GAUTENG PROVINCE
AGRICULTURE AND RURAL DEVELOPMENT
REPUBLIC OF SOUTH AFRICA

Basic Assessment Report in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended, and the Environmental Impact Assessment Regulations, 2014 (Version 1/2022)

Kindly note that:

1. This **Basic Assessment Report** is the standard report required by GDARD in terms of the EIA Regulations, 2014.
2. This template is current as of April 2022. It is the responsibility of the EAP to ascertain whether subsequent versions of the template have been published or produced by the competent authority.
3. A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to all State Departments administering a law relating to a matter likely to be affected by the activity to be undertaken.
4. **A draft Basic Assessment Report must be submitted, for purposes of comments within a period of thirty (30) days, to a Competent Authority (uploaded to the EIA online system) empowered in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended to consider and decide on the application. The EIA online system can be accessed at https://eia.gauteng.gov.za.**
5.
6. **A copy (PDF) of the final report and attachments must be uploaded to the EIA online system. The EIA online system can be accessed at https://eia.gauteng.gov.za.**
7. **Draft and final reports submitted in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) must be emailed to environmentsue@gauteng.gov.za.**
8. 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.
9. Selected boxes must be indicated by a cross and, when the form is completed electronically, must also be highlighted.
10. An incomplete report may lead to an application for environmental authorisation or Waste Management License being refused.
11. Any report that does not contain a titled and dated full colour large scale layout plan of the proposed activities including a coherent legend, overlain with the sensitivities found on site may lead to an application for environmental authorization or Waste Management License being refused.
12. The use of “not applicable” in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the application for environmental authorisation or Waste Management License being refused.
13. The applicant must fill in all relevant sections of this form. Incomplete applications will not be processed. The applicant will be notified of the missing information in the acknowledgement letter that will be sent within 10 days of receipt of the application.
14. 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.
15. Although pre-application meeting with the Competent Authority is optional, applicants are advised to have these meetings prior to submission of application to seek guidance from the Competent Authority.

DEPARTMENTAL DETAILS

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

Ground floor, Umnotho House, 56 Eloff Street, Johannesburg

Administrative Unit telephone number: (011) 240 3051/3052
Department central telephone number: (011) 240 2500

(For official use only)

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

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

N/A

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

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

This application does not relate to the decommissioning or closure of a facility.

Has a draft report for this application been submitted to a competent authority and all State Departments administering a law relating to a matter likely to be affected as a result of this activity? This is the draft report to be distributed for comment to all IAPs including all State Departments administering a law relating to a matter. No

Is a list of the State Departments referred to above attached to this report including their full contact details and contact person? See IAP Register attached under Appendix E. Yes

If no, state reasons for not attaching the list.

N/A

Have State Departments including the competent authority commented? No

If no, why?

This report is the draft report distributed for comment, comments received will be included in the final Basic Assessment Report.

SECTION A: ACTIVITY INFORMATION

1. PROPOSAL OR DEVELOPMENT DESCRIPTION

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

Proposed waste pyrolysis facility, Sustineri Energy (Pty) Ltd, Centurion, Gauteng

Select the appropriate box

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

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

YES X	~~NO~~

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

- This Basic Assessment Report is developed for an application for an Integrated Environmental Authorisation and Waste Management Licence in terms of the National Environmental Management Act No. 107 of 1998, as amended (NEMA) and the National Environmental Management: Waste Act No. 59 of 2008, as amended (NEM:WA).
- The facility will also require an Atmospheric Emissions Licence in terms of the National Environmental Management: Air Quality Act No. 39 of 2004 (NEMAQA) which will be applied for through the City of Tshwane Metropolitan Municipality.

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

2. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Promulgation Date:
National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).	National & Provincial	27 November 1998
National Environmental Management Act, 1998 (Act No. 107 of 1998, as amended).	National & Provincial	27 November 1998
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008 as amended).	National & Provincial	10 March 2009
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004, as amended).	Municipal	2004

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

Legislation, policy of guideline	Description of compliance
National Environmental Management Act, 1998 (Act No. 107 of 1998, as amended).	The proposed facility cannot be constructed prior to the issuing of an integrated environmental authorization and waste management licence.
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008 as amended).	
National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004, as amended).	The facility requires an Atmospheric Emissions Licence in terms of the National Environmental Management: Air Quality Act No. 39 of 2004 (NEMAQA) which will be applied for through the City of Tshwane Metropolitan Municipality.

3. ALTERNATIVES

Describe the proposal and alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished. The determination of

whether the site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment.

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

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

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

Please refer to Appendix I1 for the full Alternatives Assessment.

Sustineri Energy (Pty) Ltd (Sustineri) proposes to establish a waste to energy facility at the Icon Industrial Park, Centurion, Gauteng.

The primary intent of the proposed plant is to generate pyrolysis gas through pyrolysis of plastic and other high calorific non-hazardous wastes, and generate electricity by combusting the pyrolysis gas in a set of Reciprocating Internal Combustion Engines.

The proposed activities are proposed to occur within the existing boundary of the Icon Industrial Park on Portion 0 of Erf 592 in Sunderland Ridge, Extension 29. This property has an existing Environmental Authorisation (002/ 11-12/E0047) that was granted on the 14th of March 2011 for the establishment of Sunderland Ridge Extension 29 as an "Industrial 1" township. The land has been previously cleared under this authorisation.

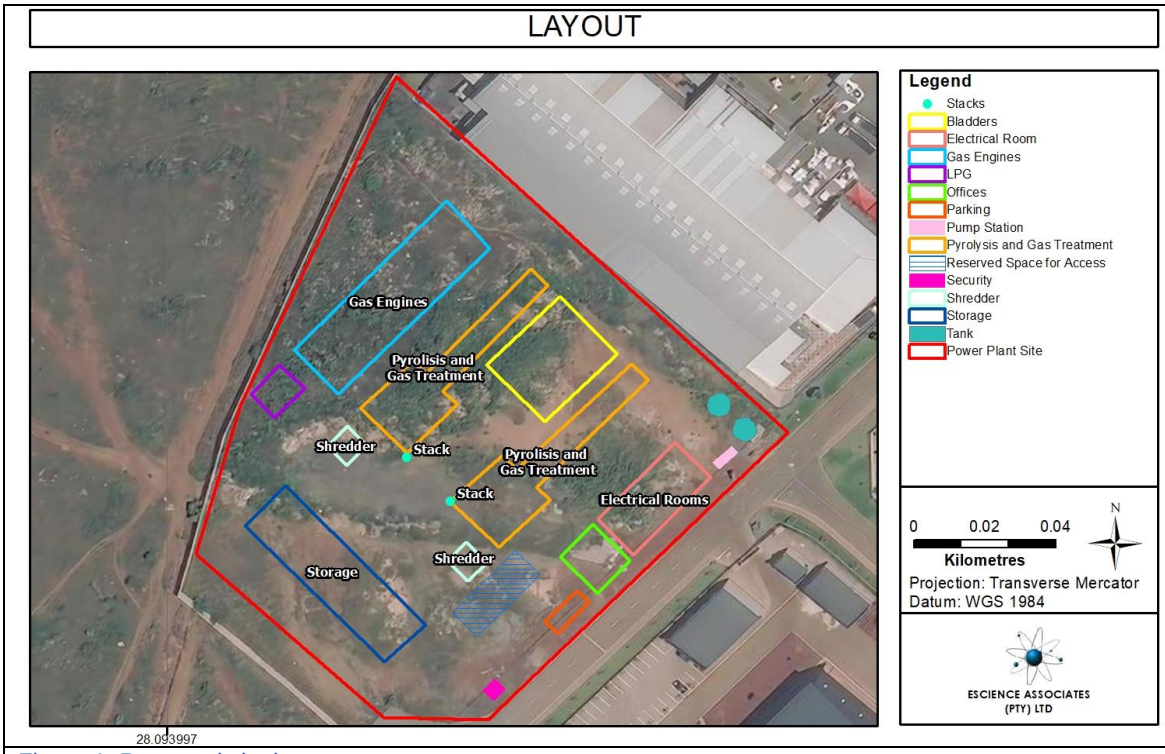

Figure 1: Proposed site layout

The decision on the location of activities is a commercial decision as the potential environmental impacts of construction will be negligible due to the fact that site is zoned for industrial use and the land has already been disturbed.

The most pertinent environmental impact during the operational phase is expected to be due to air emissions from the pyrolysis and electricity generation. The air quality impact is shown in the Air Quality Impact Assessment to be acceptable (see Appendix G – Specialist Reports). Emissions abatement equipment alternatives that have been considered are listed in the table below.

Provide a description of the alternatives considered

Please refer to Appendix I1 for the full Alternatives Assessment

No.	**Alternative type**, either alternative: site on	**Description**

	property, properties, activity, design, technology, energy, operational or other(provide details of "other")	
Location		
1	Proposal	The proposed project is proposed to be constructed on already licensed and disturbed land, on property that has been zoned for industrial use, therefore no location alternatives have been considered.
Technology –Abatement		
1	Proposal	Wet Scrubber: • Provides soluble gas and particulate removal • Lower capital and operational cost
2	Alternative 1	Bag Filters: Does not provide soluble gas abatement
3	Alternative 2	Electrostatic Precipitators: Does not provide soluble gas abatement
Technology – Waste to Energy		
1	Proposal	Pyrolysis: Most applicable to the purpose of the facility which is the recovery of gas and liquid fuels from the waste
2	Alternative 1	Incineration: Not applicable to the primary purpose of the proposed facility
3	Alternative 2	Plasma arc gasification: Not applicable to the primary purpose of the proposed facility
4	Alternative 3	Gasification: Not applicable to the primary purpose of the proposed facility

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

The proposed activities are proposed to occur within the existing boundary of the Icon Industrial Park on Portion 0 of Erf 592 in Sunderland Ridge, Extension 29. This property has an existing Environmental Authorisation (002/ 11-12/E0047) that was granted on the 14th of March 2011 for the establishment of Sunderland Ridge Extension 29 as an "Industrial 1" township. The land has been previously cleared under this authorisation.

The decision on the location of activities is therefore a commercial decision as the potential environmental impacts of construction will be negligible due to the fact that site is zoned for industrial use and the land has already been disturbed.

4. PHYSICAL SIZE OF THE ACTIVITY

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

	Size of the activity:
Proposed activity ***(Total environmental (landscaping, parking, etc.) and the building footprint)***	1.45 ha
Alternatives:	
Alternative 1 (if any)	
Alternative 2 (if any)	
	Ha/ m^2

or, for linear activities:

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

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

	Size of the site/servitude:
Proposed activity	1.45 ha
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 **X**	~~NO~~
If NO, what is the distance over which a new access road will be built N/A		m

Describe the type of access road planned:

N/A

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

Alternative 1

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

Describe the type of access road planned:

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

Alternative 2

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

Describe the type of access road planned:

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

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

Section A 6-8 has been duplicated **0** Number of times

(only complete when applicable)

6. LAYOUT OR ROUTE PLAN

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

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

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

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

- the scale of locality map must be at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map;
- the locality map and all other maps must be in colour;
- locality map must show property boundaries and numbers within 100m of the site, and for poultry and/or piggery, locality map must show properties within 500m and prevailing or predominant wind direction;

- for gentle slopes the 1m contour intervals must be indicated on the map and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the map;
- areas with indigenous vegetation (even if it is degraded or infested with alien species);
- locality map must show exact position of development site or sites;
- locality map showing and identifying (if possible) public and access roads; and
- the current land use as well as the land use zoning of each of the properties adjoining the site or sites.

7. SITE PHOTOGRAPHS

Colour photographs from the 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)

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: (Including Physical Address and Farm name, portion etc.)	Portion 0 of Erf 592 in Sunderland Ridge, Extension 29

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.

Proposed:

Latitude (S):	**Longitude (E):**
-25.837389°	28.094797°

In the case of linear activities: N/A

Alternative:

- Starting point of the activity
- Middle point of the activity
- End point of the activity

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

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

The 21 digit Surveyor General code of each cadastral land parcel

PROPOSAL	T	0	J	R	0	2	3	9	0	0	0	0	0	5	9	2	0	0	0	0	0
ALT. 1																					
ALT. 2																					
etc.																					

3. GRADIENT OF THE SITE

Indicate the general gradient of the site.

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

4. LOCATION IN LANDSCAPE

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

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

5. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

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

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

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

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

Latitude (S):	**Longitude (E):**
°	°

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

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

Latitude (S):	**Longitude (E):**
°	°

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

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

Latitude (S):	**Longitude (E):**
°	°

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

6. AGRICULTURE

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

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

A specialist soil, land use and land capability compliance and impact statement was conducted and the full report has been attached under Appendix G – Specialist Reports.

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 % = 80	Landscaped (vegetation) % =
Sport field % =	Cultivated land % =	Paved surface (hard landscaping) % =	Building or other structure % =	Bare soil % = 20

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 **X**

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 **X**

If YES, specify and explain:

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

If YES, specify and explain:

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

If yes complete specialist details

Name of the specialist:			
Qualification(s) of the specialist:			
Postal address:			
Postal code:			
Telephone:		Cell:	
E-mail:		Fax:	

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

If YES list the specialist reports attached below

Signature of specialist: _____ Date:

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

8. LAND USE CHARACTER OF SURROUNDING AREA

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

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

31. Open cast mine	32. Underground mine	33.Spoil heap or slimes dam[A]	34. Small Holdings	
Other land uses (describe):				

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

NORTH

1	**1**	**1**	**1**	**1**
1	**1**	**1**	**15**	**1**
1	**1**		**15**	**1**
10	**1**	**1**	**15**	
10	**10**	**1**	**15/1**	**15**

WEST EAST

SOUTH

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

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

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

If yes indicate the type of reports below

- Air Quality Impact Assessment Report
- Terrestrial Biodiversity Sensitivity Verification and Compliance Statement
- Aquatic Biodiversity Sensitivity Verification and Compliance Statement
- Soil (Agricultural) Sensitivity Verification and Compliance Statement
- Major Hazard Installation Risk Assessment
- Civil Aviation Sensitivity Verification Report
- Palaeontological Impact Assessment

Ful reports can be found under Appendix G – Specialist Reports.

9. SOCIO-ECONOMIC CONTEXT

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

The proposed site is located at the Icon Industrial Park in Centurion which falls under the City of Tshwane.

According to Statistics SA Census 2011, the then population of the City of Tshwane was 2.92 million with Centurion in particular having a population of 236 580. The City of Tshwane continues to fight high unemployment. Overall, the City's unemployment in 2011 was 24.2% (Statistics SA Census, 2011).

Centurion falls into Region 4 of the City of Tshwane Metropolitan Municipality. According to the city, this region falls into the economic core of Gauteng.

According to the City of Tshwane, Region 4, 25% of the population in the region is regarded as being within the low-income group although the region is described as being more affluent.

The proposed project is not expected to have any negative socio-economic impact as it constitutes the construction of a waste pyrolysis plant and supporting infrastructure. It will however contribute to the minimisation of plastic and hydrocarbon waste in across the municipality by removing waste that could be disposed of here thus ensuring that these sites can extend their operational lifespans.

10. CULTURAL/HISTORICAL FEATURES

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

38. (1) Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as-

(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;

(b) the construction of a bridge or similar structure exceeding 50m in length;

(c) any development or other activity which will change the character of a site-

(i) exceeding 5 000 m2 in extent; or

(ii) involving three or more existing erven or subdivisions thereof; or

(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or

(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;

(d) the re-zoning of a site exceeding 10 000 m2 in extent; or

(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development.

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

If YES, explain:

N/A

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:

A palaeontological impact assessment was conducted by Banzai Environmental. The study included a desktop study as well as a site survey that was conducted on the 16th of April 2022.

The specialist found weathered stromatolites on the site but found that the palaeontological significance thereof is low. An overall low palaeontological sensitivity has been allocated for the site and construction of the proposed facility may be authorised for the whole extent of the site.

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

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

SECTION C: PUBLIC PARTICIPATION (SECTION 41)

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

2. LOCAL AUTHORITY PARTICIPATION

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

Was the draft report submitted to the local authority for comment? This is the draft report to be distributed for comment to all IAPs including the local authority.	YES **X**	~~NO~~
If yes, has any comments been received from the local authority? This is the draft report to be distributed for comment to all IAPs including the local authority	~~YES~~	NO **X**

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

This is the draft report to be distributed for comment to all IAPs including the local authority.

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

This is the draft BA report for submission to interested and affected parties for comment, thus, to date no comments have been received. Comments from interested and affected parties, and responses thereto will be included in the Final BAR.

3. CONSULTATION WITH OTHER STAKEHOLDERS

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

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

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

This is the draft report to be distributed for comment to all IAPs including the local authority.

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

This is the draft BA report for submission to interested and affected parties for comment, thus, to date no comments have been received. Comments from interested and affected parties, and responses thereto will be included in the Final BAR.

4. GENERAL PUBLIC PARTICIPATION REQUIREMENTS

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

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

5. APPENDICES FOR PUBLIC PARTICIPATION

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

Appendix 1 – Proof of site notice

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

Appendix 3 – Proof of newspaper advertisements

Appendix 4 –Communications to and from interested and affected parties

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

Appendix 6 - Comments and Responses Report

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

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

Appendix 9 – Copy of the register of I&APs

SECTION D: RESOURCE USE AND PROCESS DETAILS

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

Instructions for completion of Section D for alternatives

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

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

Section D Alternative No. | "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 **X** / ~~NO~~

If yes, what estimated quantity will be produced per month? 20 tonnes

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

Construction waste to be disposed at an existing permitted site as a last resort. All possible measures to be utilised to re-use, reduce and recycle construction related waste. Otherwise, to be stored temporarily in accordance with the Norms and Standards for the Storage of Waste, and will be appropriately disposed of at a suitable, permitted/licensed, disposal site.

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

Undesired or non-recyclable solid construction waste to be collected by a licensed waste management service provider, and will be appropriately disposed of at a suitable, permitted/licensed, disposal site.

Will the activity produce solid waste during its operational phase? YES **X** / NO

If yes, what estimated quantity will be produced per month? 342 tonnes

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

The solid products of pyrolysis (char) will be dropped out and will be bagged and sold as a product to third parties.

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? N/A YES / NO

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

The solid products of pyrolysis (char) will be separated and dropped out and will be bagged and sold as a product to third parties.

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 **X**

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 **X** / ~~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:

Construction Phase:
The construction contractor will be required to provide a method statement specific to waste minimisation, reuse, recovery and recycling, as well as temporary storage and disposal; where such plans would need to be signed off by competent site environmental personnel/environmental control officer (ECO), prior to the start of construction activities.

Operational Phase:
The solid products of pyrolysis (char) will be separated and dropped out and will be bagged and sold as a product to third parties.

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 **X**	~~NO~~
If yes, what estimated quantity will be produced per month?	294 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)? N/A	YES	NO

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

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

N/A

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

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

If yes, provide the particulars of the facility:

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

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

N/A

Liquid effluent (domestic sewage)

Will the activity produce domestic effluent that will be disposed of in a municipal sewage system?	YES **X**	~~NO~~
If yes, what estimated quantity will be produced per month?	30 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 **X**

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

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

N/A

Emissions into the atmosphere

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

N/A

2. WATER USE

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

Municipal **X**	~~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:	N/A 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 **X**

If yes, list the permits required

N/A

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

3. POWER SUPPLY

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

The facility will have power supply from the municipality. The primary objective of the facility will be to produce electricity from pyrolysis gas however, and thus it will be self-sufficient to a large extent.

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

N/A

4. ENERGY EFFICIENCY

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

The purpose of the project is to generate energy from waste, which is energy efficient in itself. The proposed installations will be designed in such a way as ensure that the equipment runs at its optimal level. Some of the syngas as well as the liquid hydrocarbons produced from the process will be routed back to the reactors to fuel the pyrolysis process. Recovered heat from the process will be used to provide heat for drying waste prior to pyrolysis. Recovered heat will be distributed to the Icon Business Park tenants in the form of hot air/hot water/steam.

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

The primary purpose of the project is to generate energy from an alternative energy source, namely from general waste.

SECTION E: IMPACT ASSESSMENT

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

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summarise the issues raised by interested and affected parties.

No issues have been raised thus far.
This is the draft report for submission to interested and affected parties for comment, thus, to date no comments have been received. Comments from interested and affected parties will be included in the Final BAR.

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

No issues have been raised thus far.
This is the draft report for submission to interested and affected parties for comment, thus, to date no comments have been received. Comments from interested and affected parties will be included in the Final BAR.

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

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

A “significant impact” means an impact that may have a notable effect on one or more aspects of the environment or may result in non-compliance with accepted environmental quality standards, thresholds or targets. The significance of the potential impacts has been determined through rating the positive and negative effects of an impact on the environment based on criteria such as Nature, Extent, Duration, Intensity, Probability, Mitigation/ Enhancement Potential, Reversibility.

A detailed description of impact assessment methodology can be found as Appendix I (other information).

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.

CONSTRUCTION PHASE:

Noise

Significant noise generation from the construction itself is not expected. The construction is expected to occur within normal working hours, the noise generation is not expected to have any significant impact outside of the site and is expected to be in accordance with the locally applicable by-laws.

Noise Impacts		
Nature (N)	Negative impact - the site is located within a designated industrial area, noise levels are expected to be within the acceptable limit.	1
Extent (E)	Locally: Localised to the site and immediate surrounds	2
Duration (D)	Short term: The construction period is expected to be less than 6 months.	2
Intensity (I)	Minor: The facility is within a built-up urban area. Noise generation is expected to be minimal.	2
Probability (P)	Definite: Noise will be generated.	4
Mitigation (M)	Well mitigated: To be limited to normal working hours, in accordance with locally applicable by-laws.	4
Reversibility (R)	Mostly Reversible: The status quo will return to the previous status quo upon completion.	4

Noise Impacts			
Significance Rating without Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Low**	**16**
Significance Rating with Mitigation -Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	**8**
Significance Rating - Positive Impact (S)	N x (E+D) x I x P x (H).		-

Construction and Installation waste generation, Handling and Disposal

Construction waste will largely consist of non-hazardous / general waste. The generation of such waste could indirectly impact on the operational lifespan of a waste disposal facility, through the permanent occupation of remaining available airspace at such a facility. Recyclable materials such as steel should be separated and recycled.

Construction and Installation Waste			
Nature (N)	Indirect negative impact on landfill airspace availability.		1
Extent (E)	Municipal: Use of airspace that would otherwise be available to other uses in the municipality.		3
Duration (D)	Very Long term: Waste generated will be disposed of at a landfill.		5
Intensity (I)	Negligible: The anticipated impact will be negligible, with a very little effect on relative airspace availability.		1
Probability (P)	Definite: Waste will be produced.		4
Mitigation (M)	Moderately mitigated through re-use and recycling		3
Reversibility (R)	Reversible: The status quo will return upon completion of the construction		4
Significance Rating without Mitigation -Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Low**	**16**
Significance Rating with Mitigation -Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	**9**

Air Quality - Dust

During construction, the undertaking of ground preparation and civil works may lead to the generation of vehicle and wind entrained dust. Although the impact is likely to be localised to the site due the size of the area to be worked, dust suppression techniques such as wetting grounds, or application of dust palliatives, may be required. Other emissions during construction, such as construction vehicle and machinery exhausts are not anticipated to be significant

Impacts on Air Quality- Dust			
Nature (N)	Negative impact on air quality		1
Extent (E)	Locally: Localised to the site and surrounds		2
Duration (D)	Short Term: Construction phase conservatively anticipated for up to 6 months		2
Intensity (I)	Minor: Natural processes or functions will hardly be affected		2
Probability (P)	Likely: there is a possibility that the impact will occur, to the extent that provisions must be made for it		2
Mitigation (M)	Well mitigated: Effective dust suppression methods readily available		4
Reversibility (R)	Reversible: The status quo will return upon completion of the construction		4
Significance Rating without Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	8

Significance Rating with Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	4

Soil and Groundwater Quality

Spills or inappropriate storage, management and handling of fuels and other potentially dangerous substances could result in negative impacts on soil and groundwater quality; where spillages of such substances could enter the soil and / or groundwater environment through the infiltration of contaminated surface run-off.

Impacts on groundwater and soil quality			
Nature (N)	Negative impact on groundwater		1
Extent (E)	Locally: groundwater can be affected outside of the site boundary		2
Duration (D)	Medium term: If contaminant does enter groundwater it could be present for 1-2 years, the lifetime of fuels used is understood to be 6 months.		3
Intensity (I)	Moderate: If contaminant enters the groundwater, the environment is altered.		3
Probability (P)	Unlikely: The probability of contaminant entering soil or even groundwater is low as fuel is to be stored in a bunded area.		1
Mitigation (M)	Impact can be mostly mitigated: Impact can be prevented by placing drip trays under vehicles and storing fuel in bunded areas.		4
Reversibility (R)	Slight: Groundwater remediation is possible but is a very costly and lengthy process		2
Significance Rating without Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Low**	**15**
Significance Rating with Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	**5**

OPERATION PHASE:

Noise

Noise impacts			
Nature (N)	Negative impact		1
Extent (E)	Locally: Localised to the site and immediate surrounds		2
Duration (D)	Very long term: Operations are expected to last longer than 10 years		5
Intensity (I)	Negligible: The proposed site location is zoned for industrial use, noise levels are expected to be within the acceptable limit		1
Probability (P)	Likely: It is likely that noise will be generated to an extent that mitigation measures should be considered		2
Mitigation (M)	Well mitigated: To be limited to normal working hours, in accordance with locally applicable by-laws.		4
Enhancement (H)	N/A		-
Reversibility (R)	Irreversible: Not practical to reverse the impact once it has occurred		1
Significance Rating without Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(R)	**Moderate**	**28**

Significance Rating with Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	**6**

Soil and Groundwater Quality – Waste and Fuel Storage and Handling

Impacts on Groundwater Quality			
Nature (N)	Negative impact		1
Extent (E)	Locally: Localised to the site and immediate surrounds		2
Duration (D)	Medium term: If a plume does enter groundwater it could be present for 1-2 years		3
Intensity (I)	Major: Without the required management measures in place, if a plume enters the groundwater, the groundwater surrounding the plant would potentially be significantly impacted on.		4
Probability (P)	Unlikely: The probability of contaminant entering groundwater is low as fuel and waste is to be stored in a bunded area.		1
Mitigation (M)	Well mitigated: Impact can be prevented by construction of an impermeable bunded facility.		4
Reversibility (R)	Slight: Groundwater remediation is possible but is a very costly and lengthy process		2
Significance Rating without Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(R)	**Moderate**	**20**
Significance Rating with Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	**7**

Impacts on Soil Quality			
Nature (N)	Negative impact		1
Extent (E)	On site		1
Duration (D)	Short term: Potential impact can be addressed immediately		2
Intensity (I)	Minor: Natural processes or functions are not expected to be appreciably affected		2
Probability (P)	Unlikely: The probability of contaminant entering soil is low as fuel and waste is to be stored in a bunded area.		1
Mitigation (M)	Impact can be mostly mitigated: Impact can be prevented by placing drip trays under vehicles.		4
Reversibility (R)	Mostly reversible: The contaminated soil can be removed and treatet		4
Significance Rating without Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(R)	**Negligible**	**3**
Significance Rating with Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	**2**

Reduction in waste disposal to landfill

Plastic and other high calorific value non-hazardous waste that is currently being disposed of to landfill will be utilised as the primary material for the pyrolysis process. The impacts that are assessed here are those that arise from a reduction in the waste being disposed of at municipal landfills and waste management facilities.

Waste Reduction Impact		
Nature (N)	Positive impact	-0.25
Extent (E)	Municipal: operations will reduce waste disposed to municipal landfills	3

Waste Reduction Impact			
Duration (D)	Very Long Term: Waste diverted from landfill will be permanently diverted from landfill. Operations are expected to last longer than 10 years		5
Intensity (I)	Negligible: Activities are expected to process negligible amounts of waste (100 tons per day) in comparison to the amount waste processed on a municipal level.		1
Probability (P)	Definite: General waste will be processed.		4
Enhancement (H)	None		1
Significance Rating -Positive Impact (S)	N x (E+D) x I x P x (H).	**Positive (Negligible)**	**-8**

Socio-Economic – Provision of Employment

It is envisaged that the plant will employ approximately 20-25 people during operations. Although new employment will be created, a minimal amount of unskilled labour will be required. Effective enhancement, in the form of the proponent making a concerted effort to employ workers from the surrounding areas, can be applied.

Impacts on Socio-economics from Job creation			
Nature (N)	Positive - operation of the plant		-0.25
Extent (E)	Municipality: Expected to have an impact at a municipal extent		3
Duration (D)	Very long term: Operations are expected to last longer than 10 years		5
Intensity (I)	Minor: Proposed development is a new site that will result in job creation		2
Probability (P)	Definite: Proposed development will require new staff		4
Mitigation (M)	N/A		-
Enhancement (H)	Slight enhancement, in the form of the proponent making a concerted effort to employ workers from the surrounding areas, can be applied		2
Reversibility (R)	N/A		N/A
Significance Rating -Positive Impact (S)	N x (E+D) x I x P x (H).	**Positive (Moderate)**	-32

Assessment of the significance of all impacts informed by specialist studies have been summarized in the below table.

Full reports can be found under Appendix G – Specialist Reports.

Proposal

Potential impacts:	Significance rating of impacts (positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
Construction				
Noise	Low	• Activities, and use of construction vehicles, which may create a disturbing noise must be undertaken during typical business hours in accordance with locally applicable by-laws during the week. These activities must be avoided as far as is practical during night-time and weekends. • A complaints register shall be maintained and kept at reception in order to record complaints of noise and / or odour.	Negligible	Noise pollution
Construction waste	Low	• Recyclable materials such as steel should be separated and recycled. • Adequate Bins and / or skips must be provided on the site to provide for general waste. Waste sorting must be done at source or within a dedicated area. Undesired or non-recyclable waste must be collected by an appropriate waste management service provider. • All waste must be stored in compliance with the Norms and Standards set out in GN926 National Environmental Management: Waste Act (59 / 2008): National norms and standards for the storage of waste. • Waste management practices must adhere to the regulations set out in GN.R634 National Environmental Management: Waste Act (59 / 2008): Waste Classification and Management Regulations. • All waste and storage areas must be clearly demarcated and maintained.	Negligible	Contribution to landfill
Air Quality (Dust)	Negligible	The Proponent is to institute effective dust suppression measures on all un-surfaced areas for the duration of the construction phase.	Negligible	Air pollution
Soil and Groundwater Quality	Low	• Ensure that storage of dangerous goods takes place over an impermeable surface within a bunded area. • If vehicle and / or construction machinery maintenance is to occur onsite, a suitable leak proof container for the storage of oiled equipment (filters, drip tray contents and oil changes etc.) must be established. • Hazardous substances such as fuel and oil must be stored within appropriately sized, impermeable, bund walls, with the appropriate warning signage. • Spill kits to be readily available at all points where hazardous substances will be stored and / or transferred (e.g. refuelling points); • In the instance that a spill occurs, this should be dealt with in line with the EMPr. • All vehicles, equipment, fuel and petroleum services and tanks must be maintained in a condition that prevents leakage and possible contamination of soil or water. Refuelling areas must be bunded and secured to prevent soil and water contamination. • Where possible building materials are to be prepared at the batching plant, to enable the effects of cement and other substances, and the resulting effluent to be more easily managed.	Negligible	Soil contamination and Groundwater Pollution

Land capability	Negligible	The soils occurring within the study area have been subjected to physical disturbance such that they are not suitable for any form of cultivation.	Negligible (See Appendix G – Specialist Reports)	Decreased agricultural potential
Animal Species	Low	• There are no faunal species of conservation concern (SCC) • Construction to remain within defined footprint • Poaching of animals in the surrounding grasslands must be prohibited	Negligible (See Appendix G – Specialist Reports)	Habitat degradation
Plant Species	Low	• There are no floral species of conservation concern (SCC) • Ongoing alien and invasive plant monitoring and an alien vegetation control plan is recommended • Alien vegetation that is removed must not be allowed to lay on unprotected ground as seeds might disperse upon it. • Edge effects arising from proposed activities, such as soil compaction, erosion, and alien plant species proliferation, which may affect adjacent natural areas, need to be strictly managed.	Negligible (See Appendix G – Specialist Reports)	Habitat degradation
Terrestrial Biodiversity	Low	There are no features of significant biodiversity importance found on the site	Negligible (See Appendix G – Specialist Reports)	Habitat degradation
Aquatic Biodiversity	Low	No freshwater ecosystems were identified within the site.,	Negligible (See Appendix G – Specialist Reports)	Habitat degradation
Palaeontological finds	Low	If fossil remains are discovered during any phase of construction, either on the surface or exposed by excavations the Chance Find Protocol must be implemented	Negligible (See Appendix G – Specialist Reports)	Heritage
Operation				
Noise	Moderate	Operations to be limited to normal working hours, in accordance with locally applicable by-laws.	Negligible	Noise pollution

Groundwater Quality	Moderate	• Storage of waste is to take place under roof on an impermeable surface and within a bunded area. • Hazardous substances such as fuel and oil must be stored within appropriately sized, impermeable, bund walls, with the appropriate warning signage. • Adequate Bins and / or skips must be provided on the site to provide for storage of waste. • Spill kits to be readily available at all points where hazardous substances will be stored and / or transferred (e.g. refuelling points); • In the instance that a spill occurs, this should be dealt with in line with the EMPr. • All waste must be stored in compliance with the Norms and Standards set out in GN926 National Environmental Management: Waste Act (59 / 2008): National norms and standards for the storage of waste. • Waste management practices must adhere to the regulations set out in GN.R634 National Environmental Management: Waste Act (59 / 2008): Waste Classification and Management Regulations. • All waste and storage areas must be clearly demarcated and maintained. • Transport of handling of waste must be conducted in such a manner that leachate does not leak onto roads or parking areas.	Negligible	Groundwater pollution
Soil Quality	Negligible		Negligible	Soil contamination
Air Quality - Potential Gaseous emissions from reactors and dryers	Low	Emissions Abatement and stack monitoring to ensure emissions limits are met.	Low (See Appendix G – Specialist Reports)	Air pollution
Major Hazard Installation	Low	Maintenance plan for the pyrolysis reactors to be implemented	Low (See Appendix G – Specialist Reports)	Catastrophic event due to Major Hazard Installation
Aviation	Low	None	Low (See Appendix G – Specialist Reports)	Risk to aviation operations
Waste Reduction	Negligible (Positive)	None	Negligible (Positive)	Reduction of waste to landfill
Job Security through Improved Efficiency	Moderate (Positive)	Effective enhancement, in the form of the proponent making a concerted effort to employ workers from the surrounding areas, can be applied.	Moderate (Positive)	Socio-economic

Alternative 1 – N/A *(REPEAT THIS TABLE FOR EACH ALTERNATIVE)*

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

No Go

The no-go option refers to the alternative of the proposed project not going ahead at all. The baseline status quo would be maintained in this case, which would result the continued disposal of waste to landfill, as well as perpetuate continued reliance on fossil fuels.

Considering that the negative impacts of the proposed facility are low and negligible, and there are some positive impacts the no-go alternative is deemed an undesirable alternative.

It must be noted that the site is an existing site in an established industrial park, thus the refusal of this application would most likely result in the site being used by another industrial activity in the future (whether or not by this proponent) due to its location, zoning and access to established industrial services such as water supply, roads, electrical supply, sewage and other infrastructure. The environmental impact of this future activity cannot be predicted.

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 Report
- Terrestrial Biodiversity Sensitivity Verification and Compliance Statement
- Aquatic Biodiversity Sensitivity Verification and Compliance Statement
- Soil (Agricultural) Sensitivity Verification and Compliance Statement
- Major Hazard Installation Risk Assessment
- Civil Aviation Sensitivity Verification Report
- Palaeontological Impact Assessment

Ful reports can be found under Appendix G – Specialist Reports.

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

N/A

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.

Due to the proposed plant being located in an industrial area it is not anticipated that the site will require rehabilitation in order to restore to an undisturbed state. The decommissioning of the plant is expected to entail the dismantling and/or demolishing of the plant infrastructure and as such the impacts expected from this phase of the project are assumed to be the same as the impacts analysed under the construction phase.

Noise

Noise Impacts		
Nature (N)	Negative impact - the site is located within a designated industrial area, noise levels are expected to be within the acceptable limit.	1
Extent (E)	Locally: Localised to the site and immediate surrounds	2
Duration (D)	Short term: Decommissioning not expected to take more than 3 months.	2

Noise Impacts			
Intensity (I)	Minor: The facility is within a built-up urban area. Noise generation is expected to be minimal.		2
Probability (P)	Definite: Noise will be generated.		4
Mitigation (M)	Well mitigated: To be limited to normal working hours, in accordance with locally applicable by-laws.		4
Reversibility (R)	Mostly Reversible: The status quo will return to the previous status quo upon completion.		4
Significance Rating without Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Low**	**16**
Significance Rating with Mitigation -Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	**8**
Significance Rating - Positive Impact (S)	N x (E+D) x I x P x (H).		-

Decommissioning waste generation, Handling and Disposal

Decommissioning Waste			
Nature (N)	Indirect negative impact on landfill airspace availability.		1
Extent (E)	Municipal: Use of airspace that would otherwise be available to other uses in the municipality.		3
Duration (D)	Very Long term: Waste generated will be disposed of at a landfill.		5
Intensity (I)	Negligible: The anticipated impact will be negligible, with a very little effect on relative airspace availability.		1
Probability (P)	Definite: Waste will be produced.		4
Mitigation (M)	Moderately mitigated through re-use and recycling		3
Reversibility (R)	Reversible: The status quo will return upon completion of the decommissioning phase		4
Significance Rating without Mitigation -Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Low**	**16**
Significance Rating with Mitigation -Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	**9**

Air Quality - Dust

Impacts on Air Quality- Dust			
Nature (N)	Negative impact on air quality		1
Extent (E)	Locally: Localised to the site and surrounds		2
Duration (D)	Short Term: Decommissioning not expected to take more than 3 months.		2
Intensity (I)	Minor: Natural processes or functions will hardly be affected		2
Probability (P)	Likely: there is a possibility that the impact will occur, to the extent that provisions must be made for it		2
Mitigation (M)	Well mitigated: Effective dust suppression methods readily available		4
Reversibility (R)	Reversible: The status quo will return upon completion of the construction		4
Significance Rating without Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	8
Significance Rating with Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	4

Soil and Groundwater Quality

Impacts on groundwater and soil quality			
Nature (N)	Negative impact on groundwater		1
Extent (E)	Locally: groundwater can be affected outside of the site boundary		2
Duration (D)	Medium term: If contaminant does enter groundwater it could be present for 1-2 years, the lifetime of fuels used is understood to be 6 months.		3
Intensity (I)	Moderate: If contaminant enters the groundwater, the environment is altered.		3
Probability (P)	Unlikely: The probability of contaminant entering soil or even groundwater is low as fuel is to be stored in a bunded area.		1
Mitigation (M)	Impact can be mostly mitigated: Impact can be prevented by placing drip trays under vehicles and storing fuel in bunded areas.		4
Reversibility (R)	Slight: Groundwater remediation is possible but is a very costly and lengthy process		2
Significance Rating without Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Low**	**15**
Significance Rating with Mitigation - Negative Impact (S)	N x (E+D) x I x P ÷ ½(M+R)	**Negligible**	**5**

Proposal

Potential impacts:	**Significance rating of impacts(positive or negative):**	**Proposed mitigation:**	**Significance rating of impacts after mitigation:**	**Risk of the impact** and **mitigation not being implemented**
Noise	Low	• Activities, and use of construction vehicles, which may create a disturbing noise must be undertaken during typical business hours in accordance with locally applicable by-laws during the week. These activities must be avoided as far as is practical during night-time and weekends. • A complaints register shall be maintained and kept at reception in order to record complaints of noise and / or odour.	Negligible	Noise pollution
Decommissioning waste	Low	Decommissioning waste to be disposed at an existing permitted site as a last resort. All possible measures to be utilised to re-use, reduce and recycle related waste. Otherwise, to be stored temporarily in accordance with the Norms and Standards for the Storage of Waste, and will be appropriately disposed of at a suitable, permitted/licensed, disposal site	Negligible	Contribution to landfill
Air Quality (Dust)	Negligible	The Proponent is to institute effective dust suppression measures on all un-surfaced areas for the duration of the decommissioning phase.	Negligible	Air pollution
Soil and Groundwater Quality	Low	• Ensure that storage of dangerous goods takes place over an impermeable surface within a bunded area. • If vehicle and / or construction machinery maintenance is to occur onsite, a suitable leak proof container for the storage of oiled equipment (filters, drip tray contents and oil changes etc.) must be established. • Hazardous substances such as fuel and oil must be stored within appropriately sized, impermeable, bund walls, with the appropriate warning signage.	Negligible	Soil contamination and Groundwater Pollution

Potential impacts:	Significance rating of impacts(positive or negative):	Proposed mitigation:	Significance rating of impacts after mitigation:	Risk of the impact and mitigation not being implemented
		• Spill kits to be readily available at all points where hazardous substances will be stored. • In the instance that a spill occurs, this should be dealt with in line with the EMPr.		

Alternative 1 - N/A

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

Alternative 2 - N/A

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

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

N/A

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

None

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:

Although there are some industrial activities adjacent to site, the scale of these activities and their related emissions are not expected to contribute significantly to background air quality in the area.

Given the above, it is expected that background levels of ambient SO_2, NOx and PM_{10} in the area are relatively negligible. For this reason, it has been deemed unnecessary to undertake a cumulative impact assessment.

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

Planning and design phase

The planning and design phase is largely a desktop engineering design process. There are no appreciable impacts expected from this phase.

Construction

Noise during installation and assembly of proposed infrastructure and equipment is expected to have no significant impact outside of the site.

Waste which is disposed of will have impact at a municipal extent. The intensity of the impact will, however, be low due to the small amount of waste expected to be generated. The impact is deemed to be negligible.

All construction and operational activities must be kept within the defined footprint to minimise edge effects and impact on possible palaeontological reserves in the surrounding area.

Operation

Noise during operation of the pyrolysis facility is expected to have a negligible Impact provided mitigation measures are implemented through noise reduction at the source.

Potential Gaseous emissions from reactors and dryers will be low. Emissions Abatement and stack monitoring are to be implemented to ensure emissions limits are met

The proposed facility is a new site that will result in job creation. The impact will be of a minor intensity and will have a municipal extent. Effective enhancement, in the form of the proponent making a concerted effort to employ workers from the surrounding areas, can be applied.

Decommissioning

Due to the proposed plant being located in an industrial area it is not anticipated that the site will require rehabilitation in order to restore to an undisturbed state. In the event of the cessation of the activity the site would likely be utilised for further industrial activities. The decommissioning of the plant is expected to entail the dismantling and/or demolishing of the plant infrastructure and as such the impacts expected from this phase of the project are assumed to be the same as the impacts analysed under the construction phase i.e. manageable and negligible.

Alternative 1

N/A

Alternative 2

N/A

No-go (compulsory)

The no-go option refers to the alternative of the proposed project not going ahead at all. The baseline status quo would be maintained in this case, which would result the continued disposal of waste to landfill, as well as perpetuate continued reliance on fossil fuels.

Considering that the negative impacts of the proposed facility are low and negligible, and there are some positive impacts the no-go alternative is deemed an undesirable alternative.

It must be noted that the site is an existing site in an established industrial park, thus the refusal of this application would most likely result in the site being used by another industrial activity in the future (whether or not by this proponent) due to its location, zoning and access to established industrial services such as water supply, roads, electrical supply, sewage and other infrastructure. The environmental impact of this future activity cannot be predicted.

6. IMPACT SUMMARY OF THE PROPOSAL OR PREFERRED ALTERNATIVE

For proposal:

Potential Impact during Construction phase:

- Noise – Low without mitigation; Negligible with mitigation
- Generation of construction waste and installation waste – Low without mitigation; Negligible with mitigation
- Air Quality (Dust generation) - Negligible without mitigation; Negligible with mitigation
- Soil and Groundwater Quality – Low without mitigation; Negligible with mitigation
- Terrestrial Biodiversity - Low without mitigation; Negligible with mitigation
- Paleontological Impact - Low without mitigation; Negligible with mitigation
- Agricultural Impact - Negligible without mitigation; Negligible with mitigation

Potential Impacts during Operational phase:

- Noise – Moderate without mitigation; Low with mitigation
- Soil Quality – Negligible without mitigation; Negligible with mitigation
- Groundwater Quality – Moderate without mitigation; Negligible with mitigation
- Air Quality – Low (See AQIA specialist study as Appendix G)
- Reduction in waste disposal - Negligible (Positive
- Job creation through Efficiency improvements – Low (Positive)

The significance of these impacts are deemed low to negligible due their probability, provided the conditions put forward in the EMPr are adhered to.

Potential Impact during decommissioning phase:

- Noise – Low without mitigation; Negligible with mitigation
- Generation of construction waste and installation waste – Low without mitigation; Negligible with mitigation
- Soil and Groundwater Quality – Low without mitigation; Negligible with mitigation

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.

The proposed activities are proposed to occur within the existing boundary of the Icon Industrial Park on Portion 0 of Erf 592 in Sunderland Ridge, Extension 29. This property has an existing Environmental Authorisation (002/ 11-12/E0047) that was granted on the 14th of March 2011 for the establishment of Sunderland Ridge Extension 29 as an "Industrial 1" township. The land has been previously cleared under this authorisation.

The decision on the location of activities is a commercial decision as the potential environmental impacts of construction will be negligible due to the fact that site is zoned for industrial use and the land has already been disturbed.

The most pertinent environmental impact during the operational phase is expected to be due to air emissions from the pyrolysis and electricity generation. The air quality impact is shown in the Air Quality Impact Assessment to be acceptable (see Appendix G – Specialist Reports). Emissions abatement equipment alternatives that have been considered are described under section 3.

Please refer to Appendix I1 for the full Alternatives Assessment

7. SPATIAL DEVELOPMENT TOOLS

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

No spatial development tools were applied on the proposed development. This site is an industrial area and the property is zoned as industrial 1.

8. RECOMMENDATION OF THE PRACTITIONER

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

YES	~~NO~~
X	

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

N/A

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:

A summary of the most pertinent mitigation measures is provided herein, please refer to appendix H for the full EMPr.

1. Construction activities should be undertaken between 7:00 am and 17:00 pm.
2. Deliveries of construction materials by road must be scheduled outside of peak traffic periods.
3. All construction and operational activities must be kept within the defined footprint.
4. If fossil remains are discovered during any phase of construction, either on the surface or exposed by excavations the Chance Find Protocol must be implemented.
5. The applicant must formulate a complaints register. Should any interested and affected parties submit complaints with respect to dust or noise generation, then the applicant must investigate the source/activity causing the nuisance and ensure that the cause is remedied.
6. Waste must be reused or recycled where practical.
7. Waste that cannot be practically reused or recycled must be disposed of at a licenced landfill.
8. The plant must comply with the conditions and minimum emission standards of the Atmospheric Emissions Licence (AEL) relating to each listed activity immediately upon commencement of operation, unless otherwise stipulated in the AEL.
1. 7.The Emissions monitoring requirements and conditions set out in the AEL must be adhered to.
9. The applicant must ensure that the proposed emissions mitigation is adequately designed to ensure sufficient fume extraction, directing these fumes to the scrubber.
10. A maintenance plan for the reactors and abatement equipment must be maintained.
11. The applicant to implement dust mitigation measures

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

Sustineri Energy proposes to establish a waste to energy facility which will allow contribute to the reduction of waste to landfill.

The main targets of this project are to:

- Reduce waste to landfill to extend the landfill site air space life.
- Divert solid waste from landfill to productive utilization.
- Reduce fossil fuel dependency through the production of waste derived fuel and energy.

Waste Hierarchy

The proposed project is in line with the national waste management strategy and the promotion of the waste hierarchy through the recovery of waste and subsequent reduction of waste being disposed of to landfill. The establishment of the pyrolysis plant will effectively result in:

- Recovery of waste where such materials might otherwise be disposed of
- Recovery lighter hydrocarbons from non-hazardous wastes through thermal treatment of non-hazardous wastes
- Reduction of solid waste being disposed of to landfill

The Project is aligned with Goal 1 of the National Waste Management Strategy:

- Goal 1: to Promote waste minimisation, reuse, recycling, and recovery of waste.

Alignment with Municipal, Provincial and National Development Strategies

1. Gauteng Provincial Environmental Management Framework

The Gauteng Provincial Environmental Management Framework is a legal instrument in terms of the Environmental Management Framework Regulations, 2010. The regulations are designed to assist environmental impact management including EIA processes, spatial planning and sustainable development.

The objectives of the policy that are in alignment with the proposed project include:

- To facilitate the optimal use of current industrial, mining land and other suitable

derelict land for the development of non-polluting industrial and large commercial developments.
- To protect Critical Biodiversity Areas (CBAs) within urban and rural environments.
- To focus on the sustainability of development through the implementation of initiatives such as:
    - Waste minimisation, reuse and recycling

2. Gauteng Spatial Development Framework

According to the Gauteng Spatial Development Framework, Gauteng generates approximately 42% of the countries waste and as the majority of landfills in the City of Johannesburg and City of Tshwane have less than ten years lifespans, alternate measures to increase this lifespan are encouraged.

Although this project on its own will not make a significant impact to the lifespan of landfills in the city, it still serves as a sustainable waste-to-energy facility with a low emissions footprint that allows for flexible feedstock specifications.

3. National Waste Management Strategy

The National Waste Management Strategy 2011(NWMS), is a legislative requirement of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) as amended. The purpose of the NWMS is to achieve the objects of the Waste Act. Organs of state and affected persons are obliged to give effect to the NWMS.

The project is aligned with goal 1 of the National Waste Management Strategy:

- Goal 1: to Promote waste minimisation, reuse, recycling and recovery of waste.

4. National Development Plan

Primary objectives of the NDP include building environmental sustainability and resilience and relevant to this proposed project is the reduction of greenhouse gas emissions and improvement of energy efficiency. Chapter 5 of the NDP, Environmental Sustainability and Resilience, includes the following objectives which are supported by this project:

- Achieve the peak, plateau and decline trajectory for greenhouse gas emissions, with the peak being reached around 2025.
- Absolute reductions in the total volume of waste disposed to landfill each year.

Need And Desirability of the activity in the context of the preferred location

The proposed activities are proposed to occur within the existing boundary of the Icon Industrial Park on Portion 0 of Erf 592 in Sunderland Ridge, Extension 29. This property has an existing Environmental Authorisation (002/ 11-12/E0047) that was granted on the 14th of March 2011 for the establishment of Sunderland Ridge Extension 29 as an “Industrial 1” township. The land has been previously cleared under this authorisation. Rezoning of the property would therefore not be required as the proposed site location and facility is aligned with the desired development type for the area.

Although this project on its own will not make a significant impact to the lifespan of landfills in the city, it still serves as a sustainable waste-to-energy facility with a low emissions footprint that allows for flexible feedstock specifications. The facility also promotes waste minimisation, reuse, recycling, and recovery of waste.

The facility will also employ permanent staff from the surrounding areas which will assist in addressing the 24.2% unemployment rate (Census 2011) in Centurion.

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

The facility is planned to operate permanently. The Environmental Authorisation will be required for as long as the current site remains operational.

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

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

EMPr attached	Yes

SECTION F: APPENDIXES

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

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

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

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Route position information

Appendix E: Public participation information

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

Appendix G: Specialist reports

Appendix H: EMPr

Appendix I: Other information

CHECKLIST

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

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

Appendix A – Site Plans

A site infrastructure map is not applicable as the land is vacant.

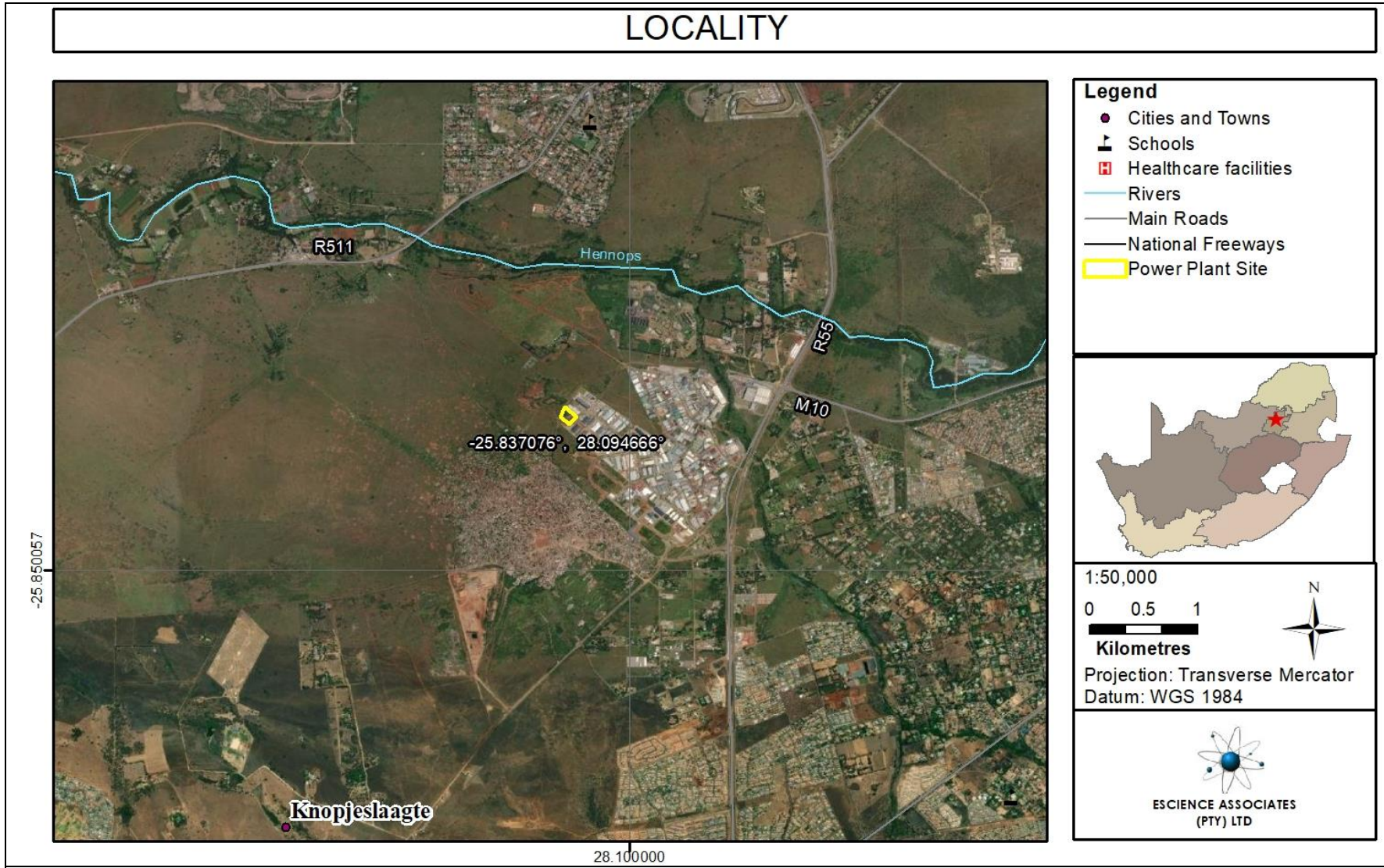

Figure 2: Site Locality

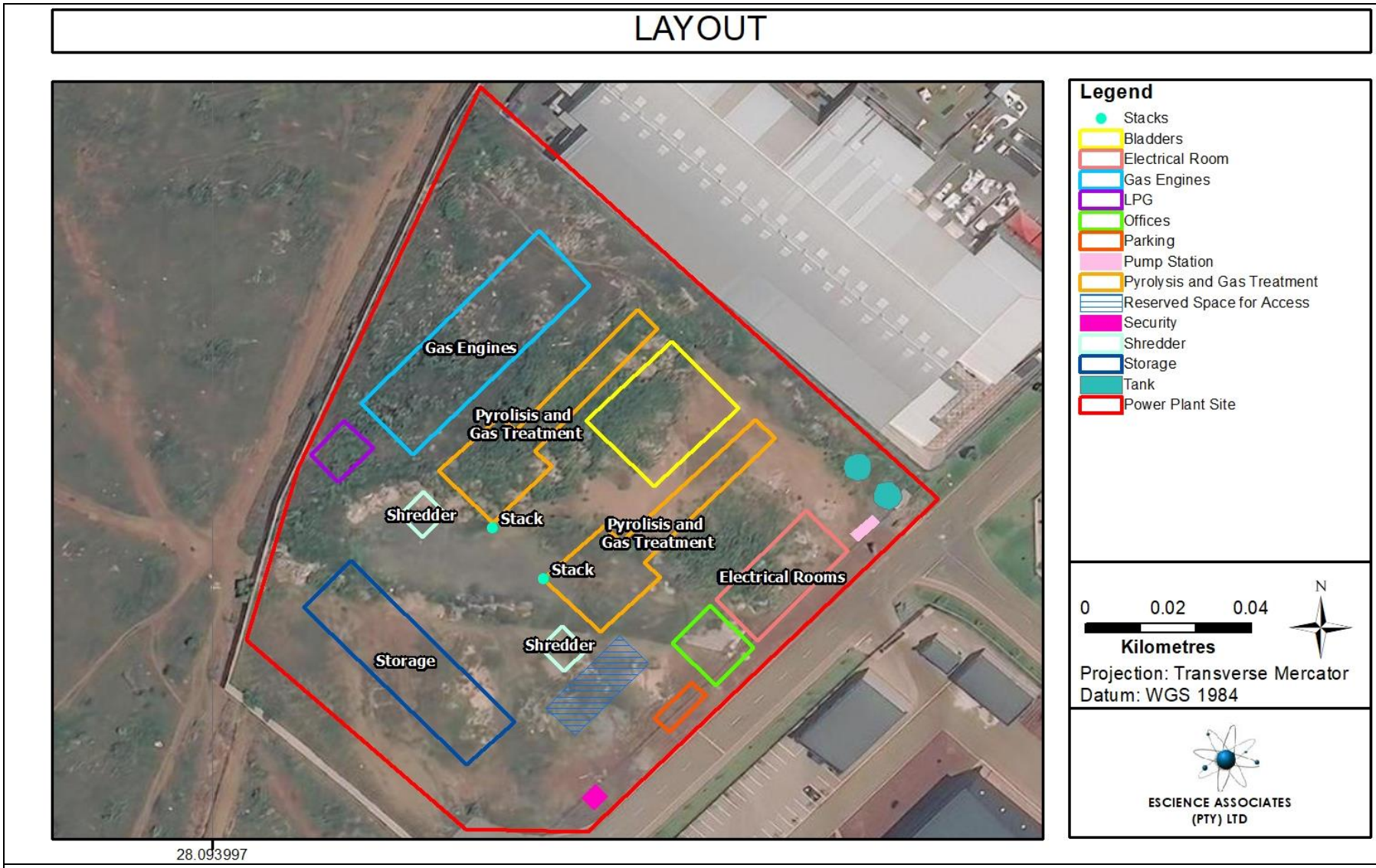

Figure 3: Site Plan of proposed expansions and site boundary

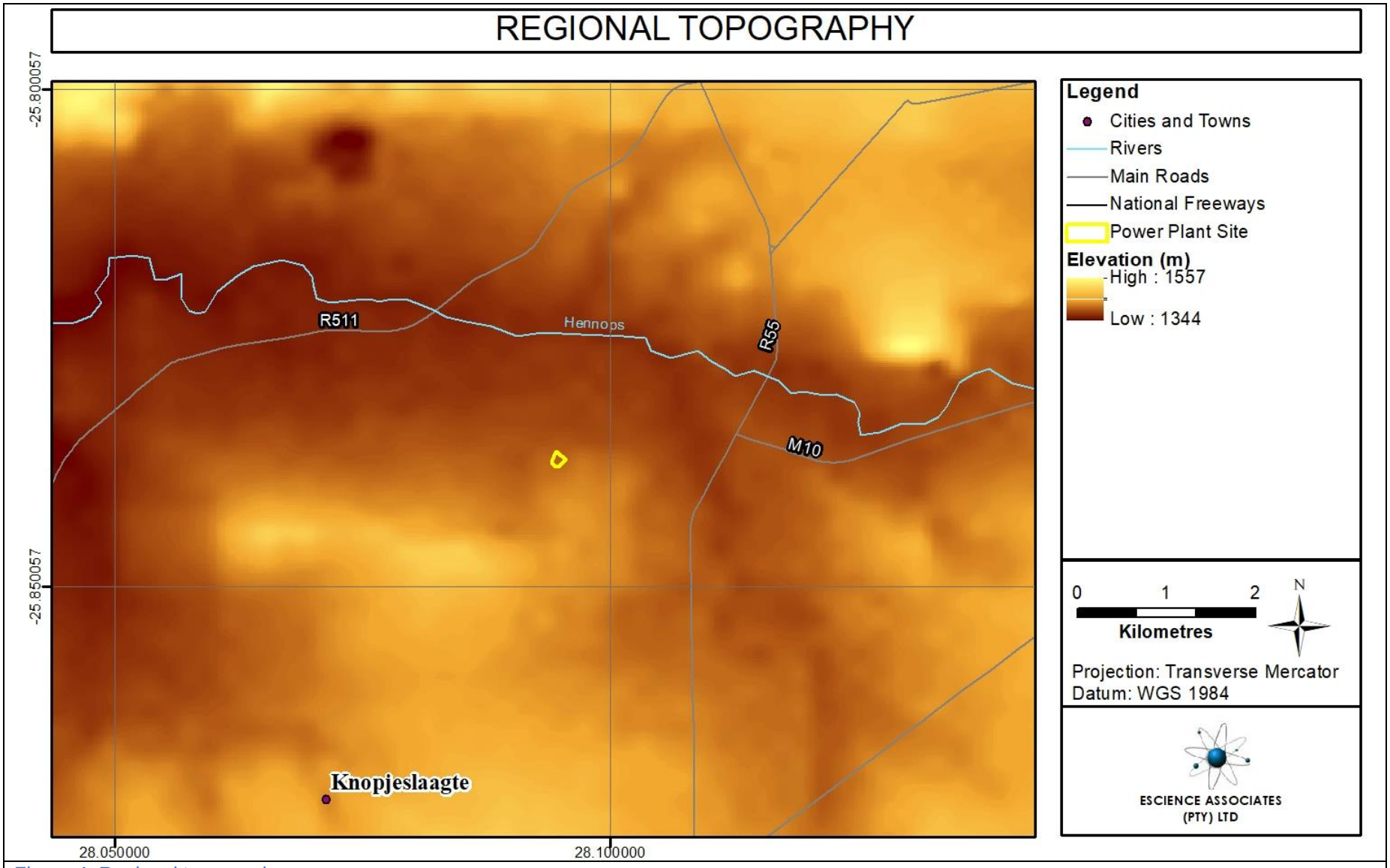

Figure 4: Regional topography

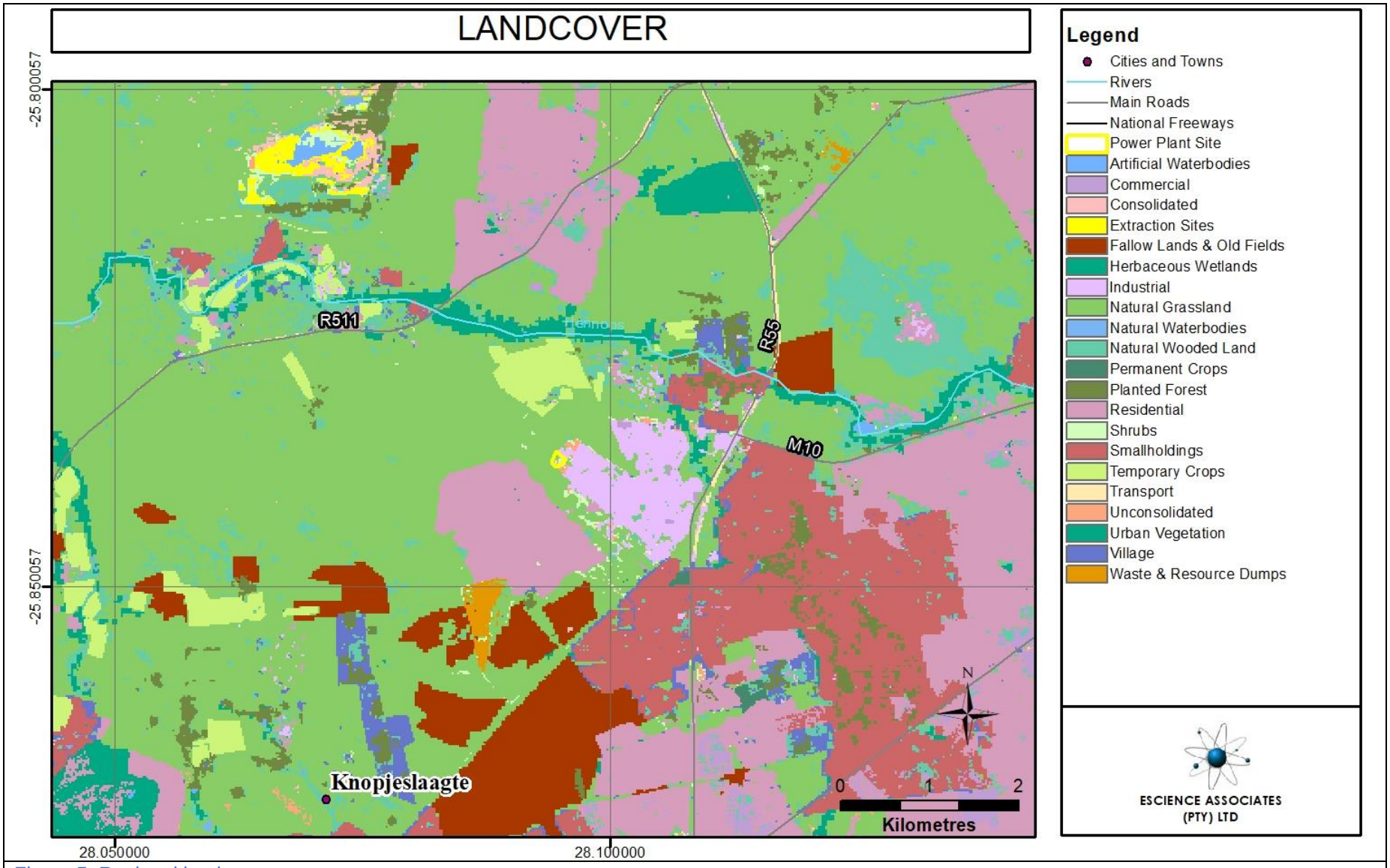

Figure 5: Regional landcover

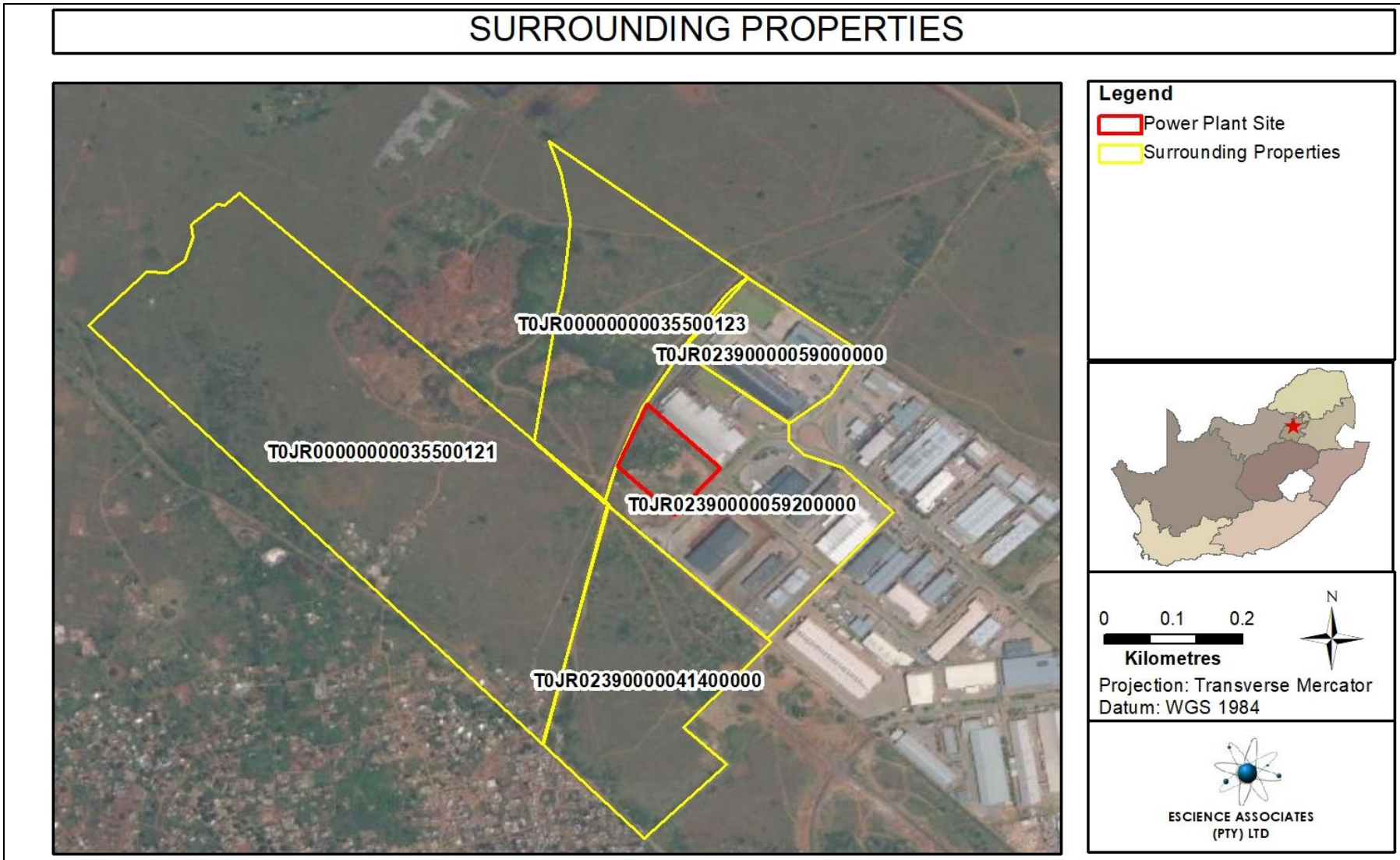

Figure 6: SG 21 Codes of all properties within 50m of the proposed site

Appendix B – Photographs

Google Earth image showing point from where photographs were taken

Figure 7: South West

Figure 8: South East

Figure 9: East

Figure 10: West

Figure 11: North East

Figure 12: North

Figure 13: Front entrance and current dumping on site

Appendix C – Facility illustrations

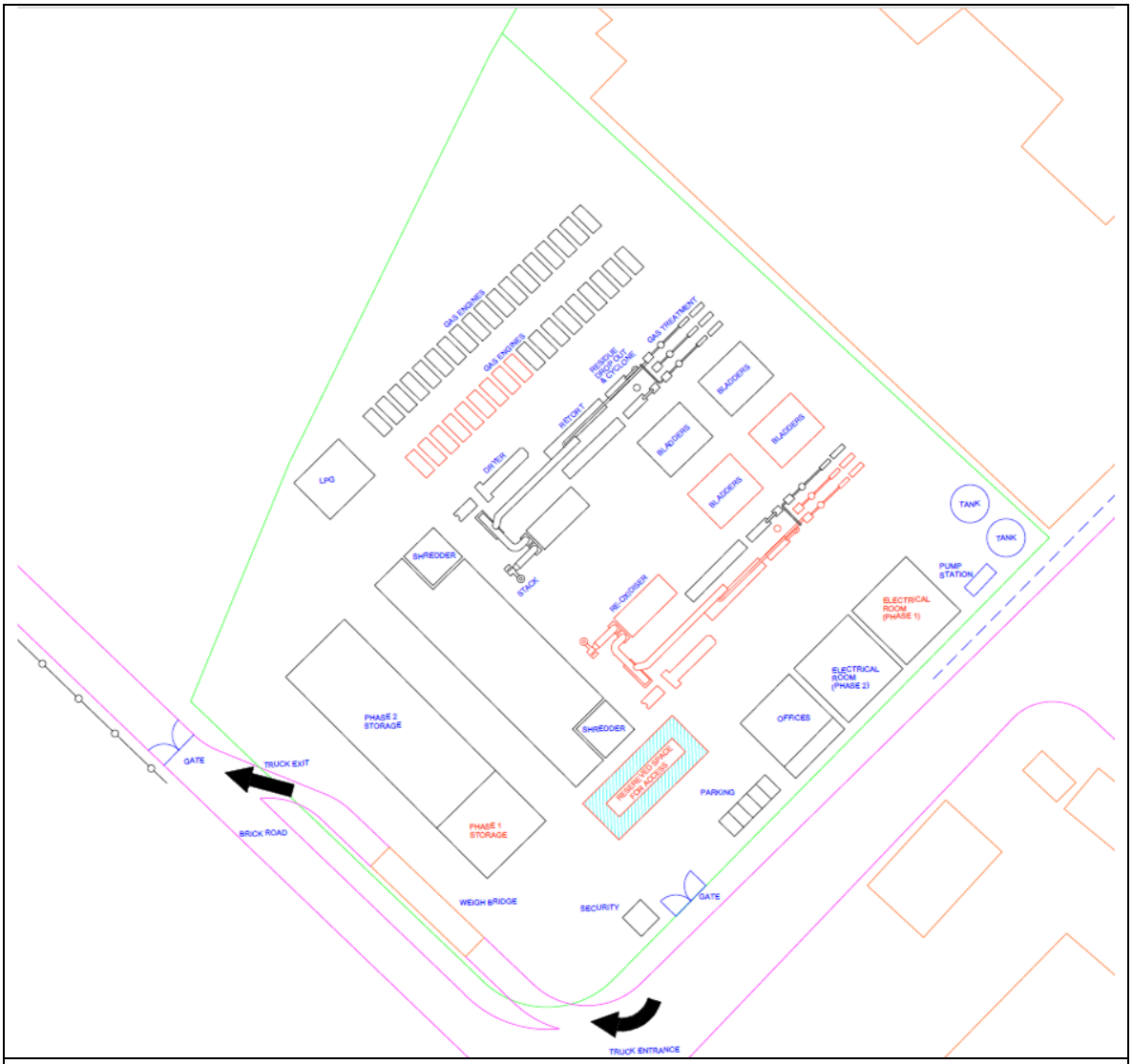

Figure 14: Detailed Facility illustration

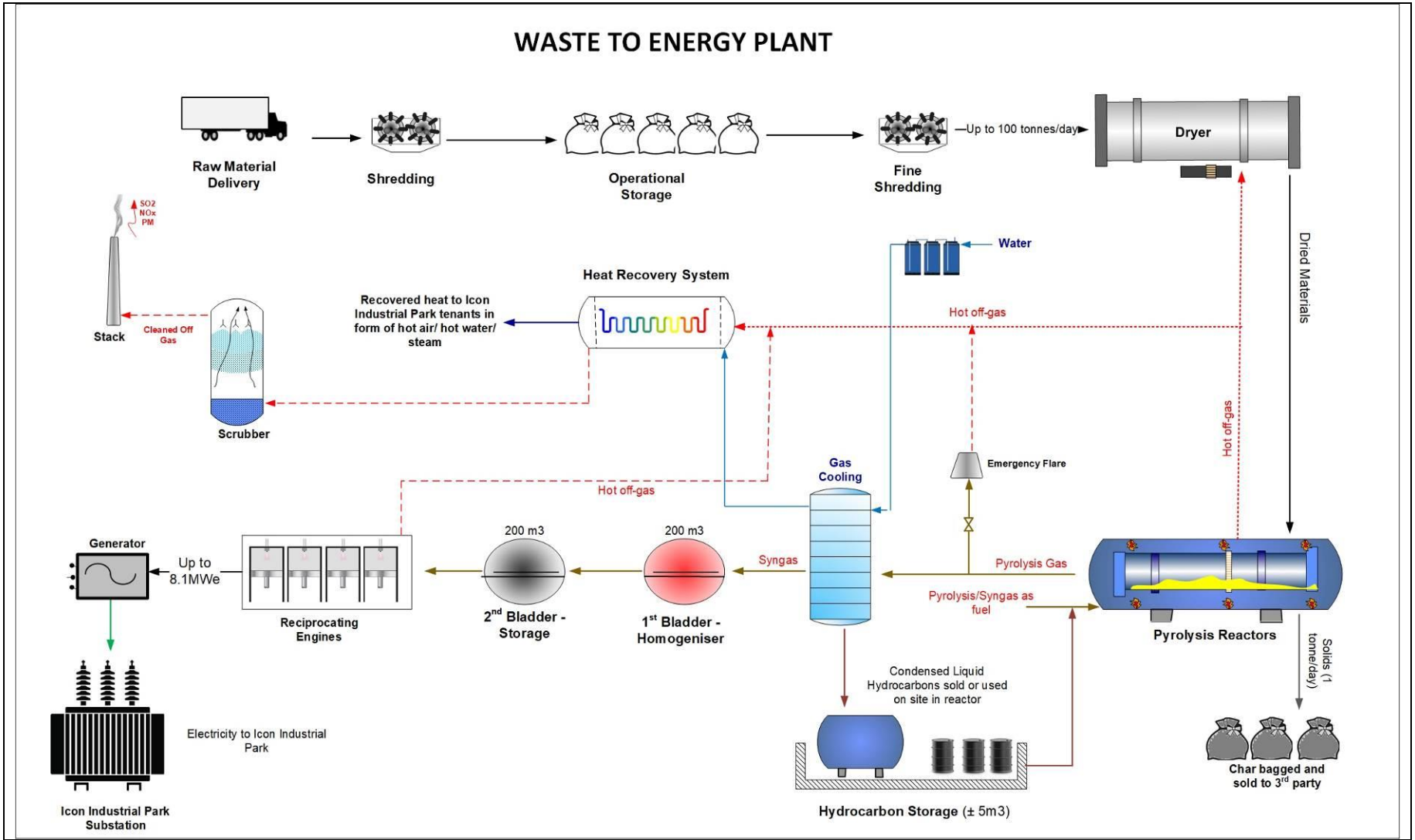

Figure 15: Process Flow Diagram

Appendix D – Route position information

Not Applicable

Appendix E1 – Public Participation

NOTIFICATION OF APPLICATION FOR INTEGRATED ENVIRONMENTAL AUTHORISATION & WASTE MANAGEMENT LICENCE AND ATMOSPHERIC EMISSIONS LICENCE:

PROPOSED WASTE PYROLYSIS FACILITY, SUSTINERI ENERGY (PTY) LTD, CENTURION, GAUTENG

Notice is hereby given in terms of the National Environment Management Act 107 of 1998, as amended (NEMA), the Environmental Impact Assessment (EIA) Regulations (GN.R 982 of 2014, as amended), the National Environmental Management: Waste Act No. 59 of 2008, as amended (NEM:WA), as well as the National Environmental Management: Air Quality Act No. 39 of 2004 (NEM:AQA), that Sustineri Energy (Pty) Ltd proposes to establish a waste pyrolysis facility at the Icon Industrial Park, Centurion, Gauteng.

Applicant: Sustineri Energy (Pty) Ltd
Independent Environmental Assessment Practitioner: EScience Associates (Pty) Ltd.
Competent Authority (EA & WML): Gauteng Department of Agriculture and Rural Development
Competent Authority (AEL): City of Tshwane Metropolitan Municipality

The primary intent of the proposed plant is to generate pyrolysis gas through pyrolysis of plastics and other non-hazardous wastes, and to generate electricity using the pyrolysis gas.

The proposed development incudes activities listed in terms of Listing Notice 1 (GN R983 of 2014, as amended) of the EIA Regulations. The listed activities triggered by the proposed development are:

- **Listing Notice 1: Activity 1 and 14**
- **Listing Notice 3: Activity 4(c)iv and 12(c)ii**

The listed activities in GN 921 of 2013 (as amended), published in terms of section 19(2) of the NEM:WA, that are applicable to the proposed development are:

- **Category A: Activity 3, 5, 6, 12**

Additionally, an atmospheric emissions licence is required in terms of Section 21 of NEM:AQA. The listed activities in GN 893 of 2013, as amended, published in terms of S21 of the NEM:AQA that are applicable to the proposed development are:

- **Category 3, Subcategory 3.1:** Combustion Installations
- **Category 3, Subcategory 3.4:** Char, Charcoal and Carbon Black Production
- **Category 8, Subcategory 8.1:** Thermal Treatment of General and Hazardous Waste

The proposed activities require that a Basic Assessment (BA) process be undertaken in accordance with the NEMA EIA Regulations.

In terms of the requirements of NEMA, NEM:WA, NEMA:QA, and the EIA Regulations, all stakeholders and interested and affected parties (IAPs) must be provided with opportunity to participate in the BA and licencing processes. This would include the opportunity to review all relevant reports generated, and to submit comments or objections as applicable. A 30 calendar day comment period will apply, excluding public holidays. To ensure that you are identified as an IAP, please submit your name, contact information and interest in the project to the contact person given below, by 11 July 2022. Any queries or comments with respect to the BA process and AEL application can be directed to the contact person detailed below.

Sam Leyde
Tel: (011) 718 6380 / 074 570 8054
E-mail: sam@escience.co.za (Preferred means of communication)
Post: PO Box 2950, Saxonwold, 2132

EScience Associates (Pty) Ltd

Figure 16: Site notice and advert wording

Proof of Site Notices

Figure 17: Site notice at main entrance to the site

Figure 18: Site notice at South Eastern Corner

Figure 19: Site notice at South Western Corner

Proof of Advertisements

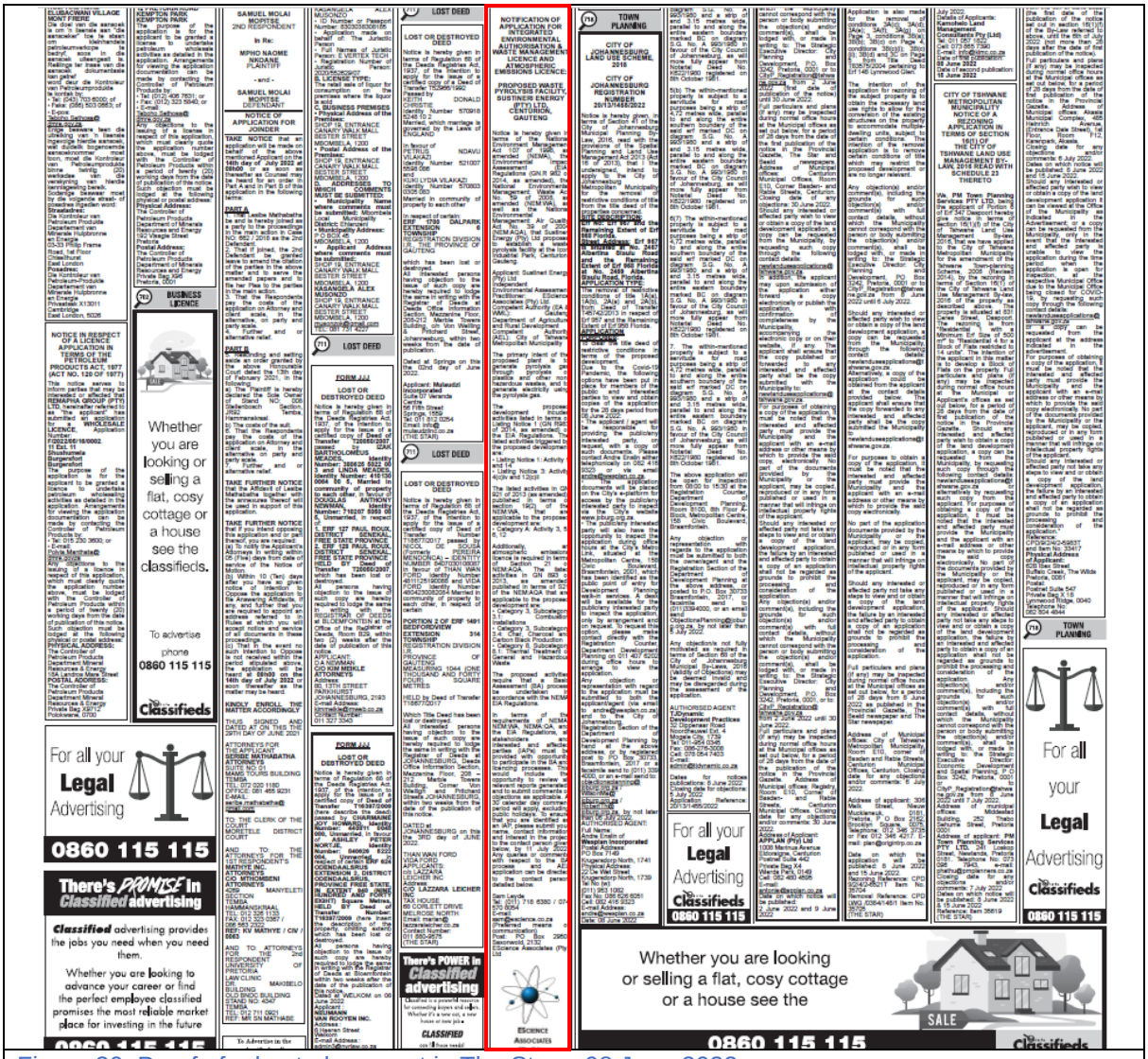

Figure 20: Proof of advert placement in The Star – 08 June 2022

Figure 21: Proof of advert placement in The Pretoria News – 08 June 2022

Appendix E2 – IAP Register

Surname	Name or Initials	Organisation/Capacity
Ward Councillors		
Muller	Marika Kruger	Ward Councillor - Ward 70 (Tshwane)
Brink	Cilliers	Constituency Head (70)
Authorities		
Motaung	Dan	Gauteng Department of Agriculture and Rural Development
Matlamela	Phuti	Gauteng Department of Agriculture and Rural Development
Makhathini	Nhlanhla	Gauteng Department of Agriculture and Rural Development
Tjatja	Mosia	Gauteng Department of Agriculture and Rural Development
		GDARD: Waste
		GDARD: SUE
Mahlangu	Lucas	Department of Forestry, Fisheries and the Environment
Ramaila	Pertunia	Department of Forestry, Fisheries and the Environment
Baloyi	Tiyani	Department of Forestry, Fisheries and the Environment
Mphahlele	Patric	City of Tshwane: Environmental Management Service
Legadima	Jacob	Provincial Air Quality Officer
Ramalepe	Mabaile	City of Tshwane: Air Quality Officer
Mukheli	Rudzani	City of Tshwane: Air Quality Officer
Godobedzha	Tshifhiwa	City of Tshwane
Mthembu	Sibusisio	Department of Water and Sanitation
Khwinana	Phillimon	Department of Water and Sanitation
National Office		Department of Water and Sanitation
Stroh	Lizell	South African Civil Aviation Authority
Higgitt	Natasha	South African Heritage Resources Authority
Neighbouring Property Owners		
-	-	Napaj (Property Owner)
-	-	Pump and Abrasion Technologies
Tan	Peter	Handyware Africa
Trosello	Shaun	Chickos Chicken

Appendix E3 – Proof of Communications

This is the draft BA report for submission to interested and affected parties for comment. Proof of communication will be included in the Final BAR.

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

Not Applicable

Appendix G – Specialist Reports

- **Air Quality Impact Assessment Report**

- **Terrestrial Biodiversity Assessment**

- **Aquatic Biodiversity Assessment**

- **Soil study (Agricultural sensitivity)**

- **Major Hazard Installation Risk Assessment**

- **Aviation Risk Assessment**

- **Palaeontological Impact Assessment**

Appendix H – Environmental Management Programme (EMPr)

Appendix I – Other Information

- I1: Alternatives Assessment
- I2: Impact Rating Methodology
- I3: National Web-Based Screening Tool

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