Mpact Operations (Pty) Ltd

Springs Recycling Yard Development Project – Draft Basic Assessment Report

Locality: Springs

Departmental Ref No: Gaut: 002/16-17/E0309

Date: April 2017

SHANGONI
Management Services (Pty) Ltd

www.shangoni.co.za

GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

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

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.

2. This application form is current as of 8 December 2014. It is the responsibility of the EAP to ascertain whether subsequent versions of the form have been published or produced by the competent authority.

3. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.**

4. **A draft Basic Assessment Report (1 hard copy and two CD's) must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application.**

5. Five (5) copies (3 hard copies and 2 CDs-PDF) of the final report and attachments must be handed in at offices of the relevant competent authority, as detailed below.

6. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.

7. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.

8. An incomplete report may lead to an application for environmental authorisation being refused.

9. **Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorisation being refused.**

10. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation being refused.

11. No faxed or e-mailed reports will be accepted. Only hand delivered or posted applications will be accepted.

12. Unless protected by law, and clearly indicated as such, all information filled in on this application will become public information on receipt by the competent authority. The applicant/EAP must provide any interested and affected party with the information contained in this application on request, during any stage of the application process.

13. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

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

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

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

(For official use only)

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

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

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

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

Not applicable

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

*** This report serves as the draft report.**

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

*** Attached as Appendix E9**

If no, state reasons for not attaching the list.

Have State Departments including the competent authority commented? No

If no, why?

No comments have been received by any State Departments as yet. This report serves as the draft Report

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Springs Recycling Yard Development Project

Select the appropriate box

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

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

YES **X**	NO

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

Notice 509 of 2016 under the National Water Act, 1998 (Act No. 36 of 1998) – Department of Water and Sanitation

If yes, have you applied for the authorisation(s)?	YES	NO **X**
*** The applicable application will be submitted in due course.**		
If yes, have you received approval(s)? (attach in appropriate appendix)		

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	**Administering authority:**	**Promulgation Date:**
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998
National Environmental Management Act EIA Regulations (4 December 2014)	National & Provincial: Department of Environmental Affairs and Gauteng Department of Agriculture and Rural Development	4 December 2014
National Water Act, 1998 (Act No. 36 of 1998 as amended)	National & Provincial: Department of Water and Sanitation	20 August 1998
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	South African Heritage Resources Agency	14 April 1999
National Environmental Management: Waste Act, 2008 (Act No.59 of 2008)	National & Provincial: Department of Environmental Affairs	6 March 2009
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)	National & Provincial: Ekurhuleni Metropolitan Municipality	19 February 2005

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

Legislation, policy of guideline	**Description of compliance**
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended)	Adherence to these principles are important for sound environmental practice. Activities must not commence until the Environmental Authorisation is granted and conditions of the authorisation must be adhered to should it be granted.
National Environmental Management Act EIA Regulations, 2014 (4 December 2014)	Listed activities have been identified that have triggered which results in the need for a Basic Environmental Impact Assessment to be conducted as per Appendix 1 of the 2014 EIA Regulations.
National Water Act, 1998 (Act No. 36 of 1998 as amended)	The proposed development doesn't trigger any water use activities that need licencing in terms of the National Water Act, 1998.
National Heritage Resources Act, 1999 (Act No. 25 of 1999)	The proposed development doesn't require any application in terms of the National Heritage Resources Act, 1999 (Act No. 25 of 1999). The South African Heritage Agency was however included in the public participation process.
National Environmental Management: Waste Act, 2008 (Act No.59 of 2008)	No application in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) is required for the proposed development. Waste management measures was, however be included in the Environmental Management Programme compiled as part of this Basic Assessment.
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004)	No application in terms of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) is required for the proposed development.

3. ALTERNATIVES

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

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

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

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

The availability of space on the proposed site as well as the location of existing infrastructure and ease of access were factors that lead to the determination of alternatives.

Provide a description of the alternatives considered

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology, energy, operational or other (provide details of "other")	**Description**
1	Proposal	The proposed project involves the upgrade and expansion of the existing raw material storage yard of the Springs Recycling Facility.
2	Alternative 1 – Layout Alternative	Alternative 1 was identified as a layout alternative for the proposed storage yard upgrade and expansion.
3	Alternative 2	
	Etc.	

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

4. PHYSICAL SIZE OF THE ACTIVITY

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

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	8 ha
Alternatives:	
Alternative 1 (if any)	8 ha
Alternative 2 (if any)	
	Ha/ m^2

or, for linear activities:

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

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

	Size of the site/servitude:
Proposed activity	15.9 ha
Alternatives:	
Alternative 1 (if any)	15.9 ha
Alternative 2 (if any)	
	Ha/m^2

5. SITE ACCESS

Proposal

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

Describe the type of access road planned:

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

Alternative 1

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

Describe the type of access road planned:

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

Alternative 2
Does ready access to the site exist, or is access directly from an existing road?
If NO, what is the distance over which a new access road will be built
Describe the type of access road planned:

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

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

Section A 6-8 has been duplicated ☐ Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

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

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

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

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

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

7. SITE PHOTOGRAPHS

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

8. FACILITY ILLUSTRATION

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

SECTION B: DESCRIPTION OF RECEIVING ENVIRONMENT

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

Instructions for completion of Section B for linear activities

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

Section B has been duplicated for sections of the route [redacted] times

Instructions for completion of Section B for location/route alternatives

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

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

*** As Alternative 1 identified for the project is only a layout alternative, Section B has not been duplicated as the receiving environment for the two alternatives are the same.**

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

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

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

Section B – Section of Route [ ] (complete only when appropriate for above)

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

1. PROPERTY DESCRIPTION

Property description: (Including Physical Address and Farm name, portion etc.)	The existing Mpact Recycling Plant and storage area is located on the property. Physical address: 189 Steel Road, Erf 228, New Era Extension 1, Springs, 1560

2. ACTIVITY POSITION

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

Alternative:	**Latitude (S):**	**Longitude (E):**
Proposed site	-26.256311°	28.413610°
Alternative 1	-26.255293°	28.413093°

In the case of linear activities:

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

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

Addendum of route alternatives attached [redacted]

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	**T**	**0**	**I**	**R**	**0**	**4**	**6**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**8**	**0**	**0**	**0**	**0**	**0**
ALT. 1	**T**	**0**	**I**	**R**	**0**	**4**	**6**	**2**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**8**	**0**	**0**	**0**	**0**	**0**
ALT. 2																					
etc.																					

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

4. LOCATION IN LANDSCAPE

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

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

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

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

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

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

Latitude (S): **Longitude (E):**

[redacted]

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

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

Latitude (S): **Longitude (E):**

[redacted]

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

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

Latitude (S): **Longitude (E):**

[redacted]

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

6. AGRICULTURE

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

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

7. GROUNDCOVER

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

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

		Veld dominated by alien species % = 10	
	Paved surface (hard landscaping) % = 40	Building or other structure % = 5	Bare soil % = 45

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

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

If YES, specify and explain:

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

If YES, specify and explain:

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

If YES, specify and explain:

Was a specialist consulted to assist with completing this section		YES X	NO
If yes complete specialist details			
Name of the specialist:	Natural Scientific Services – Susan Abell		
Qualification(s) of the specialist:	M.Sc. in Ecology, University of Witwatersrand SACNASP Reg. No. 400116/05 – Ecological & Environmental Science		
Postal address:	4TUNE 64A Colleraine Drive, Riverclub Ext 7, Sandton		
Postal code:	2191		
Telephone:	011 787 7400	Cell:	-
E-mail:	Susan@nss-sa.co.za	Fax:	011 784 7599
Are any further specialist studies recommended by the specialist?		YES	NO X
If YES, specify:	[redacted]		
If YES, is such a report(s) attached?			
If YES list the specialist reports attached below			

[redacted]

Signature of specialist: _____ Date: 11/04/2017

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

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

If yes complete specialist details

Name of the specialist:	A Pelser Archaeological Consulting		
Qualification(s) of the specialist:	BA, UNISA BA (Hons) in Archaeology MA in Archaeology, University of Witwatersrand		
Postal address:	PO Box 73703, Lynnwood Ridge		
Postal code:	0040		
Telephone:	083 459 3091	Cell:	083 459 3091
E-mail:	apac.heritage@gmail.com	Fax:	086 695 7247

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

If YES, specify: [redacted]

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

If YES list the specialist reports attached below [redacted]

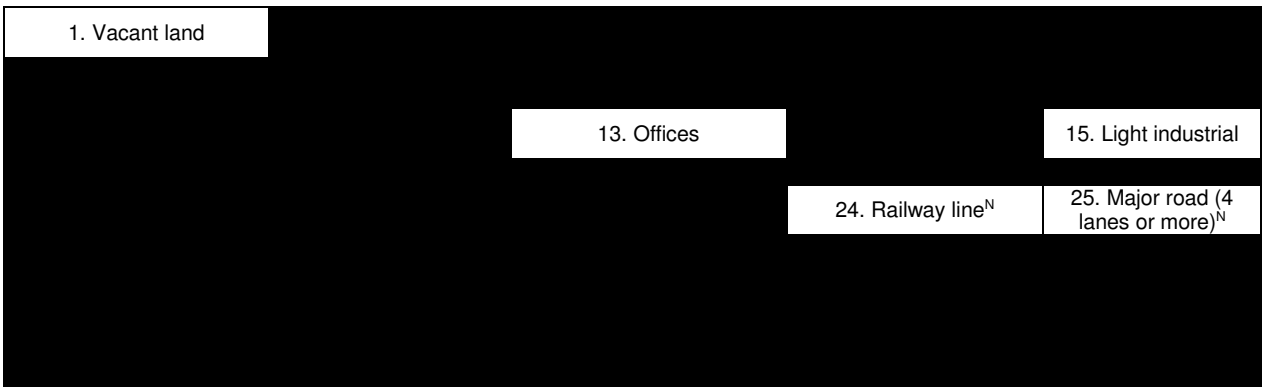
Signature of specialist: _____ Date: 2017-04-11

Was a specialist consulted to assist with completing this section		YES **X**	NO
If yes complete specialist details			
Name of the specialist:	Gideon Groenewald		
Qualification(s) of the specialist:	Ph.D. in Geology, University of Port Elizabeth		
Postal address:	PO Box 360, Clarens		
Postal code:	9707		
Telephone:	058 256 1314	Cell:	078 713 6377
E-mail:	gideonhgroenewald@gmail.com	Fax:	058 256 1314
Are any further specialist studies recommended by the specialist?		YES	NO **X**
If YES, specify:	[redacted]		
If YES, is such a report(s) attached?		[redacted]	
If YES list the specialist reports attached below	[redacted]		

Signature of specialist: _____ Date: 07 April 2017

8. LAND USE CHARACTER OF SURROUNDING AREA

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



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

NORTH

1	**1, 24**	**1**	**1**	**1, 25**
1	**1, 24**	**1**	**1**	**1, 15, 25**
15	**1, 13, 15, 24**		**1, 15**	**15, 25**
15, 24	**15**	**15**	**15**	**15, 25**
15	**15**	**15**	**15**	**15, 25**

WEST EAST

SOUTH

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

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

Have specialist reports been attached	YES **X**	NO

If yes indicate the type of reports below

Wetland Impact Assessment, Vegetation Impact Assessment, Phase 1 Heritage Impact Assessment,
Desktop Palaeontological Impact Assessment

9. SOCIO-ECONOMIC CONTEXT

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

Demographics:
According to the 2011 census, the population size in the Ekurhuleni Metropolitan Municipality equals 3 178 470. From 2001 to 2011, the Municipality had a population growth of 2.47% per annum. The population in the Municipality forms part of 1 015 465 households which equals 3.1 people per household. There are 105 men per 100 women in the Municipality and the dependency ratio is 39.4 per 100.

According to the Spatial Development Framework (2015) the population forecast for the Ekurhuleni Metropolitan Municipality is as follows:

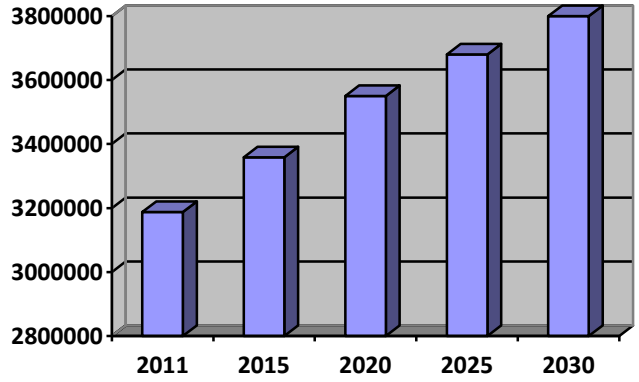


Figure 1: Population Forecast for the Ekurhuleni Metropolitan Municipality

The age structure of the Municipality is shown in the table below:

Table 1: Age Structure of the Ekurhuleni Metropolitan Municipality

Age Group	Percentage of Population (%)
<15	24.3
15-64	71.7
65+	4.0

Major economic activities:
Manufacturing sector is the largest economic contributor in the municipality with 22.74% of the GVA. The financial sector is the second largest contributor with 21.52% of the GVA followed by the community services sector with 18.83% contribution (Ekurhuleni Metropolitan Municipality Spatial Development Framework, 2015).

Education:
In terms of education, people within the municipality, aged 20 years or older, can be divided into three groups. People with no schooling comprised of 3.6% of the municipal population. The number of people with no schooling decreased from 9.2% from 2001. The number of people with a matric education increased from 27.5% to 35.9% from 2001. The percentage of people with higher education also increased since 2001 from 10% to 14%.

Unemployment and employment:
The official unemployment rate for the Ekurhuleni Metropolitan Municipality is 28.8%. The unemployment rate decrease since 2001 (40.4%).
The decrease in the unemployment rate may be contributed to the increase education level of the municipality.

10. CULTURAL/HISTORICAL FEATURES

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

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

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

If YES, explain:

According to the Desktop Palaeontological Impact Assessment, the study area is underlain by Permian aged sedimentary rocks of the Vryheid Formation (Pv), Ecca Group, of the Karoo Supergroup. The Vryheid Formation of the Ecca Group is well-known for the extremely well-preserved plant remains that are associated with the deltaic and near shore deposits of this Formation in the northern part of the Karoo Basin. The entire study area is however situated in a disturbed urban environment and it is highly unlikely that any fossils will be present on the surface. Further investigation will be required if excavations commence and the "Chance of Find Protocol", compiled as part of the Palaeontological Impact Assessment is applicable and should be implemented.

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

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

No archaeological sites, features or objects were identified in the area during the field assessment, while the only site identified was a fairly recent (middle to modern) residential refuse dump between the alternative sites. The refuse dump is not seen as significant. The preferred area has been extensively disturbed and therefore development on either this or the alternative site can be undertaken taking cognizance of the mitigation measures identified.

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

If yes, please attached the comments from SAHRA in the appropriate Appendix

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

2. LOCAL AUTHORITY PARTICIPATION

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

Was the draft report submitted to the local authority for comment? This report serves as the draft report.	YES **X**	NO

If yes, has any comments been received from the local authority?
This report serves as the draft report. Any comments received from the local authority will be included in the final Basic Assessment Report.

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

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

No comments have been received from the local authority as yet. Any comments from the local authority will be included in the Final Basic Assessment Report.

3. CONSULTATION WITH OTHER STAKEHOLDERS

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

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

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

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

No comments have been received from stakeholders as yet. Any comments from stakeholders will be included in the Final Basic Assessment Report.

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

5. APPENDICES FOR PUBLIC PARTICIPATION

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

Appendix 1 – Proof of site notice

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

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

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

Appendix 6 - Comments and Responses Report

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

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

Appendix 9 – Copy of the register of I&APs

SECTION D: RESOURCE USE AND PROCESS DETAILS

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

Instructions for completion of Section D for alternatives

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

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

Section D Alternative No. [redacted] (complete only when appropriate for above)

*** As Alternative 1 identified for the project is only a layout alternative, Section B has not been duplicated as the receiving environment for the two alternatives are the same.**

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES **X**	NO
If yes, what estimated quantity will be produced per month?		875m^3

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

Will be transported by construction contractors to a licenced landfill site.

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

Licenced landfill site as selected by construction contractors.

Will the activity produce solid waste during its operational phase?	YES **X**	NO
If yes, what estimated quantity will be produced per month?		9.3 tonnes

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

Solid waste will be disposed of at a landfill site.

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

*** Communication with the municipality in this regard have been attached under appendix F. The letter of confirmation of the capacity will be included in the final report.**

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

N/A

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

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation? If yes, inform the competent authority and request a change to an application for scoping and EIA.	YES	NO **X**

Is the activity that is being applied for a solid waste handling or treatment facility? If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.	YES	NO **X**

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

Current practice is to segregate the waste between general waste to go to landfill and paper to be recycled. This practice will continue.

Liquid effluent (other than domestic sewage)

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

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

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

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

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

If yes, provide the particulars of the facility:

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

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

N/A – the activity will not produce waste water.

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	YES **X**	NO
If yes, what estimated quantity will be produced per month?		180m^3
If yes, has the municipality confirmed that sufficient capacity exists for treating / disposing of the domestic effluent to be generated by this activity(ies)?	YES	NO **X***

*** As part of the building plan approval, an application will be made for a sewage connection during 2017.**

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

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

Emissions into the atmosphere

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

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

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

2. WATER USE

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

Municipal	Directly from water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
X					

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

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

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

If yes, list the permits required

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

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

3. POWER SUPPLY

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

The project will require limited power supply, especially in the operational phase. Power supply will be sourced from the municipality as per current practices.

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

Alternative measures will be investigated in the event that power supply is not available. The power supply requirements of the proposed development is, however, very low.

4. ENERGY EFFICIENCY

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

As the energy requirements of the proposed development are low, it can be argued that the activity will be energy efficient. Measures of further energy requirement reductions can be investigated during the operational phase.

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

No alternative energy sources have been taken into account.

SECTION E: IMPACT ASSESSMENT

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

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

No issues have been raised by interested and affected parties as yet.

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

No issues have been raised by interested and affected parties as yet, therefore no responses have been sent from the practitioner.

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

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

The environmental risk of any aspect is determined by a combination of parameters associated with the impact. Each parameter connects the physical characteristics of an impact to a quantifiable value to rate the environmental risk.

Impact assessments should be conducted based on a methodology that includes the following:
- Clear processes for impact identification, predication and evaluation;
- Specification of the impact identification techniques;
- Criteria to evaluate the significance of impacts;
- Design of mitigation measures to lessen impacts;
- Definition of the different types of impacts (indirect, direct or cumulative); and
- Specification of uncertainties.

In broad terms, the impact assessment for this project will include the following:
- All potential impacts of the proposed activity will be identified and assessed;
- The nature, significance, consequence, extent, duration and probability of all impacts will be predicted; degree to which these impacts can be reversed, may cause irreplaceable loss of resources and can be avoided, managed or mitigated.
- Identify, assess, and rank the impacts the activity will impose on the preferred location through the life of the activity.
- Identify suitable measures to avoid, manage or mitigate identified impacts,
- Identity residual risks that need to be managed and monitored.

The construction, operational and decommissioning phases of the project will be considered whilst identifying impacts. A detailed understanding of the proposed activity will be obtained to ensure that all the potential impacts are identified. The following process will be followed to identify and assess the potential impacts of the proposed activity:
- The current environmental conditions will be determined in detail. This will act as a baseline against which impacts can be identified and measured;
- The changes that will occur in future, should the proposed activity not occur, will be identified;
- A detailed understanding of the activity will be obtained in order to fully understand its consequences; and
- The significant impacts that will occur as a result of the proposed activity will be identified (should the activity be authorised).

After all impacts have been identified, the nature of each impact can be predicted. The impact prediction will take into account physical, biological, socio-economic and cultural information and will then estimate the likely parameters and characteristics of the impacts. The impact prediction will aim to provide a basis from which the significance of each impact can be determined and appropriate mitigation measures can be developed.

Table 1 and Table 2 below indicate the methodology to be used in order to assess the Probability and Magnitude of the impact, respectively, and Table 3 provides the Risk Matrix that will be used to plot the Probability against the Magnitude in order to determine the Severity of the impact.

Table 2: Determination of Probability of Impact

Frequency of Aspect / Unwanted Event	**Score**	**Availability of pathway from the source to the receptor**	**Score**	**Availability of receptor**	**Score**
Never known to have happened, but may happen	1	A pathway to allow for the impact to occur is never available	1	The receptor is never available	1
Known to happen in industry	2	A pathway to allow for the impact to occur is almost never available	2	The receptor is almost never available	2
< once a year	3	A pathway to allow for the impact to occur is sometimes available	3	The receptor is sometimes available	3
Once per year to up to once per month	4	A pathway to allow for the impact to occur is almost always available	4	The receptor is almost always available	4

Once a month - Continuous	5	A pathway to allow for the impact to occur is always available	5	The receptor is always available	5

Step 1: Determine the **PROBABILITY** of the impact by calculating the average between the Frequency of the Aspect, the Availability of a pathway to the receptor and the availability of the receptor.

Table 3: Determination of Magnitude of Impact

Source								Receptor			
Duration of impact	Score	Extent	Score	Volume / Quantity / Intensity	Score	Toxicity / Destruction Effect	Score	Reversibility	Score	Sensitivity of environmental component	Score
Lasting days to a month	1	Effect limited to the site. (metres);	1	Very small quantities / volumes / intensity (e.g. < 50L or < 1Ha)	1	Non-toxic (e.g. water) / Very low potential to create damage or destruction to the environment	1	Bio-physical and/or social functions and/or processes will remain unaltered.	1	Current environmental component(s) are largely disturbed from the natural state. Receptor of low significance / sensitivity	1
Lasting 1 month to 1 year	2	Effect limited to the activity and its immediate surroundings. (tens of metres)	2	Small quantities / volumes / intensity (e.g. 50L to 210L or 1Ha to 5Ha)	2	Slightly toxic / Harmful (e.g. diluted brine) / Low potential to create damage or destruction to the environment	2	Bio-physical and/or social functions and/or processes might be negligibly altered or enhanced / Still reversible	2	Current environmental component(s) are moderately disturbed from the natural state. No environmentally sensitive components.	2
Lasting 1 – 5 years	3	Impacts on extended area beyond site boundary (hundreds of metres)	3	Moderate quantities / volumes / intensity (e.g. > 210 L < 5000L or 5 – 8Ha)	3	Moderately toxic (e.g. slimes) Potential to create damage or destruction to the environment	3	Bio-physical and/or social functions and/or processes might be notably altered or enhanced / Partially reversible	3	Current environmental component(s) are a mix of disturbed and undisturbed areas. Area with some environmental sensitivity (scarce / valuable environment etc.).	3
Lasting 5 years to Life of Organisation	4	Impact on local scale / adjacent sites (km's)	4	Very large quantities / volumes / intensity (e.g. 5000 L – 10 000L or 8Ha– 12Ha)	4	Toxic (e.g. diesel & Sodium Hydroxide)	4	Bio-physical and/or social functions and/or processes might be considerably altered or enhanced / potentially irreversible	4	Current environmental component(s) are in a natural state. Environmentally sensitive environment / receptor (endangered species / habitats etc.).	4
Beyond life of Organisation / Permanent impacts	5	Extends widely (nationally or globally)	5	Very large quantities / volumes / intensity (e.g. > 10 000 L or >	5	Highly toxic (e.g. arsenic or TCE)	5	Bio-physical and/or social functions and/or processes might be severely/substantially altered or enhanced / Irreversible	5	Current environmental component(s) are in a pristine natural state. Highly Sensitive area (endangered species,	5

				12Ha)						wetlands, protected habitats etc.)	

Step 2: Determine the **MAGNITUDE** of the impact by calculating the average of the factors above.

Table 4: Determination of Severity of Impact

ENVIRONMENTAL IMPACT RATING / PRIORITY					
	MAGNITUDE				
PROBABILITY	1 Minor	2 Low	3 Medium	4 High	5 Major
5 Almost Certain	Low	Medium	High	High	High
4 Likely	Low	Medium	High	High	High
3 Possible	Low	Medium	Medium	High	High
2 Unlikely	Low	Low	Medium	Medium	High
1 Rare	Low	Low	Low	Medium	Medium

Step 3: Determine the **SEVERITY** of the impact by plotting the averages that were obtained above for Probability and Magnitude in the table below.

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

Impacts identified in the tables below include impacts associate with the construction and the operational phases of the development.

Proposal

Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact and mitigation not being implemented:**
Harm to the environment due to inadequate planning and design of the storage yard.	Medium (Negative)	• Development planning, including stormwater and wastewater management, must ensure that the construction and operation of the storage yard will not impact on the environment. • Project engineers should compile a method statement, outlining the construction methodologies. Mitigation measures should be included in this method statement which must be approved by the ECO and be available on site. • The approved EMP and Environmental Authorisation must be binding on the construction contractors and included in the service agreements. • The contractor is to ensure that all employees, including subcontractors and their employees, attend Environmental Awareness Training, which include the conditions of the EMP and Environmental Authorisation, prior to commencing work onsite. • Adequate planning and scheduling of construction activities to allow for disruptions caused by rain and wet conditions. The scheduling must make provision for environmental training/awareness raising for workers prior to the commencement of construction. Records of training must be maintained. • Appoint an Environmental Control Officer (ECO) prior to the commencement of the construction phase. • A complaints register must be maintained onsite from the first day of construction. • Ensure that the Environmental Authorisation and EMP are kept at the construction site.	Low (Negative)	Low.
Decreased impact on soil and groundwater	High (Positive)	• All raw material must be stored on concreted areas. No raw material may be stored on open	High (Positive)	Low

due to removal of raw material from open ground.		ground. • All water flow must be directed through controlled management into existing drainage system. • The Stormwater Management Plan must be implemented effectively.		
Exposure to soil erosion. Erosion can lead to destruction of natural habitats and sedimentation of proximate watercourses.	Medium (Negative)	• The contractor is to ensure that all reasonable measures are taken to limit erosion during the construction phase. • All areas susceptible to erosion should be protected. Erosion protection measures include sand bags, cut-off drains and/or berms. • Do not allow erosion to develop to a large scale before taking action. • Retain vegetation and soil in position as long as possible. It should only be removed immediately before construction. • Colonisation of the disturbed areas should be monitored to ensure that vegetation cover is sufficient within one growing season, if not, the areas has to be rehabilitated. • Construction should be conducted in winter months if possible to limit further impacts such as sedimentation within the canal or downstream waterbodies. • The Stormwater Management Plan must be implemented effectively. • Landscaping and revegetation should be done after construction. • Re-vegetated areas should be continuously monitored to verify whether re-vegetation was successful. • Fertilisers can be used to promote vegetation growth. • Ensure regular maintenance of the attenuation structure to ensure adequate capacity and successful containment of any silt. • Should additional erosion control measures be required, these must be installed in consultation with the design engineer.	Low (Negative)	Low.
Degradation of ambient air quality due to dust and exhaust emission generation.	Medium (Negative)	• A water cart should be available onsite to water down dusty roads and cleared areas. • A complaints register must be kept on site. The register must record the following: Date when complaint was received, name of person who reported the complaint, details of the complaint and when and how the concern was addressed. • Open areas should be re-vegetated as soon as possible. • Regular maintenance of vehicles and equipment should be undertaken. Optimal engine combustion will allow for “cleaner” exhaust emissions. • Vehicles and equipment must be switched off when not in use. No unnecessary idling should be allowed.	Low (Negative)	Low
Disturbance of sensitive receptors due to the generation of noise.	Medium (Negative)	• Activities that will generate the most noise should be scheduled during times of the day that will result in the least disturbance to neighbours. • Site workers and contractors will adhere to the requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) regarding hearing protection and noise control measures. • Regular maintenance of vehicles and equipment should be done. • If excessively noisy work is to be conducted or work is to be conducted outside normal work hours, neighbours should be informed in advance. • A complaints register must be kept on site. The register must record the following: Date when complaint was received, name of person who reported the complaint, details of the complaint and when and how the concern was addressed.	Low (Negative)	Low

Soil and surface water pollution as a result of spillage, improper handling, storage, mixing or disposal of cement and concrete.	Medium (Negative)	• Cement may only be mixed on an impermeable surface or areas to be covered with cement or concrete. • Dry cement and cement spillages must be removed from the soil surface to prevent an impermeable layer forming. The cement must be disposed of with building rubble. • Ready-mix trucks may only clean chutes into foundations or a dedicated cleaning pit. • Bricklayers and plasterers are to minimise any cement spills or runoff in their work area. They also have to ensure that the work area is cleaned of all cement spillage at the end of each workday. • Both used and unused cement bags are to be stored in weatherproof containers so as not to be affected by rain or runoff. • Soil contaminated by cement or concrete, including residue produced by the washing of cavities, are to be removed immediately after the spillage has occurred and disposed of appropriately. • Measures must be taken to prevent dirty water (wash water) from contaminating a watercourse. Water has to be contained by excavations or berms. • The following measures should be implemented at the concrete mixing area: ▪ Concrete may only be mixed in designated areas. ▪ Stormwater must be diverted around the mixing area. ▪ After use, all waste remaining at the mixing area must be removed and disposed of appropriately.	Low (Negative)	Low
Soil, groundwater and surface water pollution through increased contaminated wash water or contaminated stormwater runoff.	High (Negative)	• All water flow must be directed through controlled management into existing drainage system. • No wastewater/ wash water may be disposed of on site, onto the soil or into any water body. • Runoff from the washing of equipment is to be contained by excavations or berms. • The attenuation channel and stormwater pipes and channels are to be cleaned and de-slugged at the beginning of the raining season, at least once a month during the raining season and at the end of the raining season. • Stormwater flow from the undeveloped area to the west must be diverted away from the attenuation pond to prevent sediment build-up into the attenuation channel. • The Stormwater Management Plan must be implemented effectively.	Medium (Negative)	Low
Spread of alien invasive vegetation.	Medium (Negative)	• Category 1 alien invasive vegetation must be removed from the site. • Applications for permits for all Category 2 alien invasive species that remain on site would have to be launched with DEA. • Landscaping and re-vegetation should be conducted with only indigenous vegetation. • All alien seedlings and saplings must be removed as they become evident for the duration of construction. • Manual/mechanical removal is preferred to chemical control.	Low (Negative)	Low
Removal of alien invasive vegetation.	Medium (Positive)	• Category 1 alien invasive vegetation must be removed from the site. • Applications for permits for all Category 2 alien invasive species that remain on site would have to be launched with DEA. If no applications will be launched, the applicable vegetation have to be removed. • All alien seedlings and saplings must be removed as they become evident for the duration of construction. • Manual/mechanical removal is preferred to chemical control.	High (Positive)	Low

		• Removed vegetation must be properly disposed of to prevent further spread of alien invasive species.		
Possible impact on or loss of a bee colony within a large *Schinus molle* tree at the following GPS coordinates: 26°15'22.34"S, 28°24'43.59"E.	High (Negative)	• The *Schinus molle* tree should be conserved with the associated bee colony. • The area around the tree should be demarcated with danger tape or another form of effective demarcation. • Workers, including construction workers and contractors, must be informed on the presence of the bee colony. • Conservation measures and safety guidelines must be included in training material. • The development must be contained within the proposed footprint.	Medium (Negative)	Low
Soil, surface water and groundwater pollution due to poor waste management.	High (Negative)	• Building waste must be disposed of appropriately. • Sufficient waste bins, skips or bulk containers must be available on site. • All containers must be kept clean and hygienic. • General waste should always be stored or disposed of separately from hazardous waste. • Containers for different waste streams must be demarcated accordingly. • Waste must be stored in a manner that prevents the harbouring of pests.	Medium (Negative)	Low
Soil, surface water and groundwater pollution due to unsanitary conditions onsite.	Medium (Negative)	• Sufficient ablution facilities must be provided to contractors. • Ablution facilities should be located on impermeable surfaces at least 50m from wetlands, drainage lines or places where stormwater may accumulate. • Ablating anywhere other than in the toilets must not be allowed. • Ablution facilities are to be secured. • The contractor shall ensure that no chemicals and/or waste from the ablution facilities are spilled on the ground at any time. • Ablution facilities should be serviced weekly or more frequently if required. • Contents are to be removed from site on a regular basis. • Ablution facilities should be inspected and maintained to prevent and minimise blockage and leakages. • Toilets should have properly closing doors and be supplied with toilet paper. • Awareness of the importance of proper hygiene should be created among employees.	Low (Negative)	Low
Soil, surface water and groundwater pollution due to poor management and accidental spills of hazardous chemical substances including fuel, greases and oils used onsite.	Medium (Negative)	• Identify all hazardous chemical substances used onsite, including fuel, greases and oils. • Obtain the material safety data sheet of each of the hazardous chemical substances. These must be kept readily available onsite. • Ensure adequate access control of the chemical storage area. • Safety signage including "No Smoking", "No Naked Lights" and "Danger", and product identification signs, are to be clearly displayed in areas housing chemicals. • Appropriate equipment to deal with emergency spill incidents is to be readily available on site. This includes fire extinguishers, spill kits for hydrocarbon spills, drip trays for equipment and/or machinery leaks, drums or containers for contaminated water. • Chemicals are to be properly labelled and handled in a safety conscious manner. • All personnel handling hazardous chemicals and hazardous materials are to be issued with the appropriate Personal Protective Equipment (PPE). • Ensure that diesel/fuels tanks are in a bunded area with capacity of holding 110% of the total storage volume. • Appropriate equipment for dispensing chemicals must be used at all times.	Low (Negative)	Low

		• Immediately clean all spillages of fuels, lubricants and other petroleum based products. • Soil and other material contaminated with hazardous chemical substances shall be treated as hazardous waste and removed from site. • No hazardous chemicals may be discarded in the sewage or stormwater system. • Train staff on the use of chemicals in accordance with the risks as described in the material safety data sheets.		
Wastage and depletion of valuable resources (electricity and water) due to inefficient or redundant usage.	Medium (Negative)	**General** • Ensure that all employees have been informed of the importance of natural resources (proper environmental training and awareness). • Regular site inspection by supervisors should be conducted. • Inspect operations regularly to determine areas of improvement with regards to resource consumption. • Equipment must be regularly inspected and maintained. **Water** • Regular inspection and maintenance of all boreholes, tanks, reservoirs, toilets, water pipes, valves, taps and the attenuation pond must be conducted. • Leaking tanks, reservoirs, taps, toilets and pipes must be repaired immediately. • Running water taps and pipes may not be left unattended. **Electricity** • Save electricity by turning off lights and computers when not in use. • Energy saving light bulbs should be used.	Low (Negative)	Low
Increased risk of fire.	Medium (Negative)	• Firefighting equipment must be maintained in good working order. • All workers and contractors must receive sufficient training with regards to fire prevention and firefighting measures. • No open fires are permitted on site. • Emergency procedures must include measures for events of fire outbreaks. • Emergency numbers should be readily available on site. • Firewalls should be effectively maintained on site. • The storage area must be inspected continually. • Avoid extensive storage times by processing material as soon as possible.	Low (Negative)	Low
Increased traffic.	Medium (Negative)	• Access roads should be kept open. No storage of equipment or waste should be permitted. • Traffic signs, promoting the flow of traffic to and from the site, must be erected on site. • Security measures at the gate should be streamlined in order to promote the flow of traffic. • A complaints register should be kept on site. The register must record the following: Date when complaint was received, name of person who reported the complaint, details of the complaint and when and how the concern was addressed.	Low (Negative)	Low
Disturbance or destruction of sites, features or artifacts of archaeological and/or historical importance.	Low (Negative)	• If, during any construction or operational activities, any sites, features and objects of a cultural heritage (archaeological or historical) nature are exposed, an expert should be called in to investigate and suitable mitigation measures must be implemented.	Low (Negative)	Low
Disturbance or destruction of fossils or bedrock of palaeontological sensitivity.	Medium (Negative)	• The ECO must be informed of the fact that a Very High Palaeontological Sensitivity was allocated to the entire development site and due to the highly weathered nature of the sedimentary rocks, no significant fossils is	Low (Negative)	Low

		expected before the start of excavations for foundations. • The entire team at the construction site must be introduced to Palaeontological material that is likely to be found on site. It is best to pre-arrange a once-off information session with the Palaeontological specialist, who must present a simple and understandable, preferably audio-visual presentation (in an "interpreted voice" of the majority of the contractual workers on site), during the initial site visit that must form part of the EMPr for the project. • Mitigation measures as identified in the "Chance Find Protocol" must be included the the EMPr of the project. • A reasonable budget must be allocated to ensure compliance with the legal responsibility of the developer in terms of the proper conservation of and storage of Palaeontological Heritage. • The SAHRA must be informed of the content of this "Chance Find Protocol" and EMPr arrangements.		

Alternative 1 *(REPEAT THIS TABLE FOR EACH ALTERNATIVE)*

Potential impacts:	**Significance rating of impacts (positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented:**
Harm to the environment due to inadequate planning and design of the storage yard.	Medium (Negative)	• Development planning, including stormwater and wastewater management, must ensure that the construction and operation of the storage yard will not impact on the environment. • Project engineers should compile a method statement, outlining the construction methodologies. Mitigation measures should be included in this method statement which must be approved by the ECO and be available on site. • The approved EMP and Environmental Authorisation must be binding on the construction contractors and included in the service agreements. • The contractor is to ensure that all employees, including subcontractors and their employees, attend Environmental Awareness Training, which include the conditions of the EMP and Environmental Authorisation, prior to commencing work onsite. • Adequate planning and scheduling of construction activities to allow for disruptions caused by rain and wet conditions. The scheduling must make provision for environmental training/awareness raising for workers prior to the commencement of construction. Records of training must be maintained. • Appoint an Environmental Control Officer (ECO) prior to the commencement of the construction phase. • A complaints register must be maintained onsite from the first day of construction. • Ensure that the Environmental Authorisation and EMP are kept at the construction site.	Low (Negative)	Low.
Decreased impact on soil and groundwater due to removal of raw material from open ground.	High (Positive)	• All raw material must be stored on concreted areas. No raw material may be stored on open ground. • All water flow must be directed through controlled management into existing drainage system. • The Stormwater Management Plan must be implemented effectively.	High (Positive)	Low
Exposure to soil erosion. Erosion can lead to destruction of natural habitats and	Medium (Negative)	• The contractor is to ensure that all reasonable measures are taken to limit erosion during the construction phase. • All areas susceptible to erosion should be	Low (Negative)	Low.

sedimentation of proximate watercourses.		protected. Erosion protection measures include sand bags, cut-off drains and/or berms. • Do not allow erosion to develop to a large scale before taking action. • Retain vegetation and soil in position as long as possible. It should only be removed immediately before construction. • Colonisation of the disturbed areas should be monitored to ensure that vegetation cover is sufficient within one growing season, if not, the areas has to be rehabilitated. • Construction should be conducted in winter months if possible to limit further impacts such as sedimentation within the canal or downstream waterbodies. • The Stormwater Management Plan must be implemented effectively. • Landscaping and revegetation should be done after construction. • Re-vegetated areas should be continuously monitored to verify whether re-vegetation was successful. • Fertilisers can be used to promote vegetation growth. • Ensure regular maintenance of the attenuation structure to ensure adequate capacity and successful containment of any silt. • Should additional erosion control measures be required, these must be installed in consultation with the design engineer.		
Degradation of ambient air quality due to dust and exhaust emission generation.	Medium (Negative)	• A water cart should be available onsite to water down dusty roads and cleared areas. • A complaints register must be kept on site. The register must record the following: Date when complaint was received, name of person who reported the complaint, details of the complaint and when and how the concern was addressed. • Open areas should be re-vegetated as soon as possible. • Regular maintenance of vehicles and equipment should be undertaken. Optimal engine combustion will allow for “cleaner” exhaust emissions. • Vehicles and equipment must be switched off when not in use. No unnecessary idling should be allowed.	Low (Negative)	Low
Disturbance of sensitive receptors due to the generation of noise.	Medium (Negative)	• Activities that will generate the most noise should be scheduled during times of the day that will result in the least disturbance to neighbours. • Site workers and contractors will adhere to the requirements of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) regarding hearing protection and noise control measures. • Regular maintenance of vehicles and equipment should be done. • If excessively noisy work is to be conducted or work is to be conducted outside normal work hours, neighbours should be informed in advance. • A complaints register must be kept on site. The register must record the following: Date when complaint was received, name of person who reported the complaint, details of the complaint and when and how the concern was addressed.	Low (Negative)	Low
Soil and surface water pollution as a result of spillage, improper handling, storage, mixing or disposal of cement and concrete.	Medium (Negative)	• Cement may only be mixed on an impermeable surface or areas to be covered with cement or concrete. • Dry cement and cement spillages must be removed from the soil surface to prevent an impermeable layer forming. The cement must be disposed of with building rubble. • Ready-mix trucks may only clean chutes into foundations or a dedicated cleaning pit. • Bricklayers and plasterers are to minimise any	Low (Negative)	Low

		cement spills or runoff in their work area. They also have to ensure that the work area is cleaned of all cement spillage at the end of each workday. • Both used and unused cement bags are to be stored in weatherproof containers so as not to be affected by rain or runoff. • Soil contaminated by cement or concrete, including residue produced by the washing of cavities, are to be removed immediately after the spillage has occurred and disposed of appropriately. • Measures must be taken to prevent dirty water (wash water) from contaminating a watercourse. Water has to be contained by excavations or berms. • The following measures should be implemented at the concrete mixing area: ▪ Concrete may only be mixed in designated areas. ▪ Stormwater must be diverted around the mixing area. ▪ After use, all waste remaining at the mixing area must be removed and disposed of appropriately.		
Soil, groundwater and surface water pollution through increased contaminated wash water or contaminated stormwater runoff.	High (Negative)	• All water flow must be directed through controlled management into existing drainage system. • No wastewater/ wash water may be disposed of on site, onto the soil or into any water body. • Runoff from the washing of equipment is to be contained by excavations or berms. • The attenuation channel and stormwater pipes and channels are to be cleaned and de-slugged at the beginning of the raining season, at least once a month during the raining season and at the end of the raining season. • Stormwater flow from the undeveloped area to the west must be diverted away from the attenuation pond to prevent sediment build-up into the attenuation channel. • The Stormwater Management Plan must be implemented effectively.	Medium (Negative)	Low
Spread of alien invasive vegetation.	Medium (Negative)	• Category 1 alien invasive vegetation must be removed from the site. • Applications for permits for all Category 2 alien invasive species that remain on site would have to be launched with DEA. • Landscaping and re-vegetation should be conducted with only indigenous vegetation. • All alien seedlings and saplings must be removed as they become evident for the duration of construction. • Manual/mechanical removal is preferred to chemical control.	Low (Negative)	Low
Removal of alien invasive vegetation.	Medium (Positive)	• Category 1 alien invasive vegetation must be removed from the site. • Applications for permits for all Category 2 alien invasive species that remain on site would have to be launched with DEA. If no applications will be launched, the applicable vegetation have to be removed. • All alien seedlings and saplings must be removed as they become evident for the duration of construction. • Manual/mechanical removal is preferred to chemical control. • Removed vegetation must be properly disposed of to prevent further spread of alien invasive species.	High (Positive)	Low
Possible impact on or loss of a bee colony within a large *Schinus molle* tree at the following GPS coordinates: 26°15'22.34"S,	High (Negative)	• The *Schinus molle* tree should be conserved with the associated bee colony. • The area around the tree should be demarcated with danger tape or another form of effective demarcation. • Workers, including construction workers and contractors, must be informed on the presence	Medium (Negative)	Low

28°24'43.59"E.		of the bee colony. • Conservation measures and safety guidelines must be included in training material. • The development must be contained within the proposed footprint.		
Soil, surface water and groundwater pollution due to poor waste management.	High (Negative)	• Building waste must be disposed of appropriately. • Sufficient waste bins, skips or bulk containers must be available on site. • All containers must be kept clean and hygienic. • General waste should always be stored or disposed of separately from hazardous waste. • Containers for different waste streams must be demarcated accordingly. • Waste must be stored in a manner that prevents the harbouring of pests.	Medium (Negative)	Low
Soil, surface water and groundwater pollution due to unsanitary conditions onsite.	Medium (Negative)	• Sufficient ablution facilities must be provided to contractors. • Ablution facilities should be located on impermeable surfaces at least 50m from wetlands, drainage lines or places where stormwater may accumulate. • Ablating anywhere other than in the toilets must not be allowed. • Ablution facilities are to be secured. • The contractor shall ensure that no chemicals and/or waste from the ablution facilities are spilled on the ground at any time. • Ablution facilities should be serviced weekly or more frequently if required. • Contents are to be removed from site on a regular basis. • Ablution facilities should be inspected and maintained to prevent and minimise blockage and leakages. • Toilets should have properly closing doors and be supplied with toilet paper. • Awareness of the importance of proper hygiene should be created among employees.	Low (Negative)	Low
Soil, surface water and groundwater pollution due to poor management and accidental spills of hazardous chemical substances including fuel, greases and oils used onsite.	Medium (Negative)	• Identify all hazardous chemical substances used onsite, including fuel, greases and oils. • Obtain the material safety data sheet of each of the hazardous chemical substances. These must be kept readily available onsite. • Ensure adequate access control of the chemical storage area. • Safety signage including "No Smoking", "No Naked Lights" and "Danger", and product identification signs, are to be clearly displayed in areas housing chemicals. • Appropriate equipment to deal with emergency spill incidents is to be readily available on site. This includes fire extinguishers, spill kits for hydrocarbon spills, drip trays for equipment and/or machinery leaks, drums or containers for contaminated water. • Chemicals are to be properly labelled and handled in a safety conscious manner. • All personnel handling hazardous chemicals and hazardous materials are to be issued with the appropriate Personal Protective Equipment (PPE). • Ensure that diesel/fuels tanks are in a bunded area with capacity of holding 110% of the total storage volume. • Appropriate equipment for dispensing chemicals must be used at all times. • Immediately clean all spillages of fuels, lubricants and other petroleum based products. • Soil and other material contaminated with hazardous chemical substances shall be treated as hazardous waste and removed from site. • No hazardous chemicals may be discarded in the sewage or stormwater system. • Train staff on the use of chemicals in accordance with the risks as described in the	Low (Negative)	Low

		material safety data sheets.		
Wastage and depletion of valuable resources (electricity and water) due to inefficient or redundant usage.	Medium (Negative)	**General** • Ensure that all employees have been informed of the importance of natural resources (proper environmental training and awareness). • Regular site inspection by supervisors should be conducted. • Inspect operations regularly to determine areas of improvement with regards to resource consumption. • Equipment must be regularly inspected and maintained. **Water** • Regular inspection and maintenance of all boreholes, tanks, reservoirs, toilets, water pipes, valves, taps and the attenuation pond must be conducted. • Leaking tanks, reservoirs, taps, toilets and pipes must be repaired immediately. • Running water taps and pipes may not be left unattended. **Electricity** • Save electricity by turning off lights and computers when not in use. • Energy saving light bulbs should be used.	Low (Negative)	Low
Increased risk of fire.	Medium (Negative)	• Firefighting equipment must be maintained in good working order. • All workers and contractors must receive sufficient training with regards to fire prevention and firefighting measures. • No open fires are permitted on site. • Emergency procedures must include measures for events of fire outbreaks. • Emergency numbers should be readily available on site. • Firewalls should be effectively maintained on site. • The storage area must be inspected continually. • Avoid extensive storage times by processing material as soon as possible.	Low (Negative)	Low
Increased traffic.	High (Negative)	• Access roads should be kept open. No storage of equipment or waste should be permitted. • Traffic signs, promoting the flow of traffic to and from the site, must be erected on site. • Security measures at the gate should be streamlined in order to promote the flow of traffic. • A complaints register should be kept on site. The register must record the following: Date when complaint was received, name of person who reported the complaint, details of the complaint and when and how the concern was addressed.	Medium (Negative)	Low
Disturbance or destruction of sites, features or artifacts of archaeological and/or historical importance.	Low (Negative)	• If, during any construction or operational activities, any sites, features and objects of a cultural heritage (archaeological or historical) nature are exposed, an expert should be called in to investigate and suitable mitigation measures must be implemented.	Low (Negative)	Low
Disturbance or destruction of fossils or bedrock of palaeontological sensitivity.	Medium (Negative)	• The ECO must be informed of the fact that a Very High Palaeontological Sensitivity was allocated to the entire development site and due to the highly weathered nature of the sedimentary rocks, no significant fossils is expected before the start of excavations for foundations. • The entire team at the construction site must be introduced to Palaeontological material that is likely to be found on site. It is best to pre-arrange a once-off information session with the Palaeontological specialist, who must present a simple and understandable, preferably audio-visual presentation (in an “interpreted voice” of the majority of the contractual workers on site).	Low (Negative)	Low

		• Mitigation measures as identified in the "Chance Find Protocol" must be included the the EMPr of the project. • A reasonable budget must be allocated to ensure compliance with the legal responsibility of the developer in terms of the proper conservation of and storage of Palaeontological Heritage. • The SAHRA must be informed of the content of this "Chance Find Protocol" and EMPr arrangements.		

No Go

If no development occurs, the following impacts will occur as a result:
- Presence of alien invasive vegetation – if no development occurs, the alien invasive vegetation on site will not be removed.
- Soil, surface water and groundwater pollution due to storage of raw material on open ground.
- Loss of socio-economic benefits. No job opportunities or economic opportunities will be created.

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

- Ecological Assessment;
- Wetland Assessment;
- Phase 1 Heritage Impact Assessment; and
- Desktop Palaeontological Impact Assessment.

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

Palaeontology:
The proposed project site is underlain with the highly significant Permian aged sediments of the Vryheid Formation. No outcrops are, however, present on the site surface. The possible impact of the proposed project on the palaeontology of the area may only be determined once excavation will take place.

3. IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

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

*** Decommissioning of the recycling facility and storage yard is not anticipated for the foreseeable future. Should the facilities be decommissioned, a detailed closure and rehabilitation plan will be submitted to the Gauteng Department of Agriculture and Rural Development prior to decommissioning.**

Proposal

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

Alternative 1

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

Alternative 2

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

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

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

4. CUMULATIVE IMPACTS

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

As the site is located within an industrial area, the impacts that would contribute to the overall impact of other activities in the area. These impacts include:

- Waste paper – the development involves the upgrade and expansion of the existing storage area. The potential for waste paper spreading from the site will therefore increase.
- Generation of noise – the construction and operational activities of the project will contribute to the noise generated by other activities in the area.
- Generation of dust – the construction and operational activities of the project will contribute to the dust generated by other activities in the area.
- Recycling of waste paper and cardboard – the development will lead to the positive effect of removing recyclable material from the waste management system and re-using it by converting it to a usable product.

5. ENVIRONMENTAL IMPACT STATEMENT

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

Proposal

Development of the preferred site will contribute to the local and regional economy while also creating job opportunities. The preferred alternative is located on the north-eastern side of the project property.

The site is currently partly used for the storage of raw material and is partly unused. The site is dominated by alien invasive vegetation. The wetland present on site, including its associated 32m buffer zone, is located more than 180m from the proposed edge of development. No sensitive sites, features or artifacts of cultural heritage were found on site. The site is underlain with the highly significant Permian aged sediments of the Vryheid Formation. No outcrops are, however, present on the site surface. The site is located within the Soweto Highveld Grassland Ecosystem, however, there are no remnants of the sensitive vegetation type present on site.

The proposed development is the preferred development option due to the fact that the environmental impacts for the proposed and alternative site layouts will be similar and the layout of the proposed development is the efficient option, especially in terms of traffic regulation.

Alternative 1

Alternative 1 is a layout alternative to the preferred alternative. It involves the majority of the development to be conducted to the northern side of the proposed project property. Due to the layout of existing infrastructure, the access road on site will have a greater extent and may cause a reduction in traffic flow on site. The environmental impacts of the layout alternative will be similar to the proposed development.

Alternative 1 is not the preferred development, but due to the fact that it will have a similar environmental impact as the proposed development, it is a feasible option. It will, however result in the development of a longer road and associated increased traffic.

Alternative 2

[redacted]

No-go (compulsory)

The No-go alternative will result in current operations continuing as it currently does. The current storage of raw material will therefore continue as current. The site is dominated by alien invasive vegetation. If no development occurs, the alien invasive vegetation will not be removed.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

The following impacts were identified for the proposed project.

Potential impacts:	**Significance rating of impacts (positive or negative):**	**Significance rating of impacts after mitigation:**
Harm to the environment due to inadequate planning and design of the storage yard.	Medium (Negative)	Low (Negative)
Decreased impact on soil and groundwater due to removal of raw material from open ground.	High (Positive)	High (Positive)
Exposure to soil erosion. Erosion can lead to destruction of natural habitats and sedimentation of proximate watercourses.	Medium (Negative)	Low (Negative)

Degradation of ambient air quality due to dust and exhaust emission generation.	Medium (Negative)	Low (Negative)
Disturbance of sensitive receptors due to the generation of noise.	Medium (Negative)	Low (Negative)
Soil and surface water pollution as a result of spillage, improper handling, storage, mixing or disposal of cement and concrete.	Medium (Negative)	Low (Negative)
Soil, groundwater and surface water pollution through increased contaminated wash water or contaminated stormwater runoff.	High (Negative)	Medium (Negative)
Spread of alien invasive vegetation.	Medium (Negative)	Low (Negative)
Removal of alien invasive vegetation.	Medium (Positive)	High (Positive)
Possible impact on or loss of a bee colony within a large *Schinus molle* tree at the following GPS coordinates: 26°15'22.34"S, 28°24'43.59"E.	High (Negative)	Medium (Negative)
Soil, surface water and groundwater pollution due to poor waste management.	High (Negative)	Medium (Negative)
Soil, surface water and groundwater pollution due to unsanitary conditions onsite.	Medium (Negative)	Low (Negative)
Soil, surface water and groundwater pollution due to poor management and accidental spills of hazardous chemical substances including fuel, greases and oils used onsite.	Medium (Negative)	Low (Negative)
Wastage and depletion of valuable resources (electricity and water) due to inefficient or redundant usage.	Medium (Negative)	Low (Negative)
Increased risk of fire.	Medium (Negative)	Low (Negative)
Increased traffic.	Medium (Negative)	Low (Negative)
Disturbance or destruction of sites, features or artifacts of archaeological and/or historical importance.	Low (Negative)	Low (Negative)
Disturbance or destruction of fossils or bedrock of palaeontological sensitivity.	Medium (Negative)	Low (Negative)

For alternative:

The following impacts were identified for the layout alternative.

Potential impacts:	**Significance rating of impacts (positive or negative):**	**Significance rating of impacts after mitigation:**
Harm to the environment due to inadequate planning and design of the storage yard.	Medium (Negative)	Low (Negative)
Decreased impact on soil and groundwater due to removal of raw material from open ground.	High (Positive)	High (Positive)
Exposure to soil erosion. Erosion can lead to destruction of natural habitats and sedimentation of proximate watercourses.	Medium (Negative)	Low (Negative)
Degradation of ambient air quality due to dust and exhaust emission generation.	Medium (Negative)	Low (Negative)
Disturbance of sensitive receptors due to the generation of noise.	Medium (Negative)	Low (Negative)
Soil and surface water pollution as a result of spillage, improper handling, storage, mixing or disposal of cement and concrete.	Medium (Negative)	Low (Negative)
Soil, groundwater and surface water pollution through increased contaminated wash water or contaminated stormwater runoff.	High (Negative)	Medium (Negative)
Spread of alien invasive vegetation.	Medium (Negative)	Low (Negative)
Removal of alien invasive vegetation.	Medium (Positive)	High (Positive)
Possible impact on or loss of a bee colony within a large *Schinus molle* tree at the following GPS coordinates: 26°15'22.34"S, 28°24'43.59"E.	High (Negative)	Medium (Negative)
Soil, surface water and groundwater pollution due to poor waste management.	High (Negative)	Medium (Negative)
Soil, surface water and groundwater pollution due to unsanitary conditions onsite.	Medium (Negative)	Low (Negative)
Soil, surface water and groundwater pollution due to poor management and accidental spills of hazardous chemical substances including fuel, greases and oils used onsite.	Medium (Negative)	Low (Negative)
Wastage and depletion of valuable resources (electricity and water) due to inefficient or redundant usage.	Medium (Negative)	Low (Negative)
Increased risk of fire.	Medium (Negative)	Low (Negative)
Increased traffic.	High (Negative)	Medium (Negative)
Disturbance or destruction of sites, features or artifacts of archaeological and/or historical importance.	Low (Negative)	Low (Negative)
Disturbance or destruction of fossils or bedrock of palaeontological	Medium	Low

sensitivity.	(Negative)	(Negative)

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

The impacts identified for the proposed and alternative development are identical as the alternative only involves a layout alternative of the proposed development. The layout of existing infrastructure promotes the development of the proposed alternative. The development of alternative 1 will result in a longer access road and may result in increased traffic.
As the environmental impacts of the alternatives will be alike, the effectiveness of the operation as a result of the layout of the site determines the preferred development.

7. SPATIAL DEVELOPMENT TOOLS

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

EKURHULENI METROPOLITAN MUNICIPALITY METROPOLITAN SPATIAL DEVELOPMENT FRAMEWORK (2015)

The Springs Paper Recycling Facility is located within Region D of the Ekurhuleni Metropolitan Municipality. The role of Region D within the Municipality includes the maintenance and improvement of existing urban nodes and the creation of residential and employment opportunities while the function of the region includes the retainment of the existing industrial component and to expand on opportunities and the upgrade or renewal of existing urban nodes.

The following objectives were identified for the Ekurhuleni Metropolitan Municipality:
1. Create a single, uniform identity for the EMM;
2. Development a well-defined system of activity nodes;
3. Promote the development of a sustainable compact urban structure;
4. Create a sustainable and functional open space network;
5. Optimise job creation capacity of the formal economy;
6. Integrate the disadvantaged communities into the urban fabric;
7. Actively promote sustainable public transport;
8. Promote access to social and municipal services through CCAs;
9. Identify the spatial impact of climate change;
10. Promote sustainable livelihoods development;
11. Promote sustainable development; and
12. Optimise the comparative advantages of EMM.

The proposed development involves the upgrade of existing industrial operations, it is in correlation with SDF for the Municipality.

8. RECOMMENDATION OF THE PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner as bound by professional ethical standards and the code of conduct of EAPASA).	YES **X**	NO

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

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

1. **All mitigation measures proposed in the Basic Assessment Report and the draft Environmental Management Programme must be implemented and adhered to during all phases of the proposed project.**
2. **It is assumed that the mitigation measures proposed in the Basic Assessment Report and the draft Environmental Management Programme will be correctly implemented by the applicant and that they will be effective.**
3. **A communications pathway must be established that would allow the designated ECO to accept and deal with stakeholder complaints.**
4. **Proposed mitigation measures should be incorporated as far as possible into the operational plan for the development.**
5. **Strict monitoring and enforcement of requirements of the Environmental Management Programme must be undertaken to ensure that contractors and operators adhere to these requirements.**

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

The need and desirability of the proposed development was assessed in terms of Notice 891 of 2014 integrated environmental management guideline series 9 guideline on need and desirability in terms of the 2014 EIA regulations as published on the 20th of October 2014.

Requirement	Part where requirement is addressed/response
1. How will this development (and its separate elements/aspects) impact on the ecological integrity of the area?[1]	As the development and its associated elements/aspects will take place on an area that was historically disturbed the proposed development will not impact on the ecological integrity of the area.
1.1 How were the following ecological integrity considerations taken into account?	
1.1.1 Threatened Ecosystems.[2]	A wetland delineation and functional assessment and ecological impact assessment was conducted for the proposed development. The studies aided in determining the risks posed by the proposed development. The studies concluded that no threatened ecosystems are present on site.
1.1.2 Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetlands, and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.3	A wetland delineation and functional assessment and ecological impact assessment was conducted for the proposed development. The studies aided in determining the risks posed by the proposed development. The studies concluded than no sensitive, vulnerable, highly dynamic or stressed ecosystems are present in the vicinity of the site.
1.1.3 Critical Biodiversity Areas ("CBAs") and Ecological Support Areas ("ESAs").	A wetland delineation and functional assessment and ecological impact assessment was conducted for the proposed development. The studies aided in determining the risks posed by the proposed development on the critical biodiversity area located on site. The studies concluded that the designation of the Critical Biodiversity Area should be refuted due to the highly transformed and degraded nature of the site. The development will therefore have no influence on the Critical Biodiversity Area.
1.1.4 Conservation targets.	The conservation target for Soweto Highveld Grassland is 24%. No remnants of the Vulnerable Soweto Highveld Grassland ecosystem are, however, present on site.
1.1.5 Ecological drivers of the ecosystem.	Mitigation measures were identified and recommended in Section E of this report and the EMP to avoid, minimise and/or remedy the influence of ecological drivers such as the influence of alien invasive plant species, uncontrolled fire and human activity. The development and associated vegetation clearance will have a positive effect on the ecosystem as the area is dominated by alien invasive vegetation.
1.1.6 Environmental Management Framework.	The Environmental Management Framework for the Ekurhuleni Metropolitan Municipality identifies industrial development as a focus area.
1.1.7 Spatial Development Framework.	The Spatial Development Framework for the Ekurhuleni Metropolitan Municipality identifies industrial development and upgrade of existing urban nodes as focus areas. The proposed upgrade of the storage yard complies with the Spatial Development Objectives.
1.1.8 Global and international responsibilities relating to the environment (e.g. RAMSAR sites, Climate Change, etc.).4	The activities related to the upgrade of the storage yard will have insignificant contributions towards global and international responsibilities.
1.2 How will this development disturb or enhance ecosystems and/or result in the loss or protection of biological diversity?	An ecological impact assessment was conducted in order to determine the impact of the proposed development on

[1] Section 24 of the Constitution and section 2(4) (a) (vi) of NEMA refer.

[2] Must consider the latest information including the notice published on 9 December 2011 (Government Notice No. 1002 in Government Gazette No. 34809 of 9 December 2011 refers) listing threatened ecosystems in terms of Section 52 of National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).

[3] Section 2(4)(r) of NEMA refers.

[4] Section 2(4) (n) of NEMA refers.

Requirement		Part where requirement is addressed/response
	What measures were explored to firstly avoid these negative impacts, and where these negative impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?5	the biological diversity and ecosystems. As the area is dominated by alien invasive vegetation, the development will result in the enhancement of the ecosystem. Mitigation measures were identified to minimise negative impacts on the environment (Section E).
1.3	How will this development pollute and/or degrade the biophysical environment? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?6	Potential negative environmental impacts associated with the development were identified and evaluated in Section E of this report. Mitigation measures were identified and recommended to avoid, minimise and/or remedy negative environmental impacts. The proposed development aims to mitigate existing negative environmental impacts by storing raw material on a concrete surface with appropriate stormwater measures.
1.4	What waste will be generated by this development? What measures were explored to firstly avoid waste, and where waste could not be avoided altogether, what measures were explored to minimise, reuse and/or recycle the waste? What measures have been explored to safely treat and/or dispose of unavoidable waste?7	Generation of waste, such as building rubble and domestic waste, will take place during the construction phase of the proposed development. Some hazardous waste, such as spilt oil or diesel may also result. During the operational phase, domestic waste and sludge from the recycling process will result. Mitigation measures were recommended in Section E of this report and the EMP to effectively manage and minimise waste generated by the development.
1.5	How will this development disturb or enhance landscapes and/or sites that constitute the nation's cultural heritage? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?8	A Phase 1 Archaeological Impact Assessment was conducted on site. No sensitive sites, features or artifacts of cultural heritage origin or significance were found. Mitigation measures were identified in the event that any sites, features or artifacts of cultural heritage origin were found on site.
1.6	How will this development use and/or impact on non-renewable natural resources? What measures were explored to ensure responsible and equitable use of the resources? How have the consequences of the depletion of the non-renewable natural resources been considered? What measures were explored to firstly avoid these impacts, and where impacts could not be avoided altogether, what measures were explored to minimise and remedy (including offsetting) the impacts? What measures were explored to enhance positive impacts?9	Very limited use and/or impact on non-renewable natural resources will result as part of the proposed development. Mitigation measures were recommended in Section E of this report and the EMP to ensure that the non-renewable resources are used efficiently and not wasted.
1.7	How will this development use and/or impact on renewable natural resources and the ecosystem of which they are part? Will the use of the resources and/or impact on the ecosystem jeopardise the integrity of the resource and/or system taking into account carrying capacity restrictions, limits of acceptable change, and thresholds? What measures were explored to firstly avoid the use of resources, or if avoidance is not possible, to minimise the use of resources? What measures were taken to ensure responsible and equitable use of the resources? What measures were explored to enhance positive impacts?10	The proposed development will not use or impact upon any renewable natural resources. The development will however result in minimising impacts on soil and surrounding water bodies as raw material will be stored on an impermeable surface.
1.7.1	*Does the proposed development exacerbate the increased dependency on increased use of resources to maintain economic growth or does it reduce resource dependency (i.e. de-materialised growth)? (note: sustainability requires that settlements reduce their ecological footprint by using less material and energy demands and reduce the amount of waste they generate, without compromising their quest to*	The dependency on increased use of resources will not be exacerbated by the proposed development. The development will however result in minimising impacts on soil and surrounding water bodies as raw material will be stored on an impermeable surface.

[5] Section 24 of the Constitution and Sections 2(4) (a) (i) and 2(4) (b) of NEMA refer.

[6] Section 24 of the Constitution and Sections 2(4) (a) (ii) and 2(4)(b) of NEMA refer.

[7] Section 24 of the Constitution and Sections 2(4)(a)(iv) and 2(4)(b) of NEMA refer.

[8] Section 24 of the Constitution and Sections 2(4)(a)(iii) and 2(4)(b) of NEMA refer.

[9] Section 24 of the Constitution and Sections 2(4)(a)(v) and 2(4)(b) of NEMA refer.

[10] Section 24 of the Constitution and Sections 2(4)(a)(vi) and 2(4)(b) of NEMA refer.

Requirement		Part where requirement is addressed/response
	improve their quality of life)	
1.7.2	*Does the proposed use of natural resources constitute the best use thereof? Is the use justifiable when considering intra- and intergenerational equity, and are there more important priorities for which the resources should be used (i.e. what are the opportunity costs of using these resources this the proposed development alternative?)*	Very limited use of natural resources will result as part of the proposed development.
1.7.3	*Do the proposed location, type and scale of development promote a reduced dependency on resources?*	The proposed development will not promote a reduced dependency on resources. It will however promote recycling of used material and minimise the negative impact on resources such as soil and groundwater in the area.
1.8	How were a risk-averse and cautious approach applied in terms of ecological impacts?11	The site for development has already been disturbed and is located as far as possible from sensitive receptors.
1.8.1	*What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?*	It is believed that no knowledge gaps exist in terms of the proposed project, the current state of the environment as well as the potential impacts associated with the proposed project. No uncertainties have been identified. The following assumptions were made: • All information provided by the applicant regarding the proposed project is correct. • The mitigation measures proposed in this report and the EMP are implemented correctly and are effective. • All specialist opinions are accurate. • All research/reference sources are accurate. • There will be no significant changes to the proposed project scope that could affect the findings and recommendations of this report and the EMP.
1.8.2	*What is the level of risk associated with the limits of current knowledge?*	Based on the above described gaps, uncertainties and assumptions, it is our opinion that the level of risk associated with the limits of current knowledge is low.
1.8.3	*Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?*	A risk-averse and cautious approach was applied to this proposed development as the limitations and gaps in knowledge regarding the impacts of the proposed development were taken into account.
1.9	How will the ecological impacts resulting from this development impact on people's environmental right in terms following:12	
1.9.1	*Negative impacts: e.g. access to resources, opportunity costs, loss of amenity (e.g. open space), air and water quality impacts, nuisance (noise, odour, etc.), health impacts, visual impacts, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts?*	Refer to Section E of this report for all impacts and mitigation measures associated with the proposed development.
1.9.2	*Positive impacts: e.g. improved access to resources, improved amenity, improved air or water quality, etc. What measures were taken to enhance positive impacts?*	The development will minimise the existing negative impact on resources such as soil and groundwater in the area.
1.10	Describe the linkages and dependencies between human wellbeing, livelihoods and ecosystem services applicable to the area in question and how the development's ecological impacts will result in socio-economic impacts (e.g. on livelihoods, loss of heritage site, opportunity costs, etc.)?	All impacts associated with the proposed project was identified in Section E of this report. The proposed development will not have a negative impact on human wellbeing or livelihoods of the people in the area.
1.11	Based on all of the above, how will this development positively or negatively impact on ecological integrity objectives/targets/considerations of the area?	All impacts associated with the proposed project was identified in Section E of this report.
1.12	Considering the need to secure ecological integrity and a healthy biophysical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the "best practicable environmental option" in terms of ecological considerations?13	The site proposed for the development has already been extensively disturbed and is dominated by alien invasive vegetation. The development will therefore not result in further disturbance of the environment. Refer to Section E of the report for all impacts associated with the proposed project.

[11] Section 24 of the Constitution and Section 2(4)(a)(vii) of NEMA refer.

[12] Section 24 of the Constitution and Sections 2(4)(a)(viii) and 2(4)(b) of NEMA refer.

[13] Section 2(4)(b) of NEMA refer.

Requirement		Part where requirement is addressed/response
1.13	Describe the positive and negative cumulative ecological/biophysical impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and existing and other planned developments in the area?14	Negative: • Littering of waste paper; • Generation of noise; • Generation of dust Positive: • Increased recycling of used material.
2.1	What is the socio-economic context of the area, based on, amongst other considerations, the following considerations?:	
2.1.1	*The IDP (and its sector plans' vision, objectives, strategies, indicators and targets) and any other strategic plans, frameworks of policies applicable to the area,*	The IDP contains a Growth and Development Strategy 2055 which has identified the promotion of re-use of waste as a priority. The proposed development is therefore in line with the IDP for the EMM.
2.1.2	*Spatial priorities and desired spatial patterns (e.g. need for integrated of segregated communities, need to upgrade informal settlements, need for densification, etc.),*	It is not expected that the proposed development will impact upon spatial priorities and patterns. The proposed development is, however, in line with the existing land use of the site and surrounding properties.
2.1.3	*Spatial characteristics (e.g. existing land uses, planned land uses, cultural landscapes, etc.), and*	The proposed development will have the same spatial characteristics as the existing land use of the area.
2.1.4	*Municipal Economic Development Strategy ("LED Strategy").*	The Economic Development Strategy for the Ekurhuleni Metropolitan Municipality identified the promotion of waste recycling and reusable energy as a priority. The proposed development is therefore in line with the strategy.
2.2	Considering the socio-economic context, what will the socio-economic impacts be of the development (and its separate elements/aspects), and specifically also on the socio-economic objectives of the area?	The proposed development will provide increased recycling opportunities to people in the area. The development will also provide employment opportunities.
2.2.1	*Will the development complement the local socio-economic initiatives (such as local economic development (LED) initiatives), or skills development programs?*	The proposed development will complement the promotion of waste recycling as identified as priority initiative in the LED for the Ekurhuleni Metropolitan Municipality.
2.3	How will this development address the specific physical, psychological, developmental, cultural and social needs and interests of the relevant communities?15	The proposed development will provide the community the opportunity to increase the recycling of paper in the area. It is not anticipated that the development will further impact on the physical, psychological, developmental, cultural or social needs and interests of the community.
2.4	Will the development result in equitable (intra- and inter-generational) impact distribution, in the short- and longterm?16 Will the impact be socially and economically sustainable in the short- and long-term?	The proposed development will have an equitable impact distribution over the short- (construction phase) and long-term (operational phase). The impacts (Section E) are mostly low, taking mitigatory measures into account, for both the construction and operational phases. The development will be sustainable over the short- and long-term as the operation of the storage yard is expected to continue for at least the next 30 years.
2.5	In terms of location, describe how the placement of the proposed development will:17	
2.5.1	*result in the creation of residential and employment opportunities in close proximity to or integrated with each other,*	Employment opportunities will be created during the construction and operational phases of the storage yard.
2.5.2	*reduce the need for transport of people and goods,*	The proposed development will not have an impact on the transportation of people or goods.
2.5.3	*result in access to public transport or enable non-motorised and pedestrian transport (e.g. will the development result in densification and the achievement of thresholds in terms public transport),*	The proposed project will not have an impact on access to public transport or non-motorised and pedestrian transport.
2.5.4	*compliment other uses in the area,*	The development will have little influence on other uses in the area. It will, however, provide increased recycling facilities for the other businesses and residents in the area.
2.5.5	*be in line with the planning for the area,*	The proposed development is in line with the planning of the area in terms of the Spatial Development Framework for the Ekurhuleni Metropolitan Municipality.

[14] Regulations 22(2)(i)(i), 28(1)(g) and 31(2)(1) in Government Notice No. R. 543 refer.

[15] Section 2(2) of NEMA refers.

[16] Sections 2(2) and 2(4)(c) of NEMA refers.

[17] Section 3 of the Development Facilitation Act, 1995 (Act No. 67 of 1995) ("DFA") and the National Development Plan refer.

Requirement	Part where requirement is addressed/response
2.5.6 for urban related development, make use of underutilised land available with the urban edge,	The area proposed for the development is not currently used. It will therefore make use for underutilised land within the urban edge.
2.5.7 optimise the use of existing resources and infrastructure,	The proposed development involves the upgrade of existing infrastructure. Existing facilities will be used as far as possible.
2.5.8 opportunity costs in terms of bulk infrastructure expansions in non-priority areas (e.g. not aligned with the bulk infrastructure planning for the settlement that reflects the spatial reconstruction priorities of the settlement),	Not applicable as bulk infrastructure development for the proposed project will not have an influence on the bulk infrastructure of non-priority areas.
2.5.9 discourage "urban sprawl" and contribute to compaction/densification,	It is not anticipated that the development will contribute towards "urban sprawl" as the development is not associated with any housing or residential areas. The development will also occur on an already disturbed area that is in line with the existing land use.
2.5.10 contribute to the correction of the historically distorted spatial patterns of settlements and to the optimum use of existing infrastructure in excess of current needs,	It is not anticipated that the proposed development will contribute towards the correction of historically distorted settlement spatial patterns. The upgrade of existing infrastructure will ensure the optimum use of existing infrastructure.
2.5.11 encourage environmentally sustainable land development practices and processes,	Efficient resource usage, effective segregation of waste types and recycling of available material and mitigation of environmental impacts will encourage environmentally sustainable land development. All impacts and mitigation measures associated with this project is contained under Section E of this report.
2.5.12 take into account special locational factors that might favour the specific location (e.g. the location of a strategic mineral resource, access to the port, access to rail, etc.),	The proposed development site was chosen in order to incorporate existing infrastructure and avoid any sensitive areas.
2.5.13 the investment in the settlement or area in question will generate the highest socio-economic returns (i.e. an area with high economic potential),	In terms of land development potential, the proposed development will generate the highest socio-economic returns. The development will result in economic returns as a result of job creation, increased recycling and cardboard production.
2.5.14 impact on the sense of history, sense of place and heritage of the area and the socio-cultural and cultural-historic characteristics and sensitivities of the area, and	The development will have no impact on the sense of history, sense of place or heritage of the area. A Phase 1 Heritage Impact Assessment and Palaeontological Assessment was conducted during January 2017. No sensitive sites, features or artifacts of cultural heritage origin or significance were found. The development will have the same characteristics as the surrounding land uses.
2.5.15 in terms of the nature, scale and location of the development promote or act as a catalyst to create a more integrated settlement?	It is not foreseen that the proposed project will act as a catalyst to create a more integrated settlement.
2.6 How were a risk-averse and cautious approach applied in terms of socio-economic impacts?:	A risk-averse and cautious approach was applied by taking into account the limitations and gaps in knowledge regarding the impacts of the proposed development.
2.6.1 What are the limits of current knowledge (note: the gaps, uncertainties and assumptions must be clearly stated)?18	The proposed project site is underlain with the highly significant Permian aged sediments of the Vryheid Formation. No outcrops are, however, present on the site surface. The possible impact of the proposed project on the palaeontology of the area may only be determined once excavation will take place. It is believed that no other knowledge gaps exist in terms of the proposed project, the current state of the environment as well as the potential impacts associated with the proposed project. No uncertainties have been identified. The following assumptions were made: • All information provided by the applicant regarding the proposed project is correct. • The mitigation measures proposed in this report and the EMP are implemented correctly and are effective.

[18] Section 24(4) of NEMA refers.

Requirement		Part where requirement is addressed/response
		• All specialist opinions are accurate. • All research/reference sources are accurate. • There will be no significant changes to the proposed project that could affect the findings and recommendations of this report and the EMP.
2.6.2	*What is the level of risk (note: related to inequality, social fabric, livelihoods, vulnerable communities, critical resources, economic vulnerability and sustainability) associated with the limits of current knowledge?*	Based on the above described gaps, uncertainties and assumptions, it is our opinion that the level of risk associated with the limits of current knowledge is low.
2.6.3	*Based on the limits of knowledge and the level of risk, how and to what extent was a risk-averse and cautious approach applied to the development?*	A risk-averse and cautious approach was applied to this proposed development as the limitations and gaps in knowledge regarding the impacts of the proposed development were taken into account.
2.7	How will the socio-economic impacts resulting from this development impact on people's environmental right in terms following:	
2.7.1	*Negative impacts: e.g. health (e.g. HIV-Aids), safety, social ills, etc. What measures were taken to firstly avoid negative impacts, but if avoidance is not possible, to minimise, manage and remedy negative impacts?*	It is not anticipated that the proposed project will have a significant negative impact on people's health, safety and social ills.
2.7.2	*Positive impacts. What measures were taken to enhance positive impacts?*	Positive impacts include: • Removal of alien invasive vegetation; • Improvement of stormwater management; • Removal of raw material from open ground; • Improved traffic regulation.
2.8	Considering the linkages and dependencies between human wellbeing, livelihoods and ecosystem services, describe the linkages and dependencies applicable to the area in question and how the development's socioeconomic impacts will result in ecological impacts (e.g. over utilisation of natural resources, etc.)?	It is not anticipated that the development's socio-economic impacts will result in new, direct ecological impacts.
2.9	What measures were taken to pursue the selection of the "best practicable environmental option" in terms of socio-economic considerations?19	Due to the fact that the proposed development site has been severely degraded and is dominated by alien invasive vegetation, it is concluded that the development will not have a severe impact on the environment. The development will also involve the recycling of waste and is therefore considered to be the best practicable environmental option.
2.10	What measures were taken to pursue environmental justice so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons (who are the beneficiaries and is the development located appropriately)?20 Considering the need for social equity and justice, do the alternatives identified, allow the "best practicable environmental option" to be selected, or is there a need for other alternatives to be considered?	As the proposed project site is the only area available for development, no site alternatives were considered. The layout of existing infrastructure also limited the layout alternatives. It is, however, unlikely that the development will result in unfair discrimination against any person.
2.11	What measures were taken to pursue equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing, and what special measures were taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination?21	The services that will be offered as a result of the development will meet basic human needs and will be available to the whole community.
2.12	What measures were taken to ensure that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development's life cycle?22	Mitigation measures were recommended to ensure that the environmental impacts of the proposed development were addressed. Refer to Section E of all environmental impacts identified and mitigation measures proposed for the development.
2.13	What measures were taken to:	
2.13.1	*ensure the participation of all interested and affected parties,*	The public participation process for this project was conducted by Shangoni Management Services in terms of: • The procedure and provisions in terms of the NEMA (as amended), 1998;

[19] Section 2(4)(b) of NEMA refers.
[20] Section 2(4)(c) of NEMA refers.
[21] Section 2(4)(d) of NEMA refers.
[22] Section 2(4)(e) of NEMA refers.

Requirement	Part where requirement is addressed/response
	• Chapter 6 of the EIA Regulations of 2014; • GN 807: Public Participation Guideline in the Environmental Impact Assessment Process, dated October 2012; and • Other relevant legislation such as the Promotion of Access to Information Act (PAIA), 2000.
2.13.2 *provide all people with an opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation,23*	The public participation process is open to all parties. Public notices and a newspaper advertisement were distributed to encourage participation.
2.13.3 *ensure participation by vulnerable and disadvantaged persons,24*	The public participation process is open to all parties, including vulnerable and disadvantages persons.
2.13.4 *promote community wellbeing and empowerment through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means,25*	All employees will undergo environmental awareness/training.
2.13.5 *ensure openness and transparency, and access to information in terms of the process,26*	The public participation process for this project was conducted by Shangoni Management Services in terms of: • The procedure and provisions in terms of the NEMA (as amended), 1998; • Chapter 6 of the EIA Regulations of 2014; • GN 807: Public Participation Guideline in the Environmental Impact Assessment Process, dated October 2012; and • Other relevant legislation such as the Promotion of Access to Information Act (PAIA), 2000. The public participation process included notification letters, notice boards as well as a newspaper advertisement. The notices included all information related to the project. Therefore, the process was open and transparent and the public had access to all documents. All public comments have been included in this document and were adequately addressed.
2.13.6 *ensure that the interests, needs and values of all interested and affected parties were taken into account, and that adequate recognition were given to all forms of knowledge, including traditional and ordinary knowledge27, and*	The public participation process for this project was conducted by Shangoni Management Services in terms of: • The procedure and provisions in terms of the NEMA (as amended), 1998; • Chapter 6 of the EIA Regulations of 2014; • GN 807: Public Participation Guideline in the Environmental Impact Assessment Process, dated October 2012; and • Other relevant legislation such as the Promotion of Access to Information Act (PAIA), 2000.
2.13.7 *ensure that the vital role of women and youth in environmental management and development were recognised and their full participation therein were promoted?28*	The public participation process for this project was conducted by Shangoni Management Services in terms of: • The procedure and provisions in terms of the NEMA (as amended), 1998; • Chapter 6 of the EIA Regulations of 2014; • GN 807: Public Participation Guideline in the Environmental Impact Assessment Process, dated October 2012; and • Other relevant legislation such as the Promotion of Access to Information Act (PAIA), 2000.
2.14 Considering the interests, needs and values of all the interested and affected parties, describe how the development will allow for opportunities for all the segments of the community (e.g. a mixture of low-, middle-, and high-income housing opportunities) that is consistent with the	The development will allow for all segments of the community to store recyclable material.

[23] Section 2(4)(f) of NEMA refers.

[24] Section 2(4)(f) of NEMA refers.

[25] Section 2(4)(h) of NEMA refers.

[26] Section 2(4)(k) of NEMA refers.

[27] Section 2(4)(g) of NEMA refers.

[28] Section 2(4)(q) of NEMA refers.

Requirement		Part where requirement is addressed/response
	priority needs of the local area (or that is proportional to the needs of an area)?29	
2.15	What measures have been taken to ensure that current and/or future workers will be informed of work that potentially might be harmful to human health or the environment or of dangers associated with the work, and what measures have been taken to ensure that the right of workers to refuse such work will be respected and protected?30	All contractors, sub-contractors and workers will attend compulsory environmental awareness training and inductions. This training will highlight the dangers associated with the workplace. Procedures relating to environmental risks will also be put in place and will regularly be updated.
2.16	Describe how the development will impact on job creation in terms of, amongst other aspects:	
2.16.1	*the number of temporary versus permanent jobs that will be created,*	38 temporary job opportunities will be created during the construction phase and 56 permanent job opportunities will be created during the operational phase of the development.
2.16.2	*whether the labour available in the area will be able to take up the job opportunities (i.e. do the required skills match the skills available in the area),*	Contractors will be used to conduct the development. Local labourers may be sourced up to a certain skills level.
2.16.3	*the distance from where labourers will have to travel,*	The contractors used for the development will transport workers to and from the site.
2.16.4	*the location of jobs opportunities versus the location of impacts (i.e. equitable distribution of costs and benefits), and*	The location of job opportunities will be in close proximity to the location of impacts.
2.16.5	*the opportunity costs in terms of job creation (e.g. a mine might create 100 jobs, but impact on 1000 agricultural jobs, etc.).*	The development will create job opportunities without impact on employment opportunities in other sections.
2.17	What measures were taken to ensure:	
2.17.1	*that there were intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment, and*	All applicable environmental legislation was considered and adhered to during the Basic Assessment process. Refer to Section A2 of this report.
2.17.2	*that actual or potential conflicts of interest between organs of state were resolved through conflict resolution procedures?*	The public participation process for this project was conducted by Shangoni Management Services in terms of: • The procedure and provisions in terms of the NEMA (as amended), 1998; • Chapter 6 of the EIA Regulations of 2014; • GN 807: Public Participation Guideline in the Environmental Impact Assessment Process, dated October 2012; and • Other relevant legislation such as the Promotion of Access to Information Act (PAIA), 2000.
2.18	What measures were taken to ensure that the environment will be held in public trust for the people, that the beneficial use of environmental resources will serve the public interest, and that the environment will be protected as the people's common heritage?31	All mitigation measures proposed as part of this Environmental Impact Assessment process have been focussed on minimising the potential impacts associated with the proposed development. The focus is on the protection of the environment through various measures, including pollution minimisation.
2.19	Are the mitigation measures proposed realistic and what long-term environmental legacy and managed burden will be left?32	The mitigation measures are realistic, as also described in item 2.18 above.
2.20	What measures were taken to ensure that the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects will be paid for by those responsible for harming the environment?33	The applicant will be responsible for the costs of any pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects.
2.21	Considering the need to secure ecological integrity and a healthy bio-physical environment, describe how the alternatives identified (in terms of all the different elements of the development and all the different impacts being proposed), resulted in the selection of the best practicable	As the proposed project site is the only area available for development, no site alternatives were considered. The layout of existing infrastructure also limited the layout alternatives. The site has been severely disturbed and is dominated by alien invasive vegetation. The development

[29] Section 2(4)(g) of NEMA refers.

[30] Section 2(4)(j) of NEMA refers

[31] Section 2(4)(o) of NEMA refers.

[32] Section 240(1)(b)(iii) of NEMA and the National Development Plan refer.

[33] Section 2(4)(p) of NEMA refers.

Requirement		Part where requirement is addressed/response
	environmental option in terms of socio-economic considerations?34	will therefore not have a negative impact on the environment. The development will have a positive socio-economic impact as it will result in job opportunities and economic stimulation.
2.22	Describe the positive and negative cumulative socio-economic impacts bearing in mind the size, scale, scope and nature of the project in relation to its location and other planned developments in the area?35	Cumulative impacts are described in Section E4 of this report.

10. THE PERIOD FOR WHICH THE ENVIRONMENTAL AUTHORISATION IS REQUIRED

(CONSIDER WHEN THE ACITIVTY IS EXPECTED TO BE CONCLUDED)

The Environmental Authorisation is required for a minimum of 50 years. Ideally the authorisation should be granted indefinitely as closure of the recycling plant and associated storage area is not anticipated.

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

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

EMPr attached	Yes – Appendix H

[34] Section 2(4)(b) of NEMA refers.

[35] Regulations 22(2)(i)(i), 28(1)(g) and 31(2)(1) in Government Notice No. R. 543 refer.

SECTION F: APPENDIXES

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

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

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

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

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

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

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

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