the DEDECT

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Basic Assessment Report for the Closure of the Townlands Waste License Application NWP/WM/BP1/2013/30 Rustenburg Local Municipality

	(For official use only)
File Reference Number:	
Application Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2010, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2010 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. 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.
3. Where applicable **tick** the boxes that are applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority.
7. No faxed or e-mailed reports will be accepted.
8. The report must be compiled by an independent environmental assessment practitioner.
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?	YES	NO **X**

If YES, please complete the form entitled "Details of specialist and declaration of interest"

for appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail[1]:

Project Description:

The application is for a waste management licence for the decommissioning and closure of the unlicensed Townlands landfill site located in the Rustenburg Local Municipality.

NW-DEDECT Reference: NWP/WM/BP1/2013/30

The listed activity applied for:

The listed NEM:WA activity is: Category A, Activity 14, The decommissioning of a facility for waste management activity listed in Category A or B of this schedule published in GN. 921 of 29 November 2013.

Scope of the application:

Phase	Included in the scope of this application	Responsibility	Where/how to address
Interim operation of the landfill site	No	North-West (NW) Department of Economic Development and Tourism (DEDECT)	Interim operation of the landfill site to be regulated by the NW DEDECT through conditions for operation as part of the waste management license.
Pre-closure conditions	Yes	Centre for Environmental Management (CEM)	Addressed as part of the EMP (*Appendix F*).
Closure plan/EMP to inform closure design	Yes	CEM	Addressed as part of the EMP (*Appendix F*).
Closure design and approval	No	Rustenburg Local Municipality to appoint a registered Consulting Engineer	To generate a detailed closure plan, project plan, design plan and drawings before final closure is commenced with, since immediate closure is not possible in terms of the municipal planning processes.
Detailed design requirements	No	Rustenburg Local Municipality to	It is not possible to draft detailed closure designs and

[1] Please note that this description should not be a verbatim repetition of the listed activity as contained in the relevant Government Notice, but should be a brief description of activities to be undertaken as per the project description.

(closure/remedial design, design of storm water management, leachate management, settlement/surface pondage), plan drawings, and long and short term stability		appoint a registered Consulting Engineer	planning proposals for the Townlands landfill site at this stage. The proponent (Rustenburg Local Municipal) needs to make provision for this in its Integrated Development Plan (IDP) as well as the short to medium expenditure framework. The closure of this site is the responsibility of the Rustenburg Local Municipality. It is unknown how long it will take before the municipality is in a position to commence with work and to what extent conditions at the site will change in the interim. Hence, the approach to draft the final closure designs and planning when the project can be implemented. It is imperative that the NW DEDECT and the Department of Water Affairs (DWA) sign off on these final designs. Addressed as part of the EMP (*Appendix F*).
Alternative waste disposal options – new landfill site	Not applicable	Bojanala Platinum District Municipality	According to the Rustenburg Integrated Waste Management Plan (IWMP) – Status Quo Report, March 2005, a replacement regional site for the Townlands landfill site is currently being investigated in the Waterval area. Once in operation this new regional landfill site will be of significant strategic importance to the larger area, which is experiencing significant growth.
Alternative waste disposal options – transfer station	No	Rustenburg Local Municipality	Not applicable, since according to the IWMP – Status Quo Report, March 2005, a replacement regional site for the Townlands landfill site is currently being investigated in the Waterval area.
Post-closure care and maintenance	Yes	CEM	Addressed as part of the EMP (*Appendix F*).

Post-closure hand-over documents	No	Municipality to appoint registered Consulting Engineer	Documents to be generated and handed over to the municipality for implementation.
Additional authorisations	Not applicable	Not applicable	Waste disposal activities trigger the need for a section 21(g) water use license in terms of the National Water Act, 1998 (No. 36 of 1998) (NWA). No application is needed for a NWA section 21(g) water use license as the DWA dispenses this requirement by providing the relevant National Environmental Management Act, 1998 (No. 107 of 1998) (NEMA) authority with conditions that need to be included in the NEMA environmental authorisation.
Rezoning application	Yes	Rustenburg Local Municipality	The Remainder of Portion 1 of the Farm Town and Townlands 272 JQ is zoned as Mining and Quarrying, whilst the Remainder of portion 1 is zoned Agricultural. The desired post closure use of the land is intended to be for municipal-use. Therefore, rezoning will be required.

Site Location:

The Townlands landfill site is located approximately 3.5km north of the town of Rustenburg. The landfill site can be accessed from the Thabazimbi road (R 510). The landfill site is approximately 7.7 hectares (ha) in extent. There is no buffer zone to the north and west of the landfill site.

The landfill site is located on mining and quarrying and agricultural land owned by the National Government of the Republic of South Africa and the Rustenburg Local Municipality on the Remainder of Portion 1 of the Farm Town and Townlands 272 JQ.

The landfill site was operated by the Rustenburg Local Municipality, but the municipality has, since June 2004, contracted in a landfill operator (Platinum Waste Resources) to operate the landfill site. However, the Rustenburg Local Municipality still manages, and is responsible for the closing of the landfill site. A replacement regional landfill site is currently being investigated in the Waterval area.

Reconstruction and Development Programme (RDP) housing is located to the north, directly adjacent to the landfill site. There is no buffer area between the landfill site and the RDP housing. A school with sports fields are located north of the RDP housing. A residential area is located towards the east and south-east of the landfill site. A crusher plant is located towards the south of the landfill site. There is a leachate/stormwater pond towards the south-west of the landfill site. Informal settlements are located

towards the west and the north-west of the landfill site. An Eskom power line; a railway and railway station; and a major road (Tabazimbi road, R 510) are also located on, or in close proximity to the landfill site.

Zonation of the land:

The Remainder of Portion 1 of the Farm Town and Townlands 272 JQ is zoned as Mining and Quarrying, whilst the Remainder of portion 1 is zoned Agricultural.

Land ownership:

The land is owned by the National Government of the Republic of South Africa, and the Rustenburg Local Municipality. The landfill site is operated by Platinum Waste Resources. Rustenburg Local Municipality manages, and is responsible for the closing of the landfill site.

Operating entity:

Some 48% of the population of the Rustenburg Local Municipality receives waste services which are provided by the local municipality, in conjunction with one external collection service provider and one landfill management provider. The municipality is relatively well-equipped with a waste management plant (Bojanala Platinum District Municipality Integrated Waste Management Plan, 2010).

The municipality is currently closing its main landfill and is in the process of opening a new state-of-the-art facility, to cater for the needs of the municipality for the next 30 years. It could also assist in the disposal needs of neighbouring municipalities. Other landfills are all permitted. The waste management system in the municipality relies upon a series of transfer stations located in outlying areas to improve the efficiency of both collection and disposal activities (Bojanala Platinum District Municipality Integrated Waste Management Plan, 2010).

The institutional arrangements in the municipality support effective waste management. The waste management department is actively managed and proactive. Political support and effective management are demonstrated by the guiding of the new landfill project and the construction of a new departmental head office (Bojanala Platinum District Municipality Integrated Waste Management Plan, 2010).

The Waste Management Department has detailed budgets. The RLM is presently undergoing a major capital expansion (Bojanala Platinum District Municipality Integrated Waste Management Plan, 2010).

The by-laws have been updated and are in line with modern waste management practice. They currently exist in draft form and have not yet been accepted by Council. Rustenburg Local Municipality completed an Integrated Waste Management Plan in 2006. The department is bottom-heavy, with the result that should key management leave, ready replacements are not in place (Bojanala Platinum District Municipality Integrated Waste Management Plan, 2010).

Waste site characteristics and current operations:

The Townlands Landfill Site is approximately 7.7ha in extent. The landfill site was permitted as a G:M:B- waste disposal facility in 1996 by the Department of Water Affairs and Forestry (DWAF) in terms of the provisions of section 20(1) of the Environment Conservation Act (No 73 of 1989) (ECA). According to the Rustenburg IWMP – Status Quo Report, March 2005, it has been established that the landfill site receives approximately 425 tonnes of general waste per day. The landfill site is therefore classed as a G:M:B- waste disposal facility. The landfill site has some infrastructure required for a formal G:M:B- waste disposal facility. Infrastructure at the landfill site include, amongst others, a bathroom; kitchen; security office; site office; storage areas; and storage containers.

The waste at the landfill site was historically land-filled. The waste was buried, and the landfill site used to

be at the same elevation as the surrounding area. The waste is no longer being land-filled, but rather land build. The waste is not being buried, instead the waste is disposed on the surface of landfill site and subsequently covered. The availability of cover material is a concern. The crusher plant used to supply the landfill site with cover material. However, access to the crusher plant is no longer allowed, due to safety concerns. The landfill site is currently at a much higher elevation than its surroundings.

Although the burning of waste is not permitted on the landfill site, waste (such as tyres) is sometimes burned on-site by the recyclers.

There are five boreholes in the vicinity of the landfill site. One borehole is located at the entrance to the landfill site. Two more boreholes are located towards the fence of the landfill site that boarders with the crusher plant. A further three boreholes surrounds the landfill site, towards the communities. These boreholes have not been monitored recently, due to the dewatering of the aquifer undertaken by the mines in the area.

There is a leachate/storm water pond on the landfill site. It is, however, not being managed currently. The area where the leachate/storm water pond is located, is not fenced. Thus, contaminated water is entering the surrounding environment. The leachate/storm water pond is presenting a severe health and safety risk to the communities and the recyclers.

There used to be four methane extractors with gas probes on the landfill site. However, none of these are operational at present, since they have been stolen/vandalised by the community/recyclers.

Waste recyclers:

There are approximately 900 – 1000 recyclers at the Townlands landfill site on a daily basis. No agreement exists between the Rustenburg Local Municipality and the recyclers. The composition of the recyclers does not remain consistent. It will therefore be challenging to relocate these recyclers to an alternative landfill site upon closure of the Townlands landfill site The recyclers mainly supply Tshikane Enviro Recycling with recyclable material. The amount of waste being recycled from the landfill site is undetermined.

Closure activities:

The landfill site needs to be lawfully decommissioned, closed and rehabilitated. Three scenarios or alternatives are available:

- **Alternative 1 (modular closure, preferred alternative):** *In-situ* phased closure and capping of the waste body, once an alternative waste disposal site is available (with interim conditions for operation, prior to final closure);

The preferred alternative involves the phased closure and capping of the current waste body and the on-going interim waste disposal operations at the landfill site, subject to specific interim operational conditions defined by the relevant authority in the environmental authorisation, while the regional landfill site (Rustenburg: Waterval) is planned, constructed and commissioned.

- Conditions must be specified by the relevant authority for operating the landfill site prior to the final closure thereof. Minimum requirements must be adhered to for the interim operation of the landfill site.

- A registered civil engineer must design the optimal position, shape, size and height of the closed landfill site.

- The facility must be designed in terms of the Minimum Requirements and the Additional Requirements of the DWA. These arrangements include, but are not limited to: the prevention of water ingress into the dump; the formation of leachate; and the elimination of general pollution associated with the site.

- Implement and maintain a maintenance and care programme, and a sustained ground water quality monitoring programme.

- **Alternative 2 (once-off closure):** Immediate closure and capping of the existing waste body; or

- **Alternative 3 (no-go, not preferred alternative):** The no-go alternative (maintaining the status quo of the authorised waste disposal facility

The no-go option is included as a compulsory alternative, but it is not the recommended option, since it will imply that the unlicensed status of the landfill site will be retained.

2. FEASIBLE AND REASONABLE ALTERNATIVES

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

(a) the property on which or location where it is proposed to undertake the activity;

(b) the type of activity to be undertaken;

(c) the design or layout of the activity;

(d) the technology to be used in the activity;

(e) the operational aspects of the activity; and

(f) the option of not implementing the activity.

Describe 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 in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether 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. 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.

Description of alternatives considered in this application:

The objective of this application is to lawfully decommission, close and rehabilitate the waste disposal facility at Townlands. Therefore, no locational or process alternatives are proposed. Moreover, alternatives related to closure are not proposed due to the strict norms and standards imposed by the South African government for closure. This neutralises any options for exploring closing and decommissioning alternatives.

- **Alternative 1 (modular closure, preferred alternative):** *In-situ* phased closure and capping of the waste body, once an alternative waste disposal site is available (with interim conditions for operation, prior to final closure);

The preferred alternative involves the phased closure and capping of the current waste body and the on-going interim waste disposal operations at the landfill site, subject to specific interim operational conditions defined by the relevant authority in the environmental authorisation, while

the regional landfill site (Rustenburg: Waterval) is planned, constructed and commissioned.

- Conditions must be specified by the relevant authority for operating the landfill site prior to the final closure thereof. Minimum requirements must be adhered to for the interim operation of the landfill site.
- A registered civil engineer must design the optimal position, shape, size and height of the closed landfill site.
- The facility must be designed in terms of the Minimum Requirements and the Additional Requirements of the DWA. These arrangements include, but are not limited to: the prevention of water ingress into the dump; the formation of leachate; and the elimination of general pollution associated with the site.
- Implement and maintain a maintenance and care programme, and a sustained ground water quality monitoring programme.

➢ **Alternative 2 (once-off closure):** Immediate closure and capping of the existing waste body; or

➢ **Alternative 3 (no-go, not preferred alternative):** The no-go alternative (maintaining the status quo of the authorised waste disposal facility

The no-go option is included as a compulsory alternative, but it is not the recommended option, since it will imply that the unlicensed status of the landfill site will be retained.

Paragraphs 3 – 13 below should be completed for each alternative.

3. 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 degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

Alternative

	Latitude (S):		**Longitude (E):**	
Alternative S1[2] (preferred or only site alternative)	27o	15'44.94"	25o	37'44.94"
Alternative S2 (if any) ***Not Applicable***	o	'	o	'
Alternative S3 (if any) ***Not Applicable***	o	'	o	'

In the case of linear activities:

Alternative: *Not Applicable* **Latitude (S):** **Longitude (E):**

[2] "Alternative S" refers to site alternatives.

Alternative S1 (preferred or only route alternative)

• Starting point of the activity	o	‘	o	‘
• Middle/Additional point of the activity	o	‘	o	‘
• End point of the activity	o	‘	o	‘

Alternative S2 (if any)

• Starting point of the activity	o	‘	o	‘
• Middle/Additional point of the activity	o	‘	o	‘
• End point of the activity	o	‘	o	‘

Alternative S3 (if any)

• Starting point of the activity	o	‘	o	‘
• Middle/Additional point of the activity	o	‘	o	‘
• End point of the activity	o	‘	o	‘

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

The size of the landfill site that requires decommissioning and closure is: 7.7ha.

Alternative: : *Not Applicable*	**Size of the activity:**
Alternative A1[3] (preferred activity alternative)	77 250m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

or, for linear activities:

Alternative: : *Not Applicable*	**Length of the activity:**

[3] “Alternative A” refers to activity, process, technology or other alternatives.

Alternative A1 (preferred activity alternative)	M
Alternative A2 (if any)	M
Alternative A3 (if any)	M

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur): ***Not Applicable***

Alternative:	**Size of the site/servitude:**
Alternative A1 (preferred activity alternative)	m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

5. SITE ACCESS

Does ready access to the site exist?	*YES* ***X***	*NO*
If NO, what is the distance over which a new access road will be built: ***Not Applicable***	*m*	

Describe the type of access road planned: ***Not Applicable***

Not Applicable

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

Not Applicable

6. SITE OR ROUTE PLAN:

See Maps TLS1, TLS2, TLS3 and TLS4 in Appendix A.

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

6.1 the scale of the plan which must be at least a scale of 1:500;

6.2 the property boundaries and numbers of all the properties within 50 metres of the site; *See Map TLS2 in Appendix A*.

6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites; *See Map TLS3 and TLS4 in Appendix A*.

6.4 the exact position of each element of the application as well as any other structures on the site; *See Map TLS1 in Appendix A*.

6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure; *See Map TLS1 in Appendix A*.

6.6 all trees and shrubs taller than 1.8 metres; *See Map TLS1 in Appendix A*.

6.7 walls and fencing including details of the height and construction material; *See Map TLS1 in Appendix A*.

6.8 servitudes indicating the purpose of the servitude;

6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):

- rivers; *See Map TLS1 in Appendix A*.
- the 1:100 year flood line (where available or where it is required by DWA); *See Map TLS1 in Appendix A*.
- ridges; *See Map TLS1 in Appendix A*.
- cultural and historical features; *See Map TLS1 in Appendix A*.
- areas with indigenous vegetation (even if it is degraded or invested with alien species); *See Map TLS1 in Appendix A*.

6.10 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and *See Map TLS1 in Appendix A*.

6.11 the positions from where photographs of the site were taken. *See Map TLS1 in Appendix A*.

7. SITE PHOTOGRAPHS

See Appendix B.

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

8. FACILITY ILLUSTRATION

See TLS5, which indicates the current status of waste disposal *(See Appendix C*).

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C 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.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	To be determined	
What is the expected yearly income that will be generated by or as a result of the activity?	To be determined	
Will the activity contribute to service infrastructure?	YES	NO **X**
Is the activity a public amenity?	YES	NO **X**
How many new employment opportunities will be created in the development phase of the activity?	To be determined	
What is the expected value of the employment opportunities during the development phase?	Not determined	
What percentage of this will accrue to previously disadvantaged individuals?	Not determined	
How many permanent new employment opportunities will be created during the operational phase of the activity?	None	
What is the expected current value of the employment opportunities during the first 10 years?	Not determined	
What percentage of this will accrue to previously disadvantaged individuals?	Not determined	

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

The need for the project is vested in the following arguments:

- According to the Feasibility Report for Regional Landfill Site(s) in the Bojanala Platinum District Municipality, 2011, very low levels of acceptable waste management practises are evident at the Townlands landfill site.
- According to the Rustenburg IWMP – Status Quo Report, March 2005, the Townlands landfill site has neared the end of its life due to the encroachment of adjacent residential developments and informal settlements.
- Furthermore, due to the large jurisdictional area allocated to the Rustenburg Local Municipality, the Townlands landfill site cannot serve the needs of communities to the far north, south and east of the landfill site.
- According to the Rustenburg Local Municipality's Environmental Management Framework, 2011 the Townlands landfill site has reached its full capacity. The landfill site no longer has any airspace available.
- The landfill site is operated lawfully in terms of the NEM:WA. Closure of the site is therefore desirable.
- The vegetation unit is rated as endangered in terms of its conservation status by Mucina and Rutherford (2006). Therefore, the footprint of the landfill site should not be extended to prevent further harm to the surrounding (endangered) habitat.

The desirability of the project is vested in the need to:

- Manage waste more responsibly and lawfully within the Bojanala Platinum District Municipality and the Rustenburg Local Municipality.

NEED:			
1.	Was the relevant provincial planning department involved in the application?	YES **X**	NO
2.	Does the proposed land use fall within the relevant provincial planning framework?	YES **X**[4]	NO
3.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		
	Not Applicable		

DESIRABILITY:			
1.	Does the proposed land use / development fit the surrounding area?	YES **X**	NO
2.	Does the proposed land use / development conform to the relevant structure plans, SDF and planning visions for the area?	YES **X**	NO
3.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES **X**	NO
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		

[4] The SDF dated 2004 of the North West Province was consulted.

	Not Applicable		
5.	Will the proposed land use / development impact on the sense of place?	YES **X**	NO
6.	Will the proposed land use / development set a precedent?	YES	NO **X**
7.	Will any person's rights be affected by the proposed land use / development?	YES **X**	NO
8.	Will the proposed land use / development compromise the "urban edge"?	YES	NO **X**
9.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation:		
	The impact of the proposed activity on the sense of place of the area will be positive, since the area will be restored. However, the impact on the rights of persons, specifically the waste recyclers, will be negative, since they will no longer have access to the waste source to recycle the waste. Thus, the waste recyclers will lose their only source of income. This impact can be mitigated by providing the waste recyclers with controlled and safe access to the waste resource at the regional landfill site (Rustenburg: Waterval).		

BENEFITS:			
1.	Will the land use / development have any benefits for society in general?	YES **X**	NO
	Explain: The benefits accrue to the adjacent land owners as the risk of fire and exposure of cattle to wind-blown plastic will be eliminated.		
2.	Will the land use / development have any benefits for the local communities where it will be located?	YES **X**	NO
	Explain: The community members of the town of Rustenburg will benefit once the town's landfill site is closed and a replacement regional site (Waterval) for the Townlands landfill site is built. This regional site needs to be managed to ensure that the waste handlers are controlled and protected from hazards posed by the waste, including pathogens.		

10. 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, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
Bojanala Platinum District Municipality's IDP	Bojanala Platinum District Municipality	2011
Bojanala Platinum District Municipality's IWMP	Bojanala Platinum District Municipality	2011
Feasibility Report for Regional Landfill Site(s) in the Bojanala Platinum District	Bojanala Platinum District	2011
Health Act, 1977 (Act 63 of 1977)	Department of Health	1977
List of waste management activities that have, or are likely to have a detrimental effect on the environment (GN. 921), 2013	National Department of Environmental Affairs and Provincial Department of Economic Development, Conservation and Tourism	2013
Minimum requirements for waste disposal by landfill, 1998	Department of Water Affairs	1998
Minimum requirements for water monitoring at waste management facilities	Department of Water Affairs	1998
Municipal Structures Act, 1998 (Act 117 of 1998)	Local Municipality	1998
Municipal Systems Act , 2000 (Act 32 of 2000)	Local Municipality	2000
National Ambient Air Quality Standards in Terms of	National Department of Environmental	2009

Section 9(1)(a) and (b) of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) (Government Notice No. 1210, 24 December 2009)	Affairs and Provincial Department of Economic Development, Conservation and Tourism	
National Environment Management: Air Quality Act, 2004 (Act No. 39 of 2004) (NEM: AQA)	National Department of Environmental Affairs and Provincial Department of Economic Development, Conservation and Tourism	2004
National Environmental Management Act, 1998 (No. 107 of 1998) (NEMA), including the NEMA Amendment Act, 2008 (No. 62 of 2008)	National Government, and National Department of Environmental Affairs	1998
National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEM:WA) 2008	National Department of Environmental Affairs and Provincial Department of Economic Development, Conservation and Tourism	2008
National Norms and Standards for Disposal of Waste to Landfill (GN 636), 2013	National Department of Environmental Affairs and Provincial Department of Economic Development, Conservation and Tourism	2013
National Norms and Standards for the Assessment of Waste for Landfill Disposal (GN 635), 2013	National Department of Environmental Affairs and Provincial Department of Economic Development, Conservation and Tourism	2013
National Norms and Standards for the Storage of Waste (GN 926), 2013	National Department of Environmental Affairs and Provincial Department of Economic Development, Conservation and Tourism	2013
National Waste Management Strategy, 2010	National Department of Environmental Affairs and Provincial Department of Economic Development, Conservation and Tourism	2010
National Water Resource Strategy, 2013	Department of Water Affairs	2013
NEMA EIA Regulations, 2010 (Government Notice Nos. 543, 544, 545 and 546)	North West Department of Economic Development, Environment, Conservation and Tourism	2010
North West Provincial Spatial Development Framework	NW Province	2008
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993)	Department of Labour	1993
Rustenburg Integrated Waste Management Plan (IWMP) – Status Quo Report, March	Rustenburg Local Municipality	2005
South Africa's Constitution, 1996 (Act No. 108 of 1996), including the Bill of Rights (Chapter 2, Section 24)	National Government	1996
The National Heritage Resources Act, 1999 (Act No 25 of 1999) as amended, particularly Chapter II, Section 38	South African Heritage Resource Agency	1999
The National Water Act, 1998 (Act No. 36 of 1998)	Department of Water Affairs	1998
Waste Classification and Waste Management Regulations (GN 634), 2013	National Department of Environmental Affairs and Provincial Department of Economic Development, Conservation and Tourism	2013

Waste Information Regulations (GN 625), 2012	National Department of Environmental Affairs and Provincial Department of Economic Development, Conservation and Tourism	2012
Water Services Act, 1997 (Act No. 108 of 1997)	At local authority level	1997

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES	NO[5] **X**
If yes, what estimated quantity will be produced per month?	m^3	

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

Not applicable

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

Not applicable

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

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

Not applicable

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

Not applicable

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, then 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	NO **X**

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

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO **X**
If yes, what estimated quantity will be produced per month?	m^3	
Will the activity produce any effluent that will be treated and/or disposed of on-site?	Yes	NO **X**

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.

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:

[5] The activity itself (landfill site) will not produce solid waste. However, the application is for the closure of a landfill site which received solid waste during its operational phase.

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

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

Not applicable

11(c) Emissions into the atmosphere

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

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:

The following emissions are expected at the landfill site:

- Dust emissions from the movement, deposition and covering of waste on-site, as well as dust generation from the surface of the landfill due to wind and erosion;
- Undetermined potential of landfill gas (mainly carbon dioxide and methane) to be generated. However, small volumes of domestic waste is being disposed-off, thus the likelihood for the formation of methane is low; and
- Vehicle exhausts emissions.

11(d) Generation of noise

	YES	NO
Will the activity generate noise?	**X**	
If yes, is it controlled by any legislation of any sphere of government?	YES	NO **X**

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 noise in terms of type and level:

Noise may be generated by vehicles and earth-moving activities during the decommissioning and closure phase of the proposed activity.

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

municipal	water board	groundwater	river, stream, dam or lake	other	the activity will not use water **X**

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate:

	litres	
the volume that will be extracted per month:		
Does the activity require a water use permit from the Department of Water Affairs?	YES **X**	NO

Waste disposal activities trigger the need for a section 21(g) water use license in terms of the NWA. No application is needed for a NWA section 21(g) water use license as the DWA dispenses this requirement by providing the relevant NEMA authority with conditions that need to be included in the NEMA environmental authorisation.

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

13. ENERGY EFFICIENCY

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

No energy usage on-site, except for the hydrocarbon use during site works.

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

Not applicable

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

The Townlands landfill site is located approximately 3.5km north of the town of Rustenburg. The landfill site can be accessed from the Thabazimbi road (R 510). The landfill site is approximately 7.7 hectares (ha) in extent. There is no buffer zone to the north and west of the landfill site.

The landfill site is located on mining and quarrying and agricultural land owned by the National Government of the Republic of South Africa and the Rustenburg Local Municipality on the Remainder of Portion 1 of the Farm Town and Townlands 272 JQ.

The landfill site was operated by the Rustenburg Local Municipality, but the municipality has, since June 2004, contracted in a landfill operator (Platinum Waste Resources) to operate the landfill site. However, the Rustenburg Local Municipality still manages, and is responsible for the closing of the landfill site. A replacement regional landfill site is currently being investigated in the Waterval area.

Reconstruction and Development Programme (RDP) housing is located to the north, directly adjacent to the landfill site. There is no buffer area between the landfill site and the RDP housing. A school with sports fields are located north of the RDP housing. A residential area is located towards the east and south-east of the landfill site. A crusher plant is located towards the south of the landfill site. There is a leachate/stormwater pond towards the south-west of the landfill site. Informal settlements are located towards the west and the north-west of the landfill site. An Eskom power line; a railway and railway station; and a major road (Tabazimbi road, R 510) are also located on, or in close proximity to the landfill site.

The Remainder of Portion 1 of the Farm Town and Townlands 272 JQ is zoned as Mining and Quarrying, whilst the Remainder of portion 1 is zoned Agricultural.

The land is owned by the National Government of the Republic of South Africa, and the Rustenburg Local Municipality. The landfill site is operated by Platinum Waste Resources. Rustenburg Local Municipality manages, and is responsible for the closing of the landfill site.

Important notes:

1. For linear activities (pipelines, etc.) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases

please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A):	

2. Paragraphs 1 - 6 below must be completed for each alternative.

	YES	NO **X**
3. Has a specialist been consulted to assist with the completion of this section?		

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

Property description/physical address:	The Townlands landfill site is located approximately 3.5km north of the town of Rustenburg. The landfill site can be accessed from the Thabazimbi road (R 510). The landfill site is approximately 7.7 hectares (ha) in extent. There is no buffer zone to the north and west of the landfill site. The landfill site is located on mining and quarrying and agricultural land owned by the National Government of the Republic of South Africa and the Rustenburg Local Municipality on the Remainder of Portion 1 of the Farm Town and Townlands 272 JQ. The landfill site was operated by the Rustenburg Local Municipality, but the municipality has, since June 2004, contracted in a landfill operator (Platinum Waste Resources) to operate the landfill site. However, the Rustenburg Local Municipality still manages, and is responsible for the closing of the landfill site. A replacement regional landfill site is currently being investigated in the Waterval area. Reconstruction and Development Programme (RDP) housing is located to the north, directly adjacent to the landfill site. There is no buffer area between the landfill site and the RDP housing. A school with sports fields are located north of the RDP housing. A residential area is located towards the east and south-east of the landfill site. A crusher plant is located towards the south of the landfill site. There is a leachate/stormwater pond towards the south-west of the landfill site. Informal settlements are located towards the west and the north-west of the landfill site. An Eskom power line; a railway and railway station; and a major road (Tabazimbi road, R 510) are also located on, or in close proximity to the landfill site. The Remainder of Portion 1 of the Farm Town and Townlands 272 JQ is zoned as Mining and Quarrying, whilst the Remainder of portion 1 is zoned Agricultural. The land is owned by the National Government of the Republic of South Africa, and the Rustenburg Local Municipality. The landfill site is operated by Platinum Waste Resources. Rustenburg Local Municipality manages, and is responsible for the closing of the landfill site. (Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

The landfill site is located on the Remainder of Portion 1 of the Farm Town and Townlands 272 JQ.

In instances where there is more than one town or district involved, please attach a list of towns or districts to this application.

Current land-use zoning:

The Remainder of Portion 1 of the Farm Town and Townlands 272 JQ is zoned as Mining and Quarrying, whilst the Remainder of portion 1 is zoned Agricultural.

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to this application.

Is a change of land-use or a consent use application required?
Must a building plan be submitted to the local authority?

YES **X**	NO
YES	NO **X**

Locality map:

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (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 map must indicate the following:

- an indication of the project site position as well as the positions of the alternative sites, if any; *(See Map TLS7 and TLS8 in Appendix A).*
- road access from all major roads in the area; *(See Map TLS7 and TLS8 in Appendix A).*
- road names or numbers of all major roads as well as the roads that provide access to the site(s); *(See Map TLS7 and TLS8 in Appendix A).*
- all roads within a 1km radius of the site or alternative sites; and *(See Map TLS7 and TLS8 in Appendix A).*
- a north arrow; *(See Map TLS7 and TLS8 in Appendix A).*
- a legend; and *(See Map TLS7 and TLS8 in Appendix A).*
- locality GPS co-ordinates (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 degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection) *(See Map TLS7 and TLS8 in Appendix A).*

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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

Alternative S2 (if any):

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

	1:20					1:5

Alternative S3 (if any):

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

2. LOCATION IN LANDSCAPE

The site is located on an area with a steep gradient. The Remainder of Portion 1 of the Farm Town and Townlands 272 JQ is zoned as Mining and Quarrying, whilst the Remainder of portion 1 is zoned Agricultural.

The vegetation type is classified as Vegetation Unit and Topographical Features SVcb6, Marikana Thornveld. The vegetation is mainly open Acacia karroo woodland, occurring in valleys and slightly undulating plains, and some lowland hills. Shrubs are denser along drainage lines, on termitaria and rocky outcrops or in other habitat protected from fire. The vegetation unit is rated as endangered in terms of its conservation status by Mucina and Rutherford (2006). Therefore, the footprint of the landfill site should not be extended to prevent further harm to the surrounding (endangered) habitat.

No significant sensitive environmental features were observed on and around the site. Ground water levels could not be verified due to the lack of data regarding groundwater.

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

NB: Indicate by highlighting/ticking

2.1 Ridgeline

2.2 Plateau Flat

2.3 Side slope of hill/mountain

2.4 Closed valley

2.5 Open valley

2.6 Plain X

2.7 Undulating plain / low hills

2.8 Dune

2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Most of the area is underlain by the mafic intrusive rocks of the Rustenburg Layered Suite of the Bushveld Igneous Complex. Rocks include gabbro, norite, pyroxenite and anorthosite. The shales and quartzites of the Pretoria Group (Transvaal Supergroup) also contribute. Mainly vertic melanic clays with dystrophic or mesotrophic plinthic catenas and some freely drained, deep soils.

According to the DWA's borehole database the depth of the groundwater table in the area of the landfill site varies from 3.65m to 41.1m. The depth of the immediate water table could, however, not be verified due to a lack of data.

The proposed locations of the monitoring boreholes and the direction of flow of the groundwater are indicated on *Map TLS9 in Appendix A*.

Is the site(s) located on any of the following (tick the appropriate boxes)?

	Alternative S1:		**Alternative S2 (if any):**		**Alternative S3 (if any):**	
Shallow water table (less than 1.5m deep)	YES	NO **X**	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO **X**	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO **X**	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO **X**	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO **X**	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO **X**	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO **X**	YES	NO	YES	NO
An area sensitive to erosion	YES	NO **X**	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

The vegetation type is classified as Vegetation Unit and Topographical Features SVcb6, Marikana Thornveld. The vegetation is mainly open *Acacia karroo* woodland, occurring in valleys and slightly undulating plains, and some lowland hills. Shrubs are denser along drainage lines, on termitaria and rocky outcrops or in other habitat protected from fire. The disturbed areas are heavily invaded with alien species.

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s). See Fig TLS1 in *Appendix A*.

The vegetation unit is rated as endangered in terms of its conservation status by Mucina and Rutherford (2006). Therefore, the footprint of the landfill site should not be extended to prevent further harm to the surrounding (endangered) habitat.

Natural veld - good condition[E]	Natural veld with scattered aliens[E]	Natural veld with heavy alien infestation[E] **X**	Veld dominated by alien species[E]	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil **X**

If any of the boxes marked with an "[E] "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that does currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

The Townlands landfill site is located approximately 3.5km north of the town of Rustenburg. The landfill site can be accessed from the Thabazimbi road (R 510). The landfill site is approximately 7.7 hectares (ha) in extent. There is no buffer zone to the north and west of the landfill site.

The landfill site is located on mining and quarrying and agricultural land owned by the National Government of the Republic of South Africa and the Rustenburg Local Municipality on the Remainder of Portion 1 of the Farm Town and Townlands 272 JQ.

The landfill site was operated by the Rustenburg Local Municipality, but the municipality has, since June 2004, contracted in a landfill operator (Platinum Waste Resources) to operate the landfill site. However, the Rustenburg Local Municipality still manages, and is responsible for the closing of the landfill site. A replacement regional landfill site is currently being investigated in the Waterval area.

Reconstruction and Development Programme (RDP) housing is located to the north, directly adjacent to the landfill site. There is no buffer area between the landfill site and the RDP housing. A school with sports fields are located north of the RDP housing. A residential area is located towards the east and south-east of the landfill site. A crusher plant is located towards the south of the landfill site. There is a leachate/stormwater pond towards the south-west of the landfill site. Informal settlements are located towards the west and the north-west of the landfill site. An Eskom power line; a railway and railway station; and a major road (Tabazimbi road, R 510) are also located on, or in close proximity to the landfill site.

The Remainder of Portion 1 of the Farm Town and Townlands 272 JQ is zoned as Mining and Quarrying, whilst the Remainder of portion 1 is zoned Agricultural.

The land is owned by the National Government of the Republic of South Africa, and the Rustenburg Local Municipality. The landfill site is operated by Platinum Waste Resources. Rustenburg Local Municipality manages, and is responsible for the closing of the landfill site.

NB: Indicate by highlighting:

5.1 Natural area

5.2 Low density residential

5.3 Medium density residential ***X***

5.5 Informal residential ***AN***

5.6 Retail commercial & warehousing

5.7 Light industrial

5.8 Medium industrial ***AN***

5.9 Heavy industrial ***AN***

5.10 Power station

5.11 Office/consulting room

5.12 Military or police base/station/compound

5.13 Spoil heap or slimes dam ***AN***

5.14 Quarry, sand or borrow pit

5.15 Dam or reservoir

5.16 Hospital/medical centre

5.17 School

5.18 Tertiary education facility

5.19 Church

5.20 Old age home

5.21 Sewage treatment plant ***AN***

5.22 Train station or shunting yard ***AN***

5.23 Railway line ***AN***

5.24 Major road (4 lanes or more) ***AN***

5.25 Airport ***AN***

5.26 Harbour

5.27 Sport facilities

5.28 Golf course

5.29 Polo fields

5.30 Filling station ***H***

5.31 Landfill or waste treatment site ***X***

5.32 Plantation

5.33 Agriculture

5.34 River, stream or wetland

5.35 Nature conservation area

5.36 Mountain, koppie or ridge

5.37 Museum

5.38 Historical building

5.39 Protected Area

5.40 Graveyard

5.41 Archaeological site

5.42 Other land uses (specify)

If any of the features marked with an "N "are highlighted or ticked, how will this impact / be impacted upon by the proposed activity?

Not applicable

If any of the features marked with an "An" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity?

Not applicable

If any of the features marked with an "H" are highlighted or ticked, how will this impact / be impacted upon by the proposed activity?

Not applicable

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including	*YES*	*NO **X***
Archaeological or paleontological sites, on or close (within 20m) to the site?	*No **X***	
If YES, explain:	***Not Applicable***	

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:	***Not Applicable***

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 submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

In terms of section 38 of the National Heritage Resources Act (25 of 1999), the activities related to the closure of the existing waste disposal site at Townlands exceeds 5000m^2 in extent. The activity has been registered with SAHRA.

According to the South African Heritage Resource Information System (SAHRIS) there are no declared archaeological or paleontological sites within 20 metres from the site.

According to the Council of Geoscience's Fossil Sensitivity Map the area where the landfill site is located has an insignificant/zero sensitivity as far as paleontological sensitivity is concerned. No paleontological studies are required.

SECTION C: PUBLIC PARTICIPATION

The entire public participation process, outcomes and evidence are recorded in *Appendix G1*.

1. ADVERTISEMENT

The person conducting a public participation process must take into account any guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of the application which is subjected to public participation by—

(a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—

  (i) the site where the activity to which the application relates is or is to be undertaken; and

  (ii) any alternative site mentioned in the application;

(b) giving written notice to—

  (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;

(ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;

(iii) owners and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;

(iv) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;

(v) the municipality which has jurisdiction in the area;

(vi) any organ of state having jurisdiction in respect of any aspect of the activity; and

(vii) any other party as required by the competent authority;

(c) placing an advertisement in—

(i) one local newspaper; or

(ii) any official *Gazette* that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;

(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in sub-regulation 54(c)(ii); and

(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—

(i) illiteracy;

(ii) disability; or

(iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

(a) indicate the details of the application which is subjected to public participation; and

(b) state—

(i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;

(ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;

(iii) the nature and location of the activity to which the application relates;

(iv) where further information on the application or activity can be obtained; and

(iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

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

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

6. AUTHORITY PARTICIPATION

Please note that a complete list of all organs of state and or any other applicable authority with their contact details must be appended to the basic assessment report or scoping report, whichever is applicable.

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.

List of authorities informed:

- North-West Department of Economic Development, Environment, Conservation and Tourism (DEDECT);
- North-West Department of Local Government and Traditional Affairs;
- Department of Water Affairs (National and Regional Offices) (DWA);
- Department of Agriculture, Forestry and Fisheries (DAFF);
- The South African Heritage Resource Authority (SAHRA);
- Bojanala Platinum District Municipality; and
- Rustenburg Local Municipality.

See the list of I&AP's attached to *Appendix G1*.

List of authorities from whom comments have been received:

- North-West Department of Local Government and Traditional Affairs;
- Department of Water Affairs (National and Regional Offices) (DWA);
- Department of Agriculture, Forestry and Fisheries (DAFF); and
- South African Heritage Resource Authority (SAHRA).

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.
Proof of any such agreement must be provided, where applicable.

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):

Verbal comments were received from the:

- Department of Agriculture, Forestry and Fisheries (DAFF): *The DAFF wishes to be informed of the process and detail regarding the process. The DAFF indicated that it will only comment on an application if the land is zoned for, or used as agricultural land and must be re-zoned or used for any purpose other than agriculture.*
- North-West Department of Local Government and Traditional Affairs: Members of the department requested to be registered for the project.
- The Department of Water Affairs (DWA): Members of the Head Office and the relevant regional office provided specifications for closing GCB waste sites.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

See *Appendix E.*

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report as Annexure E):

See *Appendix E.*

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

Alternative 1 (modular closure, preferred alternative): *In-situ* phased closure and capping of the waste body, once an alternative waste disposal site is available (with interim conditions for operation, prior to final closure)

Direct, indirect and cumulative impact associated with the interim operation of the landfill site

Direct impacts:

Direct impacts with a high significance:

- Surface water contamination;
- Ground water contamination;
- Soil deterioration and contamination;
- No change/gain in land-use potential; and
- Non-compliance to legal requirements.

Direct impacts with a medium significance:

- Hydrology;
- Air pollution due to dust and the potential for the burning of waste on site; and
- Direct biodiversity loss due to the potential extension of the footprint of the landfill site.

Direct impacts with a low significance:

- Infrastructural impacts;
- Mobility (transportation and pedestrian) impacts; and
- Use of resources (soil as cover material, hydrocarbons, resources).

Indirect impacts:

- Habitat transformation (due to alien and invasive infestation, if it is not controlled);
- Heritage impacts (conservation);
- Sense of place due to mal-odorous smells and wind-blown dust;
- Social impacts (health, safety, nuisance); and

- Non-compliance risks due to the landfill site not being authorised.

Cumulative impacts:

Not applicable

Direct, indirect and cumulative impact associated with the closure of the landfill site

Direct impacts:

Direct impacts with a medium significance:

- The management of vehicles, machinery and equipment (especially due to the use of hydrocarbons) may have negative impacts of a medium significance on surface water and soil pollution, habitat transformation and community safety impacts (due to the operation of machinery and equipment during the closure phase.

Direct impacts with a low significance:

- The provision and operation of on-site staff facilities and activities during closure operations may have negative impacts with a low significance on air, soil, and water pollution, sense of place (due to safety aspects and nuisance), social impacts and infrastructural impacts and use of resources. These impacts are, however, expected to be of a short duration (less than 30 days) and restricted to a small part of the site.

- Negative impacts related to activities during earthworks and levelling of the site are expected to be low.

Direct negative impacts:

- The closure of the landfill site will have negative socio-economic impacts to waste recyclers. The municipality needs to consider relocation/other alternatives to accommodate the waste recyclers.

Direct positive impacts:

- Management of existing waste (historical disposal on landfill) - i.e. moving scattered waste to dedicated areas of the landfill site, closing and capping the current waste *in situ* etc. is expected to have positive impacts on the potential for future surface water pollution (since the waste will be concentrated). Short-term negative impacts (of a low significance) are expected as it relates to soil and air pollution.

- The capping and closing of cells, re-vegetation of the landfill site and removal of alien and invasive vegetation are expected to have positive impacts on the land-use potential and it is expected that the potential for surface water, groundwater and air pollution will be significantly reduced. A concern regarding the capping of cells is the use of clay/impervious material and topsoil, which may be a limited and expensive resource in the area.

- The establishment of infrastructure for the management of storm water and the installation of monitoring infrastructure is expected to have long-term positive

impacts on the surrounding environment.

- Prevention of the disposal of waste on the closed landfill site will have net positive impacts on the surrounding environment.

- Establishment and active management and maintenance of the end-land use will have a positive impact on the land-use potential of the site.

Indirect impacts:

***Indirect positive impacts**:*

- The authorisation of the landfill site will have an indirect positive impact, which will allow the municipality to apply for funding (from MISA or the DEA for example) to rehabilitate and actively manage the waste disposal site.

Cumulative impacts:

Not applicable

Alternative 2 (once-off closure): Immediate closure and capping of the existing waste body

Direct impacts:

Direct impacts with a medium significance:

- The management of vehicles, machinery and equipment (especially due to the use of hydrocarbons) may have negative impacts of a medium significance on surface water and soil pollution, habitat transformation and community safety impacts (due to the operation of machinery and equipment during the closure phase.

Direct impacts with a low significance:

- The provision and operation of on-site staff facilities and activities may have negative impacts with a low significance on air, soil, and water pollution, sense of place (due to safety aspects and nuisance), social impacts and infrastructural impacts and use of resources. These impacts are, however, expected to be of a short duration (less than 30 days) and restricted to a small part of the site.

- Negative impacts related to activities during earthworks and levelling of the site are expected to be low.

Direct negative impacts:

- The closure of the landfill site will have negative socio-economic impacts to waste recyclers. The municipality needs to consider relocation/other alternatives to accommodate the waste recyclers.

Direct positive impacts:

- Management of existing waste (historical disposal on landfill) - i.e. moving scattered waste to dedicated areas of the landfill site etc. is expected to have positive impacts on the potential for future surface water pollution (since the waste will be

concentrated). Short-term negative impacts (of a low significance) are expected as it relates to soil and air pollution.

- The capping and closing of cells, re-vegetation of the landfill site and removal of alien and invasive vegetation are expected to have positive impacts on the land-use potential and it is expected that the potential for surface water, groundwater and air pollution will be significantly reduced. A concern regarding the capping of cells is the use of clay/impervious material and topsoil, which may be a limited and expensive resource in the area.

- The establishment of infrastructure for the management of storm water and the installation of monitoring infrastructure is expected to have long-term positive impacts on the surrounding environment.

- Prevention of the disposal of waste on the closed landfill site will have net positive impacts on the surrounding environment.

- Establishment and active management and maintenance of the end-land use will have a positive impact on the land-use potential of the site.

Indirect impacts:

***Indirect positive impacts**:*

- The authorisation of the landfill site will have an indirect positive impact, which will allow the municipality to apply for funding (from MISA or the DEA for example) to rehabilitate and actively manage the waste disposal site.

Cumulative impacts:

Not applicable

Alternative 3 (no-go, not preferred alternative): The no-go alternative (maintaining the status quo of the authorised waste disposal facility

Direct impacts:

Direct impacts with a high significance:

- Surface water contamination;
- Ground water contamination;
- Soil deterioration and contamination;
- No change/gain in land-use potential; and
- Non-compliance to legal requirements.

Direct impacts with a medium significance:

- Hydrology;

- Air pollution due to dust and the potential for the burning of waste on site; and
- Direct biodiversity loss due to the potential extension of the footprint of the landfill site.

Direct impacts with a low significance:

- Infrastructural impacts;
- Mobility (transportation and pedestrian) impacts; and
- Use of resources (soil as cover material, hydrocarbons, resources).

Indirect impacts:

- Habitat transformation (due to alien and invasive infestation if it is not controlled);
- Heritage impacts (conservation);
- Sense of place due to mal-odorous smells and wind-blown dust;
- Social impacts (health, safety, nuisance); and
- Non-compliance risks due to the landfill site not being authorised.

Cumulative impacts:

- ***Not applicable***

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity 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.

Alternative 1 (modular closure, preferred alternative): *In-situ* phased closure and capping of the waste body, once an alternative waste disposal site is available (with interim conditions for operation, prior to final closure)

Although activities related to the immediate closure of the landfill site may have potentially adverse impacts of a low to medium significance on surface and ground water pollution, air quality and the quality of soil (erosion and degradation), these impacts are envisaged to be immediate to the site and of a short term. Closing the site will reduce and ultimately eliminate potential contamination of ground water and impacts on natural habitat surrounding the site.

The positive impacts associated with the licencing and closure of the Townlands landfill site, including the gain in land-use potential, the establishment of stormwater management- and monitoring measures, and the positive social contributions (health and safety, and sense of place) will have long-term, highly positive impacts on a local to regional scale.

Therefore, taking into account the relevant information gathered regarding the Townlands landfill site and the closure thereof, it is recommended that the proponent proceeds with the immediate closure of the landfill site.

Alternative 2 (once-off closure): Immediate closure and capping of the existing waste body

Although activities related to the immediate closure of the landfill site may have potentially adverse impacts of a low to medium significance on surface and ground water pollution, air quality and the quality of soil (erosion and degradation), these impacts are envisaged to be immediate to the site and of a short term. However, closing the site will eliminate the availability of airspace for waste disposal prior to the construction of the planned regional facility in the Waterval area.

Alternative 3 (no-go, not preferred alternative): The no-go alternative (maintaining the status quo of the authorised waste disposal facility

The no-go alternative is not a viable proposition as the site is currently not licensed. The objective of the project is to authorise and close the site.

Maintaining the *status quo* involves the continuation of an lawful waste management activity without any requirements or commitment to rehabilitate or manage the landfill site in accordance with an EMP or licence conditions.

In terms of the impact identification and assessment matrices *(Appendix G2)* the number of activities related to the no-go option seems less compared to the preferred option (immediate closure of the landfill site). However, in terms of the severity, duration and likelihood of impacts, the continued negative nature of the impacts related to the no-go option are much more significant and severe than the option to close the landfill site.

SECTION E: RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?	YES **X**	NO

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

Not Applicable

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

See *Appendix F*

Is an EMP attached?	YES **X**	NO

The EMP must be attached as Appendix F.

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A - Site Plan(s)

- Figure TLS1: Site/route map
- Figure TLS2: Adjacent properties map

- Figure TLS3: Land-use zoning map
- Figure TLS4: Current land-use map
- Figure TLS7: 1:50 000 locality map
- Figure TLS8: Locality map (close-up)
- Figure TLS9: Boreholes and ground water flow direction

Appendix B - Townlands Site Photographs Taken on 2014-02-25

- Appendix B1: Townlands site photographs taken in the eight major compass directions
- Appendix B2: Additional site photographs of relevant features taken on the Townlands site

Appendix C - Facility Illustration(s)

- Figure TLS5: Representation of current waste body
- Figure TLS6: Future representation of landfill site

Appendix D - Specialist Report

- Townlands Closure and rehabilitation plan
- Location map
- Map of bentonite seal
- Map of buffer zone

Appendix E - Comments and Responses Report

Appendix F - Environmental Management Programme

- Environmental Management Programme
- Appendix F1-F4: Method statements
- Appendix F5: Alien and Invasive Plant Species Management Plan

Appendix G – Other Information

- Appendix G1 - Public participation report
- Appendix G2 - Impact identification and impact assessment matrices
- Appendix G3 - Waste licence application form (as submitted to NW DEDECT)