the DEDECT

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Basic Assessment Report for the Closure of the Coligny Waste License Application NWP/WM/NM3/2014/02 Ditsobotla 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 closure of the unlicensed Tlhabologang landfill site located at Coligny in the Ditsobotla Local Municipality. An EIA process commenced in 2003 in an attempt to license the landfill site, but there is no evidence that a permit was granted by either DWA or NW DEDECT.

NW-DEDECT Reference: **NWP/WM/NM3/2014/02**

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.

This application does not include the planned waste transfer station.

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 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	CEM	Addressed as part of the EMPr (Appendix F).
Closure plan/EMPr to inform closure design	Yes	CEM	Addressed as part of the EMPr (Appendix F).
Closure design and approval	No	Municipality to appoint registered Consulting Engineer	To generate a detailed closure plan, project plan, design plan and drawings.
Detailed design requirements (closure/remedial design,	No	Municipality to appoint registered Consulting Engineer	It is not possible to do a detailed closure design and planning proposals for this site at this stage. The proponent needs to

[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.

design of storm water management, leachate management, settlement/surface pondage), plan drawings, and long and short term stability.			make provision for this in its IDP as well as the short to medium expenditure framework. The closure of this site is the responsibility of the Ditsobotla Local Municipality. It is not known how long it will take before the municipality is in a position to commence with work and how the conditions at the site will change in the interim. Hence the approach should be to do the final closure designs and planning when the project can be implemented. It is imperative that the NW DEDECT and the DWA sign off on these final designs. Refer to the EMPr in Appendix F.
Alternative waste disposal options – new landfill site	Not applicable	Municipality	An integrated and comprehensive waste management strategy needs to be found, designed and implemented before this site can be permanently closed. In the interim, sustained use of this facility until it is due for closing and capping. Eventually waste will be disposed at a licensed landfill site, such as the Lichtenburg site, within proximity of the municipality upon closure of Coligny site, until an alternative solution is found.
Alternative waste disposal options – transfer station	Not applicable	Ditsobotla Local Municipality	Ditsobotla Local Municipality does not have an IWMP and the 2005 Central (now Ngaka Modiri Molema) District Municipality IWMP is in the process for revision. Interim operational specifications must be established.
Post-closure care and maintenance	Yes	CEM	Addressed as part of the EMPr (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 part of the CEM's scope of work	Municipality to appoint independent EAP	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. Because the site is located closer than 500m from a water resource, it will be necessary to apply for a water use license in terms of section 21(c) & (i) of the NWA, 1998.
Rezoning application	No	Municipality	The site is zoned for agricultural land use. Rezoning of the land to municipal use is required.

Site Location

Tlhabologang landfill site in Coligny is located on the remainder of Portion 38 of the farm Elandsfontein 34 IP, Ditsobotla Local Municipality, North-West Province.

The landfill site is located off the N14 across from turn-off to the town of Coligny. The site is bordered by open land. The town's waste water treatment works is located approximately 500 metres south-east of the site. The northern border of the landfill site is approximately 300 metres from the Taaibos Spruit. An old quarry is located directly adjacent to the western border of the landfill site. The surrounding land is mainly used for agricultural purposes. There are no residential areas directly adjacent to the site.

Zonation of the land

The land is zoned for agricultural purposes, but the permissible activities include municipal use that also includes the oxidation dam and waste disposal activities.

Land ownership

The land belongs to the Ditsobotla Local Municipality.

Operating entity

The landfill is managed and operated by the Ditsobotla Local Municipality.

Waste site characteristics

The site is approximately 3 ha in extent and is expected to be classified as a GCB$^-$ site. It is not known since when the site has been in operation and what quantities of waste are being disposed of per day on-site. Although an EIA was commenced with in 2003, no record exists that a permit was issued by DWA or NW DEDECT. The facility has poor access controls and waste is illegally being dumped next to the access road to the landfill site. Apart from the access road (gravel), there is no other infrastructure at the landfill site.

The landfill site is close to reaching its capacity as far as the disposal of waste to the surface of land is concerned.

It is not recommended that the quarry adjacent to the landfill site is used for the disposal of waste. The depth of the ground water table and the stability of the quarry are uncertain. The DWA National Groundwater Database indicates that the depth of the groundwater table is between 1.88 and 6 metres in the vicinity of the landfill site. Given the fact that the quarry is excavated to a depth of approximately 5 - 6 metres relative to the surrounding area, it is expected that the quarry may be very close to the ground water table. Stagnant water was observed in the quarry and the vegetation in the quarry is indicative of saturated, wet soils. A geohydrological and geotechnical assessment for the landfill site and its surroundings were done by Khulani Groundwater Consulting in 2003. The company, however, no

longer exists, and the municipality has no records of these reports.

A letter by DWA (2000) indicates that the landfill site (combined with pollution from the WWTW oxidation ponds) have "polluted the groundwater in the vicinity, as the production boreholes nearby previously used by the council, are no longer fit for domestic use".

Waste is pushed in a U-shaped stockpile and some coverage of waste has taken place in the past. The areas where waste has been covered with topsoil are invested with weeds. The site is located 280 metres from the Taaibos Spruit and within a critical biodiversity area (CBA-T2), as declared by SANBI, as well as cited in the NW Provincial SDF and the Ditsobotla LUMs.

Furthermore, the Ditsobotla Local Municipality currently has no technical expertise to operate the landfill site.

Waste is not being compacted or covered on a daily basis and no monitoring of ground water or potential landfill gas is taking place. The uncovered waste and associated wind-blown litter are presenting a negative aesthetic impact at the site and its surroundings.

Evidence has been observed of the burning of waste at the landfill site. The formation of smoke may present a safety risk to road users of the N14.

There is no mention of waste management in the Ditsobotla IDP. Ditsobotla Local Municipality does not have an IWMP and no provisions have been made in the IDP or budget for the compilation of such a plan. The IWMP for the Ngaka Modiri Molema District Municipality is in the process of being revised.

Closure activities

The waste site needs to be lawfully decommissioned closed and rehabilitated. Two scenarios or alternatives are available:

- *In-situ* closure and capping; or
- The no-go alternative.

The preferred alternative is to cap and close the facility *in situ* in terms of the following parameters:

- A registered civil engineer must design the optimal position, shape, size and height of the closed waste dump, especially in the light of the fact that the facility is located 280 m west of the Taaibos spruit.

- Design the facility in terms of the Minimum Requirements and the additional requirements[2] of the Department of Water Affairs with arrangements to prevent water ingress into the dump, the formation of leachate and general pollution prevention arrangements.

- Implement and maintain a maintenance and care programme and a sustained groundwater quality monitoring programme.

Waste recyclers

There were about 10 waste reclaimers on site during the site visit. The most reclaimed material are scrap metal, tin, plastics and glass. The Ngaka Modiri Molema District Municipality's IWMP does make provision for the establishment of a controlled waste transfer station at Groot Marico.

2. FEASIBLE AND REASONABLE ALTERNATIVES

[2] Letter by K Legge and C Ficker (ref 16/1/1/2/4) on 31 January 2014

"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.

Paragraphs 3 – 13 below should be completed for each alternative.
Description of alternatives considered in this application:

The objective of this application is to lawfully decommission, close and rehabilitate the waste disposal facility at Coligny (Thlabologang landfill site). 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 alternative waste disposal solutions are being established.

- 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 unauthorised 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.

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[3] (preferred or only site alternative)	26°	20‘ 19.1”	26°	20‘ 03.4”
Alternative S2 (if any) Not Applicable	°	‘	°	‘
Alternative S3 (if any) Not Applicable	°	‘	°	‘

In the case of linear activities:

Alternative:	**Latitude (S):**		**Longitude (E):**	
Alternative S1 (preferred or only route alternative)				
• Starting point of the activity	°	‘	°	‘
• Middle/Additional point of the activity	°	‘	°	‘
• End point of the activity	°	‘	°	‘
Alternative S2 (if any)				
• Starting point of the activity	°	‘	°	‘

[3] “Alternative S..” refer to site alternatives.

• Middle/Additional point of the activity	°	‘	°	‘
• End point of the activity	°	‘	°	‘

Alternative S3 (if any)

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

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):

Alternative:	**Size of the activity:**
Alternative A1[4] (preferred activity alternative)	30 000 m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

or, for linear activities:

Alternative:	**Length of the activity:**
Alternative A1 (preferred activity alternative)	339 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):

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

[4] “Alternative A..” refer to activity, process, technology or other alternatives.

Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

5. SITE ACCESS

Does ready access to the site exist?	*YES*	*NO*
	X	
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.

6. SITE OR ROUTE PLAN

See Maps C1, C2, C3 and C4 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 C2 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 C3 and C4 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 C1 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 C1 in Appendix A.***

6.6 all trees and shrubs taller than 1.8 metres; ***See Map C1 in Appendix A.***

6.7 walls and fencing including details of the height and construction material; ***See Map C1 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 C1 in Appendix A*.**
- the 1:100 year flood line (where available or where it is required by DWA); ***See Map C1 in Appendix A*.**
- ridges; ***See Map C1 in Appendix A*.**
- cultural and historical features; ***See Map C1 in Appendix A*.**
- areas with indigenous vegetation (even if it is degraded or invested with alien species); ***See Map C1 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 C1 in Appendix A*.**

6.11 the positions from where photographs of the site were taken. ***See Map C1 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 Appendix C for a current and future representation of the landfill site.

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?	R value To be determined	
What is the expected yearly income that will be generated by or as a result of the activity?	R value 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?	R value To be determined	
What percentage of this will accrue to previously disadvantaged individuals?	% To be determined	
How many permanent new employment opportunities will be created during the operational phase of the activity?	To be determined	
What is the expected current value of the employment opportunities during the first 10 years?	R value To be determined	
What percentage of this will accrue to previously disadvantaged individuals?	% To be 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:

- The landfill site is operated unlawfully in terms of the NEM:WA. Closure of the site is therefore desirable.

- The landfill site is close to reaching its air space capacity and an alternative waste disposal solution must be established.

- The landfill site is located in a critical biodiversity area; in close proximity to the Taaibos Spruit and close to a shallow groundwater table.

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

Manage waste more responsibly and lawfully within the Ditsobotla 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**[5]	NO
3.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		
	Not Applicable		

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

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:		
	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	NO **X**
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 as the area will be restored.		

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 Coligny will benefit once the town's landfill site is closed and a replacement an alternative waste disposal facility. This 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:
South Africa's Constitution, 1996 (Act 108 of 1996), including the Bill of Rights (Chapter 2, Section 24)	National Government	1996
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
NEMA EIA Regulations, 2010 (Government Notice Nos. 543, 544, 545 and 546)	North West Department of Economic Development, Conservation and Tourism	2010
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, Environment, Conservation and Tourism	2008
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, Environment, Conservation and Tourism	2013
Waste Classification and Waste Management Regulations (GN 634), 2013	National Department of Environmental Affairs and Provincial Department of Economic Development, Environment, Conservation and Tourism	2013
National Norms and Standards for Disposal of Waste to Landfill (GN 636), 2013	National Department of Environmental Affairs and Provincial Department of Economic Development, Environment, 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, Environment, 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, Environment, Conservation and Tourism	2013
Waste Information Regulations (GN 625), 2012	National Department of Environmental Affairs and Provincial Department of Economic Development, Environment, Conservation and Tourism	2012
National Waste Management Strategy, 2010	National Department of Environmental Affairs and Provincial Department of Economic Development, Environment, Conservation and Tourism	2010
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
National Environment Management: Air Quality Act, 2004 (Act No. 39 of 2004) (NEM: AQA)	National Department of Environmental Affairs and Provincial Department of	2004

Title of legislation, policy or guideline:	Administering authority:	Date:
	Economic Development, Environment, Conservation and Tourism	
National Ambient Air Quality Standards in Terms of 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)	National Department of Environmental Affairs and Provincial Department of Economic Development, Environment, Conservation and Tourism	2009
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
National Water Resource Strategy, 2013	Department of Water Affairs	2013
Water Services Act, 1997 (Act No. 108 of 1997)	At local authority level	1997
Occupational Health & Safety Act, 1993 (Act No. 85 of 1993)	Department of Labour	1993
Health Act, 1977 (Act 63 of 1977)	Department of Health	1977
Municipal Structures Act, 1998 (Act 117 of 1998)	Local Municipality	1998
Municipal Systems Act , 2000 (Act 32 of 2000)	Local Municipality	2000
North West Provincial Spatial Development Framework	NW Province	2008
Integrated Waste Management Plan Report 3	Central (now Ngaka Modiri Molema) District Municipality	2005

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[6] **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	YES	NO

[6] 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.

legislation?		**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:			
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

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	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:

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

11(d) Generation of noise

Will the activity generate noise?	YES **X**	NO
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. Noise levels are not expected to be significant in relation to the existing activities on site and in its surroundings. Noise will be limited to normal working hours.

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
the volume that will be extracted per month:

litres	
YES	NO
X	

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

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.

Waste disposal activities trigger the need for a section 21(g) water use license in terms of the NWA. application is needed for a NWA section 21(g) water use license as the DWA dispenses this requirement providing the relevant NEMA authority with conditions that need to be included in the NEMA environmer authorisation. Because the site is located closer than 500m from a water resource, it will be necessary to apply for a wa use license in terms of section 21(c) & (i) of the NWA, 1998.

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

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.

3. 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 each specialist thus appointed:
All specialist reports must be contained in Appendix D.

Property description/physical address:	Tlhabologang landfill site in Coligny is located on the remainder of Portion 38 of the farm Elandsfontein 34 IP, Ditsobotla Local Municipality, North-West Province. The landfill site is located off the N14 across from turn-off to the town of Coligny. The site is bordered by open land. The town's waste water treatment works is located approximately 500 metres south-east of the site. The northern border of the landfill site is approximately 300 metres from the Taaibos Spruit. An old quarry is located directly adjacent to the western border of the landfill site. The surrounding land is mainly used for agricultural purposes. There are no residential areas directly adjacent to the site. See Maps C01, C07 and C08 in Annexure A
	(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.
	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:	Agricultural use
	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 , to this application.

	YES	NO
Is a change of land-use or a consent use application required?		**X**
Must a building plan be submitted to the local authority?		**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 C7 and C8 in Appendix A)
- road access from all major roads in the area; (See Map C7 and C8 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 C7 and C8 in Appendix A)
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow; (See Map C7 and C8 in Appendix A)
- a legend; (See Map C7 and C8 in Appendix A) and
- 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 C7 and C8 in Appendix A)

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

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

Alternative S2 (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

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 landfill site is located off the N14 across from turn-off to the town of Coligny. The site is bordered by open land. The town's waste water treatment works is located approximately 500 metres south-east of the site. The northern border of the landfill site is approximately 300 metres from the Taaibos Spruit. An old quarry is located directly adjacent to the western border of the landfill site. The surrounding land is mainly used for agricultural purposes. There are no residential areas directly adjacent to the site.

The landfill site is located in the Vegetation Unit and Topographical Features number Gh13 the Klerksdorp Thornveld, while the eastern section of the property, where the wetland is located is located on Gh10 the Vaal-Vet Sandy Grassland.

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

NB: Indicate by highlighting/ticking

2.1 Ridgeline

2.2 Plateau

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

The DWA National Groundwater Database indicates that the depth of the groundwater table is between 1.88 and 6 metres in the vicinity of the landfill site. Given the fact that the quarry is excavated to a depth of approximately 5 - 6 metres relative to the surrounding area, it is expected that the quarry may be very close to the ground water table. Stagnant water was observed in the quarry and the vegetation in the quarry is indicative of saturated, wet soils.

The site has soils with a calcareous subsoil horizon, underlain by Ventersdorp lava. The soils are thus shallow with signs of seasonal waterlogging.

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 **X**	NO	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

The landfill site is located in the Vegetation Unit and Topographical Features number Gh13 the Klerksdorp Thornveld, while the eastern section of the property, where the wetland is located is located on Gh10 the Vaal-Vet Sandy Grassland.

The Gh 10 veld type is characterised by dry grassland and clumps of *Acacia karroo*.

Indicate the types of groundcover present on the site:

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

Natural veld - good condition[E]	Natural veld with scattered aliens[E]	Natural veld with heavy alien infestation[E]	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:

NB: Indicate by highlighting/ticking

5.1 Natural area

5.2 Low density residential

5.3 Medium density residential

5.4 High density residential

*5.5 Informal residential**A***

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**A***

*5.14 Quarry, sand or borrow pit **(historical)***

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**A***

*5.22 Train station or shunting yard **N***

*5.23 Railway line **N***

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

*5.25 Airport **N***

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 ***X***

5.34 River, stream or wetland ***X***

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 this impact will / 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?

If YES, specify and explain:
If YES, specify:
The waste water treatment works will not be impacted on by the closure of the landfill site.

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

If YES, specify and explain:
If YES, specify:
Not Applicable

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as	*YES*	*NO*[7]

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

defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including		***X***
Archaeological or palaeontological sites, on or close (within 20m) to the site?	***No***	
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 Coligny exceeds 5000m2 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—

According to the Council of Geoscience's fossil sensitivity map the area where the landfill site is located are expected to have a low sensitivity as far as palaeontological sensitivity is concerned. No palaeontological studies are required, however a protocol for finds is required.

(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 subregulation 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);
- NW Department of Local Government and Traditional Affairs
- Department of Water Affairs (National and Regional Offices);
- Department of Agriculture, Forestry and Fisheries (DAFF);
- The South African Heritage Resource Authority (SAHRA);
- Ngaka Modiri Molema District Municipality
- Ditsobotla 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

See Appendix G2(a) for Impact identification matrix and Appendix G2(b) for impact assessment matrix.

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 (preferred alternative) – Capping and closure of the existing waste body, with conditions for interim operations leading to closure

- ***Interim operations of the landfill site***

***Direct impacts**:*

Direct impacts with a high significance

- Groundwater contamination;
- Surface 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

- Groundwater pollution; and
- Air pollution due to dust and the potential for the burning of waste on site.

Direct impacts with a low significance

- Infrastructural impacts;

- 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 malodourous smells and wind-blown dust;
- Social impacts (health, safety, nuisance) and impacts on the sense of place; and
- Non-compliance risks due to the landfill site not being authorised.

***Cumulative impacts**:*

- Not applicable.

➢ **Closure of the landfill site**

***Direct impacts**:*

- The provision and operation of on-site staff facilities and activities may have negative impacts with a low significance on soil, water and air pollution, habitat transformation, social impacts and sense of place (due to safety aspects and nuisance), 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.
- The management of vehicles, machinery & equipment (especially due to the use of hydrocarbons) may have negative impacts of a medium significance on soil pollution, and community safety impacts (due to the operation of machinery and equipment during the closure phase. This may also result in a medium impact on the quality of surface water runoff and a high impact on shallow groundwater occurring at certain areas beneath the site.
- Negative impacts related to activities during earthworks and levelling of the site are expected to be low;
- Management of existing waste (historical disposal on landfill) - i.e. moving scattered waste to dedicated areas of the landfill site, filling trenches 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.

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

- 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**:*

- The authorisation of the landfill site will have the 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– Immediate in-situ closure and capping the landfill site with clay and topsoil

***Direct impacts**:*

- The provision and operation of on-site staff facilities and activities may have negative impacts with a low significance on soil, water and air pollution, habitat transformation, social impacts and sense of place (due to safety aspects and nuisance), 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.

- The management of vehicles, machinery & equipment (especially due to the use of hydrocarbons) may have negative impacts of a medium significance on soil pollution, and community safety impacts (due to the operation of machinery and equipment during the closure phase. This may also result in a medium impact on the quality of surface water runoff and a high impact on shallow groundwater occurring at certain areas beneath the site.

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

- Management of existing waste (historical disposal on landfill) - i.e. moving scattered waste to dedicated areas of the landfill site, filling trenches 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.

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

- 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**:*

- The authorisation of the landfill site will have the 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 alternative) – Maintaining the *status quo* at the unauthorised waste disposal facility

***Direct impacts**:*

Direct impacts with a high significance

- Groundwater contamination;

- Surface 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

- Groundwater pollution; and
- Air pollution due to dust and the potential for the burning of waste on site.
- Mobility (transportation and pedestrian) impacts.

Direct impacts with a low significance

- Infrastructural impacts;
- 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 malodourous smells and wind-blown dust;
- Social impacts (health, safety, nuisance) and impacts on the sense of place; 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 (preferred option – closure of the landfill site)

Although activities related to the closure of the landfill site may have a 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 Coligny landfill site, including the gain in land-use potential, establishment of stormwater management- and monitoring measures, and positive social (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 Coligny landfill site and the closure thereof, it is recommended that the proponent proceeds with the proposed activity.

Alternative 2: 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.

No-go alternative (compulsory)

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 unlawful 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 (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	NO
	X	

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 EMPr attached?	YES	NO
	X	

The EMPr must be attached as Appendix F.

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports (not applicable)

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G1: The public participation process

Appendix G2: Impact identification and impact evaluation matrices

Appendix G3: Waste management licence application form (as submitted to NW DEDECT)