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BASIC ASSESSMENT REPORT ON

**The Proposed Mixed Business and
Residential Development within
Portion 64 of Farm Vlakfontein 238
IQ, Tshepiso Extension 4,
Johannesburg West, Gauteng
Province**

**Report No : 16011-46-Rep-001-Tshepiso
DBAR-Rev0**

Submitted to :

Gauteng Department of Agriculture and Rural
Development
P.O. Box 8769
Johannesburg
2000

18 August 2016

16011

DOCUMENT CONTROL SHEET

Project Title: Basic assessment for a mixed business and residential development within Portion 64 of Farm Vlakfontein 238 IQ farm, Tshepisoong Extension 4, Johannesburg West, Gauteng Province

Project No: 16011

Document Ref. No: 16011-46-Rep-001-Tshepisoong DBAR-Rev0

DOCUMENT APPROVAL



| ACTION | DESIGNATION | NAME | DATE | SIGNATURE |
|-------------------|--------------------|---------------------|----------------|---|
| Prepared | Project Manager | Virginia Ramakuwela | 4 July 2016 |  |
| Reviewed/Approved | Project Associate | Mathys Vosloo | 18 August 2016 |  |

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LIST OF ACROYNYS

| Acronym | Description |
|---------|---|
| BA | Basic Assessment |
| BAR | Basic Assessment Report |
| CA | Competent Authority |
| EA | Environmental Authorisation |
| EAP | Environmental Assessment Practitioner |
| EIA | Environmental Impact Assessment |
| EMPr | Environmental Management Programme |
| GDARD | Gauteng Department of Agriculture and Rural Development |
| GDACE | Department of Agriculture, conservation and Environment |
| JRA | Johannesburg Road Agency |
| NEMA | National Environmental Management Act 107 of 1998 (as amended) |
| NEMWA | National Environmental Management Waste Management Act 59 of 2008 |
| NWA | National Water Act 36 of 1998 |
| OHS | Occupational Health and Safety Act 85 of 1993 |
| PAIA | Promotion of Access to Information Act 2 of 2000 |
| PPP | Public Participation Process |
| RoD | Record of Decision |
| WUL | Water Use Licence |



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

Kindly note that:

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

DEPARTMENTAL DETAILS

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

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

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

(For official use only)

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

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

Not applicable

Is a closure plan applicable for this application and has it been included in this report?

No

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

The proposed project is a mixed business and residential development.

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.

Not Applicable

Have State Departments including the competent authority commented?

No

If no, why?

An opportunity for all State Departments to comment will be during the 30 day public review period of this Basic Assessment Report.

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Basic Assessment for a mixed business and residential development within Portion 64 of Farm Vlakfontein 238 IQ, Tshepisong Extension 4, Johannesburg West, Gauteng Province.

Select the appropriate box

The application is for an upgrade of an existing development

The application is for a new development

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

Not Applicable

If yes, have you applied for the authorisation(s)?

| | |
|-----|----|
| YES | NO |
| YES | NO |

If yes, have you received approval(s)? (attach in appropriate appendix)

Project Description

Background

Tua Conserva Environmental & Conservation Services CC was appointed in 2006 to undertake an Environmental Impact Assessment (EIA) process for the proposed township development on portions 21, 23, 63 & 64 of the farm Vlakfontein 238 IQ, Project Ref no: Gaut 002/06-07/0361, and the Environmental Authorisation (EA), previously referred to Record of Decision (RoD) was subsequently granted in January 2008. However, the application was withdrawn by the applicant in 2009 with the Council due to the changes envisaged to the proposed development and the EA has since lapsed.

One of the land owners, Mr. Antonio Cremona, involved in the application mentioned above would now like to submit a new application for a new proposed mixed business and residential development within the property Portion 64 of Farm Vlakfontein 238 IQ. The applicant owns the property from which the proposed development is envisaged.

The specialist studies below were undertaken in 2006/7 and were submitted to the Gauteng Department of Agriculture and Rural Development (GDARD) previously referred to Department of Agriculture, conservation and Environment (GDACE) for decision making:

- Heritage Impact Assessment;
- Geotechnical Studies;
- Traffic Impact Assessment; and
- Invertebrates Impact Assessment.

The specialist studies indicated that there was no significant threat to the environment as a result of the proposed development. The proposed site has largely degraded over the years owed to surrounding residential areas and human activities. The area is criss-crossed by footpaths and motor vehicle tracts and on site visit there was movement of people across the site. Several areas are used as informal 'sporting grounds' by the neighbouring communities, whereas on several patches of other areas, the communities grow maize. There are no indigenous trees on the site, but exotic trees are common. A substantial area is covered with kikuyu grassland and invasive alien weeds. There is also fairly heavy littering on the site, which include discarded clothing textile, cardboard, plastic as well as building rubble.

Study Area / Site Description

The proposed project is located on farm Vlakfontein 238 IQ, portion 64 (**Centre Coordinates: 27°47'12.084"E, 26°11'6.295"S**) as stated above (Refer to **Figure 1, Figure 2** and **Appendix A-2**). The project site is a small open piece of land, located in Tshepisong township, approximately 9 km west of Roodepoort, within the City of Johannesburg Metropolitan Municipality, Region C (Refer to **Appendix A-12**). Kagiso Drive borders the site to the west, while low-cost and informal housing mark its northern and southern boundaries. Land immediately east of the site comprised of open disturbed grassland. Relative to the surrounding main places, the proposed development is located south of Krugersdorp, south-west of Roodepoort and east of Randfontein.

The study area falls inside the urban edge boundary and is approximately 8.6 hectares in extent. A residential building (house) is located in the centre on the site and is apparently used as a community facility. The house within the property is owned by the applicant (Mr Cremona) and is not older than 60 years. It is envisaged that it will be demolished to accommodate the proposed development with the property.

The land uses and amenities identified within the proximity of the proposed development are as follows:

- Northern side: mixed formal and informal residential, spaza shops, community facilities (including soccer field), School (Kid Maponyana Primary, Tsakani Primary, Kagiso Senior Secondary and Kagiso Secondary), Shopping centre (Kagiso), filling station (shell);

- Eastern side: vacant land, mixed formal and informal residential, community facilities, schools, spaza Shops and public open spaces;
- Southern side: Cheese Factory, informal residential, vacant land and slimes dam; and
- Western side (Mogale City): Agricultural, 'Flip Human' Wastewater Treatment Works (WWTW), residential and schools.



Figure 1: Relative location of the study area



Figure 2: Location of the study area relative to other townships

Description of Proposed Project Activities

The proposed development will include the establishment of a mixed business (retail and associated uses) and residential development for the middle income group (Refer to **Table 1** for the summary of proposed project's activities).

Table 1: Summary of the proposed project's activities

| Use | No of Erven | Area (ha)/Length (m) | % OF Township | ERF No. |
|-------------------|-------------|----------------------|---------------|---------|
| Residential 1 | 139 | 3, 2000 | 37,36 | 2 -140 |
| Business 1 | 1 | 3,0938 | 36,12 | 1 |
| Public Open Space | 1 | 0,3453 | 4,03 | 141 |
| Street/Road | | 1,9262 | 22,49 | |
| Total | 141 | 8.5653 | 100 | |

The proposed development is situated within easy reach from major routes and close to other many amenities. The following support service or activities are proposed:

- **Existing building:** demolishing of the existing building in the center of the proposed site.
- **Roads:** It is proposed that a new access road that serves both the business as well as the residential area be constructed off Kagiso Avenue (proposed street/road name: Cremona Drive). The location of this road has a dual purpose in also providing access to the current informal settlement located on Portion 24 of the farm Vlakfontein, which currently gains access off Kagiso Avenue over the property via a dirt road. This connection will prevent traffic build up at the entrance point. The access road joins with a circular ring road. This ring road will have a width of 6.5m. Linked to this ring road is a collector road of 5.5m which will serve the local streets of 5m wide. The development will generate a traffic flow in excess of 2000 vehicles per day which warrants a traffic light intersection at the junction with Kagiso Avenue. All roads will have a bituminous wearing course with mountable kerbstone giving easy access to the houses.

Several 13m wide residential roads (Class 5) give access to the proposed 139 residential erven with a ruling stand size of 200m², as the current target market finds this erf size favourable. An access road on the eastern boundary has been provided to Portion 63 of that farm Vlakfontein for potential future development.

- **Electricity:** Electricity infrastructure will include internal residential electricity distribution to the business site and residential units. It is expected that electricity to the site and for the proposed development will be provided by Eskom.
- **Potable Water Reticulation:** The average water demand for the development was calculated at 6.54litres per second which includes a 10% loss rate, with a peak flow of 29.43litres per second envisioned. The fire water demand requires 25 liters per second flow rate with a minimum residual head of 15m. The distances of the hydrants are placed to be not more than 180m apart. A minimum pipe diameter of 75mm is used for the internal reticulation, while the bulk supply pipe to the area is 160mm. The development will connect to bulk potable water infrastructure of Johannesburg Water.
- **Sewer Reticulation:** Johannesburg Water has indicated that whilst there is no connection to the township situated adjacent to the proposed development, connection can be made into the existing infrastructure in the area.
- **Storm water:** The storm water reticulation system is designed for a flood return period of 5 years. All kerb inlets are designed to collect 80% of the passing water with the exception of the low points where 100% will be collected. The storm water reticulation consists of pipes (100m in length) with diameters ranging from 450mm to 900mm, connecting from the attenuation pond to discharge on to the existing road reserve on Kagiso Avenue. The proposed pond will be located at the lowest point of the site, which is to the south of the development (refer to Appendix B). The site slopes gradually from north east to south-west portion (lower area) of the site and storm water / surface runoff will be attenuated at the lowest point on the south-eastern corner of the site through an attenuation pond of 363m³ (22m length x 11m width x 1.5m height). All storm water runoff will eventually report to the Driefontein. The discharge of the storm water will comply with the Johannesburg Road Agency (JRA) standards (JRA-SD-S003) and will be maintained by the JRA. The proposed attenuation pond will be grassed and fenced.
- **Solid Waste Management:** Solid waste management within the development site during construction and operational phases will conform to the principles of the National Waste Management Strategy and Waste Management Hierarchy. General waste remaining after avoidance, re-use and recycling have been completed will be stored temporarily (less than 90 days at any one time) on site before removed by a credible service provider. General waste volumes of not more than 15m³ per month will be generated within the development footprint and as such does not trigger the need for a Waste Management Licence. The site will be serviced by the City of Johannesburg.
- **Storm Water Drainage:** The design of the road network will promote the affective drainage of rain water, where storm drainage and pipelines is required necessary servitudes would be incorporated.

Existing services or facilities

Potable Water: The bulk supplier of water in this region is Rand Water. A 324 mm south Roodepoort steel pipeline and a 4 metre wide Rand Water servitude by Deed of Servitude K170/1989 is located on the property's western boundary, however it will not affect the proposed development. Johannesburg Water would provide connection points into current service network or alternatives will be proposed.

Sewer: The property falls within the Driefontein Sewer Works catchment area. It is proposed that the proposed development's reticulation is a full waterborne system. The sewer pipes would be installed in the road reserves.

Electricity: City Power is the main distributor of electricity for this area. The property is encumbered by ESKOM 22kVA overhead power lines located on the northern, western and the southern boundary, as will more fully appear on the proposed layout plan. Although connecting to the City Power grid is favourable, a green option of solar panels on the roofs of the houses would alleviate the constraint on the supplier and will be investigated for feasibility.

Roads: The property gains current access off Kagiso avenue, which in turn intersects with Randfontein Road (R41) approximately 1500 m north from the property. Randfontein Road is an east-west corridor route identified by Mogale City for development. This Class 2 Mobility Spine intersects with a north-west Mobility Spine, known as the R558 (Adcock Street) which currently provides

Tshepising with proper access.

Servitudes, which affect the property are as follows: The registered deed of transfer reserves a servitude as “a roadway” of 9,45 meters wide along the eastern boundary in favour of portion 21 of the same farm. The property is further affected by three servitudes in favour of ESKOM on the northern, western and southern boundaries, each 18m wide.

Listed Activities triggered by the development

The activities that are associated with the proposed project trigger activities listed in Government Notice No. R.983 (2014). As set out in Regulations 19 of the National Environmental Management Act (NEMA) Environmental Impact Assessment Regulations, 2014, the proposed project is subjected to a Basic Assessment Process (Government Notice No. R.982). Mr. Cremona has therefore appointed Zitholele Consulting (Pty) Ltd as the independent Environmental Impact Assessment Practitioner to undertake the Basic Assessment Process for the proposed project.

Table 2: Detailed description of the listed activity associated with the project

| Indicate the number of the relevant Government Notice: | Activity No (s) (relevant notice): e.g. Listing notices 1, 2 or 3 | Describe each listed activity as per the wording in the listing notices: |
|--|---|--|
| GN 983, 08 Dec 2014 | Activity 27 (Listing Notice 1) | The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation |
| GN 983, 08 Dec 2014 | Activity 28 (Listing Notice 1) | Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture or afforestation on or after 01 April 1998 and where such development: (i) Will occur inside an urban area, where the total land to be developed is bigger than 5 hectares. |
| GN 983, 08 Dec 2014 | Activity 31 (Listing Notice 1) | The decommissioning of existing facilities, structures or infrastructure for- (ii) Any development and related operation activity or activities listed in this Notice. |

Description of Propose Project Components

i. Pre-Construction and Construction Process for proposed development

The construction of the proposed development will be undertaken in the following steps:

- Undertaking and completion of proposed development concept;
- Undertaking Environmental Authorisation application and environmental impact assessment process;
- Pre-Construction site work, such as geotechnical investigations;
- Undertaking of and compliance with pre-construction activities and conditions in terms of the Environmental Authorisation;
- Site preparation (Vegetation clearance);
- Demolishing of the existing building;
- Civil work and civil construction: Casting of new foundations and plinths for the proposed development;
- Construction of the residential and business units and associated infrastructures (roads, open spaces area);
- Construction and/or installation of water supply, sewer reticulation and storm water management infrastructure; and
- Testing and commissioning.

The construction phase for the proposed project will take approximately 5 years.

ii. Operational Activities

During the operational and maintenance phase of the project, the applicant will ensure that operation and maintenance activities are carried out by suitable qualified individual as the activities are specialised. For the activities to be carried out during operational phase refer to project activities discussed above.

iii. Decommissioning Activities

Decommissioning of the proposed activities is neither envisioned nor feasible as this would result in loss of housing (shelter) and social impacts through fragmentation of communities.

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) (NEMA). | National & Provincial | 27 November 1998 |
| The Constitution of the Republic of South Africa (Act 106 of 1998) | The Judiciary | 18 December 1996 |
| Social Housing Act of No 16 of 2008 | Department of Human Settlements (DHS) | 5 November 2008 |
| NEMA Environmental Impact Assessment (EIA) Regulations 2014 (published in Government Notice No. R.982) | Gauteng Department of Agriculture and Rural Development (GDARD) | 4 December 2014 |
| NEMA Listing Notice 1: List of activities and Competent Authorities identified in terms of Sections 24(2) and 24D (published in Government Notice No. R.983) | GDARD | 4 December 2014 |
| National Water Act 36 of 1998 (NWA) | Department of Water and Sanitation (DWS) | 20 August 1998 |
| Water Service Act 108 of 1997 | Department of Water and Sanitation (DWS) | 19 December 1997 |
| National Environmental Management Waste Act 59 of 2008 (as amended) (NEMWA), National Norms and standards for the Storage of Waste (GNR.926 of 29 November 2013) | GDARD | 10 March 2009 29 November 2013 |
| National Environmental Management: Biodiversity Act 10 of 2004 | GDARD | 7 June 2004 |
| National Heritage Resources Act 25 of 1999 | The South African Heritage Resources Agency | 28 April 1999 |
| Promotion of Access to Information Act 2 of 2000 (PAIA) | GDARD | 9 March 2001 |
| Occupational Health and Safety Act 85 of 1993 | Provincial Department of Labour. | 23 June 1993 |
| Integrated Environmental Management Guideline Series (Guideline 5) Companion to the EIA Regulations 2010 published in Government Notice 805 | National and Provincial | 10 October 2012 |
| Integrated Environmental Management Guideline Series (Guideline 7) Public Participation in the EIA Process published in Government Notice 805 | National and Provincial | 10 October 2012 |
| Environmental Management Plans, Integrated Environmental Management, Information Series 12, Department of Environmental Affairs and Tourism | National and Provincial | 2004 |
| DWS Integrated Environmental Management Series: Environmental best practice Guidelines For Water Supply and Water Resource Infrastructure: Planning, Operation, Construction and Decommissioning. | DWS | 3 February 2005 |
| Gauteng Provincial Environmental Management Framework | GDARD | 2014 |
| Applicable by-laws of the City of Johannesburg Metropolitan Municipality. | City of Johannesburg Metropolitan Municipality | - |
| National Housing Code, 2009 | Department of Human Settlements (DHS) | 2009 |

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

| Legislation, policy of guideline | Description of compliance |
|---|----------------------------------|
|---|----------------------------------|

| | |
|--|---|
| National Environmental Management Act 107 of 1998 (NEMA) and subsequent amendments to the Act. | The NEMA (as amended) is regarded as South Africa's environmental framework legislation which provides for environmental management and gives effect to section 24 of the Constitution. The Basic Assessment and Public Participation processes were undertaken in strict compliance with the NEMA, as amended. |
| The Constitution of the Republic of South Africa (Act 106 of 1998) | Section 24 of the Constitution of the Republic of South Africa provides for a comprehensive environmental right. Therefore, stakeholders and Interested and Affected Parties may exercise their right through providing comment during the PP process and raising issues of concern that are likely to infringe upon their environmental right. The Basic Assessment process recognises this right and the EAP has recorded, considered and responded to any and all issues of concern raised by the I&APs. |
| The Constitution of the Republic of South Africa (Act 1996) Housing Act 1997 (Act 107 of 1997) | Section 26 of the Constitution of the Republic of South Africa highlights that everyone has a right to have access to adequate housing, and the state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realization of this right. |
| Social Housing Act of No 16 of 2008 | To give priority to the needs of low and medium income households in respect of social housing development. |
| NEMA Environmental Impact Assessment (EIA) Regulations 2014 (published in Government Notice No. R.982) | The Basic Assessment Process for the proposed project has been carried out in accordance with the Regulations 19 and 20 of the NEMA EIA Regulations, 2014. |
| NEMA Listing Notice 1: List of activities and Competent Authorities identified in terms of Sections 24(2) and 24D (published in Government Notice No. R.983) | The proposed project activities trigger activities which are listed in Listing Notice 1. EA is therefore required before these activities may be implemented. |
| National Water Act 36 of 1998 (NWA) | The proposed project has considered the following: Section 19: prevention and remedying the effects of pollution; Section 20: control of emergency incidence; and Chapter 4: use of water and licensing. This Basic Assessment Process has considered such potential impacts and/or incidences. |
| Water Services Act 108 of 1997 | The provision of water services for the proposed project will be required. This Basic Assessment Process has taken this into account. |
| National Environmental Management Waste Act 59 of 2008 (as amended) (NEMWA), National Norms and standards for the Storage of Waste (GNR.926 of 29 November 2013) | All requirements / provision concerning waste producing activities and the handling of waste, as provided in the NEMWA and the regulations thereunder must be conformed to. The quantity of general waste that will be temporarily be stored at the construction site is anticipated to be less than 100 m ³ . In the event that more than 100 m ³ of waste is stored at any one time, the developer must comply with the National Norms and standards for the Storage of Waste. |
| National Environmental Management: Biodiversity Act 10 of 2004 | The National Environmental Management: Biodiversity Act 10 of 2004 is aimed at providing for the management and conservation of South Africa's biodiversity within the framework of the NEMA. All reasonable measures will be taken to ensure the conservation of the biodiversity within proposed project area. |
| National Heritage Resources Act 25 of 1999 | Whilst studies undertaken in 2006 and 2016 reveals that, there are no significant heritage artifacts that would be impacted, however provisions in the NHRA relating to the protection and management of heritage resources applies to the proposed project. |
| Promotion of Access to Information Act 2 of 2000 (PAIA) | As per the NEMA EIA Regulations, 2014, as well as the principles/objectives of the PAIA, the Basic Assessment Report as well as all supporting documentation (e.g. specialist studies) will be made available to the public. |
| Occupational Health and Safety Act 85 of 1993 | This is primarily intended to provide for the health and safety of persons at work and for the health and safety of persons in connection with the activities of persons at work. All work that is carried out for the implementation of the project activities as well as during each phase of the project lifecycle should be carried out in accordance with the provisions of the OHS Act. |
| Integrated Environmental Management Guideline Series (Guideline 5) Companion to the EIA Regulations 2010 published in Government Notice 805 (10 October 2012) | The aim of the guideline is to provide a detailed consideration of the practical implementation of the NEMA EIA Regulations. The guideline also provides guidance and clarity on the EA Process to be followed and interpretation of the listed activities. The guideline was used as a reference document to the applicability of the NEMA EIA Regulations, 2014 on the proposed project. |
| Integrated Environmental Management Guideline Series (Guideline 7) Public Participation in the EIA Process published in Government Notice 805 (10 October 2012) | The guideline is intended to provide information on the benefits of public participation, the minimum legal requirements for the Public Participation Process (PPP), the steps of the PPP, guidelines for planning a PPP and a description of the roles and responsibilities of the various role-players. The guideline was referred to, to facilitate an adequate understanding of the execution of the PPP. |
| Environmental Management Plans, Integrated Environmental Management, Information Series 12, Department of Environmental Affairs and Tourism | The guideline aims to provide a generic introductory information source on the purpose, objectives and content of Environmental Management Plans. |

| | |
|---|--|
| DWS Integrated Environmental Management Series: Environmental best practice Guidelines for Water Supply and Water Resource Infrastructure: Planning, Operation, Construction and Decommissioning. | This guideline is a generic environmental best practice manual for use during the planning, operation, construction and decommissioning phases of Water Supply and Water Resource Infrastructure. |
| Gauteng Provincial Environmental Management Framework (GPEMF) | The objective of the GPEMF is to guide sustainable land use management within the Gauteng Province. |
| Applicable by-laws of the City of Johannesburg Metropolitan Municipality. | A by-law is considered as piece of legislation that is specific to the municipal area of jurisdiction. By-laws are intended to regulate the affairs and the services it provides within the municipal boundaries. A by-law is passed by the Council of a municipality. |
| National Housing Code, 2009 | Provide guidelines with regard to financial, incremental, social and rental interventions and other housing related programmes. |

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

Only the proposed and a no-go alternative were considered for the proposed project. The decision on the proposed site is mainly due to applicant's ownership to the specified property.

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 | <p>The project's proposed activities and/or associated infrastructures include:</p> <ul style="list-style-type: none"> Demolishing of the existing building located at the centre of the proposed site; Residential 1 development of 139 erven (Houses) of approximately 200m² stand size; Business 1 development (retail, commercial); Development of an approximately 20m wide new street (road), viz. Cremona Drive, that will provide access to the proposed development and in turn provide access to the existing Cremona Cheese Factory and informal settlement located on Portion 24 of the Farm Vlakfontein, which currently gains access off Kagiso Avenue over the property via a dirt road. ; Public Open Space establishment; and Stormwater management infrastructures installation which include attenuation pond. |
| 2 | Alternative 1 | |
| 3 | Alternative 2 | |
| | Etc. | |

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

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

- property on which or location where it is proposed to undertake the activity;
- type of activity to be undertaken;
- design or layout of the activity;
- operational aspects of the activity; and
- option of not implementing the activity.

Motivation for not considering site alternatives

The proposed site is the only property the applicant owns that could fulfil the objectives of mixed-use development. Purchasing other properties is not feasible to the applicant and as such the proposed site is the only site available for the proposed development activities. Furthermore, the assessment of the site has concluded that no fatal flaws exist on the site that would prevent the development from occurring on the site. Furthermore, no environmental sensitivities were identified on site that would prevent the use of the site for the proposed development activities. As a result, only one site alternative has been considered, i.e. Portion 64 of Farm Vlakfontein 238 IQ. The objective of this Basic Assessment process is therefore, to mitigate and manage the possible impacts of the proposed development on the receiving environment. No other location alternatives have been investigated.

The proposed site is preferred based on the following reasons:

- The proposed and preferred site is located within the property owned by an applicant. Meaning that no cost associated with the buying of the property will be incurred;
- The proposed site currently degraded due to human activities and therefore, further degradation will be ceased as a result of the proposed development; and
- The illegal dumping observed on the proposed site will cease as a result of the proposed development.

Motivation for not considering type of activity alternatives

The proposed development site is currently zoned as ‘undetermined’ but used for agricultural purposes in the past. However, the proposed development site is located in an urban environment which will have significant impacts on future agricultural practices. The land has also laid dormant for a number of years. Continuation of agricultural activities is thus considered not feasible.

Furthermore, given the surrounding land use character, which is largely residential and commercial land-uses such as industrial, heavy industrial or mining is also not considered feasible.

Considering the need for low-cost housing, access road off Kagiso avenue, job opportunities and commercial outlets in the area, mixed business and residential development is considered the most feasible type of activity alternative for the site in question.

Motivation for not considering design or layout alternatives

The proposed layout is considered to be the most feasible layout and design as it addresses the two more pertinent needs in the community in question, i.e. low-cost housing and business and commercial outlets, including the local business opportunities that is associated with it. The design and layout is considered most feasible as it provides for 139 residential one erven and one erf for business and commercial purposes.

Motivation for not considering technology alternatives

No technology alternatives have been considered in terms of the location, layout or design of the proposed development. The area is not an affluent area, therefore basic and standard residential and commercial sites will be designed and constructed to maximise the housing, economic and retail opportunities for this site.

However, “green” initiatives such as solar power and rainwater harvesting for the business/commercial site and solar geysers and heat pumps will be implemented where feasible.

Consideration of No-Go Alternative

The ‘No-Go’ alternative refers to not implementing any of the proposed project activities described in this report. The option of not proceeding with the proposed project will result in the continuation of the status quo and denied opportunity to contribute to the LED, local infrastructure development as well as changes to the local communities in terms of employment (both temporary and permanent). All impacts on the receiving environment that likely to result during the Construction and Operational Phases of the proposed project will not transpire.

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:

Proposed activity (***Total environmental (landscaping, parking, etc.) and the building footprint***)

Size of the activity:

8,56535ha / 85 653m²

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

Ha/ m²

or, for linear activities:

Proposed activity

Alternatives:

Alternative 1 (if any)

Alternative 2 (if any)

Length of the activity:

m/km

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

Proposed activity
Alternatives:
 Alternative 1 (if any)
 Alternative 2 (if any)

Size of the site/servitude:
 8,56535ha / 856 530 000m²

 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

| |
|----------|
| 1,9262 m |
|----------|

Describe the type of access road planned:

The site earmarked for the development can be accessed from Cremona Rd off Kagiso Avenue, as illustrated on the Site Layout Plan (**Appendix A-1**) and Annexure K of the Traffic specialist opinion report (**Appendix G-4 and Appendix I-1**).

It is proposed that a new access road that serves both the business as well as the residential area be constructed off Kagiso Avenue (proposed street/road name: Cremona Drive). The location of this road has a dual purpose in also providing access to the current informal settlement located on Portion 24 of the farm Vlakfontein, which currently gains access off Kagiso Avenue over the property via a dirt road. This connection will prevent traffic build up at the entrance point. The access road joins with a circular ring road. This ring road will have a width of 6.5m. Linked to this ring road is a collector road of 5.5m which will serve the local streets of 5m wide. The development will generate a traffic flow in excess of 2000 vehicles per day which warrants a traffic light intersection at the junction with Kagiso Avenue. All roads will have a bituminous wearing course with mountable kerbstone giving easy access to the houses.

Several 13m wide residential roads (Class 5) give access to the proposed 139 residential erven with a ruling stand size of 200m², as the current target market finds this erf size favourable. An access road on the eastern boundary has been provided to Portion 63 of that farm Vlakfontein for potential future 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

| |
|---|
| m |
|---|

Describe the type of access road planned:

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

Alternative 2

Does ready access to the site exist, or is access directly from an existing road?

| | |
|-----|----|
| YES | NO |
|-----|----|

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

| |
|---|
| m |
|---|

Describe the type of access road planned:

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

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

Section A 6-8 has been duplicated

| |
|----|
| No |
|----|

 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

Refer to Appendix A-1: Layout Map and Appendix A-3: Sensitivity Map

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-2: Locality Map

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: 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.

Refer to Appendix C: Facility Illustration

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 "insert No. of duplicates" 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 alternative 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 "insert No. of duplicates" times (complete only when appropriate)

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

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

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

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

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

1. PROPERTY DESCRIPTION

Property description:
(Including Physical Address and Farm name, portion etc.)

The proposed mixed business and residential development is located at Portion 64 of Farm Vlakfontein 238 IQ, Johannesburg West, Gauteng province.

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): |
|---------------|---------------|----------------|
| Proposed site | -26.18367413 | 27.78536922 |

In the case of linear activities:

| Alternative: | Latitude (S): | Longitude (E): |
|---|---------------|----------------|
| <input type="checkbox"/> Starting point of the activity | o | o |
| <input type="checkbox"/> Middle point of the activity | o | o |
| <input type="checkbox"/> End point of the activity | o | o |

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 N/A

The 21 digit Surveyor General code of each cadastral land parcel

| PROPOSAL | T | 0 | I | Q | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 8 | 0 | 0 | 0 | 6 | 4 | |
|----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| ALT. 1 | | | | | | | | | | | | | | | | | | | | | | |
| ALT. 2 | | | | | | | | | | | | | | | | | | | | | | |
| etc. | | | | | | | | | | | | | | | | | | | | | | |

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

Refer to Appendix A-4: Topography Map

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 |
|-----------|---------|--------------------------|--------|-------|------------------------------|-------------|

Refer to Appendix A-4: Topography Map

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

- Shallow water table (less than 1.5m deep)
- Dolomite, sinkhole or doline areas
- Seasonally wet soils (often close to water bodies)
- Unstable rocky slopes or steep slopes with loose soil
- Dispersive soils (soils that dissolve in water)
- Soils with high clay content (clay fraction more than 40%)
- Any other unstable soil or geological feature
- An area sensitive to erosion

| | |
|-----|------|
| YES | NO ✓ |
| YES | NO ✓ |
| YES | NO ✓ |
| YES | NO ✓ |
| YES | NO ✓ |
| YES | NO ✓ |
| YES | NO ✓ |
| YES | NO ✓ |

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

Refer to Appendix A-5 and Appendix A-6 for the Soil and Geological Map respectively

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.

Portion of the proposed site has been categorised according to the surface-area classes as 'class 1' of the High Potential Agricultural Land (HPAL). As described in GAPA 4, class 1 refers to areas covering the surface-area ranging from 0 – 24.99 ha. Accordingly, the area earmarked as HPAL within the proposed is estimated to be 3.0131 ha (GAPA 4). Area bordering the site on the east and some portion of land to the south, west and north-west of the proposed site are classified as class 2 (surface-area covered range from 25.0 to 49.99 ha). However, the cultivation status as per contemplated by GAPA 4 indicated that there is no agricultural activities taking place within the proposed site as per 2009 and 2012 data (GAPA 4). Only pieces of land to the west of the proposed site has been identified to have low cultivation activities taking place as per information updated in 2012 (GAPA 4).

According to the Agro-Ecological Zones (AEZ) as contemplated in GAPA 4, the proposed site has been zoned as 101. Refer to **Table 3** below for the Land Capability, Land cover, Land use and Biodiversity status.

Table 3: AEZ for the proposed site (GAPA 4)

| Zone Nr | Land Capability | Land Cover | Land Use | Biodiversity |
|---------|-----------------|------------|----------|--------------|
|---------|-----------------|------------|----------|--------------|

| | | | | | | | | | | | | | | |
|-----|----------|-----|----------|------|--------------------|--------------------|-------------------|----------|----------------|-------------------|-------------|----------|------------|------------------|
| | Very Low | Low | Moderate | High | No Vegetation/soil | High Density Woody | Low Density Woody | No Woody | No Agriculture | Other Agriculture | Agriculture | Critical | Vulnerable | Least Threatened |
| 101 | | | 3 | | | | | 4 | 1 | | | | 2 | |

Refer to Appendix A-7 for Agricultural Map

7. GROUNDCOVER

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

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

| | | | | |
|--------------------------------------|---|--|--|--------------------------------|
| Natural veld - good condition % = | Natural veld with scattered aliens % = | Natural veld with heavy alien infestation % = | ✓Veld dominated by alien species % = 88 | Landscaped (vegetation) % = |
| Sport field % = | Cultivated land % = 2 | ✓Paved surface (hard landscaping) % = 1 | ✓Building or other structure % = 1 | ✓Bare soil % = 8 |

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.

Refer to Appendix A-8 for Land Cover Map and Appendix G-1 for Ecological specialist Assessment/Opinion.

Are there any rare or endangered flora or fauna species (including red list species) present on the site

| | |
|-----|------|
| YES | NO ✓ |
|-----|------|

If YES, specify and explain:

The following section has been extracted from the Ecological Specialist Assessment/Opinion undertaken by Golder Associates Africa (Pty) Ltd (2016), attached as **Appendix G-1**.

The site is located in Soweto Highveld Grassland, which is characterised by gently to moderately undulating plains that support a short- to medium-high tufted grassland (Mucina & Rutherford 2006). In an undisturbed form, Themeda triandra is the dominant grass, with Elionurus muticus, Eragrostis racemosa, Heteropogon contortus and Tristachya leucothrix also common (Mucina & Rutherford 2006). Undeveloped Soweto Highveld Grassland areas are classified as a Vulnerable ecosystem according to NEMBA Threatened Ecosystems (2011). The site is not recognised as having any conservation value according to the Gauteng Conservation Plan (C-Plan) (Figure 3).

The Plants of Southern Africa (POSA) (SANBI, 2009) database indicates that eight plant species of conservation importance have previously been recorded in the 2627BB Quarter Degree Squares (QDS) in which the site is located, namely Boophone disticha, Hypoxis hemerocallidea and Ilex mitis var. mitis - all listed as Declining, Cineraria austrotransvaalensis, Habenaria barbertoni and Pearsonia bracteata - all listed as Near Threatened, Melolobium subspicatum (Vulnerable) and Brachycorythis conica subsp. transvaalensis (Endangered) (SANBI 2015).

Several large, alien trees dominate the grounds of the facility, including Eucalyptus sp., Coniferous spp., and Melia azedarach. The remainder of the site consists of open disturbed secondary grassland. Several pedestrian paths and vehicle tracks crisscross the site and numerous incidences of rubble and refuse dumping and minor earths works were noted. Aerial imagery also indicates that dryland agriculture (cropping) has been attempted in the past. These disturbances are reflected in the site's flora composition, which is dominated by pioneer/subclimax species. At the time of the field inspection most of the area had recently been burnt, but the following grass species were noted; Aristida congesta subsp. congesta, Cynodon dactylon, Eragrostis chloromelas, Eragrostis sp., Hyparrhenia hirta, Melinis repens, Pogonarthria squarrosa. Common recorded forbs include the weeds Bidens pilosa and Tagetes minuta. Indigenous woody plants occur mostly as scattered Buddleja salviifolia and Seriphium plumosum shrubs. Sites where dumping or earth works have taken place are typically encroached with alien invasive species, with the following species recorded; Argemone sp., Cereus jamacara, Datura stramonium, Opuntia ficus-indica, Schkuhria pinnata and Agave americana.

The site is surrounded by low-cost urban development and anthropogenic movement (vehicle and foot traffic) and activity (e.g. brick-making, refuse dumping) in the area is high. Consequently, the site is highly degraded and fragmented, with low ecological integrity and functioning. On-site flora is dominated by secondary grassland, with an

abundance of alien weeds occurring in degraded areas. The site does not comprise important flora and fauna habitat, and no species of conservation importance were recorded. Moreover, considering the disturbed nature of the site, it is highly unlikely that any species of conservation concern (i.e. Red List/protected species), such as those listed for the 2627BB QDS, are present.

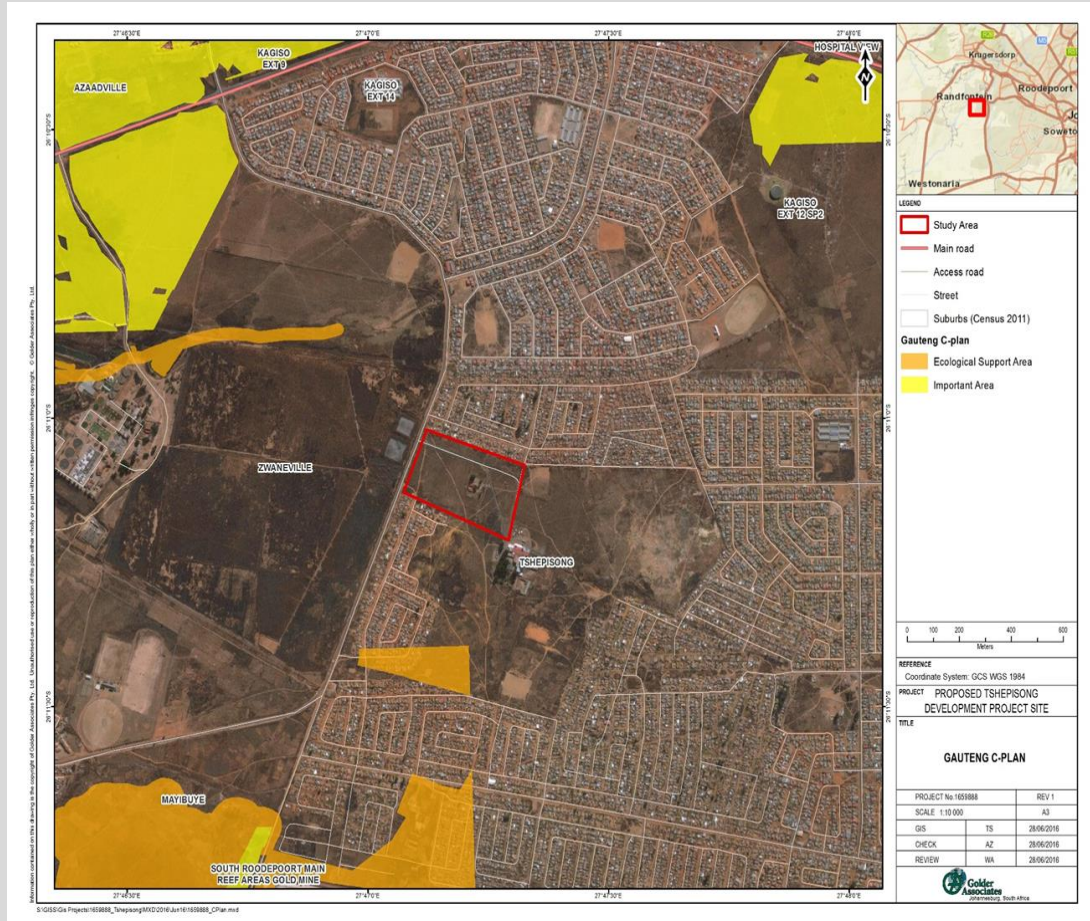


Figure 3: Site in relation to the Gauteng Conservation Plan.

Refer to **Appendix A-9, Appendix A-10 and Appendix G-1** for the **Vegetation types map, Vegetation Conservation Status map and Ecological Specialist Assessment/Opinion** respectively.

Are there any rare or endangered flora or fauna species (including red list species) present within a 200m (if within urban area as defined in the Regulations) or within 600m (if outside the urban area as defined in the Regulations) radius of the site.

| | |
|-----|------|
| YES | NO ✓ |
|-----|------|

If YES, specify and explain:

Same as above

Are there any special or sensitive habitats or other natural features present on the site?

| | |
|-----|------|
| YES | NO ✓ |
|-----|------|

If YES, specify and explain:

Same as above.

Was a specialist consulted to assist with completing this section

| | |
|-------|----|
| YES ✓ | NO |
|-------|----|

If yes complete specialist details

Name of the specialist:

Andrew Zinn

Qualification(s) of the specialist:

MSc. Resource Conservation Biology (Pr. Sci. Nat.)

Postal address:

PO Box 6001

Postal code:

1685

Telephone:

011 2544800

Cell:

011 672 0008

E-mail:

azinn@golder.co.za

Fax:

011 672 0008

Are any further specialist studies recommended by the specialist?

| | |
|-----|------|
| YES | NO ✓ |
|-----|------|

If YES, specify:

N/A

If YES, is such a report(s) attached?

| | |
|-----|------|
| YES | NO ✓ |
|-----|------|

If YES list the specialist reports attached below

Ecological Specialist Assessment/Opinion attached as **Appendix G-1**.

Signature of specialist:  Date: **17 August 2016**

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

8. LAND USE CHARACTER OF SURROUNDING AREA

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

| | | | | |
|---|---|---|--|---|
| 1. Vacant land✓ | 2. River, stream, wetland | 3. Nature conservation area | 4. Public open space | 5. Koppie or ridge |
| 6. Dam or reservoir | 7. Agriculture | 8. Low density residential✓ | 9. Medium to high density residential✓ | 10. Informal residential✓ |
| 11. Old age home | 12. Retail | 13. Offices | 14. Commercial & warehousing | 15. Light industrial✓ |
| 16. Heavy industrial ^{AN} | 17. Hospitality facility | 18. Church | 19. Education facilities | 20. Sport facilities✓ |
| 21. Golf course/polo fields | 22. Airport ^N | 23. Train station or shunting yard ^N | 24. Railway line ^N | 25. Major road (4 lanes or more) ^N |
| 26. Sewage treatment plant ^A | 27. Landfill or waste treatment site ^A | 28. Historical building | 29. Graveyard | 30. Archeological site |
| 31. Open cast mine | 32. Underground mine | 33. Spoil heap or slimes dam ^A | 34. Small Holdings | |
| Other land uses (describe): | 35. Storage ponds located on the other side of the roadway that are presumably utilised as part of the wastewater treatment infrastructure. ✓ Refer to Appendix G-2 for Wetland specialist Assessment/Opinion. | | | |

Refer to Appendix A-1 and Appendix A-8 for layout and Land Cover Maps respectively.

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

| | | | | | | |
|-------|---|--------|-------------|-------|-------------|------|
| NORTH | | | | | | |
| | 1 | 10, 20 | 9, 10 | 9, 10 | 9, 10 | |
| | 1 | 1, 35 | 9,10 | 9,10 | 1, 9, 10 | |
| WEST | 1 | 1, 35 | | 1 | 1 | EAST |
| | 1 | 1 | 1, 8, 10 | 15 | 1, 10 | |
| | 1 | 1, 10 | 1, 10 | 1 | 1, 10 | |
| SOUTH | | | | | | |

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

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

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

| | |
|-------|----|
| YES ✓ | NO |
|-------|----|

- Appendix G-1:** Ecological Specialist Assessment/Opinion
- Appendix G-2:** Wetland Specialist Assessment/Opinion
- Appendix G-3:** Heritage Specialist Assessment/Opinion
- Appendix G-4:** Traffic Impact Assessment
- Appendix G-5:** Geotechnical Assessment

Refer to Appendix I-1 for the previously conducted specialist reports.

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 proposed development falls on the remainder of Portion 64 of the Farm Vlakfontein 238-IQ and is situated in Region C in Sub-Area 15 (the Doornkop / Soweto area), near the existing township of Tshepisong Extension 4 in the Western Section of the Johannesburg Metropolitan Area, along Kagiso Drive, South off Randfontein Road (R41). The proposed development will include a mixed business (the erection of a retail and associated uses) and residential for the middle income group. The proposed development is situated within easy reach from major routes and close to other many amenities

The proposed development site is located within the jurisdiction of the City of Johannesburg Metropolitan Municipality, Region C in Sub-Area 15, and shares a boundary with the adjacent Mogale City Local Municipality to the north and west of the site. This sub-area is characterized by fragmented lower income residential settlements, informal settlements and large tracts of vacant land. This area falls within the Marginalized Priority Areas in terms of the Growth Management Strategy (GMS).

Residential densification and sufficient access routes to public transport is supported, where the necessary amenities are required to sustain the community regarding day-to-day activities.

CITY OF JOHANNESBURG LOCAL MUNICIPALITY

Level of unemployment:

According to 2011 census the City of Johannesburg Local Municipality has a total population of 4,4 million of which 76,4% are black African, 12,3% are white people, 5,6% are coloured people, and 4,9% are Indian/Asian (Statistics South Africa, 2011).

From the total population, 20 years and older 3,4% have completed primary school, 32,4% have some secondary education, 34,9% have completed matric, 19,2% have some form of higher education, and 2,9% of those aged 20 years and older have no form of schooling (Statistics South Africa, 2011).

There are 2 261 490 economically active (employed or unemployed but looking for work) people in the City of Johannesburg; of these 25,0% are unemployed. Of the 1 228 666 economically active youth (15–35 years) in the area, 31,5% are unemployed (Statistics South Africa, 2011).

Overall, the unemployment in the City is around 25% based on a narrow definition. If the expanded definition is taken into account, unemployment in the City rises to approximately 40%. Youth unemployment is of particular concern and is estimated to be around 32% (official definition). The finance sector is the biggest employer in the City accounting for 26.6% of total employment, followed by the trade sector which employs 21.1% of the formal sector workers. The agricultural sector employs the smallest share of the formal sector workers with only 0.4% (Gauteng, 2014).

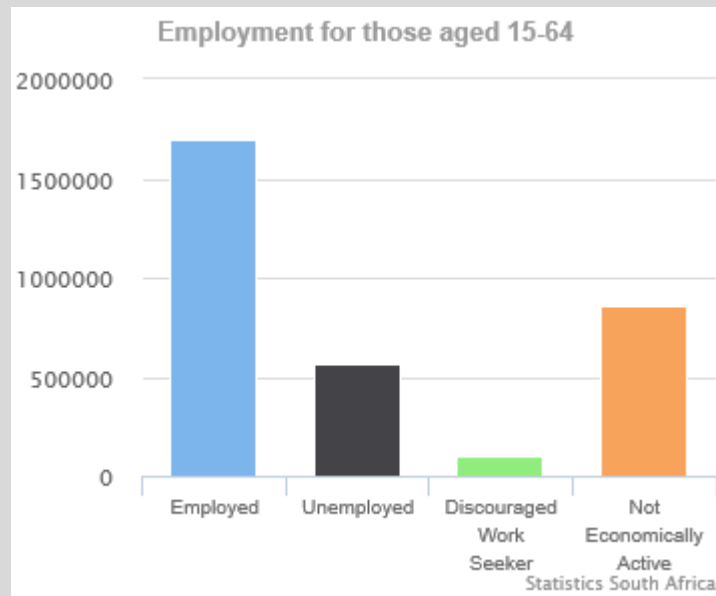


Figure 4: Status of Employment within City of Johannesburg Metropolitan Municipality for individuals aged between 15-64 years (Statistics South Africa, 2011)

Economic profile of local municipality:

The City of Johannesburg has a friendly business environment and has been successful in attracting investments. De-concentrating the economy has however remained a challenge. The dominance of trade and finance in Johannesburg arises from the central location in South Africa's geography, amongst other factors. This advantage can be contrasted to the lower concentration in agriculture and mining which is largely driven by the lack of natural resources. Thus, Johannesburg needs to continue boosting manufacturing production, in terms of higher value-added production as well as expansion into new emerging neighbouring markets. In the last decade, Johannesburg economy was one of the country's fastest growing regions at an average rate of 6% per year. The GDP growth rebounded from the negative 1.7% in 2008 and is forecasted to continue growing at an average of 3-5% in the short to medium term (Gauteng, 2014).

For Johannesburg to sustain its growth and avoid the middle income trap, it needs to pay attention to de-concentrating the economy while raising the productivity of not only manufacturing, but also the already strong services sector. Higher levels of education and skills as well as creativity, innovation, and competition are necessary (Gauteng, 2014). These would not only promote higher growth but also inclusive growth, which will help reduce the persistent high income inequality in Johannesburg (Gauteng, 2014).

Furthermore, there is 1 434 856 households in the municipality with an average household size of 2,8 persons per household. 64,7% of households have access to piped water, 26,9% have water in their yard and only 1,4% of households do not have access piped water (Statistics South Africa, 2011).

Level of education:

Of those 20 years and older 3,4% have completed primary school, 32,4% have some secondary education, 34,9% have completed matric, 19,2% have some form of higher education, and 2.9% of those aged 20 years and older have no form of schooling (Statistics South Africa, 2011).

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-
- the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
 - the construction of a bridge or similar structure exceeding 50m in length;
 - 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 ✓ |
|-----|------|

The site is heavily degraded due to dumping and use by vehicles and foot traffic. The building on site is not older than 60 years (Refer to Heritage Specialist Assessment/Opinion in **Appendix G-3** indicating the study area indicating the absence of the structure) and has no heritage significance. No historic, Iron Age or Stone Age heritage sites were noted during the site visit.

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 site is heavily degraded due to dumping and use by vehicles and foot traffic. The building on site is not older than 60 years (Refer to Heritage Specialist Assessment/Opinion in **Appendix G-3** indicating the study area indicating the absence of the structure) and has no heritage significance. No historic, Iron Age or Stone Age heritage sites were noted during the site visit.

Will any building or structure older than 60 years be affected in any way?
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 ✓ |
| YES | NO ✓ |

Refer to Appendix G-1 for Heritage Specialist Assessment/Opinion.

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

1. LOCAL AUTHORITY PARTICIPATION

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

Was the draft report submitted to the local authority for comment?

YES NO

If yes, has any comments been received from the local authority?

YES NO

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

Process currently in 30 day BAR public review period. Awaiting comments from Interested and Affected Parties (I&Aps).

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

This is the draft report that is yet to be reviewed for a period of 30 days from the date it is available for review, *i.e.* from 19 August 2016.

Details on this section will be completed fully subsequent to the review period as stated above.

2. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders?

YES NO

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

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

Same as above.

3. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

4. APPENDICES FOR PUBLIC PARTICIPATION

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

Appendix 1 – Proof of site notice

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

Appendix 3 – Proof of newspaper advertisements

Appendix 4 – Communications to and from interested and affected parties

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

Appendix 6 - Comments and Responses Report

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

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

Appendix 9 – Copy of the register of I&Aps

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 alternative 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 "insert No. of duplicates" times

(complete only when appropriate)

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

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

| | |
|-------------------|----|
| YES ✓ | NO |
| ~15m ³ | |

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

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

Construction waste generated from the proposed activities will include some spoil such as earth rock and cement. Any construction material to be disposed of needs to be at a recognised and licensed disposal site. Agreement with Local Municipality to dispose this construction solid waste will be reached by the appointed contractor before construction activities commence.

The applicant will conform to the National Waste Management Strategy and the principles of the Waste Management Hierarchy. The waste will either be re-used or recycled where possible. Any loose rock generated by the proposed project would be used in the construction of the project (as backfill, etc.) whilst sand could be used by the neighboring farmers. Where waste cannot be re-used or recycled it shall be separated into the different waste types and placed in appropriately marked waste containers. The waste containers will be transported to the nearest licensed waste disposal facility, either by an accredited service provider or through Pikitup Johannesburg (SOC) Ltd, which is the official integrated waste management service provider to the City of Johannesburg. Certificates of disposal indicating type and volume/mass of waste will be retained for verification and compliance purposes.

Littering on site will not be permitted. Appropriate signage in this regard shall be displayed on the site. Waste bins will also be provided and placed at strategic locations at the construction site for general (domestic) waste. These waste bins will be emptied regularly by the appointed contractor who in turn will dispose of the waste at a recognized disposal site as stated above.

No waste will be buried or dumped on site and no unauthorised burning of any waste materials, vegetation, litter or refuse will be allowed.

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

Same as above.

Will the activity produce solid waste during its operational phase?

| | |
|--------------------|----|
| YES ✓ | NO |
| ±15 m ³ | |

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

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

Where be separated into the different waste types and placed in appropriately marked waste containers. The waste containers will be transported to the Goudkopies Waste Landfill Site, a licensed waste disposal facility, either by an accredited service provider such as Pikitup Johannesburg (SOC) Ltd, which is the official integrated waste management service provider to the City of Johannesburg. Certificate of disposal indicating type and volume/mass of waste will be retained.

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)?

The waste will either be re-used or recycled where possible. Where waste cannot be re-used or recycled, it shall be separated into the different waste types and placed in appropriately marked waste containers. The waste containers will be transported to the nearest licensed waste disposal facility, either by the appointed Contractor or through collection and disposal by an accredited service provider or through Pikitup Johannesburg (SOC) Ltd, which is the official integrated waste management service provider to the City of Joburg. Certificate of disposal indicating type and volume/mass of waste will be retained.

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

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

| | |
|-----|-----|
| YES | NO✓ |
|-----|-----|

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

Is the activity that is being applied for a solid waste handling or treatment facility?

| | |
|-----|-----|
| YES | NO✓ |
|-----|-----|

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

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

The waste materials generated during the operational phase of the proposed development will be sorted on-site to facilitate waste reuse and/or recycling. The waste bins/containers will be clearly marked on-site with the type of wastes to be disposed off in particular waste bins/containers.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

| | |
|-----|-----|
| YES | NO✓ |
|-----|-----|

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

| | |
|--|--------------------|
| | N/A 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?

| | |
|--|--------------------|
| | N/A m ³ |
|--|--------------------|

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

Not applicable.
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:

Not applicable.

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?

| | |
|--|----------------------|
| | ± 100 m ³ |
|--|----------------------|

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?

| | |
|-----|----|
| YES | NO |
|-----|----|

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.

Not applicable.

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?

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:

Only general nuisance elements such as dust and exhaust emissions will be relevant for this development. These general nuisances are managed through standard mitigation and management measures as stipulated in the Environmental Management Programme.

Construction Phase: Dust and exhaust emissions from construction vehicles will be generated. However, watering will be used to suppress dust.

Operational Phase: The main source of air pollution will include exhaust emissions from vehicles and the emissions from the tank vent pipes. The cumulative tankage capacity at the site for the permanent immobile storage tanks are smaller than 500 cubic meters, therefore subcategory 2.2 of NEM:AQA, for the storage and handling of petroleum products, does not apply.

2. WATER USE

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

| | | | | | |
|---|---------------------------|-------------|----------------------------|-------|---------------------------------|
| municipal <input checked="" type="checkbox"/> | 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:

0 liters

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

Does the activity require a water use permit from the Department of Water and Sanitation?

YES NO

If yes, list the permits required

The proposed development and associated infrastructures do not trigger Section 21 of NWA. Therefore, a Water Use Licence (WUL) will not be required for such activities/water uses.

If yes, have you applied for the water use permit(s)?

YES NO

If yes, have you received approval(s)? (attached in appropriate appendix)

YES NO

3. POWER SUPPLY

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

The power will be supplied from the existing grid network in the area. Eskom will be responsible for all the necessary power supply infrastructure to provide power to the development site required.

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

Refer to above.

4. ENERGY EFFICIENCY

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

Where possible, energy will be saved using the following measures:

Power Supply

The conservation of energy and the utilisation of renewable and sustainable energy technologies are encouraged. This included solar panels that generate and store electricity in suitable battery packs, solar panel geysers, solar water heaters, backed up with gas, as well as gas appliances, where applicable and feasible. The storage of gas must conform to the stipulations laid out in the OHSA.

Lighting

All lights used for non-security purposes should be energy efficient for example compact fluorescent lights (CFL's). Outside lights will have to be downward shining (eyelid type), low wattage and should not be positioned higher than 1m above the ground surface. Fluorescent lamps give five times the light and last up to 10 times as long as ordinary bulbs.

Water heaters/Geysers

Solar water heaters conserve energy and can be backed up with gas or electric geysers. Installing a geyser blanket on geysers and hot water storage tanks will reduce the amount of heat lost by the geyser to cold air outside and thus conserves energy. Hot water pipes should also be insulated to prevent heat loss.

Air Conditioners

Energy efficient heaters and air conditioners should be used.

Rain water harvesting

Where feasible, tanks should be included in the development to harvest rain water for potable and non-potable re-use.

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

The use of energy sources such as solar and gas will be encouraged. Sustainable design principles to be implemented will also contribute to reducing energy demand.

SECTION E: IMPACT ASSESSMENT

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

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

No issues have been raised yet regarding this proposed development. This report is a draft and subjected to public review from mid-August to Mid-September 2016. Comments and /or issues are anticipated only after such public review has taken place.

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):

To be completed after review of this draft report.

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

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

IMPACT ASSESSMENT METHODOLOGY

The impacts will be ranked according to the methodology described below. Where possible, mitigation measures will be provided to manage impacts. In order to ensure uniformity, a standard impact assessment methodology will be utilised so that a wide range of impacts can be compared with each other. The impact assessment methodology makes provision for the assessment of impacts against the following criteria, as discussed below.

Nature of the impact

Each impact should be described in terms of the features and qualities of the impact. A detailed description of the impact will allow for contextualisation of the assessment.

Extent of the impact

Extent intends to assess the footprint of the impact. The larger the footprint, the higher the impact rating will be. The table below provides the descriptors and criteria for assessment.

Table 4: Criteria for the assessment of the extent of the impact.

| Extent Descriptor | Definition | Rating |
|-------------------|---|--------|
| Site | Impact footprint remains within the boundary of the site. | 1 |
| Local | Impact footprint extends beyond the boundary of the site to the adjacent surrounding areas. | 2 |
| Regional | Impact footprint includes the greater surrounds and may include an entire municipal or provincial jurisdiction. | 3 |
| National | The scale of the impact is applicable to the Republic of South Africa. | 4 |
| Global | The impact has global implications | 5 |

Duration of the impact

The duration of the impact is the period of time that the impact will manifest on the receiving environment. Importantly, the concept of reversibility is reflected in the duration rating. The longer the impact endures, the less likely it is to be reversible. See **Table 5** for the criteria for rating duration of impacts.

Table 5: Criteria for the rating of the duration of an impact.

| Duration Descriptor | Definition | Rating |
|---|--|--------|
| Construction / Decommissioning phase only | The impact endures for only as long as the construction or the decommissioning period of the project activity. This implies that the impact is fully reversible. | 1 |
| Short term | The impact continues to manifest for a period of between 3 and 5 years beyond construction or decommissioning. The impact is still reversible. | 2 |
| Medium term | The impact continues between 6 and 15 years beyond the construction or decommissioning phase. The impact is still reversible with relevant and applicable mitigation and management actions. | 3 |
| Long term | The impact continues for a period in excess of 15 years beyond construction or decommissioning. The impact is only reversible with considerable effort in implementation of rigorous mitigation actions. | 4 |
| Permanent | The impact will continue indefinitely and is not reversible. | 5 |

Potential intensity of the impact

The concept of the potential intensity of an impact is the acknowledgement at the outset of the project of the potential significance of the impact on the receiving environment. For example, SO₂ emissions have the potential to result in significant adverse human

health effects, and this potential intensity must be accommodated within the significance rating. The importance of the potential intensity must be emphasised within the rating methodology to indicate that, for an adverse impact to human health, even a limited extent and duration will still yield a significant impact.

Within potential intensity, the concept of irreplaceable loss is taken into account. Irreplaceable loss may relate to losses of entire faunal or floral species at an extent greater than regional, or the permanent loss of significant environmental resources. Potential intensity provides a measure for comparing significance across different specialist assessments. This is possible by aligning specialist ratings with the potential intensity rating provided here. This allows for better integration of specialist studies into the environmental impact assessment. See **Table 6** and **Table 7** below.

Table 6: Criteria for impact rating of potential intensity of a negative impact.

| Potential Intensity Descriptor | Definition of negative impact | Rating |
|--------------------------------|--|--------|
| High | Significant impact to human health linked to mortality/loss of a species/endemic habitat. | 16 |
| Moderate-High | Significant impact to faunal or floral populations/loss of livelihoods/individual economic loss. | 8 |
| Moderate | Reduction in environmental quality/loss of habitat/loss of heritage/loss of welfare amenity | 4 |
| Moderate-Low | Nuisance impact | 2 |
| Low | Negative change with no associated consequences. | 1 |

Table 7: Criteria for the impact rating of potential intensity of a positive impact.

| Potential Intensity Descriptor | Definition of positive impact | Rating |
|--------------------------------|---|--------|
| Moderate-High | Net improvement in human welfare | 8 |
| Moderate | Improved environmental quality/improved individual livelihoods. | 4 |
| Moderate-Low | Economic development | 2 |
| Low | Positive change with no other consequences. | 1 |

It must be noted that there is no HIGH rating for positive impacts under potential intensity, as it must be understood that no positive spinoff of an activity can possibly raise a similar significance rating to a negative impact that affects human health or causes the irreplaceable loss of a species.

Likelihood of the impact

This is the likelihood of the impact potential intensity manifesting. This is not the likelihood of the activity occurring. If an impact is unlikely to manifest then the likelihood rating will reduce the overall significance. **Table 8** provides the rating methodology for likelihood.

The rating for likelihood is provided in fractions in order to provide an indication of percentage probability, although it is noted that mathematical connotation cannot be implied to numbers utilised for ratings.

Table 8: Criteria for the rating of the likelihood of the impact occurring

| Likelihood Descriptor | Definition | Rating |
|-----------------------|--|--------|
| Improbable | The possibility of the impact occurring is negligible and only under exceptional circumstances. | 0.1 |
| Unlikely | The possibility of the impact occurring is low with a less than 10% chance of occurring. The impact has not occurred before. | 0.2 |
| Probable | The impact has a 10% to 40% chance of occurring. Only likely to happen once in every 3 years or more. | 0.5 |
| Highly Probable | It is most likely that the impact will occur and there is a 41% to 75% chance of occurrence. | 0.75 |
| Definite | More than a 75% chance of occurrence. The impact will occur regularly. | 1 |

Cumulative Impacts

Cumulative impact are reflected in the in the potential intensity of the rating system. In order to assess any impact on the environment, cumulative impacts must be considered in order to determine an accurate significance. Impacts cannot be assessed in isolation. An integrated approach requires that cumulative impacts be included in the assessment of individual impacts.

The nature of the impact should be described in such a way as to detail the potential cumulative impact of the activity.

Significance Assessment

The significance assessment assigns numbers to rate impacts in order to provide a more quantitative description of impacts for purposes of decision making. Significance is an expression of the risk of damage to the environment, should the proposed activity be authorised.

To allow for impacts to be described in a quantitative manner in addition to the qualitative description given above, a rating scale of between 1 and 5 was used for each of the assessment criteria. Thus the total value of the impact is described as the function of

significance, which takes cognisance of extent, duration, potential intensity and likelihood.

Impact Significance = (extent + duration + potential intensity) x likelihood

Table 9 provides the resulting significance rating of the impact as defined by the equation as above.

Table 9: Significance rating formulas.

| Score | Rating | Implications for Decision-making |
|---------|----------------|--|
| < 3 | Low | Project can be authorised with low risk of environmental degradation |
| 3 - 9 | Moderate | Project can be authorised but with conditions and routine inspections. Mitigation measures must be implemented. |
| 10 - 20 | High | Project can be authorised but with strict conditions and high levels of compliance and enforcement. Monitoring and mitigation are essential. |
| 21 - 26 | Fatally Flawed | Project cannot be authorised |

An example of how this rating scale is applied is shown below in Table 10.

Table 10: Example of Rating Scale

| Activity | Nature of Impact | Impact type | Extent | Duration | Potential Intensity | Likelihood | Rating | Mitigation | Interpretation |
|---------------|---|-------------|--------|----------|---------------------|------------|-----------|--|--|
| SO2 emissions | <u>Direct Impact:</u> | Existing | 3 | 4 | 16 | 1 | 23 - FLAW | With mitigation (FGD) the residual air quality impact will be reduced due to a lower probability of SO2 emission from the Power Station. | Ambient air quality is high impact for the area. |
| | SO2 emissions on air quality within an area of high priority air pollution. | Cumulative | 2 | 4 | 16 | 0,2 | 4 - MOD | | Air quality will remain high impact with the power station coming on-line |
| | | Residual | 5 | 4 | 16 | 0,5 | 13 - HIGH | | With mitigation (FGD) the residual air quality impact will be reduced due to a lower probability of SO2 emission from the Power Station. |

Notation of Impacts

In order to make the report easier to read the following notation format is used to highlight the various components of the assessment:

- Extent- *in italics*
- Duration – in underline
- Potential intensity – IN CAPITALS
- Likelihood - in **bold**

Please note that the impact rating system may change slightly to accommodate ease of use. However, the basic principle of the rating system will remain the same.

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. Refer to **Appendix 12** for Impact Assessment Tables.

| Proposal | | | | | |
|-------------------------------|--|--|--|--|---|
| Activity | 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 |
| Pre-Construction Phase | | | | | |
| Appointment of construction | Appointment of construction contractor | 4 - MOD Positive | Ensure that unskilled labour required for the construction and | 4 - MOD | No improvement |

| Proposal | | | | | |
|---|--|------------------|---|---------|---|
| contractor | | | installation of equipment are predominately South Africans from the surrounding communities. | | on the unemployment conditions in the area and livelihood of the surrounding communities. |
| Construction | | | | | |
| Vegetation Clearance | Dust nuisance | 2 - LOW Negative | Water sprays, especially on dry and windy days, on haul roads and where vegetation is being / has been cleared. Dust nuisance Complaints should be recorded in the complaints register at the construction site. | 3 - MOD | Health effects / risk to the surrounding community. |
| Vegetation Clearance | Possible sedimentation from uncovered areas | 4 - MOD Negative | Vegetation clearance should be undertaken in phases, i.e. limited to working unit at a time. | 2 - LOW | Pollution of the water resources. |
| Vegetation Clearance | Loss of ecological integrity and natural habitats | 2 - LOW Negative | No mitigation measures proposed. However, the proposed development site has largely degraded over the years. | 2 - LOW | Loss of natural habitats for the biodiversity occurring in the area. |
| Transportation, handling, and storage of construction materials | Vehicle traffic congestion | 1 - LOW Negative | Ensure that proper road signage is used. Limit access to the construction site to construction vehicles only. | 1 - LOW | Traffic jam or congestion in the area, leading to delays. |
| Transportation, handling, and storage of construction materials. Excavation for services and development footprint and hardening of surfaces. | Land/soil pollution from chemical / hydrocarbon spills, litter and waste metals. | 2 - LOW Negative | Establish a chemical storage area that is suitably designed to contain all spills. Ensure that hydrocarbons are stored in a bunded area with a capacity of 110% of storage volume. Ensure that the bunded area is suitably designed to allow for cleaning and prevent spillage to the environment. Ensure that all vehicles, storage, and usage areas have suitable spill kits. Develop a chemical and hydrocarbon spill procedure. Ensure that chemical and hydrocarbon usage is controlled. No servicing of vehicles onsite. Regular inspection and servicing of vehicles. Develop a spill management procedure for vehicles that may leak accidentally. Develop a waste management plan. Ensure that concrete spills are cleaned up. Ensure litter is cleared regularly to designated waste areas. | 1 - LOW | Pollution to the water resources and land. |
| Transportation, handling, and storage of construction materials | Pollution may enter ground / surface water | 1 - LOW Negative | Establish a chemical storage area that is suitably designed to contain all spills. Ensure that hydrocarbons are stored in a bunded area with a capacity of 110% of storage volume. Ensure that the bunded area is suitably designed to allow for | 1 - LOW | Pollution of the water resources. |

| Proposal | | | | | |
|--|--|------------------|--|---------|---|
| | | | cleaning and prevent spillage to the environment. Ensure that all vehicles, storage, and usage areas have suitable spill kits. Develop a chemical and hydrocarbon spill procedure. Ensure that chemical and hydrocarbon usage is controlled. | | |
| Transportation, handling, and storage of construction materials | Fugitive dust emissions (Health impact) | 2 - LOW Negative | Dust suppression mitigation is recommended. | 1 - LOW | Health impacts to the surrounding communities and biodiversity occurring in the area due to poor ambient air quality. |
| Excavation services for and development footprint and hardening of surfaces. | Erosion and loss of soil resources | 2 - LOW Negative | Develop a storm water management plan prior to commencement with construction. Use silt traps where necessary. Use bumps, humps, and cut off drains to control water velocity of exposed soils. Stockpile soils from footings in demarcated areas. Use soil material from footings in rehabilitation of impacted areas wherever possible. Develop a spill management procedure for vehicles that may leak accidentally. Develop a waste management plan. | 1 - LOW | Soil erosion and pollution of water resources. |
| Excavation services for and development footprint and hardening of surfaces. | Increased noise | 1 - LOW Negative | Limit construction activities to daylight working hours. | 1 - LOW | Exceedance of the maximum allowable noise as per the Municipal noise control bylaws. |
| Excavation services for and development footprint and hardening of surfaces. | Sedimentation, siltation, and increased turbidity in surface water | 1 - LOW Negative | Soil stock piling to be done at the designated area. | 1 - LOW | Pollution of the water resources. |
| Excavation services for and development footprint and hardening of surfaces. | Impact on heritage resources | 1 - LOW Negative | In the unlikely event of any unmarked human burials, burial pits, potsherds or stone tools being uncovered during earthworks for the proposed development, these must be reported immediately to the South African Heritage Resources Agency (Mr Andrew Salomon (021 362 2535)) | 0 - LOW | Disturbances or damaging of the sites of heritage importance. |
| Installation of proposed infrastructures / equipment | Uncontrolled activities may lead to fires | 1 - LOW Negative | Undertake monitoring to determine if fires have any impact on the surrounding environment, suitable rehabilitation is to be undertaken where necessary. A fire management plan to be established prior to construction commencing. | 0 - LOW | The construction site may be ignited and fire may spread to nearby properties / residential areas, thereby |

| Proposal | | | | | |
|--|--|--------------------|--|-----------|--|
| | | | Vegetation is to be cut back in areas where welding is undertaken to prevent fires from occurring. Fire breaks along the servitude are to be established. Suitable fire fighting equipment and training is to be provided. | | causing damage. |
| Looping/Winding/St rining | No additional impact is expected from this activity. | 0 - LOW Negative | None required. | 0 - LOW | Not Applicable. |
| Operational | | | | | |
| Inspection and maintenance of the building and other infrastructures | Pollution from litter, waste metals, vehicle spills / hydrocarbon spills during maintenance activities | 1 - LOW Negative | Ensure that a site clean-up is undertaken at the end of every maintenance cycle to ensure that no pollution has occurred. Where this has happened appropriate remedial action is to be taken. | 1 - LOW | Pollution of the water resources and land. |
| Inspection and maintenance of the building and other infrastructures | Pollution may enter ground / surface water | 1 - LOW Negative | Ensure that all vehicles, storage, and usage areas have suitable spill kits. Develop a chemical and hydrocarbon spill procedure. Ensure that chemical and hydrocarbon usage is controlled. | 1 - LOW | Pollution of the water resources. |
| Operation of the proposed development | Energy consumption. | 5 - MOD Negative | Energy-saving awareness activities / notices to be practiced within the development site (both business and residential) areas. | 3 - MOD | Contribution to load shedding. |
| Operation of the proposed development | Increased Noise | 3 - MOD Positive | Noise from the proposed residential occupants should be regulated through the building manager and rules of the residential area. | 3 - MOD | Exceedance of the maximum allowable noise as per the Municipal noise control bylaws. |
| Operation of the proposed development | Improvement on livelihood of the local communities (positive) | 11 - HIGH Positive | No Mitigation proposed | 11 - HIGH | Not applicable. |
| Operation of the proposed development | Influx of people into the area looking for job opportunities (Social Impact) | 3 - MOD Negative | Employment opportunities must be allocated to residents in the local communities surrounding the development first. | 3 - MOD | Increased theft and Shacks in the area. |
| Operation of the proposed development | Increased traffic congestion | 8 - MOD Negative | Establishment of the proposed public road or street is a mitigation measure to cater for more expected vehicle in the area. Proper road signs to be placed along the proposed streets. | 5 - MOD | Traffic jam or congestion in the area, leading to delays. |
| Operation of the proposed development | Contribution to the Local Economic Development and Infrastructural Development (Positive) | 5 - MOD Positive | None required. | 5 - MOD | Not applicable. |
| Operation of the proposed development | Improved water management and/or conservation (Positive) | 11 - HIGH Positive | Development designs to incorporate the erosion controls and storm water management infrastructures. | 11 - HIGH | Pollution and mismanagement of water resources. |

Alternative 1

(Not applicable)

| Proposal | | | | | |
|----------|--------------------|--|----------------------|--|---|
| Activity | 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 |
| | | | | | |

| No Go | | | | | |
|---------------------------|--|--|--|--|--|
| Activity | 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 |
| Project does not proceed. | No opportunity for contributing to the local economic development, infrastructural development, improvement on livelihood of the local communities and improvement on the environmental quality of the area. | 11 - HIGH Negative | Authorise and implement the proposed project activities. | 6 - MOD | No opportunity for contributing to the local economic development, infrastructural development, improvement on livelihood of the local communities and improvement on the environmental quality of the area. |

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

The following specialist opinion have been considered for the proposed project:

- Ecology: **Appendix G-1**;
- Heritage: **Appendix G-2**;
- Wetland: **Appendix G-3**;
- Traffic: **Appendix G-4**; and
- Geotechnical and Dolomite Stability Investigation: **Appendix G-5**.

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

No gaps have been identified during the assessment of this proposed development.

3. 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 | | | | | |
|---|--------------------|---|----------------------|--|---|
| Activity | 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 development is permanent and will not be decommissioned. Only the construction site at the end of the construction period will need decommissioning and rehabilitation. | | | | | |

| Alternative 1 <i>(Not applicable)</i> | | | | | |
|---------------------------------------|--------------------|---|----------------------|--|---|
| Activity | 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 |
| | | | | | |

| Alternative 2 (Not applicable) | | | | | |
|--------------------------------|--------------------|--|----------------------|--|---|
| Activity | 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 |
| | | | | | |

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

Due to the nature of the proposed development, decommissioning phase is not envisioned. As a result, impact assessments for the decommissioning activities are not considered in this assessment.

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

N/A

4. CUMULATIVE IMPACTS

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

No cumulative impacts are envisaged on the environment. The land has substantially degraded. Proposed development on the proposed site will improve the environmental status of the site as the site will be appropriately managed.

5. ENVIRONMENTAL IMPACT STATEMENT

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

Proposal

No Site Alternatives were identified as the proposed development has been identified as a project specific. The site is heavily degraded due to dumping, brick-making and use by vehicles and foot traffic. In addition, the proposed development is located within the property owned by an applicant.

Apart from for the storage ponds (associated with 'Flip Human' WWTW) that have been identified west of the study site, there are NO watercourses and wetlands located within 500m of the proposed activity location. Furthermore, NO culturally significance elements have been observed within the close proximity of the proposed activity location. The building located in the centre of site is not older than 60 years (Refer to Heritage Specialist Assessment/Opinion in **Appendix G-3** indicting the study area indicating the absence of the structure) and has no heritage significance. No historic, Iron Age or Stone Age heritage sites were noted during the site visit.

The area is covered by the Soweto Highveld Grassland. According to NEMBA, the Soweto Highveld Grassland is classified as 'Vulnerable' vegetation. However, the site is highly degraded and fragmented, with low ecological integrity and functioning, and being situated in an urban setting it is anticipated that degradation of the site will continue over time. On-site flora is dominated by secondary grassland, with an abundance of alien weeds occurring in degraded areas. The site does not comprise important flora and fauna habitat, and no species of conservation importance were recorded on site. Moreover, considering the disturbed nature of the site, it is highly unlikely that any species of conservation concern (i.e. Red List/protected species), such as those listed for the 2627BB QDS, are present and none were identified during the site walk-over by the specialist.

Construction Phase:

The construction activities will have a MODERATE to LOW negative impact on the receiving environment prior to the implementation of mitigation measures. The main reason for rating construction activities with MODERATE to LOW is that the project area has been severely degraded due to number of anthropogenic activities. The elements of the environment most affected will be the soils, the social environment (traffic and particulate emissions) and potentially groundwater. However, majority of the above-mentioned impacts already exist on site as a result of existing human activities.

The impacts will be predominantly limited to the site and study area. The impacts will also act for the time of construction phase, which is approximately eight (8) months. All of the impacts identified during the construction phase can be mitigated to acceptable limits and the majority of the impacts showed a LOW to VERY LOW significance before and after mitigation measures are implemented. Construction for the proposed mixed business and residential development, and the associated infrastructures is therefore not likely to significantly impact on the already degraded land.

Operational Phase:

Impacts identified for the operational phase of the proposed replacement of the existing furnaces are largely rated as LOW negative impact on the receiving environment. The proposed development and the associated infrastructures will make use energy saving technologies and therefore, energy consumption will be saved. For this reason, this was rated as MODERATE positive impacts.

The elements of the environment most affected will be the soils particularly during maintenance of the proposed development's facilities, the social (traffic during rush hour times) and potentially groundwater (sewage spillage during equipment maintenance). Noise impacts will be predominantly limited to the site. The impacts associated with the operational phase will mostly occur during the maintenance of the infrastructures for as long as the development is operational. All impacts incurred can be reversed with time

during the decommissioning phase, and none of the operation phase impacts are permanent.

As part of the mitigation measures, monitoring and all measures recommended in the in the EMPr attached hereto as **Appendix H** should be adhered to.

Decommissioning Phase:

It is not envisaged that the proposed development/activities will be decommissioned as it provides housing and economic opportunities to the surrounding communities.

Decommissioning phase activities associated with the decommissioning of the construction site will involve the reversal of installation of the construction phase plant and structures. The end result of the decommissioning phase will be a positive impact on the environment. However, during the decommissioning phase similar nuisance impacts such as noise, traffic will be experienced. These too can be mitigated.

Overall, the impact of the proposed activity is expected to be LOW as the study site is already heavily impacted by the surrounding activities and land use. The activities will further be mitigated to acceptable levels.

Alternative 1

Not applicable.

Alternative 2

Not applicable.

No-go (compulsory)

The 'No-Go' alternative refers to not implementing any of the proposed project activities described in this report. The option of not proceeding with the proposed project will result in the continuation of the status quo and denied opportunity to contribute to the LED, local infrastructure development as well as changes to the local communities in terms of employment (both temporary and permanent). All impacts on the receiving environment that likely to result during the Construction and Operational Phases of the proposed project will not transpire.

In terms of the environmental impacts, the current environmental status quo will remain the same and even degrade further. Impacts associated with the No-Go alternative are thus rated as MODERATE.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The impacts have been identified and assessed during the BA process. Based on the impact assessment, impacts will be predominantly limited to the site and study area. The impacts will also act for the time of construction phase, which will be approximately 5 years. All of the impacts identified during the construction phase can be mitigated to acceptable limits and the majority of the impacts showed a LOW to VERY LOW significance before and after mitigation measures are implemented. Establishment of the proposed mixed business and residential development, and the associated infrastructures is therefore not likely to significantly impact on the already degraded land.

For alternative:

Not applicable.

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 development contribute in addressing the current needs of the surrounding communities

The site is surrounded by low-cost urban development and anthropogenic movement (vehicle and foot traffic) and activity (e.g. brick-making, illegal refuse dumping) in the area is high. Low-cost and informal housing mark its northern and southern boundaries. Land immediately east of the site comprised of open disturbed grassland. The proposed development include the construction of approximately 20m wide road which will serve dual purposed, viz., providing access to the proposed development and in turn to the existing Cremona Cheese Factory on Portion 21 of the Farm Vlakfontein as well as informal settlement located on Portion 24 of the Farm Vlakfontein, which currently gains access off Kagiso Avenue over the property via a dirt road. In addition, the community is characterised by non-motorized transport (pedestrians) and it is suggested that an acceptable pedestrian access will be provided off Kagiso Avenue to the proposed business erf (ERF 1).

Furthermore, given the surrounding land use character, which is largely residential (low-cost housing) and commercial land-uses such as industrial, heavy industrial or mining, the proposed site was considered necessary and feasible.

Considering the need for low-cost housing, job opportunities, local business opportunities and commercial outlets in the area, mixed business and residential development is considered the most feasible type of activity alternative for the site in question.

In summary, the proposal has been selected for the following reason:

- Provide housing facilities (139 houses of approximately 200m² stand sizes) for the middle-income group;
- Access road to the existing Cremona Cheese Factory and informal settlement located on Portion 24 of the Farm Vlakfontein, which currently gains access off Kagiso Avenue over the property via a dirt road.
- Provide temporary and permanent employment to the local residents;
- Contribute to the local infrastructure development; and
- Subsequently contribute to the Local Economic Development (LED).

The site is currently heavily impacted and transformed

The proposed site is currently an open space with one building located at the center of the site. There are number of anthropogenic activities within the site such as vehicle movements, pedestrian criss-cross, illegal dumping and etc., resulting in land degradation.

No environmental sensitivities exist on the proposed site

Apart from for the storage ponds (associated with the wastewater treatment plant) that have been identified west of the study site, there are NO watercourses and wetlands located within 500m of the proposed activity location. Furthermore, NO culturally significance elements have been observed within the close proximity of the proposed activity location. The building located in the centre of site is not older than 60 years (Refer to Heritage Specialist Assessment/Opinion in **Appendix G-3** indicting the study area indicating the absence of the structure) and has no heritage significance. No historic, Iron Age or Stone Age heritage sites were noted during the site visit.

The area is covered by the Soweto Highveld Grassland. According to NEMBA, the Soweto Highveld Grassland is classified as 'Vulnerable' vegetation. The site is highly degraded and fragmented, with low ecological integrity and functioning. On-site flora is dominated by secondary grassland, with an abundance of alien weeds occurring in degraded areas. The site does not comprise important flora and fauna habitat, and no species of conservation importance were recorded on site. Moreover, considering the disturbed nature of the site, it is highly unlikely that any species of conservation concern (i.e. Red List/protected species), such as those listed for the 2627BB QDS, are present.

7. SPATIAL DEVELOPMENT TOOLS

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

- Appointment of town and regional planner;
- Consultation with and obtaining approvals of the development from the city council (municipality); and
- Use of GIS tool for mapping (using data from GDARD such as EMF, GAPA and GIDSv10, and other data), refer to attached maps in **Appendix A**.

Proof of correspondences and approvals from the city council are attached in **Appendix F**.

8. RECOMMENDATION OF THE PRACTITIONER

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

| | |
|-------|----|
| YES ✓ | NO |
|-------|----|

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

Not applicable.

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

The EAP recommends that the proposed establishment of a mixed business and residential development be authorised at the proposed location. All mitigation measures listed by the Heritage and biodiversity specialists in their specialist reports, and proposed in the Environmental Management Programme (EMPr) must be implemented.

9. THE NEEDS AND DESIREBILITY OF THE PROPOSED DEVELOPMENT

(AS PER NOTICE 792 OF 2012, OR THE UPDATED VERSION OF THIS GUIDELINE)

Owing to the increasing number of people working and living in the inner city, numerous organizations are searching for ways to attract people back to the inner city. Concurrently with availability of job opportunities and housing (flats) being the main reasons for attraction of people to the inner city, the inner city cannot sufficiently supply the available housing demand. Additionally, it is noted that although prominent companies occupy office space within the inner city, satellite offices are constructed within neighboring townships, assisting in the need to connect the inner city with the outskirts of the city.

The western area of Johannesburg, specifically Roodepoort and surrounding areas, have increased development of major shopping centers and office parks in the last 10 years. These developments increased job opportunities in these areas and supported the need for the high residential development within this area. However, the focus remained on the middle to high income groups.

The Constitution of South Africa, 1996 (Chapter 2, Section 26) states that "everyone has the right to have access to adequate housing". Although Government has delivered approximately 2,37 million houses and 687 500 stands between 1994 and 2010 throughout South Africa, the demand for housing still remains high with a backlog of approximately two (2) million houses still required in 2010. The increase of informal settlements around the country contributes to the greater housing demand.

In 2011, Minister Sexwale stated that "The solution to this backlog is not going to be through providing free houses. We can't sustain what we are doing". (IHHWC, 2011). President Zuma, addressing the housing crisis stated in 2012 that South Africa "cannot be a welfare state". The Government is continuing efforts to establish ways to provide social housing to the poor, through subsidies or with the co-operation of the citizens of the country. Through private land owners developing otherwise non-productive farm land still situated in urban areas with residential stands, low to middle income citizens have the opportunity to own land, as per the Constitution (Chapter 2, Section 25).

Tshepisong falls on the outskirts of Johannesburg, with Mogale City bordering on the northern and western boundaries. Excluding

agricultural land to the direct west, Mogale City has developed the township Kagiso, which provides low-rise residential properties (privately owned), supported by schools, clinic, community facilities, small shops and a neighborhood shopping center.

Informal settlements are on the increase in the immediate area, with the whole of Portion 24 of the farm Vlakfontein, located on the eastern boundary of the property, encumbered with shacks. The Tshepiso Township is gradually being developed from the eastern side towards the property. Tshepiso provides Proper low-rise residential properties (privately owned), supported by schools, clinic, community facilities and small shops. The development of the remainder of the farm Vlakfontein towards the western boundary of Johannesburg is a necessity, for it is clear from the current Mogale City development and the rising informal settlements in the area that a high demand for residential infrastructure is required.

Thus, the property is located within a growing residential character, providing adequate housing to the lower income groups. The proposed development will provide housing facilities for the middle-income group, also providing access to services within the proximity of their communities.

The proposed mixed business and residential development is anticipated to:

- Provide housing facilities (139 houses of approximately 200m² stand sizes) for the middle-income group;
- Provide access road off Kagiso Avenue to the existing Cremona Cheese Factory and informal settlement located on Portion 24 of the Farm Vlakfontein, which currently gains access off Kagiso Avenue over the property via a dirt road.
- Provide temporary and permanent employment to the local residents;
- Contribute to the local infrastructure development; and
- Subsequently contribute to the Local Economic Development (LED).

The proposed development of the property with 139 residential erven, with a minimum size of 200m², provides potential home owners with the opportunity to own an affordable property within close proximity to Mogale City and Roodepoort. The property is both accessible and ideally located on an active taxi route along Kagiso, thus providing housing in close proximity to transport, adhering to the principles of the Development Facilitation Act, Act No. 67 of 1995 (DFA) and the guidelines of the Regional Spatial Development Framework (RSDF), 2010/11.

Therefore, the proposed development will see an increase in the economic activities of the area as well as promote development infrastructure to the area. The commercial and light industrial development will increase business opportunities and employment that will accrue largely to previously disadvantaged people.

The population of Johannesburg west is young and growing, partly because of an influx of new homeowners from Soweto drawn by better housing, land values and facilities, as well as swift, convenient access to their places of work. The proposed development will further cater to providing facilities in a convenient location for the local communities. Moreover, the development phase of the project is likely to provide in the region of 100 new employment opportunities, with the operational phase providing approximately 150 employment opportunities. It is likely that many of these opportunities will be available to local residents.

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

The environmental authorisation is required from November 2016. Due to the nature of the activity, there is no definite period as to when the activity will be concluded.

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

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

EMPr attached

YES

Refer to Appendix H for the EMP.

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 A1 – Layout Map
Appendix A2 – Locality Map
Appendix A3 – Sensitivity Map
Appendix A4 – Topography Map
Appendix A5 – Geology Map
Appendix A6 – Soil Map
Appendix A7 – Agriculture Map
Appendix A8 – Land cover Map
Appendix A9 – Vegetation Types Map
Appendix A10 – Vegetation Conservation Status Map

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

NOT APPLICABLE.

Appendix E: Public participation information

To be compiled after a 30-day review period.

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

Appendix F1 – Email correspondence with DWS to confirm that Water Use Licence is not required.
Appendix F2 - Correspondences with Municipalities attached.

Information related to SAHRA included in **Appendix G2** (Specialist assessment).

Appendix G: Specialist reports

Appendix G1 – Ecological Specialist
Appendix G2 – Heritage Specialist
Appendix G3 – Wetland Specialist
Appendix G4 – Traffic Assessment
Appendix G5 – Geotechnical Investigation

Appendix H: EMPr

Appendix I: Other information

Appendix I1 – Existing EIA Reports
Appendix I2 – Impact Assessment Tables

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.

ZITHOLELE CONSULTING (PTY) LTD



Virginia Ramakuwela
Project Manager



Mathys Vostoo
Project Associate

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