Technical report:

AS-R-2013-02-18 **GDARD Reference No. S24G/03/11-12/0220**

Environmental Impact Assessment:

Basic Assessment Report for the construction of a steel recycling facility on Erf 129, 130 and 131 in Babelegi, Hammanskraal, Gauteng Province

February 2013

Document version 1.0 – Final
Compiled by: H Gildenhuys
C Smith

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Basic Assessment Report (BAR) for the construction of a steel recycling facility on Erf 129, 130 and 131 in Babelegi, Hammanskraal, Gauteng Province

February 2013

GDARD Reference No. S24G/03/11-12/0220

Prepared for:

Unica Iron & Steel (Pty) Ltd

Compiled by:

Project team

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REPORT DISTRIBUTION LIST

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Rofhiwa Khorombi-Ramugondo	Gauteng Department of Agriculture and Rural Development – Compliance and Enforcement
Livhuwani Muluvhu	Gauteng Department of Agriculture and Rural Development – Waste Management
Unica Iron & Steel (Pty) Ltd	Irsjad Ul Haq, Syed Hasan Ali, Muhammad Asif Qasim

DOCUMENT HISTORY

Report no	Date	Version	Status
AS-R-2012-12-10	10 December 2012	1.0	Draft
AS-R-2013-02-18	18 February 2013	1.0	Final

Gauteng Department of Agriculture and Rural Development (GDARD)

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, 2010 (Version 1)

List of all organs of state and State Departments where the draft report has been submitted, their full contact details and contact person

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2010.

2. This application form is current as of 2 August 2010. 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 to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken. The draft reports must be submitted to the relevant State Departments and on the same day, two CD's of draft reports must also be submitted to the Competent Authority (GDARD) with a signed proof of such submission of draft report to the relevant State Departments.**

4. 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.

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

6. An incomplete report shall be rejected.

7. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.

8. 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.

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

10. 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.

DEPARTMENTAL DETAILS

Gauteng Department of Agriculture and Rural Development
Attention: Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch
P.O. Box 8769
Johannesburg
2000

Administrative Unit of the Sustainable Utilisation of the Environment (SUE) Branch
18th floor Glen Cairn Building
73 Market Street, Johannesburg

Admin Unit telephone number: (011) 355 1345
Department central telephone number: (011) 355 1900

(For official use only)

File Reference Number:						
Application Number:						
Date Received:						

* Submission to State Departments (Number 3 above)

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

Is a list of State Departments referred to above been attached to this report? ☒

if no, state reasons for not attaching the list.

Please refer to cover letter

SECTION A: ACTIVITY INFORMATION

1. ACTIVITY DESCRIPTION

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

Proposed operation of a steel recycling facility on erven 129, 130 and 131 in Babelegi, Hammanskraal, Gauteng Province.

Select the appropriate box

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

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

~~YES~~ NO

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

National Environmental Management: Waste Act 2008, No. 59 of 2008 – Gauteng Department of Agriculture and Rural Development
National Environmental Management: Air Quality Act 2008, No. 39 of 2004 – The City of Tshwane Municipality

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

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	**Administering authority:**	**Promulgation Date:**
National Environmental Management: Air Quality Act 2004, No. 39 of 2004	City of Tshwane Metropolitan Municipality	Government notice No. 476 published in Government Gazette No. 27318 24 February 2005
National Environmental Management: Waste	Gauteng Department	10 March 2009

Act 2008, No. 59 of 2008	of Agriculture and Rural Development	
Government Notice 718 **Category A** **Activity 1:** The storage, including the temporary storage, of general waste at a facility that has the capacity to store in excess of 100m^3 of general waste at anyone time, excluding the storage of waste in lagoons. **Activity 5:** The sorting, shredding, grinding or bailing of general waste at a facility that has the capacity to process in excess or one ton of general waste per day. **Activity 7:** The recycling or re-use of general waste of more than 10 tons per month. **Activity 18:** The construction of facilities for activities listed in Category A of this Schedule (not in isolation to associated activity).	Gauteng Department of Agriculture and Rural Development	3 July 2009
National Water Act (Act No 36 of 1998) (NWA) The NWA has been considered, however no section 21 water uses are however applicable to the project and therefore a water use license is not required for the plant.	Department of Water Affairs (DWA)	26 August 1998
Integrated Environmental Management: Integrated Environmental Management (IEM) is a philosophy, which prescribes a code of practice for ensuring that environmental considerations are fully integrated into all stages of the development process. This philosophy aims to achieve a desirable balance between conservation and development (Department of Environmental Affairs: DEAT, 1992). The IEM guidelines intend endearing a pro-active approach to sourcing, collating and presenting information at a level that can be interpreted at all levels.	Department of Environmental Affairs and Tourism (DEAT).	1992
Gauteng Spatial Development Framework: Strives to confine urban type of development within the urban edge. The proposed development falls within the urban edge.	Gauteng Department of Agriculture and Rural Development (GDARD)	2002

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.

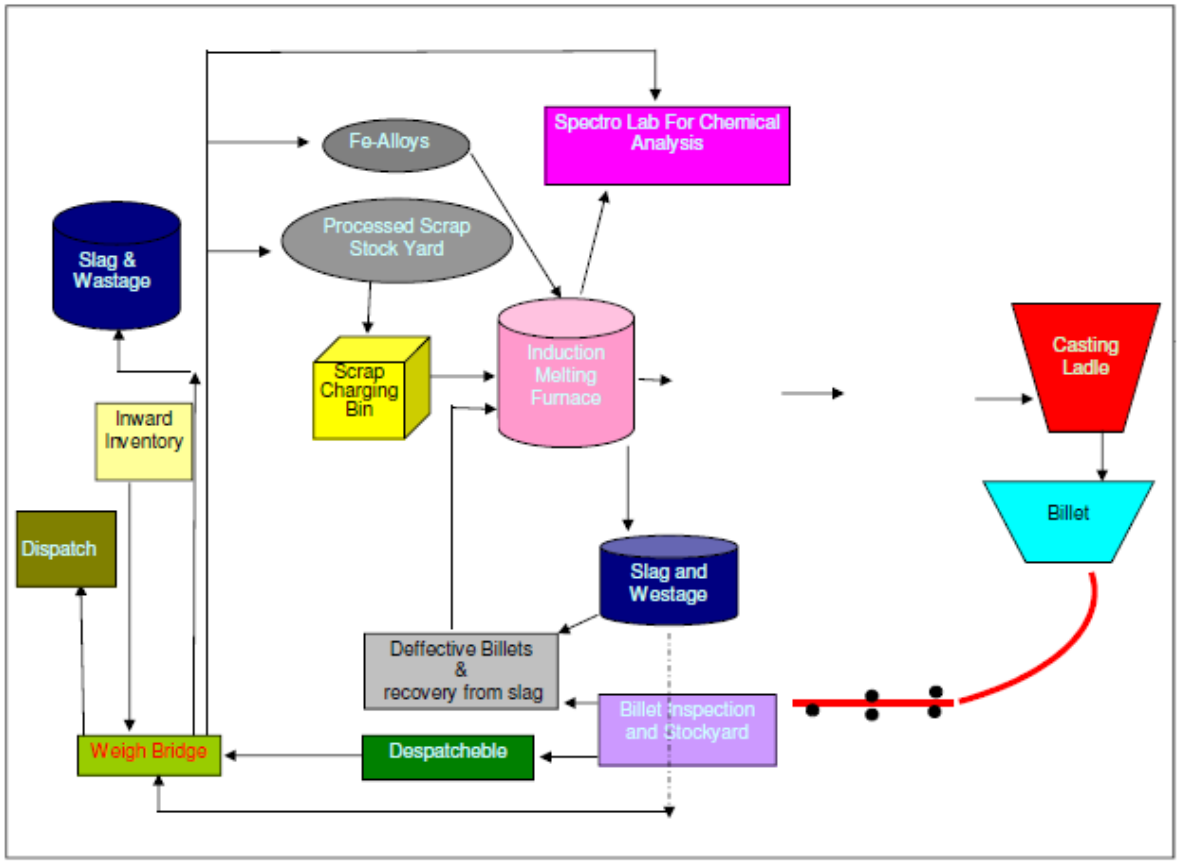
Note: After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.
Provide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

No.	**Alternative type**, either alternative: site on property, properties, activity, design, technology,	**Description**

	operational or other(provide details of "other")	
1	Proposal	The proposed project will involve the construction and operation of a steel recycling facility for the recycling of metal scrap through the induction electric process. The project area is within a proclaimed industrial area which comprises 60 000m^2 of which the affected area is approximately 4000m^2.The industrial area is located adjacent to the Ramotse residential development. Unica Iron and Steel (Pty) Ltd intend to use only heavy melting scrap, shredded scrap and blue steel which does not contain the tramp elements (contaminants high in Zinc, Copper, and Boron), or with a high Sulfur and Phosphorus content. The approach to recycling the steel will be through the induction electric process, whereby heat is applied by heating an electrically conducting metal. The process sequence will be as follows: **Weighing**: Super heavy and heavy melting scrap, shredded scrap and blue steel scrap, with an iron yield between 98 and 99%, will be delivered to site by road transport. Following a quality assurance process the scrap steel will be off-loaded into the scrap storage area using a mechanical grab or magnet and weighed on a weigh bridge. **Melting**: A 20 ton 6MVA coreless induction furnace with the capacity to melt 7449 tons of ferrous scrap per month. The induction furnace operates by utilising a strong magnetic field created by passing an electric medium frequency alternating current through a coil wrapped around the furnace. The magnetic field in turn creates a voltage across, and subsequently an electric current through, the metal to be melted. The electrical resistance of the metal produces heat, which in turn melts the metal. Since there is no contact between the charge and the energy-carrier, the induction furnace is suited for the melting of scrap steel. The furnace contains a water-cooled copper coil, the inside of which is internally refractory lined, while the outside is insulated and enclosed in a steel shell. The furnace body is mounted in a frame equipped with a tilting mechanism. The furnace is refractory-lined, bucket-shaped, the top of which is open for charging and de-slagging operations. The 20 ton furnace is batch-charged by means of a lifting magnet or a mechanical grab. A two-hour melting cycle is expected. The scrap steel quality ensures that slag production is limited to below 2%. The slag is manually raked-off the melt surface into a slag box. The slag is temporarily stored outside the furnace building before recycling/disposal off-site. The induction furnace is not suited for holding molten metal. The metal will be transferred into an efficient holding crucible as soon as it has reached the desired temperature. The refractory lined casting ladle is pre-heated to 1

		000℃ and fitted with a slide gate valve. The ladle is used to transfer the metal to the continuous casting machine and is cleaned after every completed cycle. The melting process will be fitted with an emission control system providing for primary and secondary collection. The primary fume collection system incorporates a custom build swivel hood during the melting process. The charging and tapping processes will be serviced through a secondary system incorporating a roof-mounted hood. Both primary and secondary emission capture systems will feed to a spark arrestor and finally a bag house. **Casting:** the molten steel will then be transferred to the preheated ladle and then to the Continuous Casting Machine for solidification and cutting. The continuous, two strand, bow-type caster machine is a high productivity device which will produce the final product, 100x100mm steel billets. Through rapid cooling, a fine-grained material with good mechanical properties is obtained. In continuous casting, the molten metal is cast into a water-cooled die, which is open at the bottom. The die gives the desired form to the product. Through intensive cooling, the outside of the metal product solidifies, while it is slowly pulled out of the mould. Through continuous pouring and extraction the product gets longer. After horizontal straightening, a mechanical shear cuts the bloom in 6m lengths. The steel billets are stacked on a cooling bed by means of a conveyor roller table and hydraulic pusher arrangement. The billets are temporarily stored on site before dispatch by road transport. Fines/baghouse dust generated by the process is also recycled/disposed off site. Please refer to the Waste Management Plan for more details on waste management activities on site.

PROCESS FLOW CHART FOR THE PRODUCTION OF STEEL BILLETS



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

- **Site Alternatives**

The identification of site and layout alternatives is limited due to the fact that the steel recycling facility is currently under construction. The facility is situated within the Babelegi Industrial area and is bordered by large industrial warehouses and businesses to the south and west. Consequently it fits in well with the surrounding land uses and is not out of place within its industrial setting. As the site falls within a proclaimed industrial area and was previously vacant land of a highly degraded nature, it is deemed that the placing of the facility would not have influenced any environmentally sensitive features on or surrounding the site. No site or layout alternatives are thus proposed and such alternatives would most probably not have been relevant before construction started due to the disturbed nature and industrial setting of the site.

- **Service provision and alternatives**
  - **Power**

Eskom will by supplying electricity to the facility. An electrical line runs past the site. Electrical alternatives were therefore not considered as power is readily available to the operations.

  - **Road network**

Access to the site is via the existing tarred access road of the Bela Bela (R101) Road. No access road needs to be constructed and therefore no alternatives were evaluated.

  - **Water supply**

The overall water use for the process will be approximately 5000 Kl per month. The water passes through a closed loop circuit and is continuously re-used. The only water loss is

through evaporation. Water will be sourced from municipal supply and therefore no alternatives were evaluated.

- **Effluent and sewage treatment**

The facility does not generate effluent or sewage. The office buildings do require sewerage access for domestic effluent. The municipal sewerage system will be used. No alternatives were evaluated.

- **Technology Alternatives**

All technological options for the facility are associated with the design of the facility and the implementation of pollution systems to limit air pollution. As the plant is currently under construction, the identification of plant design is rather limited. A highly automated pollution system supplied by a well-reputed pollution system designer from India who has supplied more than 100 successfully operational systems all over the world will be installed at the facility. In addition to the primary pollution system, the applicant is installing a secondary automised pollution system. The 2 pollution systems will run parallel and ensure that any emissions are well within the standards for atmospheric emissions. A monitoring programme will allow for an accuracy test of these assertions. According to the air quality specialist, the above pollution system is according to best available industry techniques and therefore no other alternatives were evaluated.

NOTE: The numbering in the above table must be consistently applied throughout the application report and process

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	8500m²
Alternatives:	
Alternative 1 (if any)	
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)	
	k/km

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

	Size of the site/servitude:
Proposed activity	60000m²
Alternatives:	
Alternative 1 (if any)	
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~~	NO
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

Access to the site is via an existing tarred road linking the site with the existing tarred Bela Bela (R101) Road. No access road needs to be constructed and therefore no alternatives were evaluated. The entire site is fenced and access is controlled by a security guard at the entrance of the property.

Include the position of the access road on the site plan.

Alternative 1

Does ready access to the site exist, or is access directly from an existing road?	YES	NO

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

Describe the type of access road planned:

Include the position of the access road on the site plan.

Alternative 2

Does ready access to the site exist, or is access directly from an existing road? | YES | NO

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

Describe the type of access road planned:

Include the position of the access road on the site plan.

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. SITE 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 as Appendix A to this document. The site or route plans must indicate the following:

- the scale of the plan, which must be at least a scale of 1:2000 (scale can not be larger than 1:2000 i.e. scale can not be 1:2500 but could where applicable be 1:1500)
- the property boundaries and numbers of all the properties within 50m of the site;
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- the exact position of each element of the application 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, street lights, sewage pipelines, septic tanks, storm water infrastructure and telecommunication infrastructure;
- walls and fencing including details of the height and construction material;
- servitudes indicating the purpose of the servitude;
- sensitive environmental elements on and within 100m of the site or sites 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);
- for gentle slopes the 1m contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- the positions from where photographs of the site were taken.
- Where a watercourse is located on the site at least one cross section of the water course must be included (to allow the 32m position from the bank to be clearly indicated)

7. SITE PHOTOGRAPHS

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

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)

Further:

Instructions for completion of Section B for linear activities

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

Section B has been duplicated for sections of the route **"insert No. of duplicates"** times

Instructions for completion of Section B for location/route alternatives

1) For each location/route alternative identified the entire Section B needs to be completed
2) Each 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 **"insert No. of duplicates"** times
(complete only when appropriate)

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

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

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

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

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

1. PROPERTY DESCRIPTION

Property description: Erf 129, 130 and 131, Babelegi, Hammanskraal, Gauteng Province
(Farm name, portion etc.)

2. ACTIVITY POSITION

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

Alternative:	**Latitude (S):**	**Longitude (E):**
	-25.360240°	28.280996°

In the case of linear activities:

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

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

Addendum of route alternatives attached ☐

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

4. LOCATION IN LANDSCAPE

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

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

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

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

b) are any caves located on the site(s) YES ~~NO~~
If yes to above provide location details in terms of latitude and longitude and indicate location on site or route map(s)

Latitude (S):	**Longitude (E):**
°	°

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

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

Latitude (S):	**Longitude (E):**
°	°

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

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

Latitude (S):	**Longitude (E):**
°	°

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

6. AGRICULTURE

Does the site have high potential agriculture as contemplated in the Gauteng Agricultural Potential Atlas (GAPA 3)? YES NO

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

7. GROUNDCOVER

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

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

Natural veld - good condition % =	Natural veld with scattered aliens % =	Natural veld with heavy alien infestation % =	Veld dominated by alien species % =70	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =20	Bare soil % =10

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

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

If YES, specify and explain:

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

If YES, specify and explain:

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

If YES, specify and explain:

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

If yes complete specialist details

Name of the specialist:	Dr. Buks Henning		
Qualification(s) of the specialist:	Ph.D Plant Ecology, MSc Soil Science		
Postal address:	Postnet Suite 74 Private Bag X07 Arcadia		
Postal code:	0007		
Telephone:	012 751 2160	Cell:	082 939 7067
E-mail:	bhenning@ages-group.com	Fax:	086 607 2406

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

If YES, specify:

If YES, is such a report(s) attached? YES NO

If YES list the specialist reports attached below

Signature of specialist:  Date: 2012/12/12

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

8. LAND USE CHARACTER OF SURROUNDING AREA

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

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

NOTE: Each block represents an area of 250m X250m

NORTH

14/15/16	14/15/16/ 24	1/15	8/10	8/10
14/15/16	14/15/24	1/15	10/12	8/10
14/15	14/15/24		8/10	8/10
14/15/16	14/15/16/ 24	16/14	8/10	8/10
14/15/16	14/15/16/ 24	1/16/14	8/10	8/10

WEST EAST

SOUTH

= Site

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

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

Have specialist reports been attached ~~YES~~ NO

If yes indicate the type of reports below

Air Quality Impact Assessment
Noise Impact Assessment
Social Impact Assessment
Ecological Impact Statement

Heritage Impact Statement

9. SOCIO-ECONOMIC CONTEXT

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

The proposed development site is located in the Gauteng Province, and falls within the jurisdiction of the City of Tshwane Metropolitan Municipality. The Municipality can be affected in terms of infrastructure expectations as well as their Integrated Development Plans and Local Economic Development Initiatives. The proposed development site borders various industries and businesses which are located within the Babelegi Industrial area. A number of shops and other businesses are also located adjacent to the development site, these include a supermarket, liquor store, hardware store, hairdresser, etc. A number of street vendors have stalls along the Bela Bela (R101) Road. These stalls sell anything from fresh food produce to services such as shoe repair.

Residential areas include Ramotse Residential Development, which is located east of the proposed site. The proposed steel recycling facility may positively affect these residents by creating employment opportunities. A number of game reserves and lodges occur within the project area, most notably the Dinokeng Game Reserve, which is situated to the east of Hammanskraal. The Dinokeng region is a relatively new tourist region and attracts a number of tourists. Another tourist attraction in the area is the Carousel Casino just north of Hammanskraal.

Please refer to the Social Impact Assessment Report in Appendix G3 for more details on the socio-economic background of the project area.

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 alterantives, 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	NO
		X

If YES, explain:

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:

During the survey, no sites of archaeological and historical value were documented at the site of the steel recycling facility construction, or elsewhere on the property. It is also evident that no heritage resources were impacted upon during initial construction phases of the facility.

Will any building or structure older than 60 years be affected in any way?	YES	~~NO~~
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	NO
If yes, please attached the comments from SAHRA in the appropriate Appendix		

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The Environmental Assessment Practitioner must follow any relevant guidelines adopted by the competent authority in respect of public participation and must at least –

1(a) Fix a site notice at a conspicuous place, on the boundary of a property where it is intended to undertake the activity which states that an application will be submitted to the competent authority in terms of these regulations and which provides information on the proposed nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations on the application may be made;

1(b) inform landowners and occupiers of adjacent land of the applicant's intention to submit an application to the competent authority;

1(c) inform landowners and occupiers of land within 100 metres of the boundary of the property where it is proposed to undertake the activity and whom may be directly affected by the proposed activity of the applicant's intention to submit an application to the competent authority;

1(d) inform the ward councillor and any organisation that represents the community in the area of the applicant's intention to submit an application to the competent authority;

1(e) inform the municipality which has jurisdiction over the area in which the proposed activity will be undertaken of the applicant's intention to submit an application to the competent authority; and

1(f) inform any organ of state that may have jurisdiction over any aspect of the activity of the applicant's intention to submit an application to the competent authority; and

1(g) place an advertisement in one local newspaper and any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of these regulations.

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 (GDARD).

Has any comment been received from the local authority? YES ~~NO~~

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

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

The City of Tshwane Metropolitan Municipality - Department of Air Quality and Environmental Management was provided with a Background Information Document and registration form and invited to comment on the project on both the 6th of August 2012 and again on the 28th of September 2012. Ms. Mosidi from the City of Tshwane Metro Municipality – Department of Waste Management contacted the EAP o**n the 7th of December 2012, following a request for confirmation of sufficient capacity at the Temba municipal landfill site for the disposal of waste generated by the facility. Ms. Mosidi requested a copy of the Basic Assessment Report (BAR). No further comment has been received to date.**

3. CONSULTATION WITH OTHER STAKEHOLDERS

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

Has any comment been received from stakeholders? ~~YES~~ NO

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

Gauteng Department of Water Affairs and Forestry: On the 30/10/12 Ms. Linda Dhlamini confirmed the receipt of the Background Information Document and notified the EAP that the department approves and has no objections against the proposed project.

SAHRA: On 19/10/2012 Mr. Andrew Solomon sent a letter stating the following:

- Before the site is disturbed by development it is incumbent on the developer to ensure that a Heritage Impact Assessment is done. This must include the archaeological component (Phase 1) and any other applicable heritage components.
- The quickest process to follow for the archaeological component is to contract an accredited specialist.

If the property is very small or disturbed and there is no significant site the heritage specialist may choose to send a letter to the heritage authority to indicate that there is no necessity for any further assessment.

Eskom: On 4 September 2012 Mr. Eddie Lennox informed the EAP that Eskom Transmission Division is not affected by the proposed development. However, he would forward the BID to Eskom's Distribution Division and provide their contact details.
On the letter dated 11/12/12, Annelien Pretorius stated that Eskom Distribution has in principle no objection to the project; however, there are conditions to be adhered to. (Please refer to the EMP for the conditions to be adhered to).

Mr. L Ndala: On 10 August 2012, Mr Ndala called the EAP requesting for a BID and registration form. No further comments received to date.

Pilot Furniture Manufacturers: On 6 November 2012 Ms. Dianne Heystek raised an objection to the proposed project; stating that the air pollution has a detrimental effect on the health of all persons working in the area.

Blues Alley: On 22 October 2012, Mr. Gavin Browne sent a fax to the EAP with comments regarding the following:

- Air pollution
- Water pollution
- Noise pollution and vibrations
- Soil pollution

He voiced a strong objection to the proposed development

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

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

The Environmental Assessment Practitioner must ensure that the public participation 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 inadequate.

The practitioner must record all comments and respond to each comment of the public / interested and affected party before the application 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 to those persons detailed in 1(b) to 1(f) above

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from persons detailed in Point 2 and 3 above

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

Appendix 6 - Comments and Responses Report

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

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

Appendix 9 – Copy of the register of I&APs

Appendix 10 – Comments from I&APs on the application

Appendix 11 - Other

SECTION D: RESOURCE USE AND PROCESS DETAILS

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

Instructions for completion of Section D for alternatives

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

Section D has been duplicated for alternatives (complete only when appropriate) **"insert No. of duplicates"** times

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

1. WASTE, EFFLUENT, AND EMISSION MANAGEMENT

Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase? YES ~~NO~~

If yes, what estimated quantity will be produced per month? m^3

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

General waste will be re-used in the construction phase as backfill to assist with surface compaction. Waste used during the construction phase will consist of building rubble, slag and mill-scale. The volume of waste to be re-used is approximately 1350 m^3 and the area used for the temporary storage of the construction waste is 550 m^2.

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

N.A. (refer to description above)

Will the activity produce solid waste during its operational phase? ~~YES~~ NO

If yes, what estimated quantity will be produced per month? 95m^3

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

The waste will be disposed of at the Temba local municipal 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~~

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

The slag will be sold to NN Metals scrap suppliers. NN metals possess a waste permit for ferrous and non-ferrous scrap metals. The fines/baghouse dust in turn will be sold to cement suppliers to be used in their cement production.

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

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

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

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

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

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

During the operational phase scrap steel will be stored and recycled on site. The scrap storage area will be 792 m^2. The volume of scrap metal to be stored on site at any one time will be approximately 1200 tons. 7449 ton scrap metal will be recycled per month. In addition, waste generated during this phase, i.e. the slag and fines/bag house dust, will be sold to third parties for re-use or recycling.

Liquid effluent (other than domestic sewage)

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system? YES ~~NO~~

If yes, what estimated quantity will be produced per month? m^3

If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the liquid effluent to be generated by this activity(ies)? YES NO

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

If yes, what estimated quantity will be produced per month? m^3

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

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

Will the activity produce effluent that will be treated and/or disposed of at another facility?		YES	~~NO~~
If yes, provide the particulars of the facility:			
Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

N.A.

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	~~YES~~	NO
If yes, what estimated quantity will be produced per month?	1440 m^3	
If yes, has the municipality confirmed that sufficient capacity exist for treating / disposing of the domestic effluent to be generated by this activity(ies)?	YES	~~NO~~
Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	~~NO~~

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

PLEASE NOTE THAT THE APPLICANT HAS APPLIED FOR CAPACITY FOR BOTH THE WASTE AND EFFLUENT DISPOSAL AT THE CITY OF TSHWANE METRO MUNICIPALITY. THE SERVICE LETTERS HAS NOT YET BEEN RECEIVED. PLEASE REFER TO CORRESPONDENCE FROM THE MUNICIPALITY ATTACHED AS APPENDIX F.

Emissions into the atmosphere

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

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

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

In accordance with the Listed Activities and Minimum Emission Standards identified in terms of Section 21 of the National Environmental Management: Air Quality Act (Act 39 of 2004) (NEMAQA), UNICA Iron & Steel (Pty) Ltd must submit an application for an Atmospheric Emission Licence (AEL) to operate the proposed steel plant. The steel plant will incorporate a 6MVA induction furnace and a Continuous Casting Machine to produce 100mm2 mild steel billets.

The UNICA melting process will be fitted with an emission control system providing for primary and secondary collection. The primary fume collection system incorporates a custom build swivel hood during the melting process. The charging and tapping processes will be serviced through a secondary system incorporating a roof-mounted hood. Both primary and secondary emission capture systems will feed to a spark arrestor and finally a bag house. Gas cleaning systems for induction furnace flue-gas need to be highly efficient as emission particle sizes are small. The fabric filters to be used at UNICA are favoured above electrostatic filters, as they are more suited to the wide fluctuations in gas temperature and particulate concentration of the exhaust gases.

During the construction phase of the project, dust deposition rates in excess of the industrial action level and the residential action level are predicted at the nearest receivers west and east of the site respectively. During the operational years of the project exceedence of the industrial action level will most likely be limited to within the site boundary. Deposition rates above the residential action level may occur up to a distance of 250m in all directions from the process.

Daily exceedence of the 24-hour AQA limit at all receivers up to a maximum distance of 1 kilometre from the property boundary is expected to top the prescribed number of 4 per annum. The high background PM10 concentration increases the potential impact area of the process to more than 2 kilometres downwind of the process. It is unlikely that the process independently, would result in annual average PM10 concentrations above the national standard of 50µg/m3 at the nearest receivers. More than 75% of PM10 emissions are from controlled release. Although this may increase the potential process impact zone, dispersion and dilution of particulate concentrations from the process is good, which in turn would limit severe local pollution episodes. Ambient ground level concentrations for all the criteria gaseous pollutant were predicted to be well below the respective standards.

Emission rate (g/s)					
Activity	**PM10**	**SO^2**	**NO^2**	**CO**	**VOCs**
Scrap material handling	0.021	n.s	n.s	n.s	n.s
Smelting	0.166	0.056	0.56	1.400	0.084
Pouring	0.078	n.s	n.s	n.s	n.s
Casting	0.078	n.s	n.s	n.s	n.s
Billet cooling/handling	1.944	n.s	n.s	n.s	n.s
Ladle cleaning	0.047	n.s	n.s	n.s	n.s
Auxiliary equipment:					
•Toyota LDV 2.5 D-4D	0.001	n.s	n.s	n.s	n.s
•Road transport truck	0.171	n.s	n.s	n.s	n.s
Notes: g/s: Gram per second n.s: Not significant					

2. WATER USE

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

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

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

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

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

If yes, list the permits required

If yes, have you applied for the water use permit(s)? YES NO

If yes, have you received approval(s)? (attached in appropriate appendix) YES NO

3. POWER SUPPLY

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

Eskom will by supplying electricity to the facility as an electrical line runs past the site.

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

4. ENERGY EFFICIENCY

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

The process is energy efficient in itself iron smelting (recycling) requires much less energy than primary iron smelting. The process will be employing an induction furnace which is much more energy efficient compared to other means of metal melting, for example electric arc furnace. Induction forging has several key advantages over furnace forging. The speed and controllability of induction ensures high throughput. Induction also minimizes oxidation and helps maintain metallurgical integrity. And since induction delivers precise, localized heat, it saves energy.

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

Radiant lighting will be providing economic 400W halide lamps throughout the facility.

SECTION E: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2006, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

The main concerns raised by I&APs are as follows:

- Creation of job opportunities;
- Air pollution;
- Health, security and safety;
- Socio-economic benefits for businesses in the area;
- Noise pollution; and
- Soil pollution.

Summary of response from the practitioner to the issues raised by the interested and affected parties
(A full response must be provided in the Comments and Response Report that must be attached to this report):

All I&APs were notified that they had been registered as Interested & Affected Parties (I&APs), and that their concerns would be included and addressed in the Comments and Response Report (Please see Annexure E). With regards to the issues raised by I&AP's, an Air Quality Impact Assessment Study, Noise Impact Assessment Study and Social Impact Assessment Study were conducted to determine the impact of the proposed project on the surrounding community.

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

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

An impact can be defined as any change in the physical-chemical, biological, cultural and/or socio-economic environmental system that can be attributed to human activities related to alternatives under study for meeting a project need. The assessment phase actions were conducted in the following order:

1. Identification of key issues
2. Analysis of the activities relating to the proposed development
3. Assessment of the potential impacts arising from the activities, without mitigation; and
4. Investigation of the relevant mitigatory actions.

The potential impacts of the proposed development were identified through a **desktop study, a site visit, specialist studies** and comments received during the **public participation process**.

Significance is determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required.

The classes are rated as follows:

1) Negligible
The impact is not substantial and does not require any mitigatory action.
2) Low
The impact is of little importance, but may require limited mitigation.
3) Moderate
The impact is of importance and therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.
4) High

The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

Parameters that were taken into account in the impact prediction and decision-making included:

Nature. This is an appraisal of the type of effect that the proposed activity could have on the affected environmental component (positive, negative, direct, indirect, and cumulative).

Extent. The physical and spatial size of the impact

- Local: The impacted area extends only as far as the activity, e.g. footprint
- Site: The impact could affect the whole, or a measurable portion of the above mentioned properties.
- Regional: The impact could affect the area including the neighbouring areas.

Duration. The lifetime of the impact

- Short term: The impact will either disappear with mitigation or will be mitigated through natural processes in a time span shorter than any of the phases.
- Medium term: The impact will last up to the end of the phases, where after it will be negated.
- Long term: The impact will last for the entire operational phase of the project but will be mitigated by direct human action or by natural processes thereafter.
- Permanent: Impact that will be non-transitory. Mitigation either by man or natural processes will not occur in such a way or in such a time span that the impact can be considered transient.

Intensity/severity. Does the impact destroy the environment, or alter its function.

- Low: The impact alters the affected environment in such a way that natural processes are not affected.
- Medium: The affected environment is altered, but functions and processes continue in a modified way.
- High: Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

Likelihood/Probability. This describes the likelihood of the impact actually occurring.

- Improbable: The possibility of the impact occurring is very low, due to the circumstances, design or experience.
- Probable: There is a probability that the impact will occur to the extent that provision must be made therefore.
- Highly Probable: It is most likely that the impact will occur at some stage of the development.
- Definite: The impact will take place regardless of any prevention plans, and there can only be relied on mitigatory actions or contingency plans to contain the effect.

Significance. This is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required.

- Negligible: The impact is non-existent or unsubstantial and is of no or little importance to any stakeholder and can be ignored.
- Low: The impact is limited in extent, has low to medium intensity; whatever its probability of occurrence is, the impact will not have a material effect on the decision and is likely to require management intervention with increased costs.
- Moderate: The impact is of importance to one or more stakeholders, and its intensity will be medium or high; therefore, the impact may materially affect the decision, and management intervention will be required.
- High: The impact could render development options controversial or the project unacceptable if it cannot be reduced to acceptable levels; and/or the cost of management intervention will be a significant factor

	in decision making.
Very high	Applies to potential benefits arising from projects

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.

Proposal

Potential impacts:	**Significance rating of impacts:**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**
Topography alteration (Site establishment)	**NEGLI-GIBLE**		
Soil erosion (Construction) During the construction phase, clearing of vegetation on site will leave the soil exposed and this could result in soil erosion.	**MODERATE**	• Installation of erosion control measures. • Scheduling of construction activities to minimize land disturbance. • Minimization of the extent and duration of land clearing. • Proper management of storm water and run-off by installing temporary drains and minimising concentrated water flows. Abate storm water velocity where necessary with the use of temporary energy dissipater structures. Divert run-off around trench excavations and disturbed areas. • Rehabilitate, revegetate or stabilise all disturbed areas as soon as possible. • Indigenous trees can be planted in the buffer zone of the proposed development to enhance the aesthetic value of the site and stabilize soil conditions. • Coordinate the provision of site services to minimize disturbance. • Locate stockpiles away from concentrated flows and divert run-off around them.	**LOW**

Soil pollution Soil pollution may occur predominantly as a result of fuel spills by vehicles. This should only have a localised impact on the soil. The site will be paved, which will also keep soil pollution from spillages to a minimum.	**MODERATE**	• The facility and surrounding area should be paved in order to minimise the potential for ground and water pollution. • Vehicles and machines must be maintained properly to ensure that oil spillages and leakages are kept to a minimum. • Should refuelling or maintenance of vehicles be done on site proper refuelling and maintenance facilities should be provided. These areas will be located on concrete surfaced areas with suitable drip trays to be provided. Bunded facilities should be provided for the storage of oil and fuel (where applicable). • The outside storage of scrap material must be avoided as far as possible. Scrap must be stored in a structured manner on a cemented, covered area.	**LOW**
Groundwater quality (Construction) The potential exists for spills of contaminants such as fuels and lubricants from construction vehicles to result in groundwater contamination.	**LOW**	• Adequate fuel containment facilities to be used. • The use of all materials, fuels and chemicals which could potentially leach into underground water must be controlled. • All such materials, fuels and chemicals must be stored in a specific and secured area to prevent pollution from spillages and leakages. Construction vehicles and machines must be maintained properly to ensure that oil spillages are kept to a minimum.	**NEGLIGIBLE**
Groundwater quality (Operation) The possibility of groundwater pollution exists should refueling of vehicles be done on site.	**LOW**	Spill trays must be provided if refueling of construction vehicles are done on site.	**NEGLIGIBLE**

Loss of biodiversity (flora and fauna) and habitat The flora of the site is currently in a highly degraded state and dominated by many indicator species of degraded environments (exotic weeds, pioneer grasses, and invasive alien species). The vegetation on site can be classified as degraded grassland with scattered shrubs and alien invasive plants. Fauna species on site includes generalist species associated with townships such as rodents, feral pets (dogs and cats), invertebrates and birds. No red data species (fauna and flora) was observed on site as a result of the highly degraded state of the site. Construction activities may have resulted in a loss or disturbance to the natural habitat. However, due to the degraded nature of the site, it is assumed that no significant change in natural habitat occurred due to the construction of the facility, and therefore the impact can be considered low.	**LOW**	• Use existing facilities (e.g., access roads) to the extent possible to minimize the amount of new disturbance. • Construction activities must remain within defined construction areas and the road servitudes. No construction / disturbance will occur outside these areas. • Staff that will stay on site should be accommodated in one location of the site to ensure that the impact will be minimal on the larger area. • Maintain proper firebreaks around entire development footprint. • Construction activities must remain within defined construction areas and the road servitudes. No construction / disturbance will occur outside these areas. • Educate workers regarding the occurrence of important resources in the area and the importance of protection. • Camp fires at construction sites must be strictly controlled to ensure that no veld fires are caused.	**NEGLIGIBLE**

Spread and establishment of alien invasive species Construction activities and site disturbance can lead to the establishment and spread of alien invasive species on site.	**HIGH**	• Institute strict control over materials brought onto site, which should be inspected for potential invasive invertebrate species and steps taken to eradicate these before transport to the site. Routinely fumigate or spray all materials with appropriate low-residual insecticides prior to transport to or in a quarantine area on site. • The contractor is responsible for the control of weeds and invader plants within the construction site for the duration of the construction phase. • Alien invasive tree species such as black wattle and blue gum should be eradicated. • Control involves killing the plants present, killing the seedlings which emerge, and establishing and managing an alternative plant cover to limit re-growth and re-invasion. Weeds and invader plants should be controlled in the manner prescribed for that category by the Conservation of Agricultural Resources Act or in terms of Working for Water guidelines. • Rehabilitate disturbed areas as quickly as possible to reduce the area where invasive species would be at a strong advantage and most easily able to establish. • Institute a monitoring programme to detect alien invasive species early, before they become established and, in the case of weeds, before the release of seeds. • Institute an eradication/control programme for early intervention if invasive species are detected, so that their spread to surrounding natural ecosystems can be prevented.	**LOW**

Waste disposal and littering (Construction) The indiscriminate disposal of waste and uncontrolled littering can be a source of pollution to the soils on site. Littering will also have a negative visual impact for the surrounding community. Dust concrete, solvents, steel fillings, fuel and other wastes are all produced during building construction and can cause impacts to the soil on site and vegetation surrounding the site.	**LOW**	• A plan should be developed for control of noxious weeds and invasive plants that could occur as a result of new surface disturbance activities at the site. The plan should address monitoring, weed identification, the manner in which weeds spread, and methods for treating infestations require the use of certified weed-free mulching. Prohibit the use of fill materials from areas with known invasive vegetation problems. The spread of invasive non-native plants should be avoided by keeping vehicles and equipment clean and reseeding disturbed areas with native plants. • Maintain a high standard of housekeeping. • Store all litter carefully so it cannot be washed or blown into the storm water systems. • Rubbish bins: provide bins for construction workers and staff at appropriate locations, particularly where food is consumed. • Daily site clean-up: clean-up site of all litter daily. • Waste disposal: dispose of construction waste at a registered landfill. • Materials storage: store building materials under cover or in contained areas. • Leakage containment and treatment: ensure that oil, fuel or solvent leakages cannot enter the storm water system. • Temporary filters: fit temporary inlet pit filters near wash-down areas to prevent pollutant entry into the soils. • Refer to Waste Management Plan for more detail.	**NEGLIGIBLE**

Waste disposal and littering (Operations) The indiscriminate disposal of waste and uncontrolled littering can be a source of pollution to the soils on site. Littering will also have a negative visual impact for the surrounding community.	**MODERATE**	• Maintain a high standard of housekeeping. • Store all litter carefully so it cannot be washed or blown into the storm water systems. • Rubbish bins: provide bins for workers and staff at appropriate locations, particularly where food is consumed. • Daily site clean-up: clean-up site of all litter daily. • Waste disposal: dispose of waste at a registered landfill (Temba Landfill Site)l. • Materials storage: store building materials under cover or in contained areas. • Leakage containment and treatment: ensure that oil, fuel or solvent leakages cannot enter the storm water system. • Temporary filters: fit temporary inlet pit filters near wash-down areas to prevent pollutant entry into the soils. • Refer to Waste Management Plan for more detail.	**LOW**
TSP emissions (dust) (Construction) During the construction phase of the project, dust deposition rates in excess of the industrial action level and the residential action level are predicted at the nearest receivers west and east of the site respectively. These receivers are within 300m of operations. During extreme dry and windy spells, deposition rates as high as 8 000mg/m2/day may be recorded. The impact is mostly limited to the construction site and immediate surroundings, and the impact significance rating can therefore be considered to be moderate but can be reduced to low if the proper dust abatement measures are implemented.	**MODERATE**	• Frequent wetting of transport routes during construction operations.	**LOW**

TSP emissions (dust) (Operations) Dust formation during the operational phase of the project will largely be limited to vehicular movement. Frequent contravention of the annual target level up to a distance of 500m from the process boundary is predicted with very infrequent contravention of the residential action level. The impact from the process will be mostly limited to the process site.	**MODERATE**	• The site must be paved and good housekeeping practises must be implemented. • Efficient traffic flow on site must be ensured.	**LOW**
PM10 emissions (Operations) The Air Quality Impact Assessment found that the daily exceedence of the 24-hour AQA limit at all receivers up to a maximum distance of 1 kilometre from the property boundary is expected to top the prescribed number of 4 per annum. The highest off-site annual PM10 concentrations are expected immediately beyond the north-western property boundary. It is unlikely that the process independently, would result in annual average PM10 concentrations above the national standard of 50µg/m3 at the nearest receivers. The project area has high background PM10 concentrations. More than 75% of PM10 emissions from the process are from controlled release. Although this may increase the potential process impact zone, dispersion and dilution of particulate concentrations from the process is good, which in turn would limit severe local pollution episodes.	**HIGH**	• Process design specification provides for a primary extraction system on the induction furnace and a secondary extraction system fitted above the process, along the roof of the building. • Controlled release of captured emissions via a bag house and primary stack. • The site must be paved and good housekeeping practises must be implemented. • Efficient traffic flow on site must be ensured.	**LOW**
Gaseous and minor pollutant emissions (Operations) Ambient ground level concentrations of Sulphur dioxide (SO2) and Nitrogen dioxide (NO2) are predicted to be well below the standard and background concentrations for all reference periods.	**LOW**	• Process design specification provides for a primary extraction system on the induction furnace and a secondary extraction system fitted above the process, along the roof of the building. • Controlled release of captured emissions via a bag house and primary stack.	**NEGLIGIBLE**

Noise impact (Construction) Due to the nature of the industrial activities around the proposed development, noise from construction activities would be masked by other much louder industrial activities in the project area. Therefore the noise impact during the construction phase can be considered negligible.	**NEGLIGIBLE**	• Equipment to be used must be well-maintained and fitted with the correct and appropriate noise abatement measures. Noise abatement reverse hooters (white noise) should be considered and implemented on construction vehicles.	**NEGLIGIBLE**

Noise impact (Operations) Day time Noise from operation during the day time will be at a maximum of 2.77 dBA above the rating level of 55 dBA (SANS 10103: 2008 for urban areas. Although the plant will be very audible at the closest receptors during an absolute worst case scenario, the rating level of 55 dBA during the day will not be exceeded by any significant amount. Therefore the noise impact was rated as of moderate significance. However it is likely that the R101 public road traffic noise as well as other anthropogenic noises will mask some of the daytime plant sound noise.	**MODERATE**	• It is recommended that a noise monitoring programme is implemented (Refer to Section 9 of the Noise Impact Assessment). • Internal access roads should preferably not be operated at night-time. • If possible, access to the roller shutter doors on the east elevation should stay closed during the night. If the roller shutter doors are open during the night, the effectiveness of the plant structure acting as a noise barrier will decrease. This would be applicable for most apertures facing the east elevation, including (and if feasible), windows, doors and louver; • It is recommended that the direct line of sight from the residential area to the east of the plant be obscured by a berm/barrier for both day and night-time operations. The material, location, and dimensions of the barrier must be considered as well. • Most equipment on the plant is proposed within an enclosed structure (with certain elevations having louvers, most probably for ventilation purpose). However the layout indicates ventilation fans on the west façade facing away from the residential area. If any ventilation fans or vents are proposed on the east façade facing the residential area, it is proposed appropriate acoustical mitigation options are implemented. This may include a silencer on the ventilation shaft, internal fiber or glass wool lining, and acoustical shielding enclosure. • It is also recommended that the developer implements a line of communication where complaints can be lodged. The proposed development should maintain a commitment to the local community and respond to concerns in an expedient fashion.	**NEGLIGIBLE**

		• The plant's steel structure mainframe has already been constructed. However it would be in the developer's interest to invest in acoustical energy absorbing factory board to clad the steel structure mainframe. Any thickness and density of glass or fibre wool cladding will be applicable. If this option is chosen, care must be taken when installing over purlins, as incorrect installation may decrease the effectiveness of the acoustical cladding; • Equipment to be used must be well-maintained and fitted with the correct and appropriate noise abatement measures. Noise abatement reverse hooters (white noise) should be considered and implemented on vehicles delivering materials to the plant.	
Noise impact (Operations) Night time The proposed plant specifications as well as distance of plant to a residential area will increase the existing sound levels above the SANS10103 Rating level. The plant operations also have the potential to change the existing sound characteristic at a receptors dwelling. Therefore the impact is high and strict mitigation measures will need to be implemented.	**HIGH**	Refer to proposed "day time" mitigation measures.	**LOW**

Visual impact (Operations) The site is within a proclaimed industrial area, however the western side of the site is bordered by the Ramotse residential area. The visual impact of the facility can thus be considered as moderate.	**MODERATE**	• The removal of vegetation, especially indigenous trees, to be limited. • A fence is currently established along the project boundary. It is recommended that trees be planted along the fence to further minimise the visual impact of the development. • Low lightening lights should be mounted outside the facility, so as to minimise light pollution. • The walls of the plant should preferably be painted natural, earthy colours. • The environment should be kept as natural as possible, and exotic plants or trees should be limited on site. • Carports, staff quarters and enclosures for refuse should be constructed and finished to match aesthetic and same design criteria	**NEGLIGIBLE**
Destruction of heritage resources (Construction) An Archaeological Survey of the site revealed that no sites of archaeological and historical value occurred on the site where construction of the steel recycling facility was taking place or elsewhere on the property. It was also evident that no heritage resources were impacted upon during initial construction phases of the facility. There are thus no impacts on heritage resources on site.	**NEGLIGIBLE**		
Traffic impact The site is situated within a proclaimed industrial area. The site has good access by means of the existing access road of the Bela Bela (R101) road. Heavy vehicles are frequently encountered on the R101. The additional traffic associated with the plant is thought to be non-significant in comparison with the surrounding land use.	**LOW**	• The necessary traffic and information signs, as well as road markings, should be provided to ensure safe access to the proposed development. • Access to the proposed development will be restricted to access road off the Bela Bela (R101) Road. • No access is proposed directly off any provincial route.	**LOW**

Socio-economic: Uncertainty and expectations "Social license to operate" is often influenced by public perceptions about the proposed project. Residents from local communities are often uncertain about the nature of proposed activities or whether these activities will be harmful to them in any way and require surety in this regard. Certain expectations can also exist within the communities and will need to be addressed.	**HIGH**	• Compile a community relations plan. Consider including activities such as a community liaison forum that meets every three months and talks on the local community radio station (that is located in the Babelegi Industrial Park). This can be a useful mechanism to manage expectations and build relationships. • Implement environmental monitoring protocols as prescribed by relevant specialists.	**LOW**
Socio-economic: Economic impact More employment opportunities in the area should have a positive economic impact on the residents in the surrounding communities as there will be more spending power from which the local businesses will benefit.	**MODERATE (POSITIVE)**		
Socio-economic: Safety impacts Safety and health impacts during the operational phase due to air pollutants as well as physical injuries as a result of industrial accidents.	**MODERATE**	• Implement a Health and Safety Program on site, including safety consciousness and awareness training. The program should also include relevant health aspects, e.g. sexual health, fatigue management, social health. • Undertake emergency response planning with input from municipal health and emergency services and local police.	**LOW**
Socio-economic: Quality of life impacts (nuisance impacts, e.g. dust, noise) Environmental nuisances such as an increase in dust and noise due to construction activities and an increase in the number of heavy vehicles in the area may cause short-term frustration, and in some sensitive individuals even health impacts such as asthma, sinusitis or allergies. Dust specifically is already reported to be a problem. Environmental nuisances can impact on the **quality of life** of the members of the community.	**MODERATE**	• Implement mitigation measures as prescribed by relevant specialists, e.g. dust suppression measures. • Establish a detailed grievance mechanism for the community and other businesses to lodge concerns, suggestions and complaints that can be dealt with in a timely manner.	**LOW**

Socio-economic: Job creation During the operational phase, approximately 400 employment opportunities will be created at the proposed facility. A number of employment opportunities will also be created for unskilled and semi-skilled workers during the construction phase.	**HIGH (POSITIVE)**	• Develop a recruitment policy that allows equal opportunity to all people (woman, disabled) and give preference to local labour. • Communicate the policy to the local community via existing structures such as the ward councillor.	**HIGH (POSITIVE)**

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

Air Quality Impact Assessment – Appendix G1 Noise Impact Assessment – Appendix G2 Social Impact Assessment – Appendix G3 Ecological Impact Assessment – Appendix G4 Archaeological Impact Assessment – Appendix G5 Storm Water Management Plan – Appendix G6

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.

Proposal

Potential impacts:	Significance rating of impacts:	Proposed mitigation:	Significance rating of impacts after mitigation:
Air quality: Decommissioning Phase Dust from decommissioning activities.	**NEGLIGIBLE**	• Buildings should be emptied and cleaned of fugitive emissions. • Proper rehabilitation of disturbed areas is required in order to minimize bare patches. • Use water sprays to suppress dust.	**NEGLIGIBLE**
Waste: Decommissioning Phase The indiscriminate disposal of waste and uncontrolled littering can be a source of pollution to the soils on site. Littering will also have a negative visual impact for the surrounding community.	**LOW**	• All domestic and hazardous waste must be disposed of before evacuation of premises. • No litter, refuse or waste generated on the premises are to be placed, dumped or deposited on adjacent/ surrounding properties including road verges, roads or public places and open spaces after discontinuing production of the proposed development. • Material should be recycled where possible.	**NEGLIGIBLE**
Visual and aesthetic: Decommissioning Phase Visual impact on community in close proximity to the decommissioned plant.	**NEGLIGIBLE**	• All stockpiles must be removed and buildings emptied.	**NEGLIGIBLE**
Safety and security: Decommissioning Phase Health impact on community in close proximity to the decommissioned plant.	**NEGLIGIBLE**	• Dangerous areas that could pose health risk to be fenced off. • Any chemicals that are on the premises needs to be removed, and areas thoroughly cleaned.	**NEGLIGIBLE**
Noise Impact: Decommissioning Phase Noise generation from decommissioning activities.	**NEGLIGIBLE**		

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

Noise Impact Assessment – Appendix G2

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:

Cumulative impacts: Cumulative impacts result from actions which may not be significant on their own but which are significant when added to the impact of other similar actions.

In general three steps, as discussed below, were incorporated to ensure the correct assessment of cumulative impacts.

1. Determining the extent of cumulative impacts
2. Describing the affected environment
3. Assessment of cumulative impacts

The anticipated impacts resulting from the construction and operation of this development could potentially result in cumulative effects when taking the following into consideration:

a. Socio-economic impact.
b. Noise impact.
c. Air quality impact

The proposed development will contribute to employment opportunities within the project area. The cumulative impact of increased employment in the area therefore will contribute positively to the receiving environment with regards to social and economical upliftment of the local community.

The operation of the proposed facility will have a noise impact on the current noise-sensitive developments. However The current operations must also be considered as part of the existing soundscape, and therefore the cumulative noise levels must also be considered. Investigations into the cumulative noise levels at noise-sensitive developments due to the operations of the proposed facilities during a worst case scenario are seen as 57.24 dBA during the night-time. This would place it at 12.24 dBA above the rating level of 45 dBA for SANS 10103:2008 (for Urban Areas). Therefore, mitigation measures have been recommended to ensure that the cumulative noise levels are kept to a minimum.

The cumulative air quality impact for dust deposition will mostly be limited to the construction site and immediate surroundings. The background dust deposition rate for the area can be considered to be low. However, the background PM10 concentrations for the area are very high and the impending changes in ambient standards increases the potential occurrence of excessive concentrations beyond the process boundary. There is also a very high probability for cumulative effects of gaseous and minor pollutant emissions due to major industries in the area emitting similar air pollutants. Measures have been recommended to ensure that the cumulative impacts are mitigated.

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

The proposal constitutes the construction and operation of a steel recycling facility for the recycling of metal scrap through the induction electric process. The project area is within a proclaimed industrial area which comprises 60 000m^2 of which the affected area is approximately 4000m^2.The industrial area is located adjacent to the Ramotse residential development.

Most of the impacts as shown in the table below will be of localised (site) extent, of long duration, and of low to moderate intensity. The spread of alien vegetation, PM10 emissions and night time noise during operations were rated as high significance. However, all the impacts associated with the proposed plant can be mitigated to low or negligible significance.

IMPACT	Extent	Duration	Intensity	Likelihood/ Probability	Significance	
					WOM	WM
Topography						
Topography alteration (Site establishment)	Local (1)	Short term(1)	Low (2)	Improbable (1)	Negligible (4)	Negligible (4)
Soil						
Soil erosion (Construction)	Local (1)	Medium term (3)	Medium (6)	Highly Probable (WOM) (4) Probable (WM) (2)	Moderate (40)	Low (20)
Soil pollution	Local (1)	Medium term (3)	High (8)	Highly Probable WOM (4) Probable WM (2)	Moderate (48)	Low (24)
Water						
Groundwater quality (Construction)	Site (2)	Short term (1)	Medium (6)	Highly Probable WOM (4) Probable WM (2)	Low (36)	Negligible (18)
Groundwater quality (Operation)	Site (2)	Long term (4)	Medium (6)	Probable (WOM) (2) Improbable (WM) (1)	Low (24)	Negligible (12)
Natural Vegetation						
Loss of biodiversity (flora and fauna) and habitat	Site (2)	Medium term (3)	Medium (6)	Probable (WOM) (2) Improbable (WM) (1)	Low (22)	Negligible (11)
Spread and establishment of alien invasive species	Site (2)	Permanent (5)	High (8)	Highly probable WOM (4) Probable WM (2)	High (60)	Low (30)
Waste						
Waste disposal and littering (Construction)	Site (2)	Short term (1)	Medium (6)	Highly probable (WOM) (4) Probable (WM) (2)	Low (36)	Negligible (18)
Waste disposal and littering (Operations)	Site (2)	Long term (4)	Medium (6)	Highly probable (WOM) (4) Probable (WM) (2)	Moderate (48)	Low (24)
Waste disposal and littering (Decommissioning)	Site (2)	Short term (3)	Medium (WOM) (6) Low (WM) (2)	Probable (2)	Low (22)	Negligible (14)
Air Quality						
TSP emissions (dust) (Construction)	Site (2)	Medium term (3)	High (8)	Highly probable WM (4) Probable WOM (2)	Moderate (52)	Low (26)
TSP emissions (dust) (Operations)	Site (2)	Long term (4)	Medium (6)	Highly probable WM (4) Probable WOM (2)	Moderate (48)	Low (24)

PM10 emissions (Operations)	Regional (3)	Long term (4)	High (8)	Highly probable WM (4) Probable WOM (2)	High (60)	Low (30)
Gaseous and minor pollutant emissions (Operations)	Regional (3)	Long term (4)	Low (2)	Highly probable WM (4) Probable WOM (2)	Low (36)	Negligible (18)
Air quality (dust) (Decommissioning)	Site (2)	Short term (1)	Low (2)	Probable (WOM) (2)/ Improbable (WM) (1)	Negligible (10)	Negligible (5)
Noise						
Noise impact (Construction)	Site (2)	Medium term (3)	Low (2)	Probable (2)	Negligible (14)	Negligible (14)
Noise impact (Operations) Day time	Site (2)	Long term (4)	High WOM (8) Low WM (2)	Highly probable WOM (4) Probable WM (2)	Moderate (56)	Negligible (16)
Noise impact (Operations) Night time	Site (2)	Long term (4)	High WOM (8) Medium WM (6)	Definite WOM (5) Probable WM (2)	High (70)	Low (24)
Noise impact (Decommissioning)	Site (2)	Medium term (3)	Low (2)	Probable (2)	Negligible (14)	Negligible (14)
Visual						
Visual Impact (Operation)	Site (2)	Long term (4)	Medium WOM (6) Low WM (2)	Highly probable WOM (4) Probable WM (2)	Moderate(48)	Negligible (16)
Visual Impact (Decommissioning)	Site (2)	Short term (1)	Low (2)	Probable (WOM) (2) Improbable (WM) (1)	Negligible (10)	Negligible (5)
Heritage						
Destruction of heritage resources (Construction)	Local (1)	Short term (1)	Low (2)	Improbable (1)	Negligible (4)	Negligible (4)
Traffic						
Traffic Impact	Regional (3)	Long term (4)	Low (2)	Highly probable (4)	Low (36)	Low(36)
Socio-economic						
Uncertainty and expectations	Site (2)	Medium term (3)	High WOM (8) Medium WM (6)	Definite WOM (5) Probable WM (2)	High (65)	Low (22)
Economic Impacts	Site (2)	Long term (4)	Medium (6)	Highly Probable (4)	Moderate (48) (Positive)	Moderate (48) (Positive)

Safety Impacts	Site (2)	Long term (4)	Medium (6)	Highly Probable (WOM) (4) Probable (WM) (2)	Moderate (48)	Low (24)
Quality of life impacts (Nuisance impacts, e.g. dust, noise)	Site (2)	Long term (4)	Medium WOM (6) Low WM (2)	Highly Probable (4)	Moderate (48)	Low(32)
Job creation	Site (2)	Long term (4)	High (8)	Definite (5)	High (70) (Positive)	High (70) (Positive)
Safety and security (Decommissioning)	Site (2)	Short term (1)	Low (2)	Probable WOM (2) Improbable WM (1)	Negligible (10)	Negligible (5)

Indirect impacts:

- Positive socio-economic impacts.
- Negligible additional traffic volume on local roads.

No-go (compulsory)

Alternatives should be evaluated against the no-go option. In this scenario no development would take place, or in the Section 24G Scenario the development will be stopped and the site rehabilitated. It is thought that the no-go option would not be a feasible alternative. The facility is situated within an proclaimed industrial area. Should the mitigation measures proposed in the EMP be implemented the impact on the environment can be considered to be low to negligible

The facility fits in well with the surrounding land uses and is not situated within an environmentally sensitive area. Stopping the development would mean that the 400 job opportunities that the facility would create would be lost. The unemployment figure for the City of Tshwane Metropolitan Municipality is an estimated 20% with just under 30% of the population being economically inactive. Furthermore, the facility is in line with the Tshwane Local Spatial Development Framework for the Far North Eastern Region (2008), which aims to revitalise the industrial activity within the Babelegi Industrial Area.

The low impact of the plant on the environment and the jobs that it creates renders the no-go option to not be a feasible alternative.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

Implementation of the proposed plant will have low and negligible environmental impacts post the implementation of mitigation. All construction related impacts will be of short duration and are directly linked to the term and length of the construction period. The long term impacts are related to the operational phase of the project, where there will be an increase in noise and atmospheric pollution. These negative environmental impacts can be mitigated from moderate/high to low/negligible significance through the implementation of the above mitigation measures as well as the recommendations contained in the EMP. It will be imperative to monitor the emissions from the facility, which may be supplemented by modelling techniques to provide an adequate level of information on ambient air quality, to ensure that no long term health impacts result from the plant not being managed and maintained correctly. Annual noise monitoring should also be conducted by an acoustic consultant for the duration of the operations.

Positive impacts relate to the creation of employment opportunities and the subsequent social and economic benefits in the project area.

For alternative:

N.A.

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.

Our recommendation, based on the assessment of the available information, is that application for the proposed development should be authorized provided that the sensitive planning, design and good environmental management incorporated up to date be carried out by the proponent during all phases of development. A variety of mitigation measures have been identified that will serve to mitigate the scale, intensity, duration or significance of the impacts that have a moderate to low significance rating. These include guidelines to be applied during the construction and operational phases of the project. It is submitted that the proposed mitigatory measures, if implemented, will reduce the significance of the majority of the identified impacts to "low" and "negligible", and that the proposed project should proceed.

In addition, the recommendations made in the following specialist studies must be adhered to:

- Air Quality Impact Assessment;
- Noise Impact Assessment;
- Social Impact Assessment ;
- Ecological Impact Assessment;
- Archaeological Impact Assessment; and
- Storm Water Management Plan.

The proposed development should proceed since it will have a positive impact on the socio-economic health of the area at large in terms of an increase in the present local employment opportunities. The Environmental Management Plan (EMP) will be binding on all managers and contractors operating / utilizing the site.

7. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the Environmental Assessment Practitioner).	YES	NO

If "NO", indicate the aspects that 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:

Mitigation measures have been identified that will serve to mitigate the scale, intensity, duration or significance of the impacts that have a moderate to low significance rating (not impacts of high negative significance were identified before or after mitigation). The attached Environmental Management Plan will be applied during the construction and operational phases of the project. Of particular importance is the management of noise and air quality on site, during the operation phase. Certain recommendations are provided for the management of noise and air quality, which must be adhered to. It is also recommended that annual noise monitoring be conducted by an acoustic consultant for the duration of the operations and that emissions from the facility are monitored, to ensure that no long term health impacts result from the plant not being managed and maintained correctly.

Our recommendation, based on the assessment of the available information, is that application for the proposed development should be authorised provided that the EMP be adhered to during all phases of development.

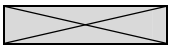
It is submitted that the proposed mitigatory measures, if implemented, will reduce the significance of all the identified impacts to "low" or "negligible", and that the proposed project should be allowed to proceed.

The proposed development will have a positive impact on the socio-economic health of the area at large, in terms of an increase in the current local employment opportunities.

The Environmental Management Programme (EMPr) will be binding on all managers and contractors operating / utilizing the site.

8. ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)

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

EMPr attached 

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

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)

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; and

Appendix A: Site plan

Appendix B: Photographs

Appendix C: Facility illustration

Appendix D: Route position information
N/A

Appendix E: Public participation information

Appendix 1 – Proof of site notice

Appendix 2 – Written notices

Appendix 3 – Proof of newspaper advertisement

Appendix 4 –Communications to and from I&APs

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

No public and/or stakeholder meeting were held

Appendix 6 - Comments and Responses Report

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

N/A

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

N/A

Appendix 9 – Copy of the register of I&APs

Appendix 10 – Comments from I&APs on the application

Refer to Appendix 4

Appendix 11 – Other

N/A

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

Appendix G: Specialist reports

Appendix G1: Air Quality Impact Assessment

Appendix G2: Noise Impact Assessment

Appendix G3: Social Impact Assessment

Appendix G4: Ecological Impact Assessment

Appendix G5: Archaeological Impact Assessment

Appendix G6: Storm water management plan

Appendix H: EMPr

Appendix I: Other

Appendix I1: Waste Management Licence Application

Appendix I2: Waste Management Plan

Appendix I3: Emergency Response Plan