# Draft Scoping Report

The proposed construction and operation of a cement facility and storage of dangerous goods on the property described as Portion 192 of Farm 125, Daggafontein, Springs, Ekurhuleni Local Municipality.

26 April 2022

Prepared for: Opsibuzz (Pty) Ltd
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**Document history and change record**

| Revision | Issue date | Description of change / Approval |
|---|---|---|
| 00 | 26/04/2022 | Initial Issue |
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Environmental Management Programmes
Carbon Footprints
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Environmental Assessment Practitioners

***Disclaimer***

*The information in this report is based on information supplied by the client, Opsibuss (Pty) Ltd. All information is given in good faith, however, no physical testing or chemical analyses were performed by ECA Consulting during the course of this assessment.*

*Although every effort was made to request and obtain all pertinent information for this assessment ECA Consulting cannot be held accountable or accept responsibility for any discrepancies in this information or for the disclosure or review of information which has not been presented to the consultant. All reports presented to the consultant for review have been referenced.*

**Details of EAP**


| | |
|---|---|
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**Expertise of EAP**

ECA Consulting is headed by Leena Ackbar (Managing Director) and Manogrie Chetty (Operations Director). Leena Ackbar holds a Master of Science degree in Environmental Sciences with a focus on sustainable bioenergy crop cultivation in Angola. The study was further extended throughout sub-Saharan Africa by COMPETE, which is an international research organisation funded by the European Union focussing on sustainable bioenergy crop expansion in sub-Saharan Africa. Leena is not only a qualified environmental scientist but is also suitably qualified environmental assessment practitioner. Manogrie Chetty also holds a Master of Science Degree in Environmental Sciences and has academically specialised in Environmental Impact Assessments in KZN. In addition to holding a tertiary qualification in environmental sciences both our lead consultants are registered Professional Natural Scientists with SACNASP, Leena is also accredited with the Green Building Council of South Africa and the Global Carbon Exchange.

To date Leena and Manogrie have handled and project managed between 50 to 80 EIAs, BARs, EMPr, EMF/SEA, ECO sites, Water Use License Applications, etc. and other environmental management related areas. Leena has been the technical advisor and lead consultant on several complex projects including, strategic environmental work for the northern KZN region, mining EIAs, and management of ECOs on large construction sites. Leena and Manogrie have extensive environmental legal knowledge regarding not only the EIA process and requirements but also with regard to all other relevant environmental legislation at a national, provincial and local level and how these affect environmental management issues. Leena Ackbar has been trained by the Global Carbon Exchange on the Greenhouse Gas Protocol and has duly completed a number of carbon footprint assessments during her training. She has also set up the GHGEI collection for the King Shaka International Airport, Cargo Terminal for Dube Tradeport. Some of our notable contributions include presentation at the 2011 Mining Conference hosted by the International Institute Research of South Africa, which is now run from its head office, Informa Middle East, located in Dubai. We have also provided comment, as part of the environmental panel for the Durban Chamber of Commerce on the National Treasury Paper on Carbon Tax.

**DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)**

I, **Manogrie Chetty** declare that,

- I will comply with the requirements for EAPs as stipulated in Regulation 13(1) of the EIA Regulations, 2014, as amended;
- I act as the independent environmental practitioner in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental impact assessments, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing - any decision to be taken with respect to the application by the competent authority; and - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the competent authority in respect of the application, provided that comments that are made by interested and affected parties in respect of a final report that will be submitted to the competent authority may be attached to the report without further amendment to the report;
- I will keep a register of all interested and affected parties that participated in a public participation process; and
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- all the particulars furnished by me in this form are true and correct;
- will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I am aware that a person is guilty of an offence in terms of Regulation 48 (1) of the EIA Regulations, 2014 (as amended), if that person provides incorrect or misleading information. A person who is convicted of an offence in terms of sub-regulation 48(1) (a)-(e) is liable to the penalties as contemplated in section 49B(1) of the National Environmental Management Act, 1998 (Act 107 of 1998)

Disclosure of Vested Interest

I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014 (as amended).

Signature of the environmental assessment practitioner: **Manogrie Chetty**
Name of company: **ECA CONSULTING**
Date: **26 April 2022**

## ACRONYMS

| | |
|---|---|
| **BPEO** | Best Possible Environmental Option |
| **CBA** | Critical Biodiversity Area |
| **C-Plan** | Gauteng Conservation Plan Version 3.3 |
| **DWS** | Department of Water and Sanitation |
| **EA** | Environmental Authorisation |
| **EIA** | Environmental Impact Assessment |
| **EIAR** | Environmental Impact Assessment Report |
| **EIR** | Environmental Impact Reporting |
| **EMF** | Environmental Management Framework |
| **GA** | General Authorisation |
| **GBFS** | Granulated Blast Furnace Slag |
| **GDARD** | Gauteng Department of Agriculture and Rural Development |
| **GPEMF** | Gauteng Environmental Management Framework |
| **I&AP** | Interested and Affected Party |
| **IDP** | Integrated Development Plan |
| **NUDC** | Northern Urban Development Corridor |
| **SACNASP** | South African Council for Natural Scientific Professions |
| **SDF** | Spatial Development Framework |
| **WUA** | Water Use Authorisation |
| **WUL** | Water Use License |

# EXECUTIVE SUMMARY

## Project Description

The applicant, Opsibuzz (Pty) Ltd, proposes the construction and operation of a new cement plant (facility) located on Portion 192 of Farm 125, Daggafontein, Springs, Ekurhuleni Local Municipality (Ward 76). The site for the proposed new facility is approximately 4 hectares in size and is geographically located at the following coordinates: 26°18'43.32" S and 28°29'01.71" E (Figure 1). The purpose of the proposed new facility is to produce portland cement and other grades of cement for use by the local building industry.

In terms of the National Environmental Management Act (NEMA) (Act 107 of 1998), EIA Regulations 2014 (as amended 2017), the proposed new facility will require Environmental Authorisation via a Scoping & EIR process. The competent authority that will either accept or reject the application is the Gauteng Department of Agriculture and Rural Development (GDARD). The proposed new facility will also require an Air Emissions License in terms of National Environmental Management Air Quality Act (NEMAQA) (Act 39 of 2004), List of Activities (2004) – Category 5.

## Alternatives

Three alternatives have been identified and will be assessed:

**Alternative 1 (A1, T1 & S1) (Preferred):** The proposed construction and operation of a cement facility and storage of dangerous goods on the property described as Portion 192 of the Farm Daggafontein, Springs. The cement will be produced by grinding clinker, GBFS and other raw materials using a vertical roller mill.

**Alternative 2:** None Identified.

**No-go option (Not Preferred):** The no-go option will not entail any construction activities. The applicant will not be able to meet the demand for construction material in the Gauteng Province. The proposed facility falls within the Tambo Springs Logistic Hub which is aimed at combining all aspects of warehousing, distribution, and operation efficiencies into one area. As such the facility is in line with the Municipal IDP and SDF (2019) in constructing and operating facilities which will industrialize the Springs area. Both the SDF and IDP inherently support the proposal. The no-go option would mean that this economic and development goal would not be achieved.

## Legislation and Guidelines considered

The following legislation and guidelines were considered in preparing this draft Scoping Report as discussed in Section 5.0 of this report.

- National Environmental Management Act (Act 107 of 1998) (NEMA):
- National Environmental Management : Biodiversity Act (Act 10 of 2004)
- National Environmental Management Protected Areas Act (Act 57 of 2003)
- National Forest Act (Act 84 of 1998)
- National Heritage Resources Act (25 of 1999)
- KwaZulu-Natal Heritage Resources Act (Act 4 of 2008)
- Conservation of Agricultural Resources Act (Act 43 of 1983)
- Kyoto Protocol to the United Nations Framework Convention on Climate Change (1998)
- Paris Convention for the Protection of the World Cultural and Natural Heritage (1975)

- Convention on the Conservation of Migratory Species of Wild Animals(CMS)
- Bill of Rights (Chapter 2 (24) of the Constitution of the Republic of South Africa)
- National Water Act (Act 36 of 1998)
- National Water Resource Strategy (2013)
- National Environmental Management: Waste Management Act (Act 59 of 2008)
- Ekurhuleni Municipality Bylaws
- National Noise Control Regulations (1992) in terms of Section 25 of the Environmental Conservation Act, 1989 (Act 73 of 1989)
- Health and Safety Act (Act 85 of 1993)
- Mine Health and Safety Act (Act 29 of 1996)
- Hazardous Chemical Substance regulations 1995
- Construction Regulations (2003)
- Mineral and Petroleum Resources Development Act (Act 28 of 2002)
- Mineral and Petroleum Resources Development Amendment Act, 2008
- National Environmental Management: Air Quality Act (Act 39 of 2004)
- NEMA Implementation Guidelines (GNR 603 of 2010)
- DEA Integrated Environmental Management Information Series (0 – 16) (2004)
- DEAT Guideline 5: Assessment of Alternatives and Impacts
- NEMA Public Participation Guideline (2012)
- Western Cape DEA &DP (2010), Guideline on Alternatives
- Western Cape DEA &DP (2010), Guideline on Need and Desirability
- DEA Integrated Environmental Management Guideline on Need and Desirability (2017)
- National Environment Management Act: Environmental Impact Assessment (EIA) 2014 Regulations (as amended in 2017)
- Gauteng Province Environmental Management Framework (GPEMF) (2014)
- Gauteng Conservation Plan (C-Plan) (2014)
- Gauteng Spatial Development Framework (2015)

**EIA Process**

The current proposal is undergoing a Scoping & EIR process as per requirements of GNR 326, NEMA EIA Regulations (2014, as amended). Activity 14 of Listing Notice 1(GNR 327) and Activity 6 of Listing Notice 2 (GNR 325) is applicable to the proposed activity.

**Draft Scoping Report**

The purpose of the Scoping report was to preliminary assess the site and identify potential impacts that the proposed activity may have on the environment. The elements of the receiving environment that have been scoped at this stage and will be further investigated in the EIR are:

- Soil
- Waste
- Cultural / Heritage
- Air Quality
- Topography
- Geology
- Vegetation
- Wetlands, rivers, streams
- Critical Biodiversity Areas
- DMOSS
- Fauna
- Social / Economic

## Public Participation Process

A key part of the EIA process is public participation, whereby authorities, residents, neighbours and any organisation that may be interested in or affected by the proposed activity, are notified of the proposal so as to provide an opportunity for expression of comments/concerns throughout the EIA process. Public participation is a legislated requirement according to the EIA Regulations, 2014, as amended. As the independent Environmental Assessment Practitioner (EAP), ECA Consulting is required to involve the public in the following way:

- Provide written notice to adjacent occupiers of the site, the municipal ward councillor, ratepayers association, and any organ of state having jurisdiction in respect of any aspect of the activity;
- Place an advert in one local newspaper, and at least one provincial or national newspaper if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken;
- Fix a notice board (minimum size 60cm x 42cm) at a place conspicuous to the public at the boundary or on the fence of the site or any alternative site mentioned in the application.

Further to the public notification, the public may register as an I&AP to obtain further information and partake in the EIA process by way of comment.

Any comment / concern / query received from an I&AP and/or authority will be addressed and considered in the environmental assessment process.

Registered I&APs are entitled to comment in writing on all written submissions, including draft reports made to the competent authority (i.e. GDARD) and to bring to the attention of the competent authority and EAP any issues which they believe may be of significance to the consideration of the application. These issues must be submitted within the timeframes approved or those as set by the competent authority.

I&APs are legally required to disclose any direct business, financial, personal or other interest which they may have in the approval or refusal or the application.

I&APs have 30 days to review this draft Scoping Report and provide comment. The comment period commences on 26 April 2022 and ends on 30 May 2022.

The public participation process followed to date and to be followed in the EIR phase is detailed in Section 9.0 of this report.

## Specialist Studies

The following specialist studies will be undertaken and will be presented and reviewed as part of the Environmental Impact Assessment Report (EIAR):

- Heritage Impact Assessment
- Traffic Impact Assessment
- Stormwater Management Plan
- Geotechnical Impact Assessment
- Air Quality Assessment including an Ambient Air Quality Assessment

## Plan of Study for EIA

The main purpose of the EIA process is to determine, assess and evaluate the consequences (positive and negative) of a proposed activity. The EIA process must thus consider the following:

- The strategic context of a development proposal along with broader societal needs, the natural resource base and the public interest;
- Ways to avoid negative impacts and enhance benefits must be addressed;

- Where negative impacts cannot be avoided, measures to minimise these must be sought; and
- Consideration must be given to the probable significance or "acceptability" of the effects or consequences, based on clear criteria. (DEA, 2010)

A Description of tasks that will be undertaken as part of the EIA process is detailed in Section 10.0 of this report.

In summary the following steps will be undertaken:

- Review of relevant maps and aerial photography,
- Review of relevant legislation and by-laws,
- Review of all available information on the site and proposal,
- Review of specialist reports,
- Impact assessment,
- Assessment of alternatives,
- Preparation of an EIR report based on the afore-described plan of study,
- Distribution of the EIR to authorities and I&APs for a 30 day comment period and consideration of issues raised by I&APs,
- Preparation of responses to comments received and finalise the draft EIR, and
- Submission of the final EIR to GDARD for authorisation.

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## 1.0 Description of Proposed Activity

### 1.1 Background & Introduction

The applicant, Opsibuzz (Pty) Ltd, proposes the construction and operation of a new cement plant (grinding facility) located on Portion 192 of Farm 125, Daggafontein, Springs within Ekurhuleni Local Municipality (Ward 76). The site for the proposed new facility is approximately 4 hectares in size and is geographically located at the following coordinates: 26°18'43.32" S and 28°29'01.71" E (Figure 1). The purpose of the proposed new facility is to produce portland cement and other grades of cement for use by the local building industry.

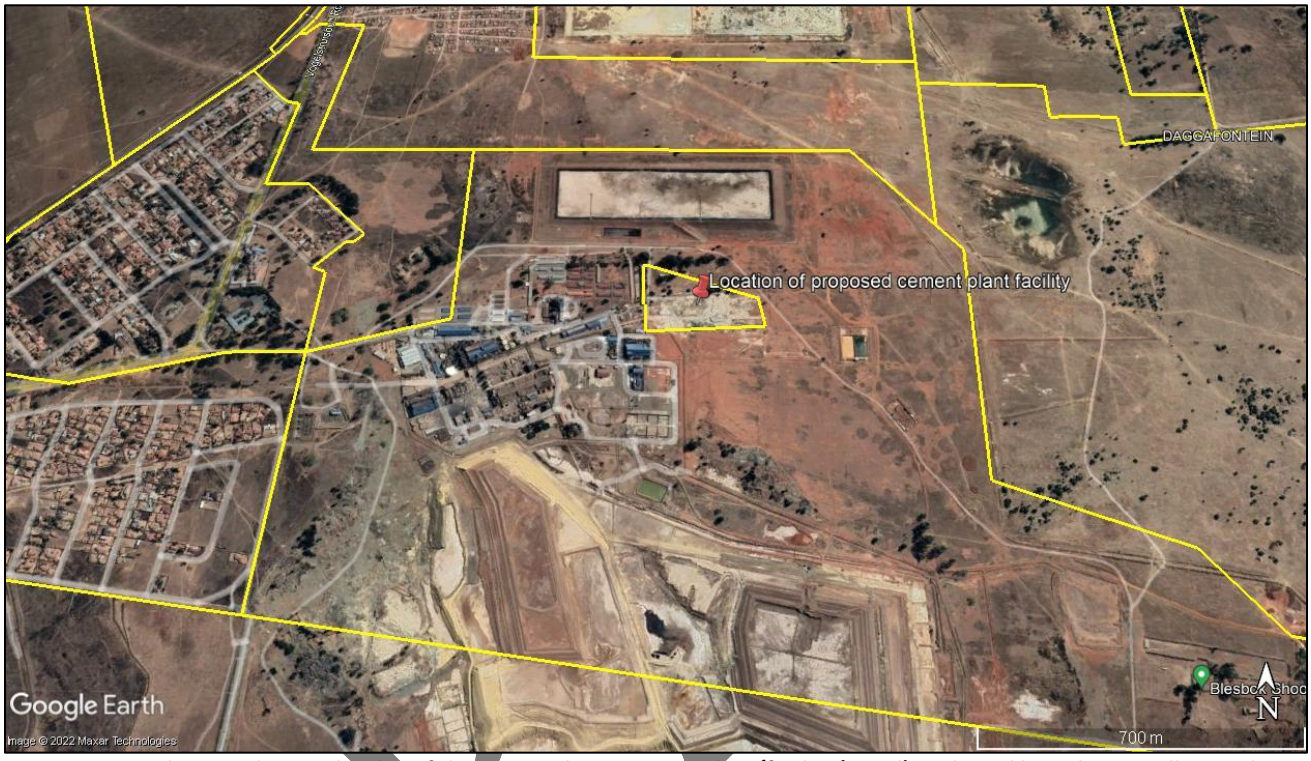



***Figure 1: Aerial image showing locality of the proposed new cement plant/facility (in red); cadastral boundary in yellow outline (Source: Google Earth, 2017).***

In terms of the National Environmental Management Act (NEMA) (Act 107 of 1998), EIA Regulations 2014 (as amended 2017), the proposed new facility will require Environmental Authorisation via a Scoping & EIR process. The competent authority that will either accept or reject the application is the Gauteng Department of Agriculture and Rural Development (GDARD). The proposed new facility will also require an Air Emissions License in terms of National Environmental Management Air Quality Act (NEMAQA) (Act 39 of 2004), List of Activities (2004) – Category 5.

The current report is a report on the Scoping stage of the Scoping & EIR process and primarily serves to inform interested and affected parties (I&APs) on the following:

- The project background and description;
- The policy and legislative context within which the development is proposed;
- Motivation for the need and desirability for the proposed development;
- Alternative considered for the proposed development, and those alternatives that will be assessed in the EIR phase of the process;
- The environmental attributes associated with the proposed site / alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;
- Potential environmental impacts / issues of the proposal;
- Details of the public consultation process followed during the scoping phase and the issues / concerns raised by I&APs; and

- A description of the tasks that will be undertaken as part of the environmental impact assessment process that includes the methodology for assessing potential environmental impacts of the proposal.

## 2.0 Structure of Draft Scoping Report

This Draft Scoping Report has been prepared in accordance with the Appendix 2 of NEMA EIA Regulations 2014, as amended. The said regulations stipulate that at minimum the content of the scoping report must include the following:

**Table 1: Minimum requirements for the scoping report.**

| Required content as per Appendix 2 of the EIA Regulations (2014, as amended) | Section /page in the scoping report where this has been addressed |
|---|---|
| (a) details of—<br>(i) the EAP who prepared the report; and<br>(ii) the expertise of the EAP, including a curriculum vitae; | Page 2, Appendix 1 |
| (b) the location of the activity, including—<br>(i) the 21 digit Surveyor General code of each cadastral land parcel;<br>(ii) where available, the physical address and farm name;<br>(iii) where the required information in items (i) and (ii) is not available, the coordinates of the boundary of the property or properties; | Section 7.1 |
| (c) a plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is—<br>(i) a linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or<br>(ii) on land where the property has not been defined, the coordinates within which the activity is to be undertaken; | Section 7.1, Appendix 2 |
| (d) a description of the scope of the proposed activity, including—<br>(i) all listed and specified activities triggered;<br>(ii) a description of the activities to be undertaken, including associated structures and infrastructure; | Section3 |
| (e) a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process; | Section 5 |
| (f) a motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location; | Section 4 |
| (g) a full description of the process followed to reach the proposed preferred activity, site and location of the development footprint within the site, including—<br>(i) details of all the alternatives considered;<br>(ii) details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs;<br>(iii) a summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them;<br>(iv) the environmental attributes associated with the alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;<br>(v) the impacts and risks which have informed the identification of each alternative, including the nature, significance, consequence, extent, duration and probability of such identified impacts, including the degree to which these impacts—<br>(aa) can be reversed; | (i) Section 6<br>(ii) Section 9<br>(iii) Section 9.4<br>(iv) Section 7<br>(v) Section 8<br>(vi) Section 8<br>(vii) Section 8<br>(viii) Section 8<br>(ix) Section 8<br>(x) Section 7<br>(xi) Section 7 |

| Required content as per Appendix 2 of the EIA Regulations (2014, as amended) | Section /page in the scoping report where this has been addressed |
|---|---|
| (bb) may cause irreplaceable loss of resources; and<br>(cc) can be avoided, managed or mitigated;<br>(vi) the methodology used in identifying and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives;<br>(vii) positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects;<br>(viii) the possible mitigation measures that could be applied and level of residual risk;<br>(ix) the outcome of the site selection matrix;<br>(x) if no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and<br>(xi) a concluding statement indicating the preferred alternatives, including preferred location of the activity; | |
| (h) a plan of study for undertaking the environmental impact assessment process to be undertaken, including—<br>(i) a description of the alternatives to be considered and assessed within the preferred site, including the option of not proceeding with the activity;<br>(ii) a description of the aspects to be assessed as part of the environmental impact assessment process;<br>(iii) aspects to be assessed by specialists;<br>(iv) a description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists;<br>(v) a description of the proposed method of assessing duration and significance;<br>(vi) an indication of the stages at which the competent authority will be consulted;<br>(vii) particulars of the public participation process that will be conducted during the environmental impact assessment process; and<br>(viii) a description of the tasks that will be undertaken as part of the environmental impact assessment process;<br>(ix) identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored. | Section 10 |
| (i) an undertaking under oath or affirmation by the EAP in relation to—<br>(i) the correctness of the information provided in the report;<br>(ii) the inclusion of comments and inputs from stakeholders and interested and affected parties; and<br>(iii) any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested or affected parties; | Page 3 |
| (j) an undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment; | Page 3 |
| (k) where applicable, any specific information required by the competent authority; and | N/A |

| Required content as per Appendix 2 of the EIA Regulations (2014, as amended) | Section /page in the scoping report where this has been addressed |
|---|---|
| (l)any other matter required in terms of section 24(4)(a) and (b) of the Act. | N/A |

## 3.0 Project Description

The applicant, Opsibuzz (Pty) Ltd, proposes the construction and operation of a new cement (facility) located on Portion 192 of Farm 125, Daggafontein, Springs within Ekurhuleni Local Municipality (hereafter referred to as the Springs cement grinding facility).

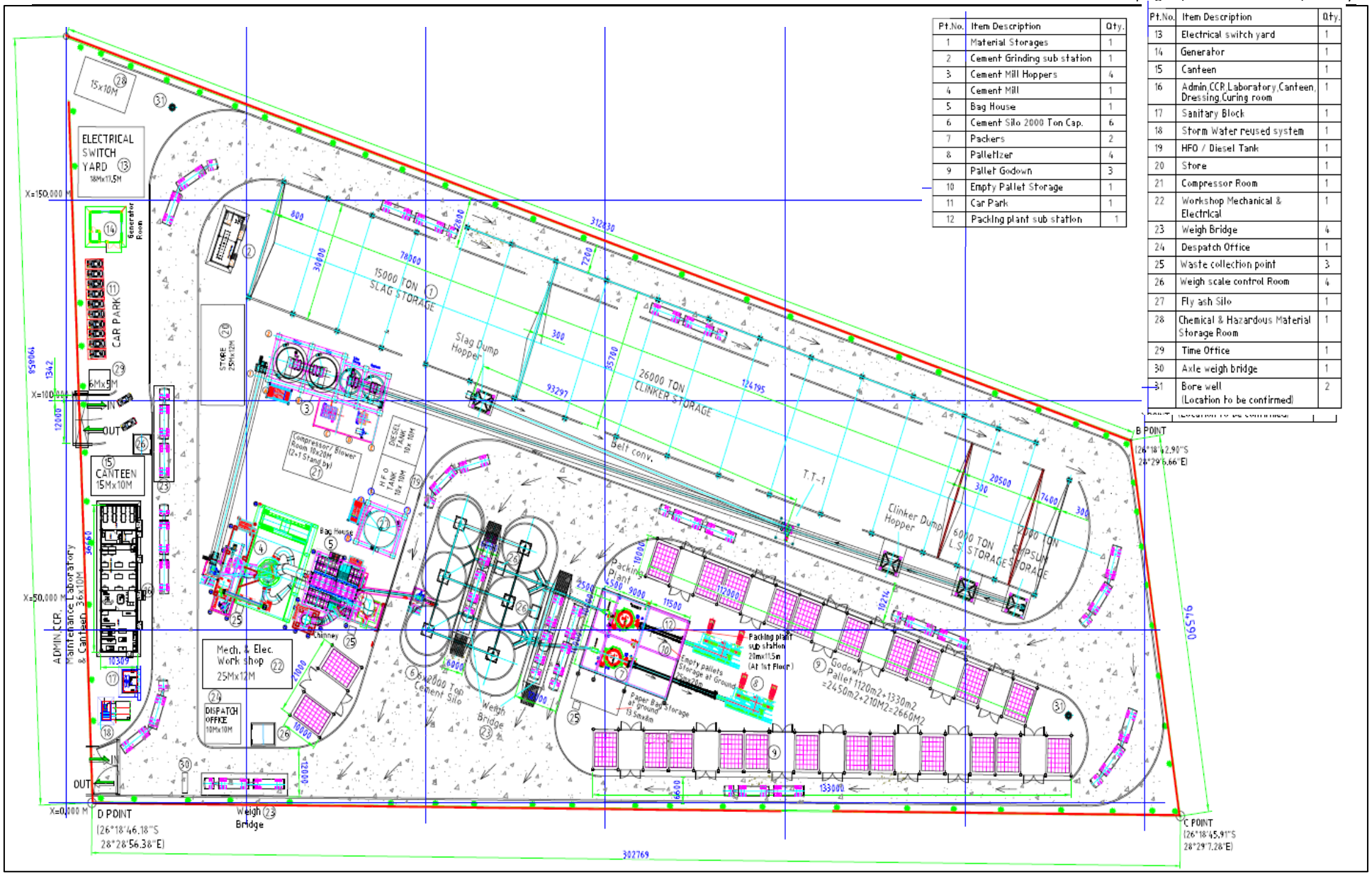
### 3.1 Site Layout

The proposed new facility will include the following areas / structures and/or infrastructure (Table 1, Figure 2, Appendix 2):

***Table 2: List of areas, structures and /or structures that have been allocated within the cement facility***

| No of structures to located within the facility | Description of structure / infrastructure within the facility | | Capacity of storage area / plant | Unit of measurement |
|---|---|---|---|---|
| 1 | Raw Material Storage Area | | 49 000 | tons |
| 1 | Cement Grinding sub-station | | - | - |
| 4 | Cement Mill Hoppers | Clinker | 600 | tons |
| | | Slag | 600 | tons |
| | | Limestone | 300 | tons |
| | | Gypsum | 300 | tons |
| 1 | Cement Mill | | 150 | Tons per hour |
| 1 | Bag House | | - | - |
| 6 | Cement Silo | | 2000 | |
| 2 | Packers | | 150 | Tons per hour (TPH) with the palletizer |
| 4 | Palletizer | | - | - |
| 3 | Pallet Go-down | | - | - |
| 1 | Empty Pallet Storage | | - | - |
| 1 | Car Park | | - | - |
| 1 | Packing Plant sub-station | | - | - |
| 1 | Electrical Switch Yard | | - | - |
| 1 | Generator | | - | - |
| 1 | Canteen | | - | - |
| 1 | Admin, CCR, Laboratory, Canteen, Dressing and Curing Room | | - | - |
| 1 | Sanitary Block | | - | - |
| 1 | Storm Water reused system | | - | - |
| 1 | Heavy Fuel Oil (HFO) Tank | | 150 | $m^3$ |
| 1 | Diesel Tank | | 100 | $m^3$ |
| 1 | Store | | - | - |
| 1 | Compressor Room | | - | - |
| 1 | Workshop – Mechanical and Electrical | | - | - |
| 4 | Weigh Bridge | | - | - |
| 1 | Despatch Office | | - | - |
| 3 | Waste Collection Point | | - | - |
| 4 | Weigh scale control room | | - | - |
| 1 | Fly ash Silo | | 1500 | tons |
| 1 | Chemical and Hazardous Material Storage Room | | - | - |

| | | | |
|---|---|---|---|
| 1 | Time Office | - | - |
| 1 | Axle weigh bridge | - | - |
| 2 | Bore well (location to be confirmed) | - | - |




| Pt.No. | Item Description | Qty. |
|---|---|---|
| 1 | Material Storages | 1 |
| 2 | Cement Grinding sub station | 1 |
| 3 | Cement Mill Hoppers | 4 |
| 4 | Cement Mill | 1 |
| 5 | Bag House | 1 |
| 6 | Cement Silo 2000 Ton Cap. | 6 |
| 7 | Packers | 2 |
| 8 | Palletizer | 4 |
| 9 | Pallet Godown | 3 |
| 10 | Empty Pallet Storage | 1 |
| 11 | Car Park | 1 |
| 12 | Packing plant sub station | 1 |

| Pt.No. | Item Description | Qty. |
|---|---|---|
| 13 | Electrical switch yard | 1 |
| 14 | Generator | 1 |
| 15 | Canteen | 1 |
| 16 | Admin,CCR,Laboratory,Canteen, Dressing,Curing room | 1 |
| 17 | Sanitary Block | 1 |
| 18 | Storm Water reused system | 1 |
| 19 | HFO / Diesel Tank | 1 |
| 20 | Store | 1 |
| 21 | Compressor Room | 1 |
| 22 | Workshop Mechanical & Electrical | 1 |
| 23 | Weigh Bridge | 4 |
| 24 | Despatch Office | 1 |
| 25 | Waste collection point | 3 |
| 26 | Weigh scale control Room | 4 |
| 27 | Fly ash Silo | 1 |
| 28 | Chemical & Hazardous Material Storage Room | 1 |
| 29 | Time Office | 1 |
| 30 | Axle weigh bridge | 1 |
| 31 | Bore well (Location to be confirmed) | 2 |

***Figure 2: Preliminary Layout of the proposed new Springs cement grinding facility (Source: Cemza, 2022).***

### 3.2 Process Description

The following section provides a description of the cement production process that will be undertaken at the proposed new facility. The proposed new facility will produce Portland cement and other grades of cement using a mix of clinker, slag, limestone and gypsum.

Cement is a powdery substance made from a mixture of natural elements, such as limestone, clay, sand and gravel which when combined with water forms a solid mass called concrete. Grades and/or quality of cement are usually determined by the amount of time taken for the cement to harden into concrete as well as the final strength of the cement. Skyscrapers for example require the highest and strongest grade of cement whereas cement needed for paving pathways does not need to meet the same strength grade. In order to vary the type and grades of cement produced, the clinker would be mixed in different proportions (recipes) with extenders such as slag, fly ash, limestone, etc. The main extender in this process will be Slag which is a by-product of the steel industry. (GIBB, 2013)

#### 3.2.1 Summary of Operational Process

The operational process can be broken into 4 main components, namely: Raw material handling, Cement milling, Cement storage and Packaging and palletizing.

**Step 1: Raw Material handling**

- Raw materials (i.e. slag, clinker, limestone and gypsum) will be received via road and stockpiled in the material storage area (Point 1 on layout).
- The raw materials will then be transferred to the milling (point 4 on layout) / drying area via a conveyor system through the mill hoppers (point 3 on layout).

**Step 2: Cement milling / drying**

- Raw materials will be extracted from the respective feed bins using weigh feeders. The weights are proportioned according to the pre-programmed recipes.
- Larger particles of Granulated Blast Furnace Slag (GBFS) will then be separated by use of a belt magnet and metal detectors which is to be removed for recycling.
- The grinding system employed by the applicant is among the most modern and energy efficient vertical roller mill (point 4 on the layout) – refer to section 3.2.2 for a detailed description of the process used in the mill.
- Materials will be ground in the mill via a rotary feeder
- Water and grinding aid will be added into the mills in accurate dosages.
- The ground material will then be passed through the classifier via the hot gas generator. Partially ground material may be trapped as it passes through the classifier, these particles will be recycled through the mill.
- The ground product in powder form is the final product.

**Step 3: Cement storage**

- Product will be separated via a baghouse filter system (point 5 on the layout).
- The product from the filters will be lifted to the product storage silos (point 6 on the layout) by bucket elevator, air slide and distributor system and material is conveyed into the four storage silos.

**Step 4: Packaging and palletizing**

- Product will be extracted from the silos and packed with an automated duel packer (point 7 on the layout) and palletizer (point 8 on the layout) configuration.

The following diagram provides an overview of lifecycle of the proposed facility:

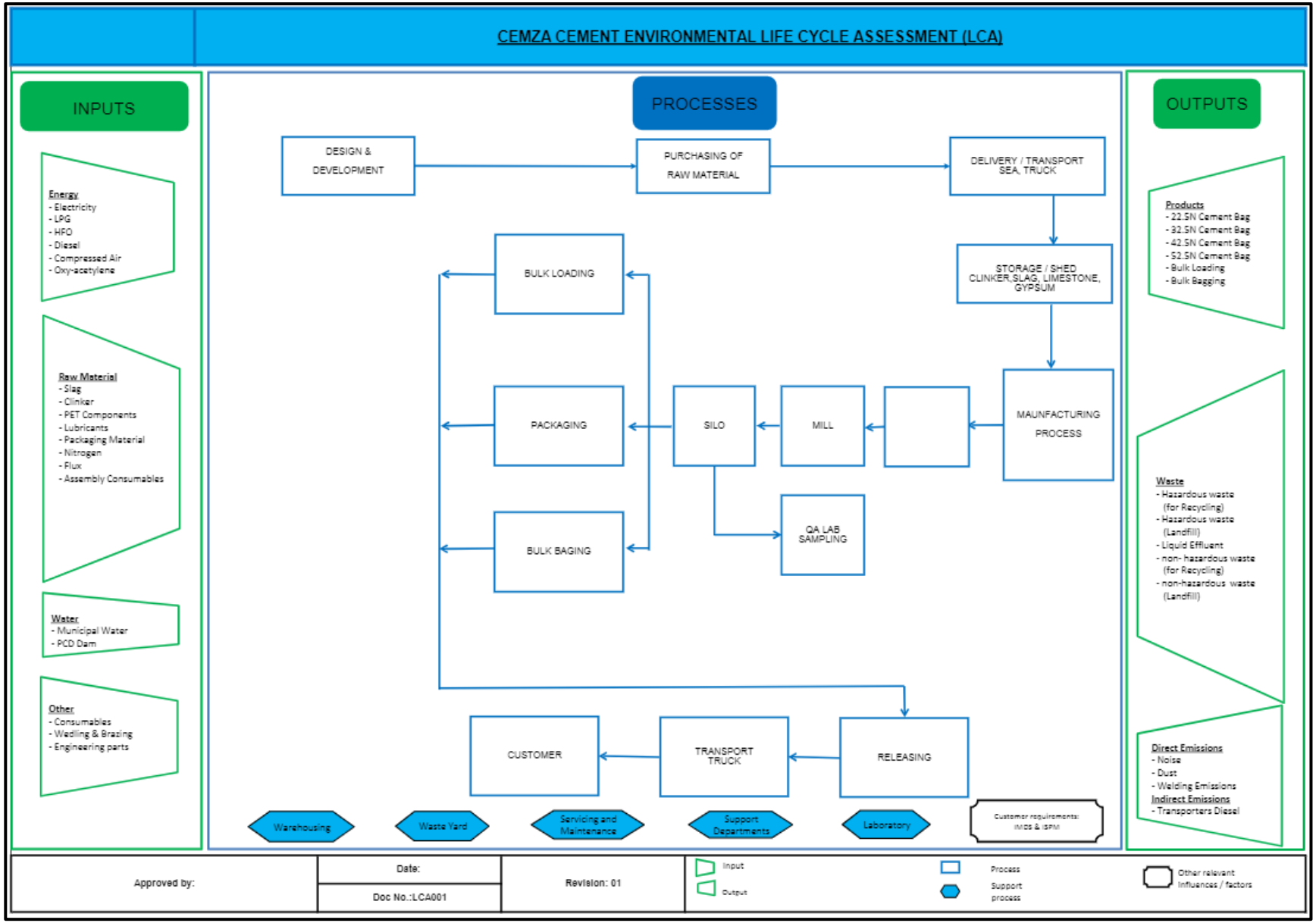



Figure 3: Overview of the operational process to be implemented at the proposed new Springs cement grinding facility (CEMZA, 2022).

### 3.2.2 The Vertical Roller Mill Process

The vertical roller mill consists of horizontal rollers running over a grooved rotating table. The large particles are forced between the rollers and the table and fractured into far smaller particles in the process. The ground particles are lifted by an air current sweeping through the mill into an integrated separator above the mill. (GIBB, 2013)

The separator returns insufficiently ground particles back to the grinding table and releases the fine ones to a down-stream bag filter where they are separated from the dust laden air. (GIBB, 2013)

The below is an example picture and schematic of a vertical roller mill (Figure 3). The exact model and make of the mill will only confirmed during the construction phase of the project.

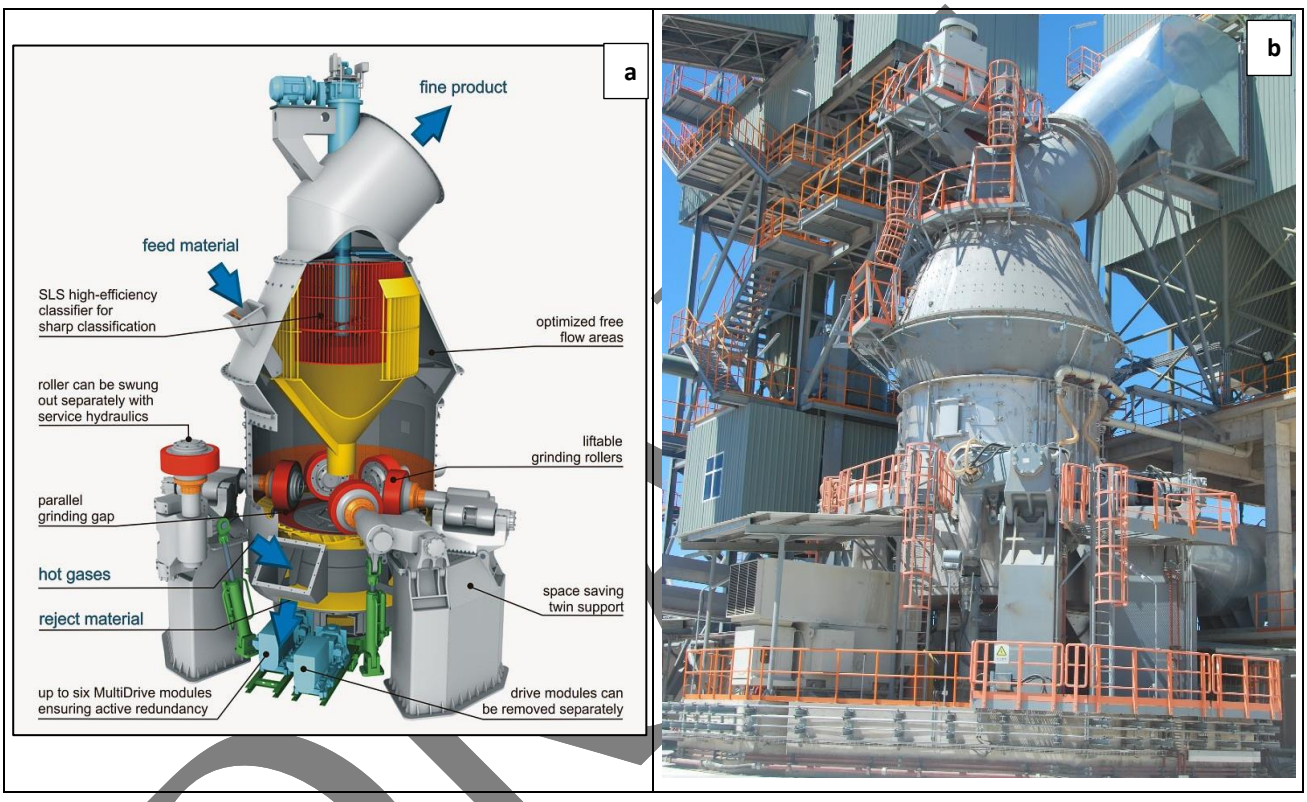



***Figure 4: (a) Example schematic diagram[1] of a vertical roller mill, (b) picture of a the outside of a vertical roller mill located at a CEMZA site.***

### 3.2.3 Heavy Fuel Oil (HFO) and Diesel Tanks

The process will use heat during the milling process and this will be achieved using HFO and diesel during the heating / drying process. As a result, the applicant will construct two fuel tanks for the storage of HFO and diesel. The tanks will be located near the bag house and compressor room as shown on the layout (Figure 2) (point 19). The tanks will be located above ground on impermeable bunded surfaces. All tanks will be SABS accredited and installed by SABS accredited suppliers. The HFO tank will have a capacity of 150cm$^3$ and the diesel tank will have a capacity of 100cm$^3$.

## 4.0 Description of the Need and Desirability of the Proposed Activity

According to the Department of Environmental Affairs Integrated Environmental Management Guideline on Need and Desirability (2017), the need and desirability of a proposed development forms a key component of any EIA application. The concept of "need and desirability" relates to, amongst others, the *nature, scale* and *location* of development being proposed, as well as the *wise use of land*. While essentially, the concept of "need and desirability" can be explained in

[1] Accessed via: *vertical roller mill cement schematic - Bing images* 08/04/2022.

terms of the general meaning of its two components in which *need* primarily refers to *time* and *desirability* to *place* (i.e. is this the right time and is it the right place for locating the type of land-use/activity being proposed?), "need and desirability" are interrelated and the two components collectively can be considered in an integrated and holistic manner. The Western Cape Department of Environmental Affairs and Development Planning (DEA&DP) provides a concise approach to determining and describing the need and desirability in the EIA Guideline and Information Document series on Need and Desirability (2010).

The Ekurhuleni Integrated Development Plan (IDP) (2019) and Budget aims at continuously improving the Municipalities 5-year objectives. The Ekhurhuleni Integrated Development Plan (IDP) (2019) aims at re-enforcing the "Pro-Poor" agenda which focuses on accelerating and broadening access to quality municipal services to the poor. The IDP maps out the future of the municipality over the short, medium, and long-term. Issues highlighted include spatial planning, disaster management, finances, performance targets, and economic development. The IDP is a 5-year plan that aims to facilitate the implementation of the City's long term planning framework which is the Growth and Development Strategy (GDS 2055). The GDS 2055 sets out to establish a high performing municipality that will be committed to building a socially inclusive, locally integrated and competitive global player modelled from the Gauteng City Region.

**City-region integration imperatives:**

"Gauteng provincial government's policy priorities and its medium to long term programme of radical socio-economic transformation emphasize the three themes of Transformation, Modernisation and Re-industrialization (TMR). This is the provinces long term vision of building the Gauteng City Region (GCR) of a Metropolitan System of Governance. The Development of the GCR is anchored on the TMR and its Ten Pillar programme:"

- Radical economic transformation;
- Decisive spatial transformation;
- Accelerating social transformation;
- Transformation of the state and governance;
- Modernisation of the public service;
- Modernisation of the economy;
- Modernization of human settlements;
- Modernisation of public transport;
- Re-industrialise Gauteng and south Africa; and
- Take a lead in Africa's new industrial revolution.

In accordance with the DEA&DP 2010 guideline on need and desirability, the following motivation is provided for the need and desirability of the proposal:

***Table 3: Motivation for the Need and Desirability of the proposal.***

| Question (as per the DEA&DP, 2010 guideline on need & desirability) | Motivation / Response |
|---|---|
| Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved Spatial Development Framework (SDF) agreed to by the relevant environmental authority? (i.e., is the proposed development in line with the projects and programmes identified as priorities within the credible IDP). | **YES:** According to the Ekurhuleni IDP (2019) the proposed Springs cement facility falls within the Tambo Springs Logistic Hub. The Tambo Springs Logistic Hub is a 600ha industrial development on the southern edge of the Ekurhuleni Metropolitan Municipality. The Tambo Hub is aimed at combining all aspects of warehousing, distribution and operation efficiencies into one area. The proposed facility located at Springs is therefore proposed to contribute to Ekurhuleni's |

| Question (as per the DEA&DP, 2010 guideline on need & desirability) | Motivation / Response |
|---|---|
| | Strategic Urban Developments to industrialise the Springs area (Ekurhuleni SDF, 2019).<br><br>The Springs site is currently zoned as Gauteng Provincial Environmental Management Framework (GPEMF) Zone 5 (i.e. industrial and commercial focus zone). The proposed facility is thus in line with the proposed land use as part of the Ekurhuleni Municipality SDF (2019). |
| Should development, or if applicable, expansion of the town/area concerned in terms of this land use (associated with the activity being applied for) occur here at this point in time? | **YES:** The proposed development is located within the Tambo Springs Logistic Hub and thus will contribute to the industrialization of the Springs area. The proposed new plant is expected to have a positive impact by providing job opportunities and contributing to the Sustainable Development Provincial Framework (SDPF) (2014) by promoting industrialisation to achieve economic growth.<br><br>According to IOL (2022) industrial construction activities in the inland areas of South Africa (including Gauteng) shows a growth demand for the construction of distribution centres and mining activities. Thus, the proposed development will aid in supplying the increased demand for construction materials.<br><br>As of November 2021, the National Treasury of South Africa prohibited the use of imported cement on all government funded projects (Leads 2 Business, 2021). Thus, the proposed facility will provide the Gauteng province with locally supplied cement to promote industrialization.<br><br>This is in line with the Ekurhuleni IDP (2019) and SDF (2019) as the proposed new plant will provide locally produced cement to aid in industrializing the Gauteng area. |
| Does the community/area need the activity and the associated land use concerned (is it a societal priority)? This refers to the strategic as well as local level (e.g. development is a<br><br>national priority, but within a specific local context it could be inappropriate) | **YES:** As per above. |
| Are the necessary services with adequate capacity currently available (at the time of application), or must | **YES:** The site will be accessed via existing access roads. |

| Question (as per the DEA&DP, 2010 guideline on need & desirability) | Motivation / Response |
|---|---|
| additional capacity be created to cater for the development? | **Bulk water supply -** The proposed Plant requires 1.8Ml / month recycled water an eventually supplemented by a borehole. The water will be supplied from municipal source.<br><br>**Electricity supply -** Opsibuzz will require 8MVA as Maximum demand to run the plant and is in communication with the Ekurhuleni Municipality regarding the power supply.<br><br>**Sewage** - Opsibuzz intends to connect to the municipal lines. The applicant is in communication with the municipality regarding confirmation of capacity.<br><br>**Effluent -** Opsibuzz intends to connect to the municipal lines. In communication with the municipality.<br><br>**Stormwater** - The stormwater system will be designed based on the requirements of the Stormwater Management Plan and Government Notice No. GN704 dated 4 June 1999. |
| Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? | **YES**: The proposed Springs Cement facility supports the City's strategic objectives of Decisive Spatial Transformation and Re-industrialisation of the Ekurhuleni IDP (2018). As of November 2021, the National Treasury of South Africa prohibited the use of imported cement on all government funded projects (Leads 2 Business, 2021).<br><br>Thus, the proposed Springs development will provide the Gauteng Human Settlement Developments of the Strategic Infrastructure Projects (SIPS) (i.e. Lufhereng, Malibongwe, Green Creek, Mooikloof Mega Residential City, Fochville Extension 11, etc.) with locally supplied cement to promote the industrialization of the Gauteng.<br><br>The local municipality will be provided opportunity to comment on the pre-application, draft and final Scoping Reports, EIR. |
| Is this project part of a national programme to address an issue of national concern or importance? | **Indirectly:** As of November 2021, the National Treasury of South Africa prohibited the use of imported cement on all government funded projects (Leads 2 Business, 2021).<br><br>Thus, the proposed Springs development will provide the Gauteng Human Settlement Developments of the |

| Question (as per the DEA&DP, 2010 guideline on need & desirability) | Motivation / Response |
|---|---|
| | Strategic Infrastructure Projects (SIPS) (i.e. Lufhereng, Malibongwe, Green Creek, Mooikloof Mega Residential City, Fochville Extension 11, etc.) with locally supplied cement to promote the industrialization of the Gauteng. |
| Is the development the best practicable environmental option for this land/site? | **YES:** The proposed activity has been designed to meet environmental, social, economic and sustainability objectives. It must be noted that the purpose of the Scoping process and the various specialist studies is to ensure that the proposed activity proceeds according to the Best Possible Environmental Option (BPEO). |
| Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF as agreed to by the relevant authorities. | **NO:** The proposed facility is in line with the Ekurhuleni IDP (2019) and SDF (2019) as the proposed new plant will provide locally produced cement to aid in industrializing the Gauteng area. |
| Would the approval of this application compromise the integrity of the existing environmental management priorities for the area (e.g., as defined in EMFs), and if so, can it be justified in terms of sustainability considerations? | **NO:** According to the Ekurhuleni IDP (2019) the proposed Springs cement facility falls within the Tambo Springs Logistic Hub. The Tambo Springs Logistic Hub is a 600ha industrial development on the southern edge of the Ekurhuleni Metropolitan Municipality. The Tambo Hub is aimed at combining all aspects of warehousing, distribution and operation efficiencies into one area. The proposed facility located at Springs is therefore proposed to contribute to Ekurhuleni's Strategic Urban Developments to industrialise the Springs area (Ekurhuleni SDF, 2019).<br><br>The Springs cement facility is located on a site that is currently zoned as Gauteng Provincial Environmental Management Framework (GPEMF) Zone 5 (i.e. industrial and commercial focus zone). The proposed facility is thus in line with the proposed land use as part of the Ekurhuleni Municipality SDF (2019). |
| Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context). | **YES:** According to the GPEMF, the site is currently zoned as Zone 5 (i.e. industrial and commercial focus zone). The proposed facility is thus in line with the proposed land use as part of the Ekurhuleni Municipality SDF (2019).<br><br>The site was previously disturbed as it was developed as a metal and/or wood plant. |

| Question (as per the DEA&DP, 2010 guideline on need & desirability) | Motivation / Response |
|---|---|
| | Specialist investigations will be undertaken to determine if there are any sensitive areas within the proposed facility. |
| How will the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas (built and rural/natural environment)? | Specialist studies are to be undertaken to determine the environmental sensitivity of the area. A Heritage Impact Assessment will be undertaken as the site exceeds 5 000m$^2$ in extent. Recommendations of the various specialist reports will be incorporated into the site-specific EMPr.<br><br>The site was previously disturbed as it was developed as a metal and/or wood plant |
| How will the development impact on people's health and wellbeing (e.g., in terms of noise, odours, visual character and sense of place, etc.)? | The proposed facility is expected to have a positive impact by providing job opportunities and contributing to the Ekurhuleni IDP (2018) by promoting industrial land use and reducing unemployment and poverty.<br><br>The Springs site is currently zoned as GPEMF zone 5 (i.e. industrial and commercial focus zone) and thus the proposed construction and operation of the cement plant is in line with the current zoning of the site. |
| Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs? | An impact assessment of the proposed facility will be undertaken to determine the risks/impacts of the proposed facility. |
| Will the proposed land use result in unacceptable cumulative impacts? | No. |

## 5.0 An Identification of All Legislation and Guidelines that Have Been Considered in the Preparation of this report

The sections to follow provides a description of the legislation, guidelines and regulations considered during the drafting of this report. This report is compiled in terms of the National Environmental Management Act (Act 107 of 2008): Environmental Impact Assessment (EIA) Regulations of 2014, as amended on the 07 April 2017.

### 5.1 Environmental Resource Protection and Management

The environmental legislation allows for the effective protection of the environment. Development is considered to key to economic growth and has the potential to negatively impact the environment. The following is a list of legislation pertaining to Environmental Resource Protection and Management that has been reviewed in respect of the proposal:

***Table 4: Legislation Applicable to Environmental Resource Protection and Management***

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| **National Environmental Management Act (Act 107 of 1998) (NEMA)** | As stated in the Act, it provides for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; to provide for certain aspects of the administration and enforcement of |

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| | other environmental management laws; and to provide for matters connected therewith.<br><br>The Act further provides a framework for the protection and conservation of the environment.<br><br>**Applicability to project:** ***The proposed project includes the release of emissions and the storage of dangerous goods. As such the development activity requires environmental authorisation in terms of the said Act.*** |
| **National Environmental Management: Biodiversity Act (Act 10 of 2004)** | "To provide for the management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; the protection of species and ecosystems that warrant national protection; the sustainable use of indigenous biological resources; the fair and equitable sharing of benefits arising from bioprospecting involving indigenous biological resources; the establishment and functions of a South African National Biodiversity Institute; and for matters connected therewith."<br><br>**Applicability to project:** ***The proposed site is not located within any sensitive, protected or CBA area.*** |
| **National Environmental Management Protected Areas Act (Act 57 of 2003)** | Purpose: "To provide for the protection and conservation of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes and seascapes; for the establishment of a national register of all national, provincial and local protected areas; for the management of those areas in accordance with national norms and standards; for intergovernmental co-operation and public consultation in matters concerning protected areas; and for matters in connection therewith."<br><br>**Applicability to project:** ***The proposed site is not located within any sensitive, protected or CBA area.*** |
| **National Forest Act (Act 84 of 1998)** | Purpose: "The purposes of this Act are to—<br>(a) promote the sustainable management and development of forests for the benefit of all;<br>(b) create the conditions necessary to restructure forestry in State forests;<br>(c) provide special measures for the protection of certain forests and trees;<br>(d) promote the sustainable use of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes;<br>(e) promote community forestry;<br>(f) promote greater participation in all aspects of forestry and the forest products industry by persons disadvantaged by unfair discrimination."<br><br>**Applicability to project:** ***The proposed facility will take place on a site that was previously developed. There are a few scattered trees.*** |
| **National Heritage Resources Act (25 of 1999)** | Purpose: "To introduce an integrated and interactive system for the management of the national heritage resources; to promote good governance at all levels, and empower civil society to nurture and conserve their heritage resources so that they may be bequeathed to future generations; to lay down general principles for governing heritage resources management throughout the Republic; to introduce an integrated system for the identification, assessment and management of the heritage resources of South Africa; to establish the South African Heritage Resources Agency together with its Council to co-ordinate and promote the management of heritage resources at national level; to set norms and maintain essential national standards for the management of heritage resources in the Republic and to protect heritage resources of national significance; to control the export of nationally significant |

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| | heritage objects and the import into the Republic of cultural property illegally exported from foreign countries; to enable the provinces to establish heritage authorities which must adopt powers to protect and manage certain categories of heritage resources; to provide for the protection and management of conservation-worthy places and areas by local authorities; and to provide for matters connected therewith."<br><br>**Applicability to project:** ***The proposed development extends over 5000m² therefore requires a Heritage Impact Assessment (HIA).*** |
| **Conservation of Agricultural Resources Act (Act 43 of 1983)** | "To provide for control over the utilization of the natural agricultural resources of the Republic in order to promote the conservation of the soil, the water sources and the vegetation and the combating of weeds and invader plants; and for matters connected therewith."<br><br>**Applicability to project:** ***During both the construction and operational phase of this development provision will be made for the protection of watercourses and removal of declared weeds and alien invader plants.*** |
| **Kyoto Protocol to the United Nations Framework Convention on Climate Change (1998)** | "Requires developed country signatories to implement and/or further elaborate policies and measures in order to achieve quantified emission limitation and reduction commitments in order to promote sustainable development."<br><br>**Applicability to project:** ***The development will use sustainable measures and resources where possible.*** |
| **Paris Convention for the Protection of the World Cultural and Natural Heritage (1975)** | This convention imposes an obligation on State Parties to ensure that effective and active measures are taken for the protection, conservation and presentation of the cultural and natural heritage situated on its territory.<br><br>**Applicability to project:** ***As per the National Heritage Resources Act (25 of 1999).*** |
| **Convention on the Conservation of Migratory Species of Wild Animals (CMS)** | "As an environmental treaty under the aegis of the United Nations Environment Programme, CMS provides a global platform for the conservation and sustainable use of migratory animals and their habitats. CMS brings together the States through which migratory animals pass, the Range States, and lays the legal foundation for internationally coordinated conservation measures throughout a migratory range." "CMS acts as a framework Convention. The agreements may range from legally binding treaties (called Agreements) to less formal instruments, such as Memoranda of Understanding, and can be adapted to the requirements of particular regions. The development of models tailored according to the conservation needs throughout the migratory range is a unique capacity to CMS."<br><br>**Applicability to project:** ***The site does not serve as corridor for migration of wild animals.*** |
| **Bill of Rights (Chapter 2 (24) of the Constitution of the Republic of South Africa)** | "Everyone has the right<br>a. to an environment that is not harmful to their health or well-being, and<br>b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:<br>i. prevent pollution and ecological degradation;<br>ii. promote conservation, and<br>iii. secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development." |

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| | **Applicability to project:** ***The proposed project will provide needed construction materials for the province as well as create job opportunities. The development will use sustainable measures and resources where possible.*** |
| **Gauteng Environmental Management Framework (GPEMF) (2014)** | The Gauteng Department of Agriculture and Rural Development (GDARD) decided to produce an Environmental Management Framework for the whole of Gauteng (GPEMF). The GPEMF replaces all other EMFs in Gauteng with the exception of the Cradle of Humankind World Heritage Site which is incorporated within the GPEMF. The objective of the GPEMF is to guide sustainable land use management within the Gauteng Province.<br><br>**Applicability to project:** ***The proposed project will be located in an area that falls outside of an environmental sensitive area. The site is located in an area that is currently zoned as Gauteng Provincial Environmental Management Framework (GPEMF) Zone 5 (i.e. industrial and commercial focus zone).*** |
| **Gauteng Conservation Plan (2014)** | The Gauteng C-Plan is a systematic biodiversity plan for the province that should be used as a land-use planning and decision-making tool. It details the Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) of the Gauteng Province.<br><br>**Applicability to project: N/A. The site is located outside of any ESA / CBA areas.** |

### 5.2 Water Resource Protection

"Water is fundamental for all life. Without water no person, plant, animal or living organism can survive" (DWAF Guideline). South Africa is a dry country, with a low average rainfall. The rivers are small in comparison with other countries and a number of the larger rivers are shared with other countries. Many of South Africa's existing water resources have been over-used or significantly altered. Everyday people and organisations have an impact on the quality of South Africa's rivers and streams, our groundwater, and wetlands (DWAF Guideline). The following is a list of legislation reviewed for the proposal in terms of Water Resource Protection:

***Table 5: Legislation Applicable to Water Resource Protection***

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| **National Water Act (Act 36 of 1998)** | Purpose: To ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways which take into account factors such as but not limited to facilitating social and economic development, protecting aquatic and associated ecosystems and their biological diversity, reducing and preventing pollution and degradation of water resources.<br><br>**Applicability to project: Water will be obtained from municipal sources for the construction and operation phases of the project. Ground water may be abstracted from a borewell. This may require a water use license, and will be confirmed during the EIA phase but currently falls outside the scope of this assessment.** |
| **National Water Resource Strategy (2013)** | Purpose: The purpose of the second edition of the National Water Resource Strategy (NWRS) is to ensure that national water resources are managed towards achieving South Africa's growth, development and socio-economic priorities in an equitable and sustainable manner over the next five to 10 years. |

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| | ***Applicability to Project: As per previous.*** |
| **National Water Resource Strategy (2013)** | Purpose: The purpose of the second edition of the National Water Resource Strategy (NWRS) is to ensure that national water resources are managed towards achieving South Africa's growth, development and socio-economic priorities in an equitable and sustainable manner over the next five to 10 years.<br><br>**Applicability to project:** ***As per previous.*** |

### 5.3 Waste Management

Waste will be produced during the construction and operation phases of this project. In South Africa, waste management is governed by the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and municipal by-laws. The following is a list of legislation reviewed for the proposal in terms of Waste Management:

***Table 6: Legislation Applicable to Waste Management***

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| **National Environmental Management: Waste Management Act (Act 59 of 2008)** | Purpose: "To reform the law regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development; to provide for institutional arrangements and planning matters; to provide for national norms and standards for regulating the management of waste by all spheres of government; to provide for specific waste management measures; to provide for the licensing and control of waste management activities; to provide for the remediation of contaminated land; to provide for the national waste information system; to provide for compliance and enforcement; and to provide for matters connected therewith."<br><br>**Applicability to project:** ***The development activity does not require a waste license in terms of NEMWA.*** |
| **Integrated Waste Management by-law, 2009 (as amended 2016)** | To regulate the avoidance, minimisation, generation, collection, cleaning and disposal of waste; and for matters related thereto.<br><br>**Applicability to project: N/A** |

### 5.4 Noise Management

South Africa's primary law on noise or acoustics are the National Noise Control Regulations (1992) which form part of the Environmental Conservation Act. These regulations set out limitations to prevent noise pollution that may result during the construction and operation phase of any development. The following is a list of legislation applicable to Noise Management:

***Table 7: Legislation Applicable to Noise Management***

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| **National Noise Control Regulations (1992) in terms of Section 25 of the Environmental Conservation Act, 1989 (Act 73 of 1989)** | These regulations set out general prohibitions and limitations for noise control. |

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| | **Applicability to project:** ***Applicable to noise generated during construction. Noise generated during construction activities will be managed by the Environmental Management Programme (EMPr).*** |

### 5.5 Occupational Health and Safety

Health and safety is governed by the Occupational Health and Safety Act 1993. Construction workers must ensure compliance with the Act during the construction phase of the project to ensure safety of workers and surrounding community members. The following is a list of legislation applicable to Occupational Health and Safety:

***Table 8: Legislation Applicable to Occupational Health and Safety***

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| **Health and Safety Act (Act 85 of 1993)** | "To provide for the health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work against hazards to health and safety arising out of or in connection with the activities of persons at work; to establish an advisory council for occupational health and safety; to provide for matters connected therewith."<br><br>**Applicability to project:** ***Applicable to construction activities. This will be managed by the EMPr.*** |
| **Hazardous Chemical Substance regulations 1995** | These regulations set out the requirements for storage and handling of hazardous chemical substances. In addition, it also provides guidelines for training of staff. Any hazardous chemical substances used in the construction phase of this project must be identified, stored used and disposed of in accordance with this legislation.<br><br>**Applicability to project:** ***Applicable to construction activities. This will be managed by the EMPr.*** |
| **Construction Regulations (2003)** | These Regulations apply to construction employees and provide guidelines for safe operation during construction.<br><br>**Applicability to project:** ***Applicable to construction activities. This will be managed by the EMPr.*** |

### 5.6 Air Quality Management

In terms of The National Environmental Management: Air Quality Act, the act binds South Africa to preventing pollution and to improving and maintaining air quality, not at the expense of socio-economic development but in a way that complements it. The proposed development is located in close proximity to an existing landfill site and as such this act has been considered in this report. The following is a list of legislation applicable has been reviewed for the proposal in terms of Air Quality Management:

***Table 9: Legislation Applicable to Air Quality Management***

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| **National Environmental Management: Air Quality Act (Act 39 of 2004)** | To reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable |

| Applicable Legislation | Purpose and Applicability to Project |
|---|---|
| | economic and social development; to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto.<br><br>**Applicability to project:** ***The proposed development activity requires an Air Emissions License (AEL) due to the use of a Hot Gas Generator at the Cement facility during the operational phase.*** |

### 5.7 Guidelines

The following guidelines were reviewed and considered during the compilation of this report.

**NEMA Implementation Guidelines (GNR 603 of 2010)**

**Purpose:** The purpose of this guideline is to provide a detailed consideration on the practical implementation of the EIA regulations. Specifically, the guideline provides clarity on the processes to be followed when applying for an environmental authorisation in terms of the EIA regulations and gives a comprehensive interpretation of the listed activities.

**DEA Integrated Environmental Management Information Series (0 – 16) (2004)**

**Purpose:** To provide general information on techniques, tools and processes for environmental assessment and management.

**DEAT Guideline 5 (2006): Assessment of Alternatives and Impacts**

**Purpose:** This guideline provides a basic guide to the assessment of alternatives and impacts which are key components of an EIA process. The purpose of the document is to create a common understanding amongst the different role-players what is required in the assessment of alternatives and impacts and alternatives.

**NEMA Public Participation Guideline (2012)**

**Purpose:** This guideline provides guidance on the procedures and the provisions of the public participation process in terms of NEMA and the associated EIA Regulations.

**Western Cape DEA &DP (2010), Guideline on Alternatives**

**Purpose:** To provide guidance on the identification and assessment of alternatives.

**Western Cape DEA &DP (2010), Guideline on Need and Desirability**

**Purpose:** To provide guidance on understanding and establishing the need and desirability of a proposal.

**DEA Integrated Environmental Management Guideline on Need and Desirability (2017)**

**Purpose:** Provides a list of questions that should be addressed when considering the need and desirability of a proposal.

**DEA Guideline on Public Participation (2017)**

**Purpose:** Provides a list of questions that should be addressed when considering the Public Participation Process.

### 5.8 Environmental Impact Assessment Regulations

The NEMA 2014 EIA Regulations (as amended) are applicable to this project. The purpose of the EIA Regulations is to ensure that the impacts of activities for which environmental authorisations are necessary are adequately assessed to enhance the positive environmental impacts, and to ensure that activities which may have an unacceptable, negative effect on the environment are not authorised. Furthermore the regulations are there to ensure that those activities which are suitable for authorisation are approved, with conditions to avoid or mitigate possible detrimental effects.

The 2014 Environmental Impact Assessment (EIA) Regulations (Government Notice (GNR) 326) was promulgated in terms of Section 24(5) of NEMA. The regulations are divided into 3 listing notices, GNR 324, GNR 325 and GNR 327.

GNR327 defines activities which will trigger a Basic Assessment (BA) process and GNR 325 defines activities which trigger an Environmental Impact Assessment (EIA) process. Should activities from both listing notices be triggered, then an EIA process must be followed. GNR 324 defines certain geographically based listed activities per province for which a BA process must be undertaken.

The current proposal is undergoing a Scoping & EIA process as per requirements of GNR 326, NEMA EIA Regulations, 2014 (as amended 2017). The application is being assessed under the 2014 EIA Regulations (as amended) in terms of the following listed activities:

- EIA Regulations, 2014 (as amended 2017) (in terms of Chapter 6 of the National Environmental Management Act, 107 of 1998 as amended) an Application for Environmental Authorisation subject to a Scoping & EIR Process will be submitted to the Gauteng Department of Agriculture and Rural Development (GDARD); and
- GNR 893 of National Environmental Management: Air Quality Act (No. 39 of 300) (NEM: AQA) for the submission of an Atmospheric Emission License (AEL) application to the Air quality Department within the local Ekurhuleni Municipality.

**Application for Environmental Authorisation is being made in respect of the following activities:**

| Listing Notice and Activity Number | Activity Description | Applicability to Project |
|---|---|---|
| GNR 327; Activity 14 | *The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres*. | The proposed project will include the construction and operation of two tanks for the storage of dangerous goods. Once tank will store 150$m^3$ of HFO and the other tank will store 100$m^3$ of diesel. |
| GNR 325; Activity 6 | *The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding–*<br>*(i) activities which are identified and included in Listing Notice 1 of 2014;*<br>*(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;*<br>*(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or* | The proposed facility will include the construction and operation of a cement plant which will release emissions during the operational phase and will thus require an AEL. |

| | | |
|---|---|---|
| | *(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day.* | |

**Application for an AEL is being made in respect of the following Activities:**

| Category of Listed Activity | Sub-category of Listed Activity | Activity Description |
|---|---|---|
| GNR 248: Category 5 | 5.2 | Drying |
| GNR 248: Category 5 | 5.4 | Cement production |

***Category 5: Mineral Processing, Storage and Handling***

***Subcategory 5.2: Drying***

| *Description* | *The drying of mineral solids including ore, using dedicated combustion installations.* | | |
|---|---|---|---|
| *Application* | *Facilities with a capacity of more than 100 tons/month product.* | | |
| *Substance or mixture of substances* | | *Plant status* | *mg/Nm$^3$ under normal conditions of 273 Kelvin and 101.3kPa.* |
| *Common name* | *Chemical symbol* | | |
| ***Particulate matter*** | ***N/A*** | ***New*** | ***50*** |
| | | *Existing* | *100* |
| *Sulphur dioxide* | *$SO_2$* | *New* | *1000* |
| | | *Existing* | *1000* |
| *Oxides of Nitrogen* | *NOx expressed as $NO_2$* | *New* | *500* |
| | | *Existing* | *1200* |

***Subcategory 5.4***

| *Description* | *The presentation of raw materials, production and cooling of Portland cement clinker; grinding and blending of clinker to produce finished cement; and packaging of finished cement.* | | |
|---|---|---|---|
| *Application* | *All installations.* | | |
| *Substance or mixture of substances* | | *Plant status* | *mg/Nm$^3$ under normal conditions of 273 Kelvin and 101.3kPa.* |
| *Common name* | *Chemical symbol* | | |
| *Particulate matter (Separate Raw Mill)* | *N/A* | *New* | *50* |
| | | *Existing* | *100* |
| *Particulate matter (Klin)* | *N/A* | *New* | *1000* |
| | | *Existing* | *1000* |
| *Particulate matter (Cooler ESP)* | *N/A* | *New* | *500* |
| | | *Existing* | *1200* |
| *Particulate matter (Cooler BF)* | *N/A* | *New* | *500* |
| | | *Existing* | *1200* |
| ***Particulate matter (Clinker grinding)*** | ***N/A*** | ***New*** | ***500*** |
| | | ***Existing*** | ***1200*** |
| *Sulphur dioxide* | *$SO_2$* | *New* | *500* |
| | | *Existing* | *1200* |
| *Oxides of Nitrogen* | *NOx expressed as $NO_2$* | *New* | *500* |
| | | *Existing* | *1200* |

## 6.0 Description of Identified Potential Alternatives to the Proposed Activity, Including Advantages and Disadvantages that the Proposed Activity or Alternatives may have on the Environment and the Community that may be Affected by the Activity

The Western Cape Department of Environmental Affairs and Development Planning (DEA & DP) guideline on alternatives has been used as a guide to the identification of feasible alternatives to the proposed activity. The following criteria were used in identifying feasible and reasonable alternatives to the proposed activity:

i. Is the alternative feasible and reasonable?
ii. Does the alternative suit the general purpose of the proposed activity?
iii. Does the alternative align with the need and desirability considerations of the proposed activity?
iv. Is the alternative designed to prevent and minimise negative impacts and to maximise benefits?
v. Does the alternative compromise the integrity of the proposal?
vi. Does the alternative comply with policy and legal requirements?

According to the DEAT Guideline 5 (2006) on the Assessment of Alternatives and Impacts, the Regulations indicate that alternatives that are considered in an assessment process be reasonable and feasible. I&APs must be provided with an opportunity of providing inputs into the process of formulating alternatives. Once a full range of potential alternatives has been identified, the alternatives that could be reasonable and feasible should be formulated as activity alternatives for further consideration during the basic assessment or scoping and EIA process.

Alternatives may include location or site alternatives, activity alternatives, process or technology alternatives, temporal alternatives, land use alternatives or the no-go alternative.

The number of alternatives that are selected for assessment should not be set arbitrarily, but should be determined by the range of potential alternatives that could be reasonable and feasible and should include alternatives that are real alternatives to the proposed activity. The process of selecting alternatives should be clearly documented.

According to the DEA&DP Guideline on Alternatives (2010), alternatives are defined in the NEMA EIA Regulations as "*different means of meeting the general purpose and requirements of the activity*". The "*feasibility*" and "*reasonability*" of and the need for alternatives must be determined by considering, *inter alia*,

*a.* the general purpose and requirements of the activity,
*b.* need and desirability,
*c.* opportunity costs,
*d.* the need to avoid negative impact altogether,
*e.* the need to minimise unavoidable negative impacts,
*f.* the need to maximise benefits, *and*
*g.* the need for equitable distributional consequences.

Based on the above, the following sections discuss the process of selecting the alternatives that have been considered for assessment.

### 6.1 Activity alternatives (i.e. land use)

According to the DEAT (2004) Guideline on the criteria for determining alternatives in EIA (Information series 11), activity alternatives are sometimes referred to as project alternatives, although the term activity can be used in a broad sense to embrace policies, plans and programmes as well as projects. Consideration of such alternatives requires a change in the nature of the proposed activity.

An activity alternative was not considered based on the following: The proposed facility falls within the Tambo Springs Logistic Hub which is aimed at combining all aspects of warehousing, distribution, and operation efficiencies into one area. As such the facility is in line with the Municipal IDP and SDF (2019) in constructing and operating facilities which will industrialise the Springs area.

Furthermore, the proposed site falls within zone five (5) (i.e., industrial, and commercial focus zone) of the Gauteng Provincial Environmental Management Framework (GPEMF, 2018) which permits the facility in terms of land use.

Thus, in accordance with the DEA&DP guideline on assessment of alternatives, activity alternatives were eliminated based on the following:

***Table 10: Consideration of Activity Alternatives***

| Activity Alternatives: | Alternative A1 (Preferred) | Alternative A2 |
|---|---|---|
| **Is the alternative feasible and reasonable?** | **YES.** The objective of the proposed activity is to construct and operate a cement plant and storage of dangerous good which will aid in supplying the increasing demand for construction material in Gauteng. | **NO.** No alternative activity options exist to the proposal. |
| **Does the alternative suit the general purpose of the proposed activity?** | **YES.** The general purpose is supply construction material (i.e., different grades of cement) which is met by the proposed activity. | **NO.** As per previous. |
| **Does the alternative align with the need and desirability considerations of the proposed activity?** | **YES.** As per Section 4.0 of this report. | **NO.** An alternative activity would not meet the need and desirability considerations. |
| **Is the alternative designed to prevent and minimise negative impacts and to maximise benefits?** | **YES.** The impacts identified in Section 8.0 of this report will be assessed in the Draft EIR. | **NO.** As per previous. |
| **Does the alternative compromise the integrity of the proposal?** | **NO**. As per previous. All identified impacts will be mitigated against in the Draft EIR. | **Unknown** as there exists no activity alternatives. |
| **Does the alternative comply with policy and legal requirements?** | **YES.** As per Section 6.0 of this report. | **Unknown** as there exists no site activity alternatives. |

***Table 11: Advantages and Disadvantages of Alternative A1 (preferred)***

| Advantages | Disadvantages |
|---|---|

| | |
|---|---|
| • The proposed facility will provide the Gauteng Province with locally supplied cement to promote industrialization. Furthermore, the facility will aid in supplying the increasing demand for construction material.<br>• The site was previously disturbed by past industrial activity. As such the ecological sensitivity of the site is low.<br>• As per the desktop investigation, no watercourses were identified on the proposed site. | • The activity will result in air emissions contributing to GHG's.<br>• Potential negative impact from surrounding mining activity on the proposed facility. |

**Activity Alternative 1 (preferred):** The proposed construction and operation of a cement facility and storage of dangerous goods on the property described as Portion 192 of the Farm Daggafontein, Springs.

**Activity Alternative A2:** None carried through for assessment as they cannot be considered feasible and/or reasonable.

### 6.2 Technology alternatives

The DEA&DP (2011) guideline on alternatives states that technology alternatives include the option of achieving the same goal by using a different method or process (e.g., 1000 megawatt of energy could be generated using a coal-fired power station or wind turbines).

The following technology alternatives were investigation for the proposed facility:

#### 6.2.1 Equipment Alternatives

The grinding process consumes the most energy in cement production, its energy consumption accounts for more than 70% of the total power consumption in the whole process of cement production (Argico Cement, 2022). The power consumption of the cement grinding accounts for about 40% of the total power consumption of the cement production process (Argico Cement, 2022). Thus, on investigation into technological options, the Vertical Roller Mill (Preferred option) is the most economical and energy efficient option. The different option investigated, and the advantages and disadvantages associated with each are discussed below.

##### 6.2.1.1 Alternative one (1): Vertical Roller Mill (Preferred Option)

The vertical roller mill consists of horizontal rollers running over a grooved rotating table. The large particles are forced between the rollers and the table and fractured into far smaller particles in the process. The ground particles are lifted by an air current sweeping through the mill into an integrated separator above the mill. (GIBB, 2013)

The separator returns insufficiently ground particles back to the grinding table and releases the fine ones to a down-stream bag filter where they are separated from the dust laden air. (GIBB, 2013)

The below is an example picture and schematic of a vertical roller mill (Figure 5). The exact model and make of the mill will only confirmed during the construction phase of the project.

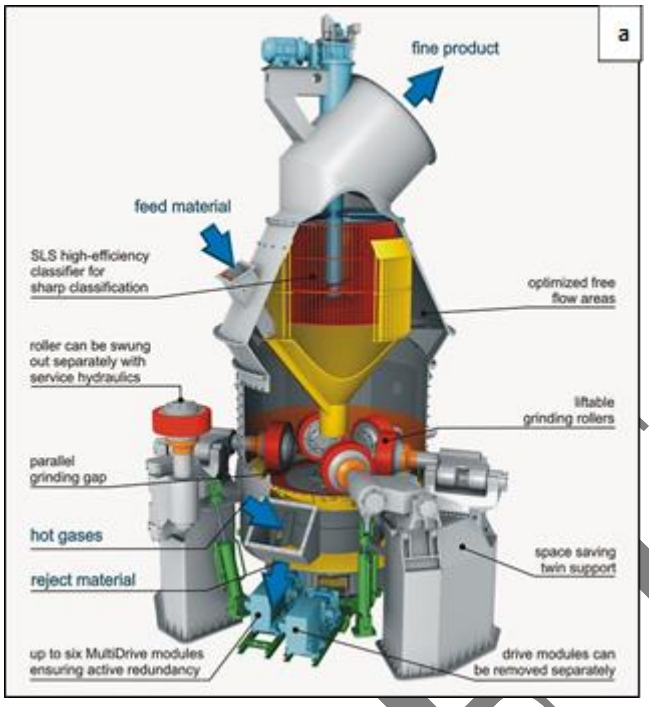



***Figure 5: Example of a vertical roller mill.***

#### 6.2.1.2 Alternative two (2): Ball Mill

A ball mill is a horizontally rotating tube typically filled with round steel balls known as grinding media. The materials to be ground are passed from one end of the tube (the feed end) to the other (GIBB, 2013). En-route these particles are crushed by falling balls and thus get reduced to a fine powder. On exiting the mill, the ground cement transported to an air separator which separates the course particles from the fine particles. The course particles are returned to the mill for re-processing. The fine particles are taken to a bag filter which separates the fine particles from the dust laden air (GIBB, 2013).

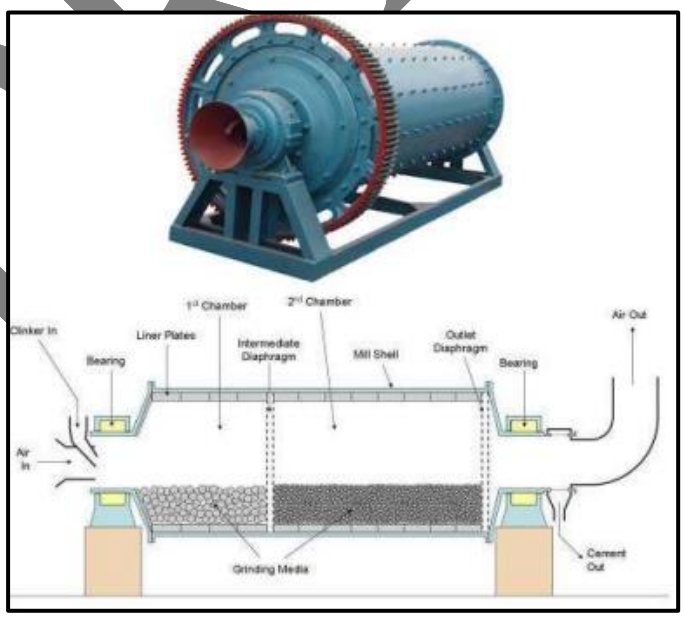



**Figure 6:** ***Example of a Ball Mill***

#### 6.2.1.3 Alternative three (3): Roller Press Ball Mill Combination

The roller press ball mill combination is very similar to a ball mill with one difference (GIBB, 2013). Prior to entering the ball mill material is passed through two rotating rollers which press incoming material and fracture it to a smaller particles size (GIBB, 2013). This material then proceeds through the ball mill in the same fashion as described above (GIBB, 2013).

**Figure 7: Example of a Roller Press Ball Mill Combination**

***Table 12: Advantages and Disadvantages of Technology Alternatives***

| Equipment Alternatives | Advantages | Disadvantages |
|---|---|---|
| **Vertical Roller Mill** | Low noise levels.<br>Low power consumption.<br>Energy efficient.<br>New technology that results in very minimal release of emissions during the production process. | High levels of maintenance. |
| **Ball Mill** | Higher noise levels compared to the vertical roller mill. | Contamination of product may occur as a result of wear and tear which occurs principally from the balls and partially from the casing.<br><br>Relatively long milling time. |
| **Roller Press Ball Mill Combination** | A simple process with less equipment required. | Materials are not sorted. |

### 6.2.2 Process Alternatives

- Alternative one (1) (Preferred Option): Grinding of clinker, GBFS, and other raw materials (Preferred option).
- Alternative two (2): Grinding of clinker only.

***Table 13: Advantages and Disadvantages of Process Alternatives***

| Process Alternatives | Advantages | Disadvantages |
|---|---|---|
| Grinding of clinker, GBFS, and other raw materials | Economically viable.<br><br>High quality cement produced.<br><br>Lower production cost. | Release of air emissions. |

| Process Alternatives | Advantages | Disadvantages |
|---|---|---|
| | Can produce various grades of cement to cater for different construction requirements. | |
| Grinding of clinker only | Produces only one (1) type of cement with high quality values. | Grinding clinker only is difficult to grind compared to other raw materials.<br><br>The material must be ground much finer.<br><br>Higher production cost.<br>Release of air emissions. |

Based on the above, the following technology alternative was carried through for assessment:

***Alternative T1(Preferred):*** The production of cement by grinding clinker, GBFS and other raw materials using a vertical roller mill.

Thus, in accordance with the DEA&DP guideline on assessment of alternatives, technology alternatives were eliminated based on the following:

***Table 14: Consideration of Technology Alternatives (preferred)***

| Technology Alternatives: | Alternative T1 (Preferred) | Alternative T2 |
|---|---|---|
| **Is the alternative feasible and reasonable?** | **YES.** Vertical roller mills offer supreme grinding with high energy-efficiency. This option is also produces less noise during production.<br><br>The vertical roller mill is also cost efficient.<br>Grinding clinker, GBFs and other raw materials produces different grades of cement. This will in turn increase the productivity of the facility and meet the demand of different industrial sectors. | YES. The technological options as presented in this section will meet the applicant's objective. However, the following must be noted:<br>• Contamination of material may result from using a ball mill.<br>• Grinding clinker only increases the production costs and will only produce one (1) type of cement.<br>Based on the above, technological options were not further assessed. |
| **Does the alternative suit the general purpose of the proposed activity?** | **YES.** The general purpose will aid in supplying the increased demand for construction material. The grinding of clinker, GBFS and other raw materials produces different grades of cement. Thus meeting the needs of different industrial sectors. | **NO.** As per previous. |

| Technology Alternatives: | Alternative T1 (Preferred) | Alternative T2 |
|---|---|---|
| **Does the alternative align with the need and desirability considerations of the proposed activity?** | **YES.** As per Section 4.0 of this report. | **YES.** An alternative technology would meet the need and desirability considerations of the proposal. |
| **Is the alternative designed to prevent and minimise negative impacts and to maximise benefits?** | **YES.** The impacts identified in Section 8.0 of this report will be assessed in the Draft EIR. | NO. An alternative option is more expensive and may result in only one (1) type of cement being produced. This will thus not meet the demand for supplying construction material to all different types of industries within the Gauteng Province. |
| **Does the alternative compromise the integrity of the proposal?** | **NO**. As per previous. All identified impacts will be mitigated against in the Draft EIR. | **NO.** An alternative technology would not compromise the integrity of the proposal but would not be economically viable as the option of grinding clinker only will only produce one (1) type of cement. |
| **Does the alternative comply with policy and legal requirements?** | **YES.** As per Section 5.0 of this report. | **NO.** |

**Technology Alternative 1 (preferred):** The production of cement by grinding clinker, GBFS and other raw materials using a vertical roller mill.

**Technology Alternative T2:** None carried through for assessment as they cannot be considered feasible and/or reasonable.

### 6.3 Location / Site alternatives

A location alternative has not been considered, as the proposal is required within the said area at this point and time. As previously discussed, the proposed site is zoned as "industrial, and commercial focus zone" which permits the facility in terms of land use. As such there are no location or site alternatives. It must be noted that the proposal does not involve a change in land use rights.

Thus, in accordance with the DEA&DP guideline on assessment of alternatives, location / site alternatives were eliminated based on the following:

***Table 15: Consideration of Location / Site Alternatives***

| Location Alternatives: | Alternative S1 (Preferred) | Alternative S2 |
|---|---|---|
| **Is the alternative feasible and reasonable?** | **YES.** The proposed activity is required at this location to meet the demand for construction material within the Gauteng Province. | **NO.** The proposed activity is required at this location as it is permitted in terms of the GPEMF (2018). The facility is also in line with the Municipal SDF and IDP. |
| **Does the alternative suit the general purpose of the proposed activity?** | **YES.** The proposed facility is permitted in terms of the GPEMF (2018) zoning. | **NO.** As per previous. |

| | | |
|---|---|---|
| **Does the alternative align with the need and desirability considerations of the proposed activity?** | **YES.** As per Section 4.0 of this report. | **NO.** An alternative location would not meet the need and desirability considerations. |
| **Is the alternative designed to prevent and minimise negative impacts and to maximise benefits?** | **YES.** The impacts identified in Section 8.0 of this report will be assessed in the Draft EIR. | **NO.** As per previous. |
| **Does the alternative compromise the integrity of the proposal?** | **NO**. As per previous. All identified impacts will be mitigated against in the Draft EIR. | **Unknown** as there exists no site alternatives. |
| **Does the alternative comply with policy and legal requirements?** | **YES.** As per Section 5.0 of this report. | **Unknown** as there exists no site alternatives. |

***Table 16: Advantages and Disadvantages of Alternative S1***

| Advantages | Disadvantages |
|---|---|
| The proposed site falls within zone five (5) (i.e., industrial, and commercial focus zone) of the Gauteng Provincial Environmental Management Framework (GPEMF, 2018) which permits the facility in terms of land use.<br><br>The site was previously disturbed by past industrial activity.<br><br>The surrounding land use is predominantly industrial. | The activity will result in air emissions contributing to GHG's.<br><br>Potential negative impact from surrounding mining activity on the proposed facility. |

**Alternative S1:** The proposed construction and operation of a cement facility and storage of dangerous goods on the property described as Portion 192 of the Farm Daggafontein, Springs.

**Alternative S2:** None carried through for assessment as they cannot be considered feasible and/or reasonable.

### 6.4 Operational alternatives

No operational alternatives identified for the proposed facility.

### 6.5 The No-Go Alternative

According to the DEAT Guideline 5 (2006) on Assessing Alternatives and Impacts, the no-go alternative is the option of not undertaking the proposed activity or any of its alternatives. The no-go alternative also provides the baseline against which the impacts of other alternatives should be compared.

It should be noted that the no-go alternative may sometimes not be a "real" or "implementable" alternative (for example, where the capacity of a sewage pipeline has to be increased to cope with current demand). It should, however, remain the default option and must always be included to provide the baseline for assessment of the impacts of other alternatives and also to illustrate the implications of not authorising the activity.

Therefore the No-Go Alternative for the proposed activity is as follows:

The no-go option will not entail any construction activities. The applicant will not be able to meet the demand for construction material in the Gauteng Province. The proposed facility falls within the Tambo Springs Logistic Hub which is aimed at combining all aspects of warehousing, distribution, and operation efficiencies into one area. As such the facility is in line with the Municipal IDP and SDF (2019) in constructing and operating facilities which will industrialize the Springs area. Both the SDF and IDP inherently support the proposal. The no-go option would mean that this economic and development goal would not be achieved.

***Table 17: Consideration of the No-Go Alternative***

| **Activity Alternatives:** | **No-go Alternative** |
|---|---|
| **Is the alternative feasible and reasonable?** | **NO:** The no-go option is not feasible or reasonable. The applicant would not be able to meet the demand for construction material in the Gauteng Province. |
| **Does the alternative suit the general purpose of the proposed activity?** | **NO:** The no-go option will not suit the general purpose of the activity. |
| **Does the alternative align with the need and desirability considerations of the proposed activity?** | **NO.** |
| **Is the alternative designed to prevent and minimise negative impacts and to maximise benefits?** | **NO.** The no-go option is not designed to prevent and minimise the negative impacts. |
| **Does the alternative compromise the integrity of the proposal?** | **YES.** This alternative would not allow the applicant to meet the demand for construction material in the Gauteng Province. |
| **Does the alternative comply with policy and legal requirements?** | **NO.** The no-go option does not comply with the City's IDP and SDF. |

***Table 18: Advantages and Disadvantages of the No-go option***

| **Advantages** | **Disadvantages** |
|---|---|
| • Contribution to GHGs will be avoided.<br>• Construction related impacts will be avoided. | • Does not allow the general need and desirability of the proposal to be met.<br>• Would not meet the economic and development goal of the IDP and SDF. |

**Based on the discussion on alternatives, the following alternatives <u>have been carried through for assessment as part of the impact assessment phase:</u>**

**<u>Alternative 1 (Preferred):</u>** The proposed construction and operation of a cement facility and storage of dangerous goods on the property described as Portion 192 of the Farm Daggafontein, Springs. The cement will be produced by grinding clinker, GBFS and other raw materials using a vertical roller mill.

**<u>No-go option (Not Preferred):</u>** The no-go option will not entail any construction activities. The applicant will not be able to meet the demand for construction material in the Gauteng Province. The proposed facility falls within the Tambo Springs Logistic Hub which is aimed at combining all aspects of warehousing, distribution, and operation efficiencies into one area. As such the facility is in line with the Municipal IDP and SDF (2019) in constructing and operating facilities which will industrialize the Springs area. Both the SDF and IDP inherently support the proposal. The no-go option would mean that this economic and development goal would not be achieved.

## 7.0 A Description of the Environment that may be Affected by the Activity and the Manner in which the Activity may be Affected by the Environment

A site visit was undertaken on 01 April 2022 to confirm the environmental sensitivity of the site. It was noted that the site is highly disturbed and characterised by the following:

- Remnants of a demolished facility;
- Scattered vegetation and grasses; and
- Building rubble.

Furthermore, a desktop investigation was undertaken using the following screening tools:

- SANBI LUDS Interactive Maps.
- Gauteng Province C-Plan.
- Google Earth, 2022.
- Cape Farmer, 2022.
- City of Ekurhuleni Metropolitan GIS viewer.

It is important to note that the site was previously developed as a metal and/or wood facility that was owned by Ekan Base Minerals (Pty) Ltd. According to Google Earth (2022), the facility was demolished in 2016. There is evidence of this on the aerial imagery reviewed.

### 7.1 Locality

A 1:50 000 locality map is provided in Appendix 3. The proposed site can be accessed via and existing factory located on Plover Street just off Nigel Springs Road (R51) (Figure 8). Table 19 below details the locality information for the site.

***Table 19: Locality / Property Description***

| | |
|---|---|
| **District Municipality:** | City of Ekurhuleni Metropolitan Municipality |
| **Local Municipality:** | City of Ekurhuleni Metropolitan Municipality |
| **Ward Number:** | 76 |
| **Property Details:** | Portion 192 (a portion of portion 154) of Farm 125, Daggafontein, Springs |
| **SG Code:** | T0IR00000000012500192 |
| **GPS co-ordinate of site** | 26°18’43.32” S; 28°29’01.71” E |
| **Property Owner:** | Opsibuzz Proprietary Limited (Windeed Property Information, 2022) |
| **Property Zoning:** | Zone Five (5) – Industrial and large commercial focus zone (GPEMF, 2018) |

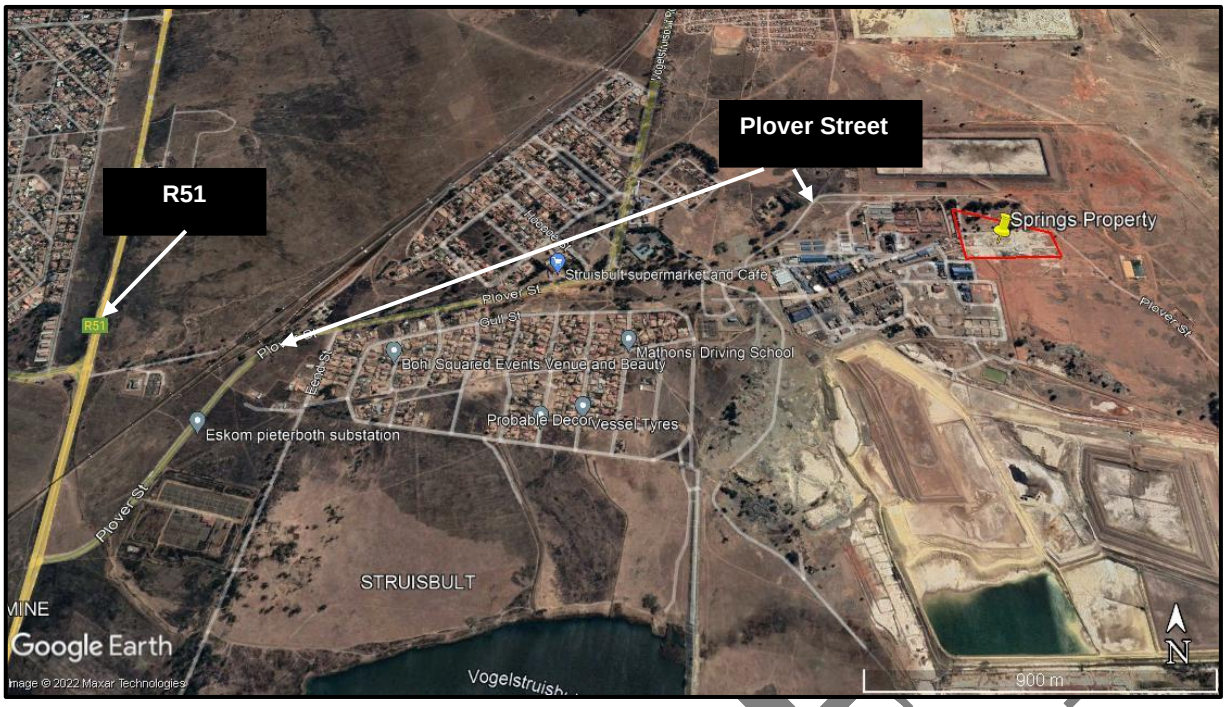



***Figure 8: Map showing the existing access road to the proposed site (in red outline) (Source: Google Earth, 2022).***

### 7.2 Site Description & Surrounding Land use

Topographically the site is flat with gentle undulations. The site has been disturbed by past industrial activity and is characterised by:

- Isolated occurrences of vegetation.
- Remnants of demolished facility.
- Building rubble.

The land use for the proposed site are characterised by Figures 9 to 14.

| Proposed Site | |
|---|---|
|  |  |
| ***Figure 9: Photographer facing South showing the vacant and open spaces on site.*** | ***Figure 10: Photographer facing East showing the vacant and open spaces on site.*** |
|  |  |
| ***Figure 11: Photographer facing West showing trees located on site.*** | ***Figure 12: Photographer facing South East showing the vacant and open spaces on site.*** |
|  |  |
| ***Figure 13: Photographer facing North showing the vacant and open spaces on site.*** | ***Figure 14: Photographer facing South West showing the vacant and open spaces on site.*** |

The surrounding land use is primarily made up of the following (Figure 15):

- Open spaces / vacant land.
- Industrial development.


***Figure 15: Map showing the location of the proposed site (in red outline) in relation to the surrounding land use (Source: Google Earth, 2022).***

**Potential Environmental Impact:** *Potential job creation during construction activities. Potential increase in traffic during construction. Potential noise impacts during construction and operation activities.*

## 7.3 Physical

### 7.3.1 Climate

As per the Köppen-Geiger Climate Classification (Figure 16), the site falls within the *Cwb classification.* This indicates that the study area has a subtropical highland climate. This indicates that the proposed development area falls within the warm temperate climate. The climate for this region is characterised by dry winters and warm Summers (Köppen-Geiger Climate Classification, 2022).

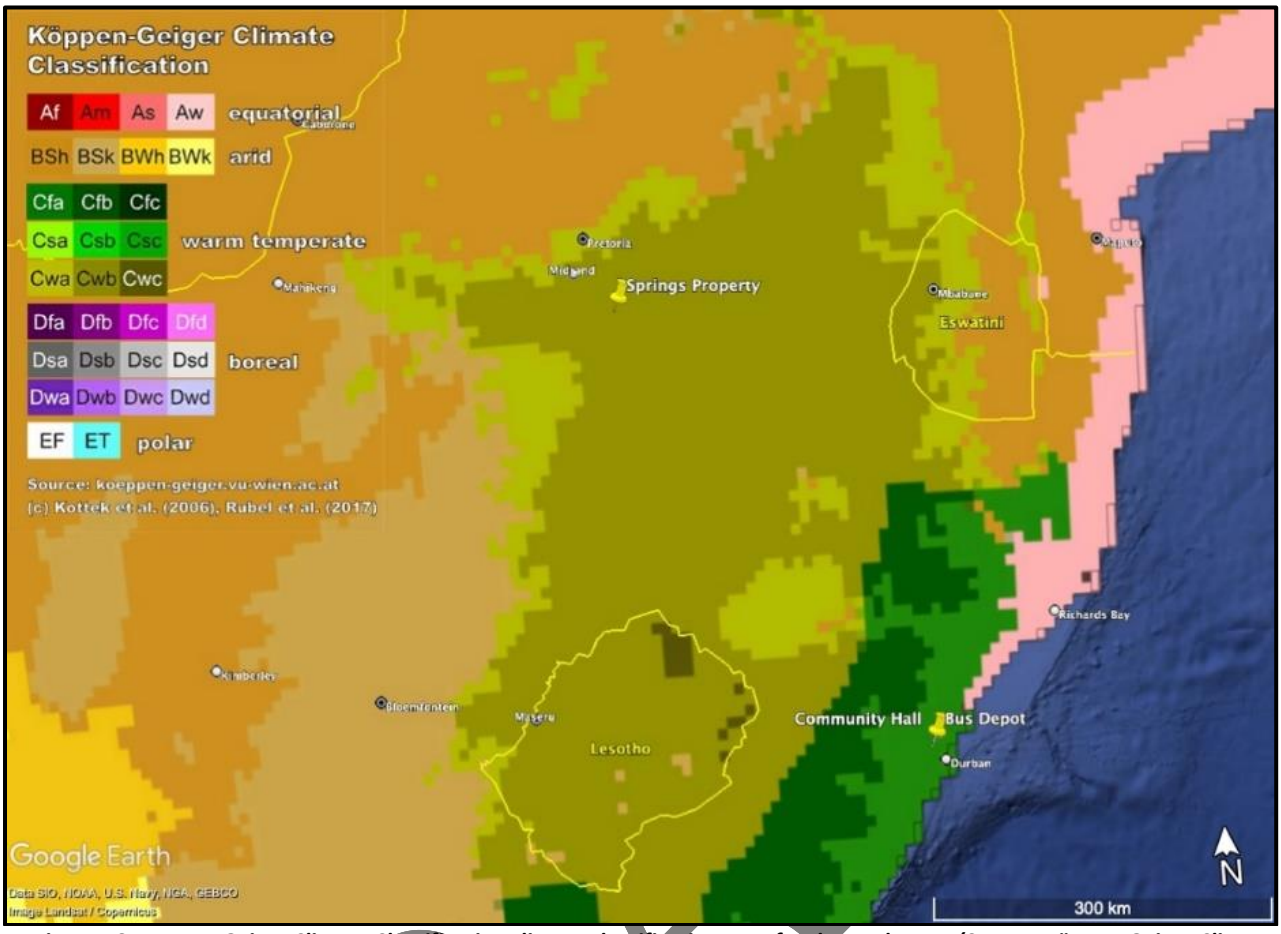



***Figure 16: Koppen-Geiger Climate Classification climate classification map for the study area (Source: Köppen-Geiger Climate Classification, 2022).***

The mean annual precipitation for this region reaches approximately 662 mm and is characterised by summer rainfall. The study area is characterised by high and low extreme temperatures during the summer and winter respectively with frost frequently occurring (Source: hikersbay, 2022) (Figure 17).

[2]

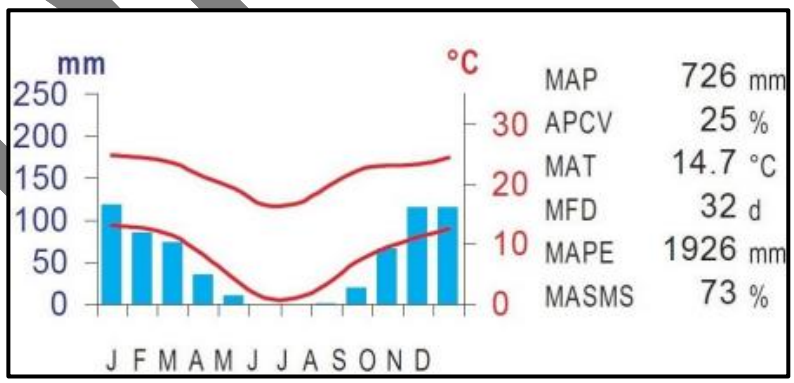



***Figure 17: Average climate for the study area (Source: hikersbay.com/climate/southafrica/springs, 2022).***

The predominant wind direction within the study area is mainly from the north and north western region. Secondary winds are noted from the south western and north eastern region. During the summer months (Dec, Jan and Feb) the

[2]Accessed 08/04/2022: *(hikersbay.com/climate/southafrica/springs, 2022).*

winds originate predominantly from the north-north–west and north-east. During the spring months (Sep, Oct and Nov), the winds originate from the north-north-west (Source: hikersbay, 2022)

A similar pattern in wind field occurs during the autumn (Mar, Apr and May) and winters months (Jun, Jul and Aug), with winds originating predominantly from the north-west, south-west and south- easterly sectors. In the study area, 1.2 % of the time, calm conditions existed over the area. The highest frequency of wind speeds lies between 2.1 – 3.6 m/s and 3.6 - 5.7 m/s which occurred for 33 % of the time respectively (Source: hikersbay, 2022).

The study area experiences very stable conditions which are characteristic of low winds, clear skies and cold night-time conditions (Source: hikersbay, 2022).

**Potential Impact(s) to be investigated further:** *Potential erosion of site following a heavy rainfall event. Potential indirect cumulative release of GHG emissions. Potential dispersion of material during a windy event.*

### 7.3.2 Geology

According to the National Soils Classification (bgis.sanbi.org, n.d.) (Figure 18), the soils in the area are red or yellow structureless soils with a plithic horizon. Figure 19 shows the study area falling within the Vryheid Formation which is characterised by fine to coarse grained sandstone, shale and coal seams (Cape Farmer, 2022).

A geotechnical investigation will be included in the Draft Environmental Impact Report (EIR) which will provide details on the geology of the site including the stability of the site for the proposed development activity.

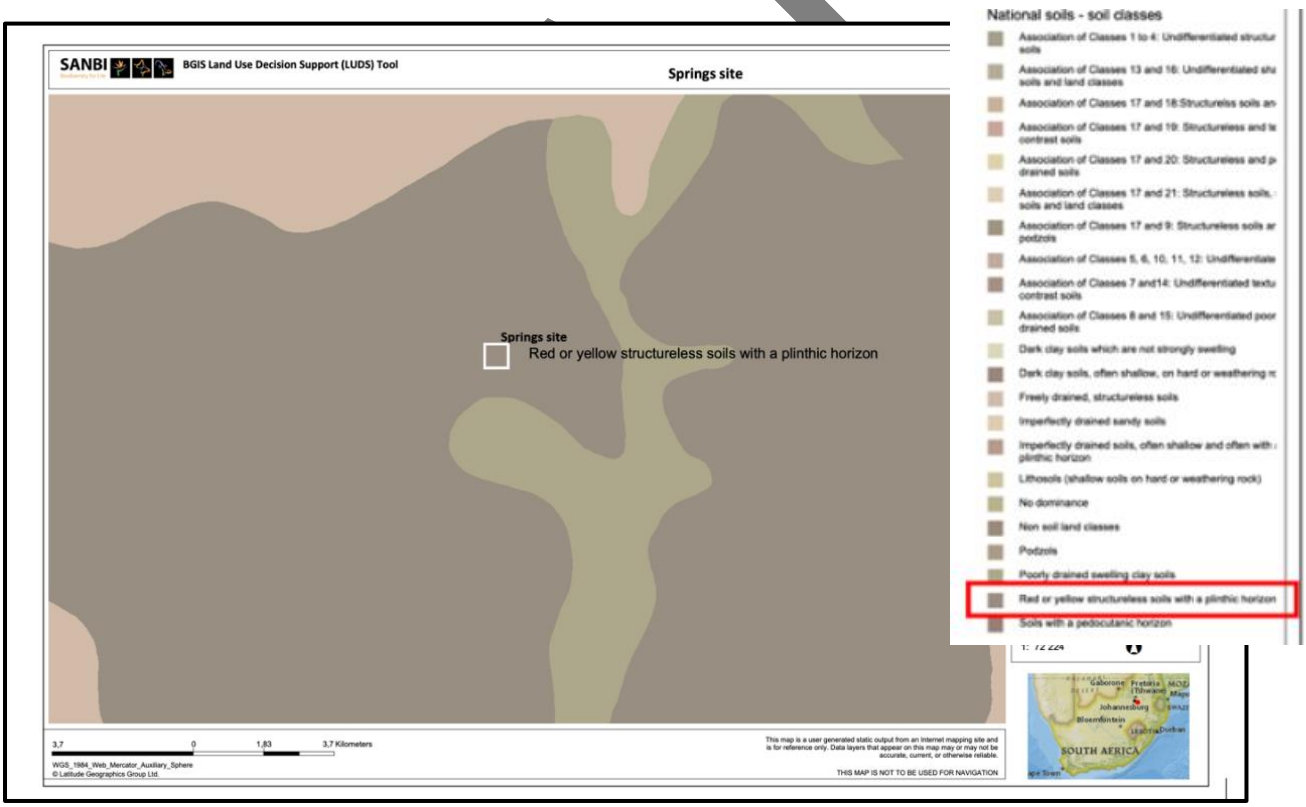



***Figure 18: National Soil Classification of Springs (Source: SANBI GIS, 2022).***


***Figure 19: Locality map indicating the lithostratigraphy of the Springs area (Source: Cape Farm Mapper, 2022).***

**Potential Environmental Impact:** *Potential instability of site during excavation activities; potential contamination of groundwater.*

### 7.4 Biological Environment

#### 7.4.1 Critical Biodiversity Areas

The Gauteng C-Plan (Conservation Plan) is a plan to guide conservation and land use decisions. It primarily focuses on identifying biodiversity priority areas within Gauteng; this includes any Critical Biodiversity Area (CBA) and Ecological Support Area (ESA). The C-Plan includes protected areas, irreplaceable and important sites due to the presence of Red Data species, endemic species, and potential habitat for these species to occur.

The South African National Biodiversity Institute (SANBI) makes provision for the C-plan data. According to Figure 20, **the proposed site does not fall within the Gauteng C-plan and as such is not located within a CBA, ESA or sensitive areas.**

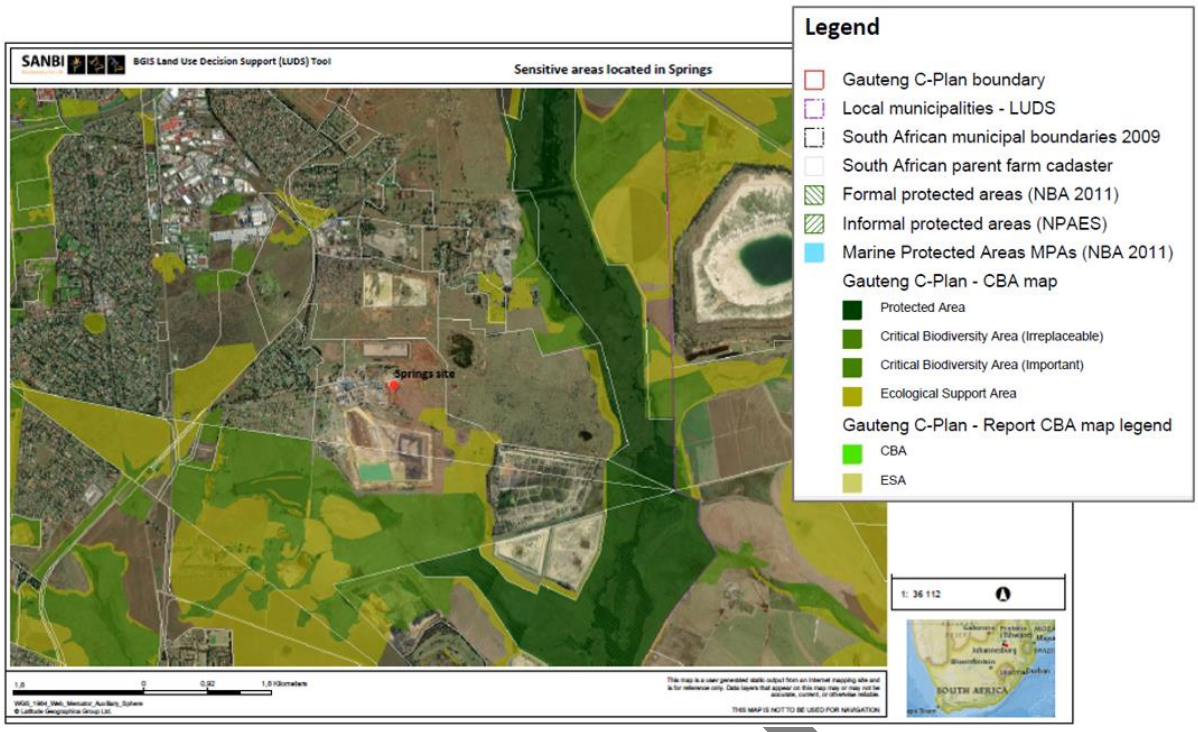



***Figure 20: The proposed site falls outside CBA, ESA and sensitive areas (Source: SANBIS GIS, 2022)***

**Potential Environmental Impact:** *Potential habitat disturbance; potential loss of indigenous vegetation; potential introduction of alien invasive vegetation within indigenous communities.*

### 7.4.2 Vegetation

The Mucina and Rutherford (2006) classification notes that the study area falls within the Tskane Clay Grassland Biome which is considered to be Endangered. The vegetation associated with this biome is dominated by a mixture of grasses (Cape Farmer, 2022).

It must be noted that as the site was previously disturbed by past industrial development, little to no vegetation are found on the site. The site visit undertaken by the EAP, noted only isolated occurrences of vegetation and remnants of the demolished facility.


***Figure 21: Present biomes within the proposed Springs site (Source: Cape Farm Mapper, 2022).***

**Potential Environmental Impact:** *Potential habitat disturbance; potential loss of indigenous vegetation; potential introduction of alien invasive vegetation within indigenous communities.*

### 7.4.3 Wetlands and Watercourses

A desktop investigation was undertaken using various sources of data to identify watercourses within the proposed site and within 500m of the site (Figure 22). The investigation noted the following:

- No watercourses were identified within the site.
- Two (2) NFEPA artificial wetlands located less than 500m of the site (Cape Farmer, 2022).

It must be noted that according to Google Earth Imagery (2022), artificial wetland one (1) (Figure 23) was infilled by previous industrial / mining activity and the artificial wetland two (2) is a stormwater pond / dam. This will be confirmed during the EIA phase.


*Figure 22: Map showing watercourses within 500m of the proposed facility (Source: Google Earth, 2022).*


*Figure 23: Map showing current status of artificial wetlands identified (Source: Google Earth, 2022).*

**Potential Environmental Impact:** *None identified.*

### 7.5 Social and Economic

The City of Ekurhuleni has six (6) administrative and planning zones ranging from Region A to Region F. The Springs site falls under Region D, which is the central support zone located between the N12 and N17 Freeways in South Africa. The secondary cities of Springs fall within this Region and is driven by manufacturing and retail, as well as certain elements of logistics.

The City of Ekurhuleni hosts a population of approximately 3 774 638 people. Of the total population, 31.2% citizens are unemployed, and 34.5% living below the poverty line. The city's economy is predominantly fuelled by Manufacturing, Finance and Business Services, Community Services and Government Services, and Hospitality.

Given the current economic activity and unemployment rate in Springs, the proposed development would offer an opportunity for job creation for both skilled and unskilled labourers within the surrounding area of Springs. As a result, it will encourage development and decrease unemployment rates, as well as improving the livelihood of the residents.

**Potential Environmental Impact:** *Potential increase noise nuisance during construction; potential economic benefit related to job creation.*

### 7.6 Heritage

The proposed site extends over an area of 4.0Ha and as such triggers Section 38 – development which exceeds 5000m² of the National Heritage Resources Act 25 of 1999.

It must be noted that the site was previously disturbed by past industrial activity. The facility was demolished in 2016 and is not foreseen to have been older than sixty (60) years. A Heritage Impact Assessment (HIA) will be undertaken for the site and included in the Draft EIR.

A desktop investigation was undertaken using the South African fossil sensitivity map (SAHRIS). As per Figure 24, the site falls within an area of "very high" sensitivity. As such, a field assessment and protocol for finds is required.


| Colour | Sensitivity | Required Action |
|---|---|---|
| RED | VERY HIGH | field assessment and protocol for finds is required |
| ORANGE/YELLOW | HIGH | desktop study is required and based on the outcome of the desktop study, a field assessment is likely |
| GREEN | MODERATE | desktop study is required |
| BLUE | LOW | no palaeontological studies are required however a protocol for finds is required |
| GREY | INSIGNIFICANT/ZERO | no palaeontological studies are required |
| WHITE/CLEAR | UNKNOWN | these areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map. |

***Figure 24: Map showing the Fossil sensitivity of the Proposed project Area (Source: SAHRIS, 2022).***

**Potential Environmental Impact:** *Potential unearthing of and damage to items of cultural and heritage significance during construction.*

### 7.7 Air Quality

It is anticipated that the project life cycle will result in generation of dust. Water tankers will be used to regularly wet the area and to suppress dust. Tail pipe emissions from the construction vehicles excavating material from the site and from vehicles transporting the material to the required destination are the only anticipated contribution to air emissions. A detailed air quality assessment including a fugitive emissions assessment will be included in the Draft EIR.

**Potential Impact(s) to be investigated further:** *Potential negative air quality impacts from construction /operation activities i.e. emissions released from the cement manufacturing process; excessive dust generation; generation of dust through blasting; dust generated by haulage roads; emissions / fumes released from fuels.*

## 8.0 A Description Of Environmental Issues And Potential Impacts, Including Cumulative Impacts, That Have Been Identified For Each Alternative

The approach to be taken by the EAP for the impact assessment is aimed to inform decision makers and is based on the following guidelines, legislation and information:

(a) National Environmental Management Act (104 of 1998)
(b) National Environmental Management Act, EIA Regulations (2010)
(c) DEAT (2006) Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Assessment Regulations, 2006. Integrated Environmental Management Guideline Series, Department of Environmental Affairs and Tourism (DEAT), Pretoria.
(d) Australian Government Department of the Environment (2013). Matters of National Environmental Significance, Significant Impact Guidelines 1.1., Environment Protection and Biodiversity Conservation Act 1999. 39pp.
(e) Federal Environmental Assessment Review Office (1994). A reference guide for the Canadian Environmental Assessment Act, Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects.
(f) Specialist studies undertaken for the proposed expansion activity in the application DM/0078/2014.
(g) Issues raised by I&APs
(h) The EAP's professional expertise and opinion.

The following is list of potential impacts identified at the scoping stage and will be further investigated in the EIR:

***Table 20: List of potential impacts***

| Environmental Aspect | Identified Potential Impact |
|---|---|
| **Construction Impacts** | |
| **Soil** | *Potential contamination of soil, s during concrete mixing; potential risk of oil / fuel spills from construction equipment contaminating soil; Risk of spills during storage of hazardous materials (cement, oils etc.) during construction. Poor stormwater management during construction can cause erosion and loss of soil.* |
| **Traffic** | *Potential traffic disruptions during construction.* |
| **Waste** | *Improper disposal of rubble i.e.: burying or neglecting building rubble can cause direct mechanical damage to surrounding vegetation within the buffer area and lead to untidiness of the site.* |
| **Cultural / Heritage** | *Potential unearthing of and damage to items of cultural and heritage significance during construction.* |
| **Sustainability** | *Sourcing of raw materials i.e.: (gravel, stone, sand, cement and water) from unsustainable sources resulting illegal sand winning and mining operations causing significant environmental damage.* |
| **Noise** | *Noise generated by construction workers, machinery and construction vehicles disturbing surrounding residents.* |
| **Dust and Air pollution** | *Construction activities resulting in excessive dust production (i.e. Vegetation clearance, grading and levelling of the exposed land and transportation of construction materials.* |
| **Stormwater Management** | *Potential flooding and contamination of the nearby watercourses during heavy rainfall events due to improper stormwater management.* |
| **Geotechnical** | *Potential instability of the site.* |
| **Positive impacts** | *Potential for job creation during construction period.* |
| **Health and Safety** | *Potential health and safety impacts during construction.* |
| **Operational Impacts** | |

| Environmental Aspect | Identified Potential Impact |
|---|---|
| **Land suitability** | *Potential instability of the site resulting in land slippage.* |
| **Topography** | *Potential instability of the site resulting in land slippage.* |
| **Soil** | *Improper stormwater management – increase in surface run-off resulting in soil erosion.* |
| **Geohydrology** | *Improper stormwater management – increase in surface run-off resulting in soil erosion. Potential contamination of groundwater from storage tanks and/or from borewell.* |
| **Vegetation** | *Potential loss of indigenous vegetation species, however a desktop assessment of the site reveals little to no vegetation present.* |
| **Wetlands** | *There are two artificial wetlands within 500m of the site. It must be noted that there will no encroachment into the wetland environments.* |
| **Critical Biodiversity Areas** | *Potential loss of indigenous vegetation species.* |
| **Fauna** | *Potential loss of protected and/or migratory species.* |
| **Surrounding land use** | *Potential positive impact – overall aesthetic upgrade of the site and land use as the site is currently vacant.* |
| **Social / Economic** | *Positive impact for creation of local employment during construction; provision of cement for local projects from a local manufacturer and supplier resulting in sustainable development.* |
| **Cultural** | *Potential unearthing of and damage to items of cultural and heritage significance.* |
| **Air Quality** | *Potential negative air quality due to emissions from the cement plant during the operational phase of the development i.e. dust generation from materials handling, crushing and milling operations* |
| **Stormwater** | *Potential pressure on bulk services. Potential for improper stormwater management; Poor stormwater management during construction can cause erosion and loss of soil. Increased hard surface areas leading to increased stormwater flow and reduced infiltration into soil; point-source discharge of surface run-off from hardened surfaces into the wetland, resulting in confined flow and lateral soil erosion. Potential for improper management of stormwater which could result in contaminated stormwater discharging into the wetland units and stormwater drains.* |
| **Water** | *Potential increased pressure on basic infrastructural resources such as water and electricity.* |
| **Wastewater / sanitation** | *Potential health and safety impact to the community should appropriate sanitation not be provided; potential increase in pressure on bulk services.* |
| **Electricity** | *Potential increase in pressure on basic infrastructural services; potential risk of fire in the event of illegal electrical connections.* |
| **Solid waste** | *Potential accumulation of waste on site should the site not be serviced routinely; Improper handling and disposal of general waste leading to accumulation of waste on site and untidiness of the site. Excess waste has the potential to create a health hazard; Potential health and safety issues due to accumulation of waste on site, such as rats, cockroaches, etc.* |
| **Traffic** | *Potential traffic disruptions during construction; potential increase in traffic.* |
| **Parking areas** | *Potential contamination of stormwater from motor oil in parking areas.* |
| **Cumulative Impacts** | |
| **Waste** | *Increase in waste being sent to landfill.* |

| Environmental Aspect | Identified Potential Impact |
|---|---|
| **Bulk Services** | *Potential increase in pressure on bulk services such as water, sanitation and electricity.* |
| **Traffic** | *Increased traffic in the area.* |
| **Air Quality** | *Potential negative air quality due to emissions from the cement plant during the operational phase of the development.* |

It must be noted that the potential impacts identified at this stage are not final and will be updated pending specialist studies and I&AP comments, and will be assessed in detail in the EIR.

## 9.0 Details of the Public Participation Process Conducted in Terms of Regulation Chapter 6 of the NEMA: EIA Regulations (2014, as amended)

A key part of the Scoping and EIR process is public participation, whereby authorities, residents, neighbours and any organisation that may be interested in or affected by the proposed activity, are notified of the proposal so as to provide an opportunity for expression of comments/concerns throughout the process. Public participation is one of the most important aspects of the environmental authorisation process and is so vital that it is the only part of the process for which an exemption cannot be given (DEA, 2010). Interested and Affected Parties (I & APs) have the right to be informed about any potential decision that may affect them and they have the right to be afforded the opportunity to influence the decisions. When done correctly, effective public participation facilitates informed decision-making by the competent authority (DEA, 2010).

Public participation is a legislated requirement according to the EIA Regulations, 2014. As the independent Environmental Assessment Practitioner (EAP), ECA Consulting is required to involve the public in the following way):

- Provide written notice to adjacent occupiers of the site, the municipal ward councillor, ratepayers association, and any organ of state having jurisdiction in respect of any aspect of the activity;
- Place an advert in one local newspaper, and at least one provincial or national newspaper if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken;
- Fix a notice board (minimum size 60cm x 42cm) at a place conspicuous to the public at the boundary or on the fence of the site or any alternative site mentioned in the application.

With reference to the DEA (2010) guideline[3] on public participation, the EAP has followed the public participation process as detailed in Figure 25. Proof of the public participation completed to date will be attached to this report as Appendix 4. A list of potential Interested and Affected Parties (I & APs) that will be notified of the proposed activity and the release of this Scoping Report will be attached to Appendix 4 of this report. Figure 25 below provides a summary of the process that will be undertaken during this Scoping & EIA process.

According to Chapter 6 of the 2014 EIA Regulations (as amended in 2017) (GNR 326), registered I & APs are entitled to comment in writing on all written submissions, including final reports made to the competent authority (i.e., GDARD) and to bring to the attention of the competent authority and EAP any issues that may be of significance to the consideration of the application. These issues must be submitted within the timeframes approved or those as set by the competent authority. I & APs will have 30 days within which to comment on this Scoping Report. I & APs are legally required to disclose any direct business, financial, personal or other interest that they may have in the approval or refusal or the application.

[3] *Reference: DEA (2010). Public Participation 2010, Integrated Environmental Management Guideline Series 7. Department of Environmental Affairs, Pretoria, South Africa,17pp.*

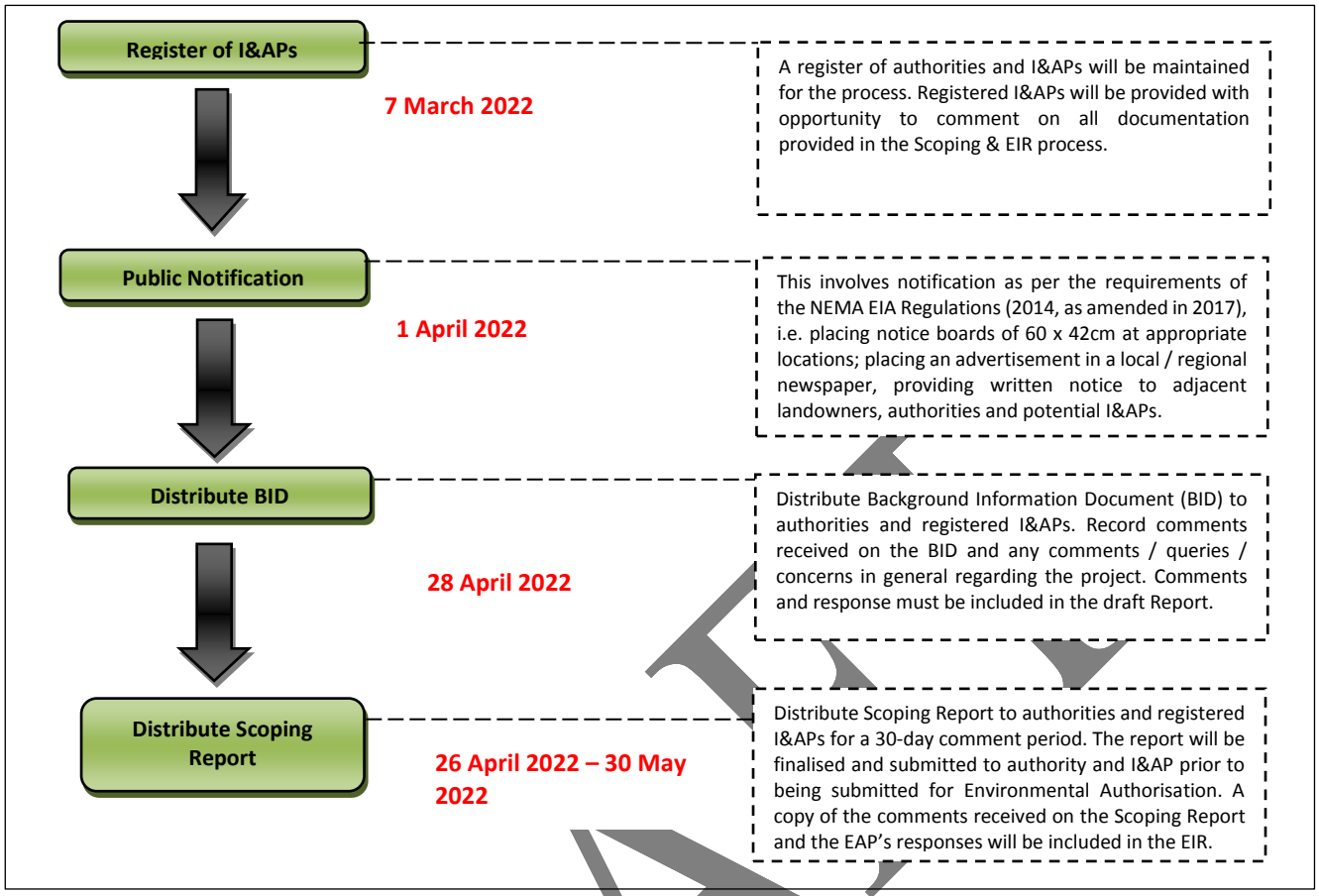



***Figure 25: Summary of public participation process***

### 9.1 Steps Taken to Notify Potentially Interested and Affected Parties of the Application

A list of Authorities as well as I & APs were compiled have been attached as Appendix 4 to this report. All Authorities and I & APs will be notified of the release of this Scoping Report and proof of notification will be attached to the Final EIR. Adjacent landowners to the proposed development site were notified via email in English on the 1 April 2022. Proof of notification is attached as Appendix 4.

### 9.2 Proof that Notice Boards, Advertisements and Notices Notifying Potentially Interested and Affected Parties of the Application have been Displayed, Placed or Given

The public participation process commenced on the 1 April 2022, with the erection of three (3) Notice Boards in English located near the proposed development site in Daggafontein, Springs (Figure 26). Photographic proof of signboard placement is attached as Appendix 4 to this report.

The geographic location of the above-mentioned signboards are as follows (Figure 26):

- Notice Board 1: 26°18'40.20"S; 28°28'56.75"E
- Notice Board 2: 26°18'42.81"S; 28°29'06.89"E
- Notice Board 3: 26°18'47.95"S; 28°28'26.04"E

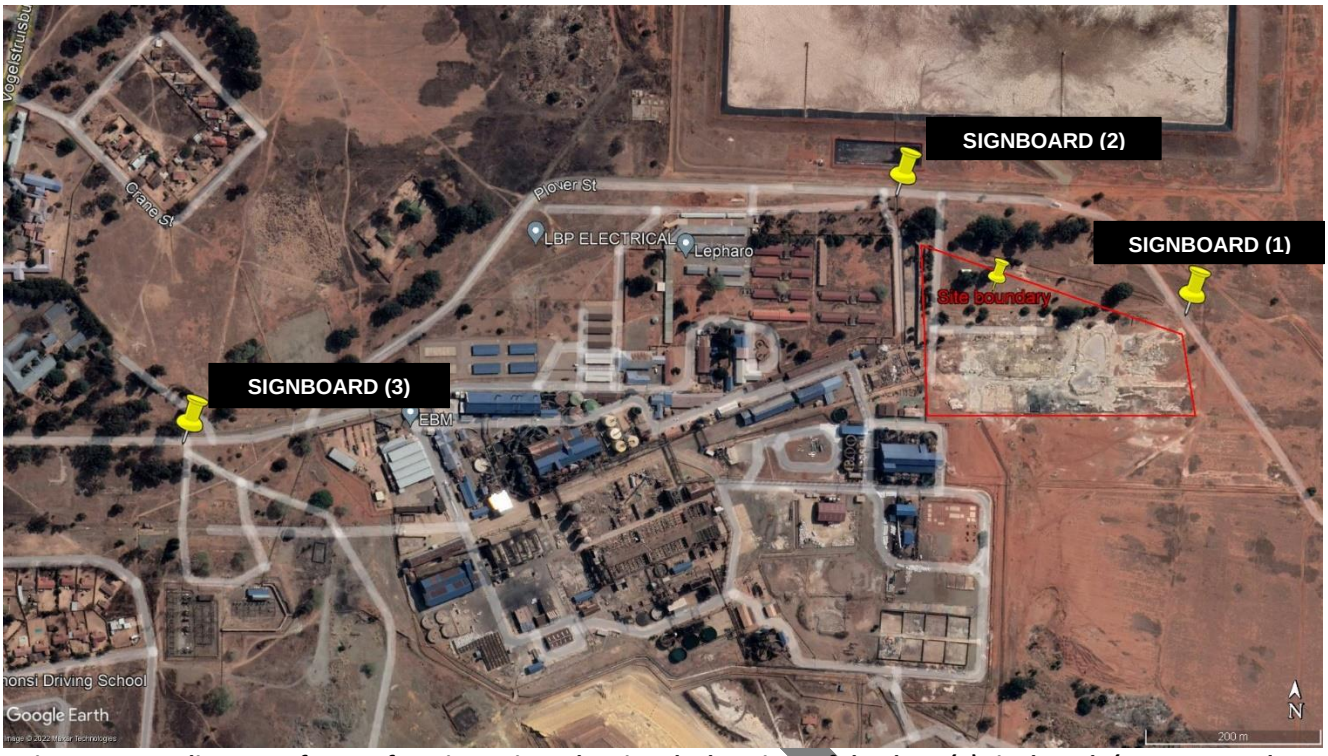



***Figure 26: Locality map of Daggafontein, Springs showing the locations of the three (3) signboards (Source: Google Earth, 2022).***

Two (2) English newspaper advertisements were published in the legal section of the Springs Advertiser and the Brakpan Herald on 28 April 2022. Proof of advertisement is attached in Appendix 4.

### 9.3 A List Of All Persons Or Organisations That Were Identified And Registered As Interested And Affected Parties (I&Aps) In Relation To The Application

Relevant state authorities have been included as a registered I&AP as well as any member of public that responded to the advert or notices that were distributed. A list of registered I&APs is attached as Appendix 4 to this report.

### 9.4 Summary Of The Issues Raised By I &Aps

No comments have been received to date from I & APs. Once Comments are received, any comments received will be recorded and addressed in the EIR.

## 10.0 Plan Of Study Of Environmental Impact Assessment (EIA) Which Sets Out The Proposed Approach To The Environmental Impact Assessment Of The Application (In Terms Of Regulation 28 (N) Of The NEMA EIA Regulations 2010)

The main purpose of the EIA process is to determine, assess and evaluate the consequences (positive and negative) of a proposed activity. The EIA process must thus consider the following:

- The strategic context of a development proposal along with broader societal needs, the natural resource base and the public interest;
- Ways to avoid negative impacts and enhance benefits must be addressed;
- Where negative impacts cannot be avoided, measures to minimise these must be sought; and
- Consideration must be given to the probable significance or "acceptability" of the effects or consequences, based on clear criteria. (DEA, 2010)

According to DEA (2010), there are four important questions that must be addressed during this phase:

1. Will the proposed development contribute to or result in the achievement of sustainable development?

2. What are the potential positive and negative environmental effects of this proposed development?
3. How can any significantly harmful impacts be avoided or reduced (i.e. mitigated) and positive impacts be enhanced? and
4. What is the level of certainty that mitigation measures will be implemented and that they will be effective?

**10.1A Description Of Tasks That Will Be Undertaken As Part Of The Environmental Impact Assessment Process, Including Any Specialist Reports Or Specialised Processes, And The Manner In Which Such Tasks Will Be Undertaken;**

The following phases of the EIA process will be discussed in this section:

- Public Participation;
- Specialist Studies and Terms of Reference;
- Impact Assessment Methodology;
- Structure of the EIA Report and the EMPr; and
- EIA Project Schedule.

**10.1.1 Public Participation During The EIA Phase - Particulars Of The Public Participation Process That Will Be Conducted During The Environmental Impact Assessment Process.**

In accordance with the 2014 EIA Regulations (as amended), public participation may commence prior to the submission of an application for a Scoping and Environmental Impact Report (S&EIR). Figure 27 is an illustrative summary of the process followed. The following is a summary of the public participation to be undertaken as part of the EIR phase:

1. Notification of registered I & APs of the outcome of the Scoping phase;
2. Maintenance of the I & AP register including the registering of any additional stakeholder;
3. Notification of registered I & APs of the availability of the Draft and Final Environmental Impact Assessment Reports (EIAR) and Environmental Management Programme (EMPr) for a thirty (30) day review period;
4. Hosting a focus meeting to discuss the content of the EIAR and EMPr as well as the S & EIR process (only if requested by I & AP's);
5. The comment and response table will be updated to include all issues or concerns raised during the public participation phase of the EIA phase and will provide a consolidated list in order to ensure that all issues and concerns raised by I&APs are considered within the EIA process; and
6. Notifying all registered I & APs of the issuing of the Environmental Authorisation (EA) and placement of an advert notifying I & APs of the EA.

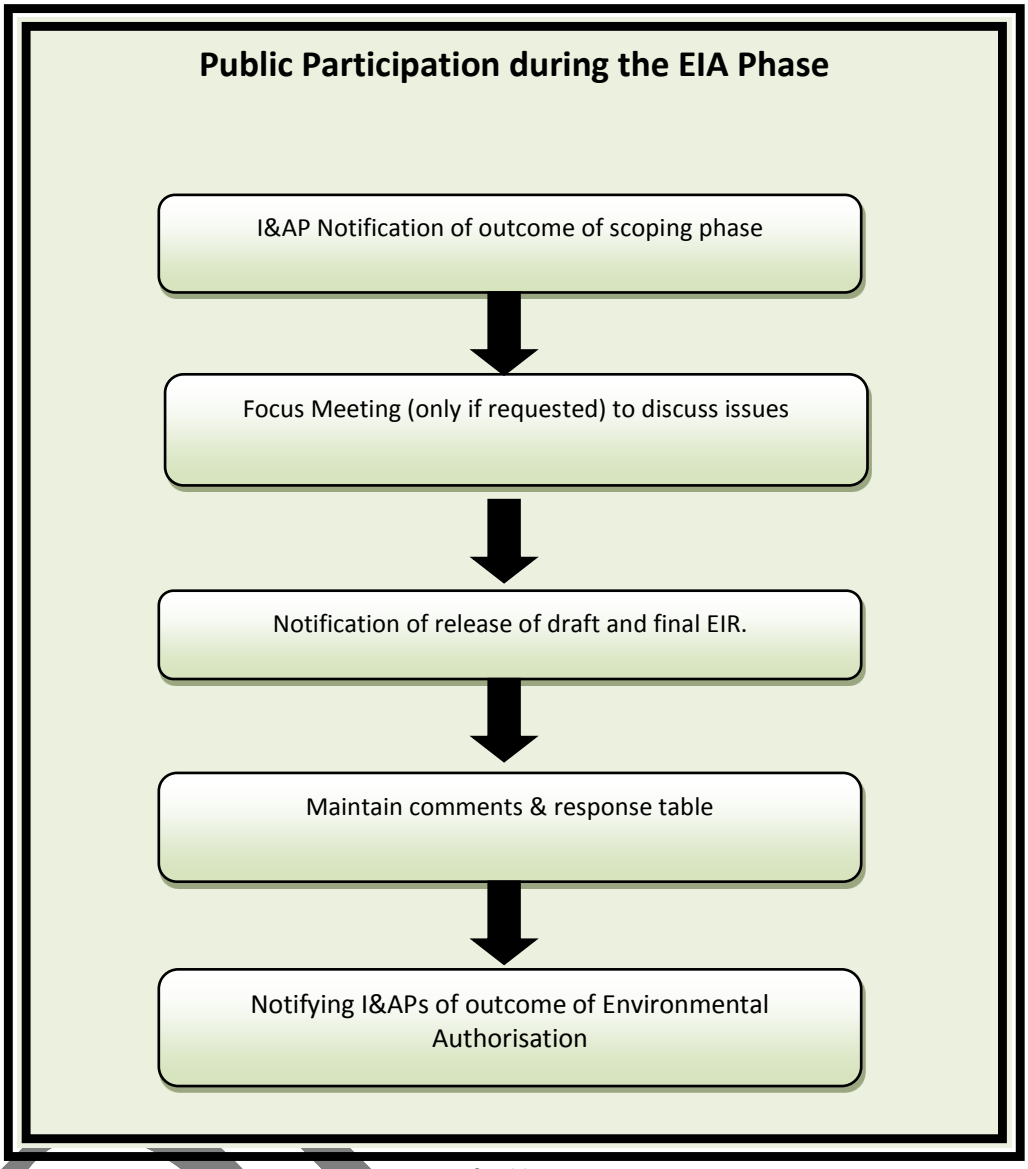



***Figure 27: Summary of public participation process***

According to Chapter 6 of the EIA Regulations, 2014 (GNR 326), registered I&APs are entitled to comment in writing on all written submissions, including draft reports made to the competent authority (i.e. GDARD) and to bring to the attention of the competent authority and EAP any issues that may be of significance to the consideration of the application. These issues must be submitted within the timeframes approved or those as set by the competent authority. I&APs have 30 days within which to comment on this report. I&APs are legally required to disclose any direct business, financial, personal or other interest that they may have in the approval or refusal or the application.

### 10.2Specialist Studies

The following table provides a list of the specialist studies will be undertaken and as well as details of the independent specialist appointed to conduct the study:

***Table 21: List of Specialist studies to be undertaken as part of the EIA phase***

| Specialist Study | Specialist Company / Representative |
|---|---|
| Heritage Impact Assessment | Agency for Cultural Resource Management |
| Traffic Impact Assessment | Koleko Transportation Engineering and Planning |
| Hydrological Assessment and Stormwater Management Plan | GCS Water and Environmental Consultants |
| Geotechnical Impact Assessment | Will not be done till February 2023 - will not be included in EIA |
| Air Quality Assessment including Ambient Air Quality Assessment | Geo One (Pty) Ltd |

The Terms of Reference for each of the specialist studies for the EIA phase is provided in Table 22.

The key outcomes of the specialist studies would be to provide information, identify sensitive areas, potential impacts and recommend appropriate mitigation measures.

***Table 22: Terms of Reference for Specialist studies.***

| Specialist | Terms of Reference |
|---|---|
| **Heritage Impact Assessment** | • To identify items / areas of cultural or heritage significance that require protection and / or consideration. To undertake heritage impact assessment in terms of Sections 36 and 38 of the National Heritage Resources Act (25 of 1999) and relevant provincial legislation.<br>• To prepare a report on findings into the existence of possible heritage resource for the site.<br>• To liaise with and submit an application for development to the Provincial Heritage Resource Authorities. |
| **Stormwater management plan** | • The aim of the stormwater management plan is to ensure that stormwater is effectively managed during site activities on a continual basis. |
| **Traffic Impact Statement** | • To understand the traffic impacts / traffic issues on the surrounding area as a result of the proposed activity. The study will look at the effect of the traffic generated by the development on the road network and where necessary introduce mitigation measures. The study will be in accordance with the guideline documents of the South Africa Committee of Transport Officials, "TMH16: South African Traffic Impact and Site Traffic Assessment Manual" and "TMH17: South African Trip Data Manual". |
| **Geotechnical Investigation** | TBC. A geotechnical investigation will be undertake prior to the commencement of construction related activities. |

| Specialist | Terms of Reference |
|---|---|
| **Air Quality and Ambient Impact Assessment** | The impact assessment will determine the baseline in terms of air quality, identify the predicted and cumulative impact; and develop a Mitigation and Air Quality Management Plans (AQMP).<br><br>The exact TOR will be confirmed in the EIR and will ensure compliance with NEMAQA and the requirements of the Air Quality Officer. |

### 10.3Impact Assessment Methodology - A Description Of The Proposed Method Of Assessing The Environmental Issues And Alternatives, Including The Option Of Not Proceeding With The Activity; And

The objective of an environmental assessment is to identify and assess all the significant potential impacts that may arise from the undertaking of an activity (DEAT, 2006). According to the DEAT Guideline on Assessment of Alternatives and Impacts (2006), an impact is the change in an environmental parameter that results from undertaking an activity – impacts occur over a specific period and within a defined area.

Against this definition, key to identifying an impact is the duration and extent of the impact.

Impacts may be direct, indirect or cumulative, meaning:

(a) Direct: caused directly by the activity and generally occur at the same time and at the same place of the activity, e.g. noise generation during construction.
(b) Indirect: are induced changes that occur as a result of the activity.
(c) Cumulative: results from an incremental impact of the proposed activity on a common resource when added to the impacts of other past, present or reasonably foreseeable future activities. Cumulative impacts can occur over a period of time and can include both direct and indirect impacts.

According to the NEMA EIA Regulations (2010), a significant impact is defined as *"an impact that by its magnitude, duration, intensity or probability of occurrence may have a notable effect on one or more aspects of the environment;"*

From this definition, the following criterion determines the significance of an impact:

- Magnitude (or intensity): refers to the severity of the adverse environmental impacts. The magnitude can be classed as either low, moderate, severe.
- Duration: refers to how long the impact will occur for. This could be classed as very short (0-1 years), short (2-5 years), medium term (5-15 years), long-term (>15 years) or permanent.
- Probability: describes the likelihood of the impact occurring and be classed as low, medium, high.

The EIA Regulations specifies that the environmental impact assessment report must include a description and assessment of the significance of any environmental impacts, including -:

(i) Cumulative impacts, that may occur as a result of the undertaking of the activity or identified alternatives or as a result of any consideration, erection or decommissioning associated with the undertaking of the activity;
(ii) The nature of the impact;
(iii) The extent and duration of the impact;
(iv) The probability of the impact occurring;
(v) The degree to which the impact can be reversed;
(vi) The degree to which the impact may cause irreplaceable loss of resources; and
(vii) The degree to which the impact can be mitigated.

Determining the significance of impacts also involves the undertaking of specialist studies for each issue where there may be significant impacts. Both the positive and negative environmental impacts and the measures to avoid or minimise

significantly harmful impacts (i.e. mitigation measures) must be considered. Impacts must be assessed for all the identified alternatives, with the aim of identifying the most environmentally appropriate option. Public participation activities take place throughout the impact assessment phase (DEA, 2010)

The DEAT 2006 guideline on Assessment of Alternatives and Impacts, states the process of evaluating significance distinguishes between the impact before mitigation and the impact after mitigation.
Also of importance in determining significance are:

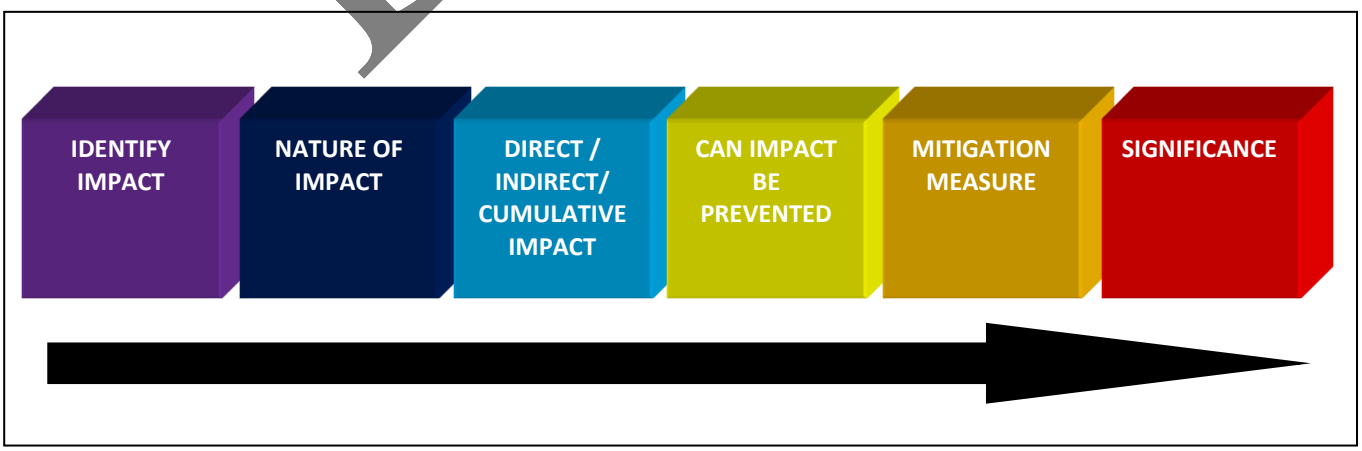
- Environmental standards, guidelines and objectives,
- Level of public concern;
- Scientific and professional evidence
- Environmental loss and deterioration
- Social impacts resulting directly or indirectly from environmental change;
- Likelihood and acceptability of risk.

The Australian Government Department of the Environment (2013) defines a significant impact as "an impact which is important, notable or of consequence, having to its context or intensity. Whether or not an action is likely to have a significant impact depends upon the sensitivity, value and quality of the environment which is impacted, and upon the intensity, duration, magnitude and geographic extent of the impacts."

It must be noted that there is no prescriptive or legislative methodology for the identification of impacts and assessment of significance. The approach to be taken by the EAP for the impact assessment is aimed to inform decision makers and is based on the following guidelines, legislation and information:

(i) National Environmental Management Act (104 of 1998)
(j) National Environmental Management Act, EIA Regulations (2010)
(k) DEAT (2006) Guideline 5: Assessment of Alternatives and Impacts in support of the Environmental Impact Assessment Regulations, 2006. Integrated Environmental Management Guideline Series, Department of Environmental Affairs and Tourism (DEAT), Pretoria.
(l) Australian Government Department of the Environment (2013). Matters of National Environmental Significance, Significant Impact Guidelines 1.1., Environment Protection and Biodiversity Conservation Act 1999. 39pp.
(m) Federal Environmental Assessment Review Office (1994). A reference guide for the Canadian Environmental Assessment Act, Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects.
(n) Specialist studies undertaken for the proposed expansion activity in the application DM/0078/2014.
(o) Issues raised by I&APs
(p) The EAP's professional expertise and opinion.

The approach to describe and assess the significance of environmental impacts is summarised as follows:



(a) Identify the impact
(b) Describe the nature of the impact
(c) Determine if the impact is direct, indirect or cumulative
(d) Predict the magnitude, extent, duration, probability of the impact
(e) Determine is the impact can be prevented, reversed or managed
(f) Identify mitigation measures
(g) Determine significance of the impact

The determination of significance involves a synthesis of characteristics and will be assessed as follows:
Against the various pieces of guidelines for the assessment of impact significance, the EAP has adopted the following measures to determine significance:

**Significance = (the extent of the impact + the duration of the impact + magnitude of the impact) in consideration of the probability of the impact occurring.**

A scoring system will be applied and be used to compare alternatives. It must be noted that cognisance must be taken of the weightings of each environmental element. For example, the significance ratings must not purport that a low environmental significance is equivalent to a low social significance. Specifically, the significance of a loss of a wetland cannot be directly compared to generation of noise as these are separate elements and have their own significance in terms of magnitude, duration, extent and probability.

The scoring system will be used to compare impacts of alternatives for the same environmental element. For example, the area of wetland loss for alternative 1 will be compared with the area of wetland loss for alternative 2. It must also be noted that a comparative assessment will be done for only the main anticipated impacts that will distinguish between choosing the most feasible alternative.
The following scoring system will be used:

| Criteria | Class | Score |
|---|---|---|
| **Magnitude** | **Low (small and has no effect on the environment)** | **1** |
| | **Moderate (will result in process continuing but in a modified way)** | **2** |
| | **Severe (results in complete destruction of patterns and permanent cessation of patterns)** | **3** |
| | | |
| **Extent** | **Site** | **1** |
| | **Surrounding area within 2km from project area** | **2** |
| | **Local between 2km to 50km** | **3** |
| | **Regional between 50km to 200km** | **4** |
| | **Provincial – impact of provincial significance** | **5** |
| | | |

| | | |
|---|---|---|
| **Duration** | **Very short term – during construction (0-1 yrs)** | **1** |
| | **Short term (2-5 yrs)** | **2** |
| | **Medium term (5-15 yrs)** | **3** |
| | **Permanent** | **4** |
| | | |
| **Probability after mitigation** | **Low** | **1** |
| | **Medium** | **2** |
| | **High** | **3** |
| | **Very high** | **4** |
| | | |
| **Reversibility** | **Can the impact be prevented?** | **1** |
| | **Can the impact be reversed?** | **2** |
| | **Can the impact be managed?** | **3** |
| | | |
| **Will irreplaceable resources be lost?** | **No** | **0** |
| | **Yes** | **1** |

The final score to be compared to significance ratings as described below.

**Comparative Assessment of Alternatives**

According to the DEAT Guideline 5 (2006) on the Assessment of Alternatives and Impacts, the Regulations require that alternatives to a proposed activity be considered. Alternatives are different means of meeting the general purpose and need of a proposed activity. Alternatives may include location or site alternatives, activity alternatives, process or technology alternatives, temporal alternatives or the no-go alternative. (The no-go alternative is the option of not undertaking the proposed activity or any of its alternatives. The no-go alternative also provides the baseline against which the impacts of other alternatives should be compared). The Regulations indicate that alternatives that are considered in an assessment process be reasonable and feasible.

The assessment of alternatives should follow the impact assessment process and should, as a minimum, include the following:

- the consideration of the no-go alternative as a baseline scenario (even in cases where the no-go alternative is not a realistic alternative);
- a comparison of the selected alternatives; and
- the providing of reasons for the elimination of an alternative.

Each alternative will be comparatively assessed in summary form. This will form the basis of the Environmental Impact Statement.

**E. g. of Comparative Assessment.**

| | **Environmental / Ecological** | **Surrounding Business / Communities** | **Economic feasibility** |
|---|---|---|---|
| **Alternative S1** | | | |
| **Alternative A1** | | | |
| **Alternative A2** | | | |
| **No-go option** | | | |

**Significance ratings:**

It must be note that the lowest obtainable score is 5 and the highest obtainable score is 20. Hence the classes range from 5 to 20.

| | | |
|---|---|---|
| **Significance ratings** | Low (5-9) | Acceptable impact that can be mitigated with no or little residual impact after mitigation. Impact is so inconsequential that it is of no significance at all /Acceptable impact that can be mitigated with low residual impact after mitigation. |
| | Medium (10-15) | Generally acceptable impact that can be mitigated with low to medium residual impact after mitigation. Sufficient magnitude and probability to warrant concern for careful mitigation of impacts. |
| | High (16-20) | Impact not acceptable – impacts cannot be mitigated and will cause detrimental impact on environment and society. |

It must be noted the described scoring system is not prescriptive and will ultimately be interpreted by the EAP in terms of the geographic context of the project and the predicted main anticipated impacts. As such, the Environmental Impact Statement provides a discussion of the scores and the relative implications for this. The Environmental Impact Statement must be considered as the conclusive statement of the environmental impact assessment phase taking into consideration the assessment of potential impacts and the impact on the environment after the management and mitigation of impacts have been taken into account.

### 10.4Structure of the Environmental Impact Report (EIR)

The EIR will be compiled to ensure that it meets the minimum requirements as stipulated in Appendix 3 of Government Notice No. R. 326 of 2014 (as amended in 2017). The EIAR will consist of the following:

- Details and expertise of the EAP;
- The location of the development footprint of the activity on the approved site as contemplated in the accepted scoping report;
- A plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale;
- A description of the scope of the proposed activity;
- A description of the policy and legislative context within which the development is located and an explanation of how the proposed development complies with and responds to the legislation and policy context;
- A motivation for the need and desirability for the proposed development, including the need and desirability of the activity in the context of the preferred development footprint within the approved site as contemplated in the accepted scoping report;
- A motivation for the preferred development footprint within the approved site as contemplated in the accepted scoping report;
- A full description of the process followed to reach the proposed development footprint within the approved site as contemplated in the accepted scoping report;
- A description of the process undertaken to identify, assess and rank the impacts the activity and associated structures and infrastructure will impose on the preferred development footprint on the approved site as contemplated in the accepted scoping report through the life of the activity;
- An assessment of each identified potentially significant impact and risk;

- A summary of the findings and recommendations of any specialist report complying with Appendix 6 of the EIA Regulations (GNR 326) and an indication as to how these findings and recommendations have been included in the final assessment report;
- An environmental impact statement which contains;
- Recommendations from specialist reports, the recording of impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation;
- The final proposed alternatives which respond to the impact management measures, avoidance, and mitigation measures identified through the assessment;
- Any aspects which were conditional to the findings of the assessment either by the EAP or specialist which are to be included as conditions of authorisation;
- A description of any assumptions, uncertainties and gaps in knowledge which relate to the assessment and mitigation measures proposed;
- A reasoned opinion as to whether the proposed activity should or should not be authorised, and if the opinion is that it should be authorised, any conditions that should be made in respect of that authorisation;
- Where the proposed activity does not include operational aspects, the period for which the environmental authorisation is required and the date on which the activity will be concluded and the post construction monitoring requirements finalised;
- An undertaking under oath or affirmation by the EAP and specialist;
- Where applicable, details of any financial provision for the rehabilitation, closure, and ongoing post decommissioning management of negative environmental impacts;
- An indication of any deviation from the approved scoping report, including the plan of study,
- Any specific information that may be required by the competent authority; and
- Any other matters required in terms of section 24(4)(a) and (b) of the Act.

### 10.5Structure of the Environmental Management Programme (EMPr)

The EMPr will highlight the most significant potential impacts and provide mitigation measures for these impacts to ensure that the risk of impact is reduced and that the activity generating the impact is suitably managed. The EMPr will comply with Section 24N of NEMA and include:

(a)details and expertise of the EAP who prepared the EMPr;

(b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;

(c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;

(d) a description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including–

(i) planning and design;

(ii) pre-construction activities;

(iii) construction activities;

(iv) rehabilitation of the environment after construction and where applicable post closure; and

(v) where relevant, operation activities;

(f) a description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) will be achieved, and must, where applicable, include actions to —

(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;

(ii) comply with any prescribed environmental management standards or practices;

(iii) comply with any applicable provisions of the Act regarding closure, where

applicable; and
(iv) comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable;
(g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);
(h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);
(i) an indication of the persons who will be responsible for the implementation of the impact management actions;
(j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;
(k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);
(l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;
(m) an environmental awareness plan describing the manner in which—
(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and
(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and
(n) any specific information that may be required by the competent authority.

### 10.6EIA Timeframes And An Indication Of The Stages At Which The Competent Authority Will Be Consulted;

Authorities such as the local municipality i.e. Ekurhuleni Municipality, the Department of Water and Sanitation, Rand Water, Department of Agriculture Forestry and Fisheries (DAFF), Department of Land Claims; Gauteng Department of Roads and Transport (GDRT), South African Heritage Resources Agency (SAHRA), Provincial Heritage Resources Agency – Gauteng (PHRAG), Department of Human Settlements, Ward Councillor and the Ratepayers Association will be provided with all documentation and reports for review and comment. The Gauteng Department of Agriculture and Rural Development (GDARD) is the competent authority on this application; final reports will be submitted to this department for acceptance and authorisation.

***Table 23: EIA Timeframes***

| Tasks | Timeframe |
|---|---|
| **Submission of Application forms to GDARD** | TBC |
| **Acknowledgment of receipt by GDARD (14 days)** | TBC |
| **Notification of I&APs / notification of adjacent landowners / land occupiers** | 01 April 2022 |
| **Placement of signboards** | 1 April 2022 |
| **Notification of Authorities** | 01 April 2022 |
| **Placement of adverts** | 28 April 2022 |
| **Distribution of BID to Registered I&APs and Authorities** | 28 April 2022 |
| **Distribution of draft scoping report to I&APs and Authorities (30-day comment period** | TBC |
| **Submission of Final Scoping report to GDARD** | TBC |
| **Notify registered I&APs of release of final Scoping Report to GDARD** | TBC |
| **Acceptance of Scoping Report by GDARD (within 43 days of submission of the final report)** | TBC |
| **Distribution of draft EIR to Registered I&APs and Authorities (30-day comment period)** | TBC |

### 10.7Summary Of Tasks To Be Undertaken In The EIA Phase

The EIA phase will make use of the following steps to conclusive determine the environmental acceptability of the proposed project:

1. Review of relevant maps and aerial photography,
2. Review of relevant legislation and by-laws,
3. Review of all available information on the site and proposal,

4. Review of specialist reports,
5. Impact assessment,
6. Assessment of alternatives,
7. Preparation of an EIR report based on the afore-described plan of study and the above,
8. Distribution of the EIR to authorities and I&APs for a 30 day comment period,
9. Preparation of responses to comments received and finalise of the draft EIR.
10. Submission of the final EIR to GDARD for authorisation.

## 11.0 Assumptions, Uncertainties, Limitations and Gaps in Information

**Assumption:** It is assumed that all information provided by the applicant is true and accurate.

**Uncertainties / Limitations**: The proposed site was previously used for a metal and / or wood manufacturing / processing facility. This was demolished in 2016 according to Google Earth imagery (2022). The site was then purchased by the applicant in 2017, it is however unknown whether there was any contamination assessments undertaken. It is however assumed that the geotechnical assessment, undertaken for this project) will determine if there are any potential levels of contamination that may need to be further assessed.

Descriptions of the environmental and socio-economic attributes of the site are based on limited fieldwork and literature available in the public domain. More information will be provided in the EIR phase based on the detailed site surveys and findings of the specialist studies.

## 12.0 Conclusion

The applicant, Opsibuzz (Pty) Ltd, proposes the construction and operation of a new cement plant (facility) located on Portion 192 of Farm 125, Daggafontein, Springs within Ekurhuleni Local Municipality (Ward 76). The site for the proposed new facility is approximately 4 hectares in size and is geographically located at the following coordinates: 26°18’43.32” S and 28°29’01.71” E (Figure 1). The purpose of the proposed new facility is to produce portland cement and other grades of cement for use by the local building industry. One alternative including the No-Go Alternative has been identified and will be assessed in detail in the EIR.

The potential impacts identified in the Scoping phase of the EIA process will be investigated in detail in the EIR and mitigation measures will be suggested. An Environmental Management Programme (EMPr) will be developed in the EIR that includes a set of management measures to achieve the recommended mitigation measures.

## 13.0 References

City of Ekurhuleni Integrated Development Plan (2019)

City of Ekurhuleni Sustainable Development Framework (2019)

City of Ekurhuleni Sustainable Development Provincial Framework (2014)

DEA (2010). National Environmental Management Act (Act 107 of 1998) Public Participation Guidelines. GNR 654 of 2010.

GIBB Engineering & Science (2013). Environmental Impact Assessment for the Proposed Development of a Cement Grinding Facility on a Site Located within the Coega Industrial Development Zone, Port Elizabeth. Draft Environmental Impact Assessment Report. Date Accessed: 08 April 2022.

IOL. 2022. Gauteng Finance MEC sets aside R36bn for construction of schools, roads and upgrading hospitals. [online] Available at: <https://www.iol.co.za/news/politics/gauteng-finance-mec-sets-aside-r36bn-for-construction-of-schools-roads-and-upgrading-hospitals-6a8f1311-8acd-4e75-be3b-4333d6861e9f> [Accessed 9 April 2022].

Jcassoc.or.jp. n.d. [online] Available at: https://www.jcassoc.or.jp/cement/4pdf/e_01b_08.pdf [Accessed 7 April 2022].

Naledzani Environmental Services (2019). Biodiversity for proposed construction of a pump station at Daggafontein at Ekurhuleni Metropolitan Municipality in the Gauteng Province, South Africa. https://sahris.sahra.org.za/sites/default/files/additionaldocs/Daggafontein%20Biodiversity%20Assessment%20-%20MR271119.pdf. Date accessed: 08 April 2022.

The National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA)

**Appendix 1: EAP CV's**

**Appendix 2: Site Layout**

**Appendix 3: Locality Map, 1:50 000 Topographic Map**

**Appendix 4: Proof of Public Participation**