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THE DECOMMISSIONING OF THE KLIPFONTEIN CONCENTRATOR

Draft Basic Assessment Report

2014/07/23

Confidentiality: Public

Quality Management

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The Decommissioning of the Klipfontein Concentrator

Draft Basic Assessment Report

2014/07/23

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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.

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Table of Abbreviations and Acronyms

Abbreviation/Acronyms	Description
DEA	Department of Environmental Affairs
DRDLR	Department of Rural Development and Land Reform
DWS	Department of Water and Sanitation
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme Report
GNR	Government Notice Regulation
IBC	Intermediate Bulk Container
NEMA	National Environmental Management Act (No 107 of 1998), as amended
NEM:AQA	National Environmental Management: Air Quality Act (No 39 of 2004)
NRA	Heritage Resources Act (No 25 of 1999)
NWA	National Water Act (36 of 1998)
NWDEDECT	North West Department of Economic Development, Environment, Conservation and Tourism
PPE	personal protective equipment
RLM	Rustenburg Local Municipality
RPM-RS	Rustenburg Platinum Mines – Rustenburg Section
SAHRA	South African Heritage Resources Agency
SANS	South African National Standard
SDF	Spatial Development Framework
WSP	WSP Environmental (Pty) Ltd

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

Yes✓	No
------	----

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:

Anglo American Platinum Limited: Rustenburg Platinum Mines – Rustenburg Section

Anglo American Platinum Limited: Rustenburg Platinum Mines – Rustenburg Section (RPM-RS) mines, processes, refines and markets platinum and other platinum group metals as well as base metals at their operations in Rustenburg located within the North West Province of South Africa (**Figure 1 – Appendix F**). RPM-RS is one of a number of RPM-RS operations across South Africa.

The RPM-RS mine lease area covers an area of approximately 16 651.6 hectares (ha). The ore extracted by RPM-RS includes that of two ore bodies, namely the Merensky Reef and the UG2 Reef at various shafts contained within the RPM-RS mine lease area. RPM-RS utilise various mining methods such as hybrid, board and pillar, conventional stopping, trackless development and opencast mining in order to extract the ore depending on the geological structure of the area being mined and the surface conditions. Following extraction from the reef the ore is passed through a number of processing and beneficiation stages in order to extract the required precious and base metals. The infrastructure required includes but is not limited to the following:

- Concentrators;
- Smelters;
- Precious Metals Refinery; and
- Base Metals Refinery.

RPM-RS has a planned life of mine of at least an additional 30 years.

RPM-RS Concentrators

The RPM-RS concentrators include the following:

- Frank Concentrator (undergoing decommissioning) (Environmental Authorisation: NWP/EIA/103/2012 - 2 August 2013);
- Klipfontein Concentrator (to be decommissioned);
- UG2 Concentrator (Operational); and
- The Waterval Concentrator (Operational).

The concentrators have the purpose of reducing ore to a concentrate mat which can be transferred to the smelters for further beneficiation. Each concentrator is comprised of, but not limited to the following main infrastructure:

- Crushing Plant;
- Milling Cells;
- Flotation Pods;
- Thickeners; and
- Filtration.

Each of the said infrastructures is utilised in order to reduce the ore received into a fine mat material. The concentrators form an integral part of the RPM-RS operation.

Klipfontein Concentrator

- Background and Status Quo

The Klipfontein Concentrator was commissioned in 1931 and is located approximately 11km east of Rustenburg in the North West Province. The Klipfontein Complex comprises an area of approximately 20ha. The Concentrator had the capacity to process approximately 120 000 tons of ore per month.

Following the establishment of the UG2 and the Waterval Concentrators, RPM-RS decided to remove the Klipfontein Concentrator from active service (mothballed in 2007) due to the technological capabilities available at the two new concentrators (i.e. the increased efficiency). As such, the Klipfontein concentrator is considered a redundant plant and no longer has any beneficial use to the mining operation. The Klipfontein Concentrator is currently under care and maintenance.

- Contaminated Land

- RPM-RS Lease Area

WSP Environmental (Pty) Ltd (WSP) undertook a Contaminated Land Assessment and Remediation Strategy for the Anglo Platinum Rustenburg Lease Area in 2008. The investigation identified issues within the RPM-RS lease area in terms of contaminated land and developed a conceptual framework to address legacy contamination as well as potential future impacts in accordance with international and national best practice guidelines. The 2008 investigation identified the key concerns in terms of land contamination within the Lease Area.

- Klipfontein Concentrator Area

RPM-RS appointed WSP in 2011 to assess whether a full contamination investigation is required at the Klipfontein Concentrator prior to decommissioning of the plant. The resultant assessment indicated that the area is considered a contaminated land “hotspot”. The area was thus classified as such by RPM:RS.

The Klipfontein Concentrator footprint (specifically focused around the previously operational areas of the plant) is considered contaminated with heavy metals associated with historic mining related activities, and previous hydrocarbon spillages during the 76 years of operation. It must be noted that WSP only considered and assessed the land on which infrastructures to be demolished are located; areas which do not have any infrastructure that is proposed to be demolished, and areas on which infrastructure will remain were not considered as part of the assessment (illustrated in **Figure 3 in Appendix F**).

Proposed Project

RPM-RS propose to decommission and dismantle the infrastructure associated with the Klipfontein Concentrator located on Portion 4 of the Farm Klipfontein 300 JQ (**Figure 3 – Appendix F**) in 2015. The following areas of the Klipfontein Concentrator are to be decommissioned and dismantled to slab level:

- Milling Section;
- Thickener section;
- Filtration section;

- Reagent section;
- Crusher section;
- Flotation section;
- Redressing section; and
- General areas.

Certain infrastructure associated with the concentrator will remain on-site as the infrastructure is still considered useful to RPM-RS, which includes the following:

- Concentrator offices;
- Concentrator workshop;
- Concentrator change houses; and
- Certain utilities.

The WSP Contaminated Land Assessment and Remediation Strategy for the Anglo Platinum Rustenburg Lease Area in 2008 identified the Klipfontein Concentrator as a “contamination hotspot” however; the Proposed Project will not involve any form of land remediation. It should be noted that the remediation costs associated with the area have been included in the Final RPM-RS closure plan (SRK, 2012, Report Number: 435110) and as such the site will be rehabilitated upon closure following the life of mine. Furthermore, annual provisions for rehabilitation costs is made in the Platinum Producers Environmental Trust Fund to the Department of Mineral Resources (DMR).

Due to the presence of contaminated land on the site on which decommissioning is intended, RPM-RS require environmental authorisation according to the National Environmental Management Act (No 107 of 1998), as amended, (NEMA) prior to the commencement of the decommissioning activities. In order to obtain environmental authorisation, RPM-RS is required to undertake a Basic Assessment (BA) process in accordance with Government Notice Regulation (GNR) 543 and 544 of 2010. The decommissioning activity triggers the following listed activities in terms of GNR 544:

- Activity 27 (iv); and
- Activity 27 (v).

The competent authority responsible for considering this application is the North West Department of Economic Development, Environment, Conservation and Tourism (NWDEDECT).

RPM-RS appointed WSP to undertake the BA process on behalf of the Applicant.

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.

Alternatives:

a) Property Alternatives

Due to the nature of the Proposed Project, being “decommissioning” of an existing facility, no property alternatives are available or have been considered by this application.

b) Activity Type Alternatives

The activity type is “decommissioning” which is the only option available to RPM-RS considering the care and maintenance costs and technology available at the plant.

c) Design or Layout Alternatives

The design and layout of the facility is as per the original design and layout established in 1931. As such, the order and sequence applied to the dismantling activities is determined by the existing scenario. No layout and design alternatives are applicable to the Proposed Project.

d) Technology Alternatives

The Proposed Project results from the availability of the new technological capabilities at the two new concentrators (i.e. the increased efficiency) as such the technological alternative is the driver of the Proposed Project.

e) Operational Alternatives

There is no Operational Phase associated with the Proposed Project as such, no operational alternatives could have or have been assessed.

f) No-go Alternative

Discussed in **Section 3**.

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 should be completed for each alternative (Note: No alternatives have been identified for the Proposed Project).

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 (Preferred or only Site Alternative)

°	'	"	°	'	"
25	42	09.41	27	22	07.53

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
- Middle/Additional point of the activity
- End point of the activity

Latitude (S):

Longitude (E):

°	'	"	°	'	"

Alternative S3 (if any)

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

Latitude (S):

Longitude (E):

°	'	"	°	'	"

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.

No-go alternative

The no-go alternative presents the option of not demolishing/dismantling the infrastructure associated with the Klipfontein Concentrator. As discussed in **Section 1**, the infrastructure is considered to have no further beneficial use to the RPM-RS mining operations. The infrastructure has been in a redundant state for several years within which no further use has arisen or been identified. In the event that this infrastructure is not demolished the redundant infrastructure will remain a financial liability, an environmental liability, and a health and safety risk associated with unauthorised access resulting in injury or death. WSP does not recommend the no-go option. The overall aim of the Proposed Project is aligned with mine closure and rehabilitation objectives.

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 (preferred activity alternative)

Approximately 35,000m ²
m ²
m ²

Alternative A2 (if any)

Alternative A3 (if any)

or, for linear activities:

Alternative:

Length of the activity:

Alternative A1 (preferred activity alternative)

m ²
m ²
m ²

Alternative A2 (if any)

Alternative A3 (if any)

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
m ²
m ²

Alternative A2 (if any)

Alternative A3 (if any)

5. Site Access

Does ready access to the site exist?

Yes✓	No
m	

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

Describe the type of access road planned:

N/A

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.

Refer to **Appendix A (Figure 1 and 4)**

6. Site or Route Plan

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;
- 6.3 The current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 The exact position of each element of the application as well as any other structures on the site;
- 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;
- 6.6 All trees and shrubs taller than 1.8 metres;
- 6.7 Walls and fencing including details of the height and construction material;
- 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;
 - the 1:100 year flood line (where available or where it is required by DWS);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invested with alien species);
- 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
- 6.11 The positions from where photographs of the site were taken.

Refer to **Appendix A (Figure 1)**.

Site Photographs

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

Due to site layout WSP deemed photos in the eight compass directions impractical. A more suited method of taking photos of the various infrastructure to be dismantled was applied. WSP hereby supply various photos of the redundant infrastructure of interest to the competent authority. Refer to **Appendix B**.

7. Facility Illustration

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.

Klipfontein Concentrator Operational Flow Chart:

(Note: This section is to be read in conjunction with **Appendix C**. The Klipfontein Concentrator has been mothballed since 2007 hence the flow chart does not represent the current operations on the site).

1. *Area 1* encompasses the following infrastructure:
 - Silos: Ore originating from the various shafts is stored in the silos.
 - Conveyor system: From the silos the ore material is fed through to the primary crusher at a constant rate.
 - Primary Crusher: The ore material is fed into the primary crusher where it is crushed to a coarse material in an effort to reduce the ore to a grain size small enough to be fed into the secondary crusher.
 - Secondary Crusher: Output material from the Primary Crusher feeds into the Secondary Crusher.
2. *Area 2* encompasses the following infrastructure:
 - Milling Section: Output material from the Secondary Crusher (uniform grain size) feeds into the milling section for further grinding (i.e. milling). The aim of milling is to reduce the grain size to 65% (-75 microns) (required for input into the processes to follow). The required grain size should be achieved in order to obtain the desired mineral percentage output from the floatation section to follow.
3. *Area 3* encompasses the following infrastructure:
 - Steel Ball storage area within cement bunkers (Approximately 3m below ground level).
4. *Area 4* encompasses the following infrastructure:
 - Floatation Plant: Fine material received from the Milling Section is used as input to the floatation process. Floatation reagents are added to the milled water/milled ore mixture to aid in the separation of minerals from the material. Furthermore, the floatation process enhances the hydrophobic nature of the minerals in the ore. Underflow suspension is considered unusable and piped to Area 6 which is the Thickener. The overflow material is transferred to the Filtration Plant (Area 8).
5. *Area 5* encompasses the following infrastructure:
 - Hazardous/dangerous good storage area: Used for the storage of reagent substances, fluids and other fuels and chemicals.
6. *Area 6* encompasses the following infrastructure:
 - Tailings Thickener: Pulp is pumped to the tailings thickener. Water is decanted from the tailings thickener and then recycled back to the Klipfontein Concentrator. The return water is used in the milling, filtration and floatation processes and is considered essential to the continuation of efficient processes at the Klipfontein Concentrator. Thickened underflow from the thickener is pumped to the

tailings dam.

7. *Area 7 encompasses the following infrastructure:*

- A Pipeline to the Thickener: The pipeline is used to transfer the concentrate stream to the thickener.

8. *Area 8 encompasses the following infrastructure:*

- The Filtration Area: The underflow from the thickeners is pumped at a high density to the filters in the filtration plant (concentrate stream). The concentrate stream is filtered to achieve a wet cake suitable for transfer to the Waterval Smelter. The tailings from the filtration section is considered unusable and as such is pumped to Area 6. The tailings underflow from Area 6 is then transferred to the tailings dam whereas the overflow is sent to Area 8 (filtration plant).

The final product is a wet concentrate containing both precious and base metals. The wet concentrate is delivered to the Waterval Smelter where it is dried, melted and undergoes a converting process to generate matte. The crushed matte is sent to the Rustenburg Base Metals Refinery to produce base metals (copper, nickel, cobalt and sodium sulphate). Resulting matte and concentrate is received by the Precious Metals Refinery where the concentrate is refined into the respective PGMs (platinum, palladium, rhodium, iridium, ruthenium, osmium and gold), all to a high degree of purity.

Klipfontein Concentrator Decommissioning/Dismantling Order:

- Site Establishment: Establish all required equipment and contractor camps onsite.
- Electrical Reticulation: Dismantling and removal of infrastructure onsite related to electricity acceptance and distribution throughout the site (e.g. the transformers and power cables).
- Primary and Secondary Crushers.
- Milling Buildings.
- Silos.
- Conveyors.
- General Areas.
- Floatation Building.
- Disestablishment: Removal of all equipment and contractor camps onsite.

8. Activity Motivation

a. Socio-economic Value of the Activity

What is the expected capital value of the activity on completion?	R 117 129 600
What is the expected yearly income that will be generated by or as a result of the activity?	R 58 564 800
Will the activity contribute to service infrastructure?	No
Is the activity a public amenity?	No
How many new employment opportunities will be created in the Development Phase of the activity?	96 Temporary Employment Opportunities
What is the expected value of the employment opportunities during the Development Phase?	R 21 749 760
What percentage of this will accrue to previously disadvantaged individuals?	70%
How many permanent new employment opportunities will be created during the Operational Phase of the activity?	+/-5 Semi-Permanent/ Permanent Employment Opportunities
What is the expected current value of the employment opportunities during the first 10 years?	R 117 129 600
What percentage of this will accrue to previously disadvantaged individuals?	50%

b. Need and Desirability of the Activity

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

NEED:			
1.	Was the relevant provincial planning department involved in the application?	Yes✓	No
The Department of Rural Development and Land Reform (RDLR) was consulted.			
2.	Does the proposed land use fall within the relevant provincial planning framework?	Yes✓	No
Appendix A (Figure 2) contains a map depicting the current land uses of the RPM-RS mine lease area and surrounding areas. Furthermore, Appendix A (Figure 3) contains a map indicating the conceptual post closure land uses as presented in the RPM-RS Final Closure Plan (SRK, 2012, Report Number: 435110). The area occupied by the Klipfontein Concentrator will be rehabilitated to a grazing land use type. The North West Province Spatial Development Framework was consulted during the compilation of the conceptual post closure land uses planning exercise.			
3.	If the answer to questions 1 and/or 2 was NO, please provide further motivation/explanation:		

DESIRABILITY:			
1.	Does the proposed land use/development fit the surrounding area?	Yes✓	No
Appendix A (Figure 2) indicates the current land uses surrounding the Klipfontein Concentrator. The area immediately surrounding the Concentrator is commercial/industrial. The Concentrator area itself is zoned as mining. Appendix A (Figure 3) indicates the conceptual land use plan for the RPM-RS mine lease area			

including that of the Klipfontein Concentrator. As previously indicated, the conceptual planned land use of the Klipfontein Concentrator area is grazing. Other conceptual land uses for the mine lease area include: agriculture, green belts and conservation areas. As such, yes grazing does fit in with the other proposed land uses within the mine lease area (post closure).			
2.	Does the proposed land use/development conform to the relevant structure plans, SDF and planning visions for the area?	Yes✓	No
The Final Mine Closure Plan (SRK, 2012, Report Number: 435110) was developed based on SDF and other relevant planning documentation.			
3.	Will the benefits of the proposed land use/development outweigh the negative impacts of it?	Yes✓	No
The Proposed Project is aligned with the overall mine closure plan. The Proposed Project is aimed at achieving the mine closure objectives. Site rehabilitation is essential to restore the area to an acceptable standard which will benefit society and the environment.			
4.	If the answer to any of the questions 1-3 was NO, please provide further motivation/explanation:		
5.	Will the proposed land use/development impact on the sense of place?	Yes✓	No
The Proposed Project contributes to the overall site rehabilitation. The overall mine lease area rehabilitation will result in a changed sense of place following mine closure.			
6.	Will the proposed land use/development set a precedent?	Yes	No✓
7.	Will any person's rights be affected by the proposed land use/development?	Yes✓	No
The rehabilitation of the site will promote Section 24 of the Republic of Constitution of South Africa.			
8.	Will the proposed land use/development compromise the "urban edge"?	Yes	No✓
9.	If the answer to any of the question 5-8 was YES, please provide further motivation/explanation.		
	As the Proposed Project involves the decommissioning and removal of redundant infrastructure the aim of the Proposed Project is to promote the objectives of mine closure and mine rehabilitation. The overall impact of the Proposed Project is thus positive. See above sections for question specific feedback.		

BENEFITS:			
1.	Will the land use/development have any benefits for society in general?	Yes✓	No
2.	Explain:		
	<p>The facility is located in a mine lease area and therefore the general public will have limited access to the facility. However, following mine closure and overall mine rehabilitation (i.e. not limited to the Klipfontein Concentrator) the general public may be afforded the right to occupy the land. The proposed land uses of the lease area include the following:</p> <ul style="list-style-type: none"> ■ Agriculture; ■ Grazing; ■ Green Belts; and ■ Conservation areas. <p>As such, the land use capability of the land will be better suited to use by the public. Furthermore, the Proposed Project will result in a number of temporary and permanent employment opportunities during both the Decommissioning Phase and the Operational Phase (i.e. post</p>		

	decommissioning).		
3.	Will the land us/development have any benefits for the local communities where it will be located?	Yes✓	No
4.	<p>Explain:</p> <p>See Section 2 above.</p> <p>In addition: Employment opportunities will be focused on local communities. Local communities bordering the RPM-RS mine lease area will benefit for the overall improved condition of the land to the proposed land uses described. Furthermore, the land may be used as grazing land following mine closure (dependant on the intended land use). The majority of the employment opportunities are temporary and as such the benefits to local communities is limited.</p>		

9. 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:

National Environmental Management Act (NEMA) Government Notice Regulation (GNR) 544 of 2010 Listed Activity 27(iv)	North West Department of Economic Development, Environment, Conservation and Tourism	2010
<p><u>Listed Activity</u></p> <p>Activity 27 (iv): The decommissioning of existing facilities or infrastructure for activities, where the facility or land on which it is located is contaminated.</p> <p><u>Applicability</u></p> <p>The Proposed Project involves the decommissioning of a plant which is located upon land which is considered a contamination hotspot resulting from the mining operations taking place on the site since 1931.</p>		
<p><u>Listed Activity</u></p> <p>Activity 27 (v) The decommissioning of existing facilities or infrastructure, for storage, or storage and handling, of dangerous goods of more than 80 cubic metres.</p> <p><u>Applicability</u></p> <p>The Proposed Project involves the decommissioning of a plant which has various infrastructure previously used to beneficiate ore. The infrastructure is deemed to have the capacity to store and handle dangerous goods exceeding 80 cubic metres.</p>		
Heritage Resources Act (No 25 of 1999)	South African Heritage Resources Agency (SAHRA)	1999
<p>The Klipfontein Concentrator was established in 1931, therefore, WSP considered the Proposed Project under the Heritage Resources Act (No 25 of 1999) (NRA). NRA Section 34 (1) indicates viz. no person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority. Furthermore, the NRA, Section 1 indicates viz. for the purposes of this Act, those heritage resources of South Africa which are of cultural significance or other special value for the present community and for future generations must be considered part of the national estate and fall within the sphere of operations of heritage resources authorities.</p> <p>The Klipfontein Concentrator infrastructure was used by RPM-RS to process ore in order to obtain a floatation concentrate for transfer to the nearby Waterval Smelter. Due to the known purpose of the facility, WSP is of the opinion that the Klipfontein Concentrator does not have cultural significance or other associated historic value to the mine or the public. As such, WSP is of the opinion that Section 1 of NRA is not applicable to the Proposed Project. Therefore, Section 34 (1) of NRA may not apply and the applicant may not require a heritage permit prior to Proposed Project commencement. WSP are in communication with the SAHRA and the Provincial Department regarding applicability. All NRA related processes will be undertaken separately to this process, if required. Updates regarding this communication will be incorporated into the Final BAR.</p>		

10. Waste, Effluent, Emission and Noise Management

Note: No Construction and Operational Phases associated with the Proposed Project, only decommissioning. The following section has been compiled with focus on the Decommissioning Phase.

a. Solid Waste Management

Will the activity produce solid construction waste during the Construction/Initiation Phase (i.e. Decommissioning Phase)?

Yes✓	No
350 tons	

If yes, what estimated quantity will be produced per month (referred to as (i.e. Decommissioning Phase)?

How will the construction solid waste be disposed of (describe) (i.e. Decommissioning Phase)?

Solid waste generated as a result of the decommissioning activities will be managed according to the RPM-RS Integrated Waste and Water Management Plan. Waste that is generated from the decommissioning and demolition will be stored in a temporary designated waste storage area prior to removal from site. Waste which can be recycled and/or reused will be transported to an offsite recycling facility. Waste which cannot be recycled and/or reused will be temporarily stored prior to removal from site by a registered contractor and subsequent storage at a registered landfill site. This waste will be stored for less than 90 days.

Where will the construction solid waste be disposed of (describe) (i.e. Decommissioning Phase)?

The materials that will be produced by the activity will be reused, recycled or sold to third party companies as redundant materials (e.g. steel, equipment, etc.) where possible. Waste that is generated from the decommissioning and demolition process which cannot be reused or recycled will be stored in a temporary designated waste storage area. This waste will be storage for less than 90 days where it will be collected by a waste contractor and disposed of at an appropriate licensed waste landfill facility. The uncontaminated waste material will be disposed as inert waste at a licensed general landfill site, and hazardous material disposed of at a permitted hazardous landfill site. All material removed from site will be recorded, via a waste manifest to ensure safe disposal and correct reuse and recycling activities are maintained.

Will the activity produce solid waste during its Operational Phase (i.e. Post Decommissioning Phase)?

Yes	No✓
-----	-----

The Operational Phase is considered the Post-Decommissioning Phase. No waste will be associated with the Post-Decommissioning Phase.

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

m ³

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

See **Sub-section (a)**.

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

Waste generated which is deemed general waste will be disposed of at a licensed general waste landfill (not necessarily a municipal facility). Hazardous waste resulting from the Proposed Project will be transported to Holfontein for disposal (licensed hazardous waste disposal facility).

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
------	----

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

The waste material which will result from the Proposed Project has not been classified and as such the nature of the waste is unknown. If hazardous waste is produced by the Proposed Project, the waste will not remain on the site for a period exceeding 90 days. The storage of waste on the site is considered temporary as the waste is subsequently transported offsite to registered facilities.

Is the activity that is being applied for a solid waste handling or treatment facility?

Yes	No✓
-----	-----

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.

b. Liquid Effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

Yes	No✓
-----	-----

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

m ³

Will the activity produce any effluent that will be treated and/or disposed of on site?

Yes	No✓
-----	-----

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

Will the activity produce effluent that will be treated and/or disposed of at another facility?

Yes	No✓
-----	-----

The water contained within the Klipfontein Return Water Dam will be transferred to the Western Limb Tailings Retreatment Plant (located approximately 3km north east of the Klipfontein Concentrator) for re-use.

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:

c. Emissions into the Atmosphere

Will the activity release emissions into the atmosphere?

Yes✓	No
------	----

If yes, is it controlled by any legislation of any sphere of government?

Yes✓	No
------	----

If yes, the applicant should consult with the competent authority to determine whether it is

necessary to change to an application for scoping and EIA.

The Proposed Project will result in dust generation associated with the rubble moving process and emissions resulting from vehicle uses however should the suggested mitigation measures (Environmental Management Programme Report (EMPr) contained in **Appendix F**) be successfully implemented dust should not pose an environmental or human health hazard. The volumes of fugitive dust emissions generated by the Proposed Project are expected to be minimal and below the thresholds as set in the National Ambient Air Quality Standards (for Particulate Matter) furthermore, the Proposed Project does not trigger a listed activities in terms of the GNR 893 of the National Environmental Management: Air Quality Act (39 of 2004) (NEM:AQA).

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

d. Emissions into the Atmosphere

Will the activity generate noise?

Yes✓	No
Yes✓	No

If yes, is it controlled by any legislation of any sphere of government?

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

Noise will be generated as a result of dismantling and demolition activities taking place. Other sources of noise would be vehicles transporting waste and materials offsite. The NEM:AQA makes reference to noise control provisions within section 34 of the Act. The Act makes provision for the promulgation of national noise standards which have not yet been set by the Minister. As such, all assessments are undertaken according to the South African National Standard (SANS) 10103 and SANS 10328 which includes noise thresholds and guidelines aimed at controlling the release of noise emissions in South Africa. The SANS codes are specific to certain land use types. The Proposed Project is located within an industrial mining related area and it is envisaged that the Proposed Project will not have a significant effect on the ambient noise climate.

All staff working onsite will be provided with appropriate personal protective equipment (PPE) to reduce the effects of noise on persons working in immediate or close proximity to the operation. All mitigation measures associated have been included in the EMPr (**Appendix F**).

If no, describe the noise in terms of type and level:

11. 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
Water will be required by vehicles and equipment onsite as well as for drinking purposes. There is no need to extract additional water from boreholes or surface water sources.					

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 ✓

Does the activity require a water use permit from the Department of Water and Sanitation (DWS)?

Water will be supplied by the Municipality which is deemed to be in possession of the necessary permits required by both the Water Services Act (107 of 1998) and the National Water Act (36 of 1998) (NWA).

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

12. Energy Efficiency

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

All reusable, recyclable or commercial materials will be removed from site for recycling or reused on adjacent RPM-RS sites. As such, the waste hierarchy objectives as contained within the National Environmental Management: Waste Act (59 of 2008), as Amended, are satisfied.

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

In the event that power is not available from the local municipality, generators will be used as alternative energy sources as and when required.

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.

Has a specialist been consulted to assist with the completion of this section?

Yes✓	No
------	----

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:

25° 42' 09.41" S 27° 22' 07.53"E

(Farm name, portion etc.) Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application.

Farm Klipfontein 300 JQ, Portion 4

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:

Mining

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.

Is a change of land-use or a consent use application required?

Yes	No✓
-----	-----

A change in land use is not required for the purposes of the Proposed Project however a formal change in land use may be required/considered upon mine closure.

Must a building plan be submitted to the local authority?

Yes	No✓
-----	-----

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;
- Road access from all major roads in the area;
- Road names or numbers of all major roads as well as the roads that provide access to the site(s);
- All roads within a 1km radius of the site or alternative sites; and
- A north arrow;
- A legend; 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)

Refer to **Appendix A (Figure 4)**.

Note: Major road names are not readily available however all major, secondary and supporting roads have been indicated.

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
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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
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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
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2. Location in Landscape

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✓

2.7 Undulating plain/low hills

2.8 Dune

2.9 Seafront

3. Groundwater, Soil and Geological Stability of the Site

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✓	Yes	No	Yes	No
Dolomite, sinkhole or doline areas	Yes	No✓	Yes	No	Yes	No
Seasonally wet soils (often close to water bodies)	Yes	No✓	Yes	No	Yes	No
Unstable rocky slopes or steep slopes with loose soil	Yes	No✓	Yes	No	Yes	No
Dispersive soils (soils that dissolve in water)	Yes	No✓	Yes	No	Yes	No
Soils with high clay content (clay fraction more than 40%)	Yes✓	No	Yes	No	Yes	No
Any other unstable soil or geological feature	Yes	No✓	Yes	No	Yes	No
An area sensitive to erosion	Yes	No✓	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 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 ✓ ¹	Veld dominated by alien species ^E ✓	Gardens
Sport field	Cultivated land	Paved surface✓	Building or other structure✓	Bare soil✓

Information attained from RPM-RS Biodiversity Action Plan.

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

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

¹ It is WSP's opinion that no specialist study is required due to the limited availability of plant species found on site and is dominated by alien species.

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

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) ✓

- Underground Mining Shaft✓

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

There is a railway and railway station located on the boundary of the Klipfontein Concentrator. No impact is anticipated on the said infrastructure as a result of the Proposed Project. All decommissioning and demolition activities will take place within the boundaries of the Klipfontein Concentrator fence line.

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:

The Klipfontein Concentrator itself is considered a heavy industrial activity. Activities in all compass directions are associated with heavy mining industry. As such, the Klipfontein Concentrator and the activities proposed will fit into the sense of place and thus the Proposed Project will not significantly impact upon any adjacent associated mining activities.

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:

|

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 Archaeological or paleontological sites, on or close (within 20m) to the site?

Yes	No✓
Yes	No✓

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:

--

Will any building or structure older than 60 years be affected in any way?

Yes✓	No
-------------	----

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

Yes	No✓²
-----	------------------------

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.

² Although the structure is older than 60 years it is not considered culturally significant

SECTION C: PUBLIC PARTICIPATION

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.

In accordance with GNR 543, Section 54, site notices were erected on 8 July 2014 in and around the Klipfontein Concentrator areas. A list of places where the site notices were erected is included below. Refer to **Appendix E** for a copy of the site notice and photographs of the site notices.

Site notice positions:

- Entrance to the Klipfontein Concentrator;
- The Platinum Health Medical Centre Notice Board;
- The Rustenburg Public Library;
- Intersection of Road to Marikana & Road to Khomani Mine (25° 41' 58.31" S 27° 21' 58.67" E);
- The RPM-RS Recreational Centre; and
- Entrance to the Klipfontein Residential Area to the south of the Klipfontein Concentrator (25° 42' 17.68" S 27° 22' 00.45" E).

- (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;

- i. The owner of the land is RPM-RS;
- ii. The facility is redundant. Security officers monitor the site have been informed of the Proposed Project via verbal communication from the Concentrator Manager;

- iii. RPM-RS own the land surrounding the Klipfontein Concentrator. The occupiers of the residential housing south of the Klipfontein Concentrator have been informed via site notice and newspaper advert;
- iv. The ward councillor has been informed by email/fax and telephone call;
- v. The Municipality (Rustenburg Local Municipality) (RLM) has been informed by written notice;
- vi. Various commenting authorities such as the DWS and the SAHRA have been notified of the Proposed Project; and
- vii. The general public have been notified via the newspaper adverts and the distribution of site notices.

In accordance with Regulation 54 (2b), notices in the form of background information documents and letters of invite were emailed and faxed to all stakeholders indicated above where applicable. In addition, the stakeholder database (developed during previous projects) provided by RPM-RS was utilised by WSP. The database includes the general public, employees of RPM-RS and organs of state that have jurisdiction over the Proposed Project. Refer to **Section 6** in this report for a list of authorities consulted. Proof the various methods of communication and the original documents are contained within **Appendix E**.

- (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

In accordance with Regulation 54 (c and d), newspaper advertisements were placed in the Rustenburg Herald and the Platinum Weekly on 10 and 11 July 2014. The newspaper advertisement contained information of the Proposed Project and invited the public to register as a stakeholder. Proof of publication is included in **Appendix E**.

- (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.

None have been identified by the EAP to date. The EAP will react upon request by the competent authority or a stakeholder.

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
The manner in which and the person to whom representations in respect of the application may be made

See **Appendix E** for advert and notice content.

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.

The Proposed Project will not result in impacts outside of the RLM. As such, newspaper adverts were placed in a regional and local newspaper, not a national newspaper.

The advert included reference to the following:

- An application has been submitted to the NWDEDECT to obtain Environmental Authorisation;
- A Proposed Project description;
- Location of the Proposed Project; and
- Details of the EAP from which further detail can be obtained.

No Proposed Project location alternatives have been identified which was stipulated in the stakeholder notification material distributed.

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.

WSP have not undertaken a public meeting for the Proposed Project as the level of public interest in the Proposed Project is not expected to be high. However, should a high level of interest become apparent during the Draft BA Report review period WSP will make provision to host a public meeting in order to address any potential issues.

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**.

WSP have to date not received any issues and/or comments from the general public regarding the Proposed Project. However, WSP have received comment from the SAHRA considering requirements of the National Heritage Resources Act (25 of 1999) (NHRA). WSP will update the issues and responses report following the Draft BA Report public review period (see **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:

NWDEDECT	Agricentre Building Corner. Dr. James Moroka & Stadium Road Private Bag X2039, Mmabatho, 2735	Tel: (018) 389 5959/5156 Fax: (018) 389 5006 Email:Smukhola@nwpg.gov.za
DMR	Vaal University of Technology Building, c/o Voortrekker & Margaretha Prinsloo Streets, klerksdorp, 2570	Tel: (018) 487 9830 Fax: (018) 462 9039
DWA	Old Rustenburg Rd, Hartbeespoort, Brits, 0216, South Africa	Tel: (012) 253 1093/8
Bonjanala Platinum District Municipality	Corner Beyers Naude & Fatima Bhayat Drive, Rustenburg, 0300	Tel: (014) 590 4500 Fax: (014) 592 6085
RLM	159 Nelson Mandela Drive, Rustenburg, 0299	Tel: (014) 590 3111 Fax: (014) 592 0181
DRDLR	Surveyor-General: Pretoria (Gauteng and North West)	Tel: (012) 303 1601
SAHRA	111 Harrington Street, PO Box, 4637,Cape Town, 8000, South Africa	Email:phine@sahra.org.za
North West Provincial Heritage Resource Authority	Gabomotho Building, Dr James Moroka Drive, Office No B27, Mmabatho, 2735	Tel: 082 344 1626 or 073 207 1996 Email:mosianem@nwpg.gov.za

List of authorities from whom comments have been received:

- SAHRA (relevance of the NHRA to the Proposed Project).
- NWDEDECT (acknowledgement of receipt of the application form).

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

-
- SAHRA (does not object to the closure of the concentrator however, the matter should be referred to the North West Provincial Heritage Resources Authority).
 - NWDEDECT (acknowledgement of receipt of the application form).

Copies contained within **Appendix E**.

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.

No Comments received to date.

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):

No Response issued to date.

2. Impacts that may Result from the Proposed Project

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.

The environmental impact rating has been undertaken according to RPM-RS's 5x5 Impact Rating Matrix utilised to determine the significance of the potential impact as a result of the Proposed Project. This entailed:

- The identification of different environmental aspects, impacts, receptors and resources for the Decommissioning Phase (Construction and Operational Phases);
- The identification of receptors and resources to provide an indication of the areas sensitivity to impact; and
- The identification of the significance of impacts, including the probability of occurrence; the intensity or severity of the change to the environment; the timing of the impact; duration over which an impact will be experienced; and the spatial extent of the impact.

Aspect	Consequence				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
Schedule	Less than 1% impact on overall project timeline	May result in overall project timeline overrun equal to or more than 1% and less than 5%	May result in overall project timeline overrun of equal to or more than 5% and less than 20%	May result in overall project timeline overrun of equal to or more than 20% and less than 50%	May result in overall project timeline overrun of 50% or more
Cost	Less than 1% impact on the budget of the project	May result in overall project budget overrun equal to or more than 1% and less than	May result in overall project budget overrun of equal to or more than 5% and less than 20%	May result in overall project budget overrun of equal to or more than 20% and less than	May result in overall project budget overrun of 50% or more

Aspect		Consequence			
		5%		50%	
Quality of Deliverables	No significant impact on quality of deliverables	Quality issues that can be addressed prior to handover	Quality issues that can be addressed during ramp-up	Quality issues that require significant intervention to maintain performance	Quality issues that require significant intervention to achieve performance
Safety/Health	First aid case/Exposure to minor health risk	Medical treatment case/Exposure to major health risk	Lost time injury/Reversible impact on health	Single fatality or loss of quality of life/Irreversible impact on health	Multiple fatalities/Impact on health ultimately fatal
Legal & Regulatory	Low level legal issue	Minor legal issue; non-compliance and breaches of the law	Serious breach of law; investigation/report to authority, prosecution and or moderate penalty possible	Major breach of the law; considerable prosecution and penalties	Very considerable penalties and prosecutions. Multiple law suits and jail terms
Reputation/Social/Community	Slight impact - public awareness may exist but no public concern	Limited impact - local public concern	Considerable impact - regional public concern	National impact - national public concern	International impact - international public attention
Environment	Minimal environmental harm - L1 incident	Material environmental harm - L2 incident remediable short term	Serious environmental harm - L2 incident remediable within LOM	Major environmental harm - L2 incident remediable post LOM	Extreme environmental harm - L3 incident irreversible

Likelihood		Risk Level				
5 – Almost Certain	90% and higher probability of occurring	11 (M)	16 (H)	20 (H)	23 (H)	25 (H)
4 – Likely	Between 60% and less than 90% of occurring	7 (M)	12 (M)	17 (H)	21 (H)	24 (H)
3 – Possible	Between 30% and less than 60% of occurring	4 (L)	8 (M)	13 (H)	18 (H)	22 (H)

Likelihood		Risk Level				
2 – Unlikely	Between 1% and less than 30% of occurring	2 (L)	5 (L)	9 (M)	14 (H)	19 (H)
1 – Rare	Less than 1% of occurring	1 (L)	3 (L)	6 (M)	10 (M)	15 (H)

Risk Rating	Guideline for Matrix
21 to 25 Extreme (EX)	Eliminate, avoid, implement specific action plans/procedures to manage and monitor
13 to 20 High (H)	Proactive Management
6 to 12 Medium (M)	Actively manage
1 to 5 Low (L)	Monitor and manage as appropriate

The potential environmental impacts associated with the Proposed Project have been evaluated according to their significance, which is determined as a result of the consequence and likelihood. Consequence is a function of schedule, cost, quality, safety/health, legal and regulatory, reputation and environmental impact, whereas the likelihood of the impact is a function of the frequency of the activity and frequency of the incident/impact. The consequence multiplied by the likelihood gives the significance of the potential impact. All impacts were assessed with and without management measures in place.

Alternative (Preferred Alternative)

Direct Impacts:							
Impact Description	Consequences	Likelihood	Without Mitigation (Impact Rating)	Recommendation	Consequences	Likelihood	With Mitigation (Impact Rating)
Topography							
Removal of artificial structures and infrastructure.	3	5	20 (H) (positive)	Not applicable			
Soils, Land Use and Land Capability							
Potential soil erosion as a result of dismantling and remediation activities, leading to soil degradation and loss of topsoil.	2	3	8 (M)	As little vegetation as possible should be removed from the site in order to reduce soil erosion.	1	4	7 (M)
				Existing access routes should be used as much as possible in order to reduce the potential for soil compaction and soil erosion.	2	2	5 (L)
Potential hydrocarbon spillages from equipment, machinery and vehicles (including redundant equipment and transformers currently onsite at the concentrator) may lead to soil contamination, potentially impacting on surface water runoff and groundwater quality.	2	3	8 (M)	Equipment, machinery and vehicles should be serviced regularly at an offsite location, and daily inspections should be conducted to ensure that the equipment, vehicles and machinery are performing at optimum performance standards and to ensure that there are no leakages of vehicle fuel/oil tanks.	2	2	5 (L)
				The area chosen for the purpose of fuel and chemical management must be the minimum required.	2	2	5 (L)

				The storage areas, accommodating hazardous substances such as fuel, oils and chemicals, must be securely fenced (under lock and key). The storage area floor must be an impermeable surface and suitably bunded to retain 110% of all the container volumes.	2	2	5 (L)
				Fuels, lube oils or other chemicals used outside of the bunded area should be kept to a minimum and suitable secondary containment in the form of drip trays should be used.	2	2	5 (L)
				In the event that oil traps or interceptors need to be used, maintenance should be undertaken on a regular basis and records maintained.	1	2	2 (L)
				All liquids stored on-site are to be labelled and identifiable. Material Safety Data Sheets (MSDS) for on-site chemicals, hydrocarbon materials and/or waste and hazardous substances must be readily available. MSDS must include mitigation measures to ameliorate against any potential environmental impacts which may result from a spill, incorporating health and safety mitigation measures. The mitigation measures are to be applied in conjunction with the requirements of EMPr.	2	2	5 (L)

				If soil becomes contaminated, it should be removed and placed on an impermeable surface (preferably a plastic sheet) and covered with a similar material to minimise surface water and soil contamination until the soil can be removed from the site.	1	2	2 (L)
				The Emergency Preparedness and Response Procedure should be kept onsite at all times.	1	2	2 (L)
				A spill kit should be available at all times during the decommissioning activities. If deemed reasonable RPM-RS (or the contractor) should maintain more than one operational soil kit onsite (i.e. one per area of concern).	2	2	5 (L)
				A hazardous waste disposal certificate must be obtained from the waste removal company as evidence of correct disposal.	1	2	2 (L)
Potential spillages of dangerous materials associated with demolition of thickeners.	3	2	9 (M)	A clean and dirty water system is present at the Klipfontein Concentrator. All dirty water (i.e. water originating within the site) is directed to drainage sumps and contained within the site boundary. All clean water is directed around the site.	2	3	8 (M)
Disturbance and compaction of soil through dismantling activities leading to rapid surface water runoff, potential	2	3	8 (M)	Vehicles, machinery and equipment should be limited to pre-defined	2	2	5 (L)

erosion and degradation of soil characteristics.				access routes within the Klipfontein Concentrator thereby minimising soil compaction.			
				Soil will be ripped, aerated and re-vegetated during mine closure as per the current mine closure plan.	2	2	5 (L)
The removal of topsoil and sub-surface soil during any form of excavation on site which is required in order to remove redundant infrastructure.	4	1	10 (M)	Spoil material removed should be used for site rehabilitation i.e. the filling of excavated areas.	2	2	5 (L)
				The topsoil should be stockpiled separately from the spoil material to maintain the integrity of the soil for rehabilitation purposes.	3	1	4 (L)
				Topsoil and spoil stockpiles should be kept below a height of 2 meters in an effort to reduce erosion.	2	2	5 (L)
				Avoid topsoil stripping and handling in windy or excessive rainy conditions.	2	2	5 (L)
				Erosional channels on the stockpiles are to be managed by the application of erosion stabilising measures.	2	2	5 (L)
				Litter and general waste is to be removed from the soil before stockpiling.	3	1	4 (L)
				Land use and land capability will remain as 'uses associated with mining', although the dismantling activity will assist in overall mine closure.	2	4	12 (M) (positive)
Air Quality							
Generation of particulate matter from dismantling and transportation of	3	5	20 (H)	Tarpaulins should be used to cover material being removed from site to	2	2	5 (L)



redundant materials and waste.				prevent the production of airborne (contaminated) dust material.			
				A complaints register must be provided to the public at an accessible location (i.e. site entrance point) to report any excessive dust incidents.	2	2	5 (L)
				Areas producing high concentrations of dust (access roads, soil stockpiles, dismantled material, etc.) should be sprayed with uncontaminated water, or a dust suppressant chemical to prevent dust production.	2	3	8 (M)
Generation of exhaust fumes from equipment, machinery and vehicles associated with the dismantling project.	2	5	16 (H)	All vehicles and machinery onsite should be maintained to ensure that emissions being created are not in excess of the manufacturer's specifications of exhaust CO ₂ output. Inspections should take place on a weekly basis.	2	3	8 (M)
				No burning of waste should be permitted onsite.	2	1	3 (L)
				The contractor should order any equipment to be repaired or withdrawn from use if evident that it is not operating optimally.	2	2	5 (L)
Release of volatile organic compounds (VOCs) associated with hydrocarbon spillages as well as potential spillages from equipment, machinery and vehicles during demolition.	2	4	12 (M)	PPE should be provided to all onsite employees.	2	2	5 (L)
				All hydrocarbon spillages are to be cleaned as soon as practically possible with the use of spill kits onsite. The waste material should be managed and disposed	2	3	8 (M)

				of as hazardous waste.			
Release of VOCs from potential rupture of the transformers and structures associated with the substation that are located onsite.	4	2	14 (H)	The transformers are located within a bunded area, however, spill kits are to be placed nearby to ensure any rupture is appropriately cleaned and the resultant waste material managed and disposed of according to the type of waste. Refer to Emergency Preparedness and Response Procedure.	2	2	5 (L)
				All employees removing the transformers are to be supplied with relevant PPE.	2	2	5 (L)
Surface Water							
The dewatering of the filtration plant, if released, could contaminate soil and resultant surface water runoff from the site boundary.	4	5	17 (H)	All water that is dewatered from existing sumps is to be pumped directly into Intermediate Bulk Containers (IBCs).	2	2	5 (L)
				The water should be tested, and should the results indicate that no contaminants (hydrocarbons) are present; the water can be used for dust suppression activities.	2	2	5 (L)
				If the water is deemed contaminated, the water should be treated at an existing licensed plant or alternatively disposed of as hazardous waste.	2	2	5 (L)
Dewatering of the water within the settling plant, if released, could contaminate soil and resultant surface water runoff from the site boundary.	4	5	17 (H)	All water that is dewatered from existing sumps is to be pumped directly into IBCs.	2	2	5 (L)

				The water can be tested, and should the results indicate that no contaminants (hydrocarbons) are present; the water can be used for dust suppression activities.	2	2	5 (L)
				If the water is deemed contaminated, the water should be treated at an existing licensed plant or alternatively disposed of as hazardous waste.	2	2	5 (L)
Rapid surface runoff can cause erosion and accumulate suspended solids, heavy metals and VOCs which could contaminate surface water resources down-gradient of the site boundary.	4	5	23 (H)	A clean and dirty water system is present at the Klipfontein Concentrator. All dirty water (i.e. water originating within the site) is directed to drainage sumps and contained within the site boundary. All clean water is directed around the site.	2	2	5 (L)
				Erosion and loss of soil must be prevented. Where necessary, erosion stabilising actions, such as gabions or re-vegetation must be implemented to prevent further erosion.	2	2	5 (L)
				All spillages are to be remediated prior to heavy rainfall events.	2	2	5 (L)
Incorrect management of contaminated soil identified onsite could have an impact on surface water runoff.	3	3	13 (H)	On identification of any spillage, the spillage is to be managed according to the EMP, the MSDS and the Emergency Preparedness and Response Procedure in an effort to prevent the contaminated material from entering nearby areas via a	2	2	5 (L)

				surface water medium.			
				If soil becomes contaminated, as a minimum it should be removed and placed on an impermeable surface (preferably a plastic sheet) and covered with a similar material to minimise surface water and soil contamination until the soil can be removed from the site.	2	2	5 (L)
Onsite disposal of materials (waste) associated with the dismantling activity could have an impact on the surface water runoff.	5	2	19 (H)	All waste is to be collected and transferred by a permitted waste contractor in accordance with the South African National Standard 10228 and disposed of at a permitted landfill site (unless required for reuse, recycling or treatment purposes). All records of waste removed, transported and disposed of is to be retained for a period of 5 years. Similarly, safety disposal certificates are to be retained as proof of correct disposal.	2	2	5 (L)
				Hazardous waste may not be stored onsite for a period longer than 90 days prior to disposal.	2	2	5 (L)
				Hazardous waste stored onsite should be undertaken in a manner which does not lead to contamination of soils, surface water and groundwater or air quality (i.e. contained within an impermeable container with not access to pollution	2	2	5 (L)

				pathways).			
				Under no circumstances will any waste material generated from the dismantling project be disposed of onsite permanently.	2	2	5 (L)
Groundwater							
The permeation of contaminated surface water may have an impact on underlying groundwater off the site.	4	3	14 (H)	A clean and dirty water system is present at the Klipfontein Concentrator. All dirty water (i.e. water originating within the site) is directed to drainage sumps and contained within the site boundary. All clean water is directed around the site.	2	2	5 (L)
				If soil becomes contaminated, it should be removed and placed on an impermeable surface (preferably a plastic sheet) and covered with a similar material to minimise surface water and soil contamination until the soil can be removed from the site.	3	3	8 (M)
				A spill kit should be available at all times during the decommissioning activities.	2	2	5 (L)
				All water that is dewatered from existing sumps is to be pumped directly into IBCs.	2	2	5 (L)
				The water can be tested, and should the results indicate that no contaminants (hydrocarbons) are present;	1	2	2 (L)

				the water can be used for dust suppression activities.			
				If the water is deemed contaminated, the water should be treated at an existing licensed plant or alternatively disposed of as hazardous waste.	2	2	5 (L)
Potential contamination of groundwater sources associated with mismanagement of materials generated from the dismantling process.	4	3	14 (H)	All materials resulting from dismantling are to be immediately removed from site or stored temporarily prior to removal from site.	1	3	4 (L)
				The temporary storage is to be undertaken on an impermeable surface in the case of dangerous goods.	3	3	8 (M)
				Inert waste to be temporarily stored in a designated area which is sign boarded to ensure awareness of any safety related issues.	3	3	8 (M)
				If soil becomes contaminated, it should be removed and placed on an impermeable surface (preferably a plastic sheet) and covered with a similar material to minimise surface water and soil contamination until the soil can be removed from the site.	3	3	8 (M)
Fauna							
Fauna within the site may be disturbed during the decommissioning activities. This may be as a result of heavy machinery and vehicles operating onsite.	3	5	20 (H)	Vehicles, machinery and equipment should be limited to pre-defined access routes within the Klipfontein Concentrator thereby minimising the overall footprint of the	2	2	5 (L)

				Proposed Project.			
				The area disturbed by the Proposed Project should be the minimum required.	2	2	5 (L)
				If rare or protected plant species are found on-site, a permit needs to be acquired for their relocation. The South African National Biodiversity Institute (SANBI) must be approached in order to give input and assist with the relocation.	2	2	5 (L)
				All personnel involved with demolition and dismantling activities are to be encouraged to remain within demarcated areas as indicated on the site plan.	2	2	5 (L)
Fauna could be harmed during transportation activities associated with the decommissioning of the infrastructure associated with the Klipfontein Concentrator.	2	3	8 (M)	No transportation should be allowed after dark due to visibility.	2	2	5 (L)
				Each vehicle transporting any material (contaminated waste, reusable and recyclable material, etc.) from site should have an emergency response procedure in case of emergencies.	2	2	5 (L)
				Vehicles leaving the site and entering the public road network should be authorised to do so in accordance with relevant legislation.	2	2	5 (L)

				Vehicles should be fitted with high visibility reflectors and lights as a warning to fauna and humans which may be in harm's way. Furthermore, vehicles should be fitted with reverse light and siren indicators.	2	2	5 (L)
Fauna may be impacted during the disturbance of contaminated soil from particle (contaminated dust) exposure.	2	4	12 (M)	Areas producing high concentrations of dust (access roads, soil stockpiles, dismantled material, etc.) should be sprayed with uncontaminated water, or a dust suppressant chemical to prevent contaminated dust production.	2	3	8 (M)
				Ingress of any fauna into the areas of concern should be monitored and measures applied to discourage fauna from entering these areas (establish barriers if deemed necessary).	2	3	8 (M)
Potential impacts on fauna from VOCs downwind of potential spillages and leakages of vehicles, machinery and equipment (including redundant equipment and transformers currently onsite at the concentrator).	2	3	8 (M)	Equipment, machinery and vehicles should be serviced regularly at an offsite location, and daily inspections should be conducted to ensure that the equipment, vehicles and machinery are performing at optimum performance standards and to ensure that there are no leakages of vehicle fuel/oil tanks.	2	2	5 (L)
				All hydrocarbon spillages are to be cleaned as soon as practically possible with the use of spill kits onsite.	2	2	5 (L)

				The waste material should be managed and disposed of as hazardous waste.			
Fauna occurring naturally in the area may be harmed by hunting or poaching from onsite employees during the decommissioning and remediation activities.	2	1	3 (L)	A site induction presentation should be given to site remediation workers, which states that the hunting or poaching of animals is strictly forbidden.	1	1	1 (L)
				Regular toolbox talks are to be held within which hunting and poaching onsite is prohibited.	1	1	1 (L)
				Issue information flyers containing all actions prohibited onsite including that of poaching and hunting.	1	1	1 (L)
				Erect posters to notify and emphasize the prohibition of such acts.	1	1	1 (L)
Flora							
The impact of demolition of infrastructure may lead to the destruction of vegetation occurring within pockets on the Klipfontein Concentrator site.	1	5	11 (M)	Vehicles, machinery and equipment should be limited to pre-defined access routes	1	4	7 (M)
				Noise abatement equipment should be retrofitted onto demolition equipment and machinery if generating excessive noise.	1	4	7 (M)
				Demolition activities should be limited to daylight hours for both disturbance and safety reasons associated with fauna and humans.	1	4	7 (M)
The destruction of endemic ecosystems that have developed on the site may be destroyed during decommissioning activities	2	5	16 (H)	As little vegetation as possible should be removed from the site in order to maintain as much biodiversity as possible and	2	2	5 (L)

				to reduce soil erosion.			
				Vehicles, machinery and equipment should be limited to pre-defined access routes within the site.	2	2	5 (L)
Alien and invasive plant species may be introduced during the decommissioning activities.	1	3	4 (L)	RPM-RS is to ensure that any alien and/or invasive plant species identified onsite are removed and disposed of in an adequate manner. Should significant ingress occur a specialist should be contacted to advice on the most reasonable practical solution.	1	1	1 (L)
				RPM-RS to manage alien and invasive species according to the Biodiversity Management Plan.	1	1	1 (L)
				Topsoil that is potentially contaminated with the seed of alien invader plants will not be permitted for use during the rehabilitation phase unless adequately treated and confirmed clear of alien species.	1	1	1 (L)
Noise							
Nuisance may result from noise generated by equipment, machinery and vehicles during decommissioning and transportation activities.	2	4	12 (M)	The vehicles and machinery utilised onsite should be fitted with silencer devices if the noise generated is deemed unreasonable and potentially a nuisance to surrounding occupants, fauna and/or employees.	1	3	4 (L)
				Once decommissioning activities commence, a	1	3	4 (L)

				boundary noise survey is to be undertaken to confirm that any areas in close proximity to sensitive receptors are not subjected to levels of noise above the typical rating levels provided in SANS 10103:2008. The survey can be taken by an RPM-RS representative however, the apparatus used and the relevant calibration certificate is to be retained in the onsite file.			
				Cognisance is to be taken of the noise standard requirements of the Occupational Health and Safety Act (No. 85 of 1993) as well as adhere to the EMS procedure.	1	3	4 (L)
Visual							
Generation of dust associated with the dismantling, transportation and disposal activities of the Proposed Project.	2	4	12 (M)	Areas producing high concentrations of dust (access roads, soil stockpiles, dismantled material, etc.) should be sprayed with uncontaminated water, or a dust suppressant chemical to prevent dust production.	2	3	8 (M)
Dismantling and removal of unnatural structures and infrastructure may improve the aesthetic impact on the surrounding area of the Klipfontein Concentrator.	2	5	16 (M) (positive)	Not applicable.			
Waste Management							
General waste in the form of litter may be generated from onsite employees during the decommissioning activities.	2	4	12 (M)	The site induction presentation and subsequent toolbox talks should include reference to the prohibition of littering	1	3	4 (L)

			17 (H)	onsite. Furthermore, the induction and toolbox talks are to contain reference to waste minimisation, management and correct disposal.			
				There should be an adequate number of general waste receptacles onsite at any given time during decommissioning and remediation activities. The receptacles are to be appropriately labelled, lined and covered.	1	3	4 (L)
				The general waste should be sent to a registered or licensed disposal facility unless re-use or recycling is deemed reasonable and achievable.	1	3	4 (L)
				Signage prohibiting littering and burning of waste onsite should be erected at strategic points around the site.	1	3	4 (L)
				No general waste is to be disposed of within any stockpiles onsite.	1	3	4 (L)
				Decommissioning and dismantling activities will result in usable and unusable materials. The unusable materials which cannot be recycled will require disposal as a waste material. The waste will require temporary storage, transport and permanent disposal.	3	4	17 (H)
				Hazardous and general wastes are to be stored and disposed separately.	1	3	4 (L)
				All reusable, recyclable and redundant materials are to be removed and sold by an independent removal	1	3	4 (L)



				company or be stored within the existing workshops for future reuse.			
				Hazardous waste - contaminated soil stockpiles is to be stockpiled separately to uncontaminated soil. Thereafter the contaminated soil should be removed from site and treated or disposed of as appropriate.	2	3	8 (M)
Traffic							
Contractor vehicles transporting waste materials to a landfill site, and transporting recyclable/reusable/redundant materials to the salvage yard, may impact on the traffic flow of the area.	3	5	20 (H)	Vehicles leaving the site should be scheduled at intervals and no transportation should be allowed after dark.	2	2	5 (L)
				A route of least resistance or impact is to be devised by the site manager (i.e. the route which contains the least right turns across oncoming traffic).	2	2	5 (L)
				Each vehicle transporting any material (contaminated waste, reusable and recyclable material, etc.) from site should have an emergency response procedure in case of emergencies.	2	2	5 (L)
				Vehicles should be covered if transporting waste considered dangerous or toxic and easily windborne.	2	2	5 (L)
				Vehicles should meet the standards of the Hazardous Substances Act and associated SANS code (10228) prior to entering	2	2	5 (L)

				the road network.			
The leakage/spillage of hazardous materials from the transport vehicles may result in the contamination of land en-route to the landfill site and salvage yard.	3	3	13 (H)	Every vehicle being used to transport contaminated soil should be fitted with a spill kit.	2	2	5 (L)
				Each vehicle should be provided with a spill response plan.	2	2	5 (L)
				The vehicle driver is to be appropriately trained on the measures which should be applied according to the spill response plan.	2	2	5 (L)
				The vehicle driver is to be in possession of the correct license (i.e. license should make provision for the transport of hazardous goods/wastes).	2	2	5 (L)
				Ensure that all vehicles transporting hazardous material conform to SANS 10228. Vehicles are to have appropriate signage providing accurate information about the nature and properties of the load.	2	2	5 (L)
Increase of traffic in and around the Klipfontein Concentrator during decommissioning and dismantling process.	1	4	7 (M)	Depending on the traffic loads expected, RPM-RS should inform the road traffic department (local and provincial departments).	2	2	5 (L)
				Determine the capacity of the road network in terms of structural integrity prior to utilising heavy vehicles.	2	2	5 (L)
				Monitor road deterioration on a monthly basis to determine if the activities	2	2	5 (L)

				onsite may be resulting in excessive damage (undertake corrective reasonable measures if deemed appropriate).			
				The majority of material and waste transport is to be undertaken in a manner which avoids prime time traffic periods (i.e. avoid period between 07:00am and 09:00am as well as the period between 16:00pm and 18:00pm).	2	2	5 (L)
Archaeological, Cultural and Heritage							
It is believed that no sites of archaeological, cultural or heritage significance exist onsite, therefore no impact is anticipated.	1	1	1 (L)	RPM-RS has developed a Heritage Management Plan for the Rustenburg Mining Operations. Any commitments identified within this plan will be adhered to.	1	1	1 (L)
				If an artefact/midden/grave is uncovered on-site, work in the vicinity must be stopped immediately; SAHRA is to be contacted and will appoint an archaeological consultant.	1	1	1 (L)
				Work may only resume, once clearance is given in writing by the archaeological consultant.	1	1	1 (L)
As the Klipfontein Concentrator was constructed during 1930, and was commissioned in 1931, the structures associated with the Klipfontein Concentrator are older than 60 years. The dismantling activities could have an impact on historic aspects within the area.	2	5	16 (H)	Upon request from the SAHRA, RPM-RS is to undertake a heritage impact assessment (HIA).	2	2	5 (L)
				Any mitigation measures proposed by the HIA specialist are to be adopted by RPM-RS during all Proposed Project Phases.	2	2	5 (L)

				Areas or structures identified by the HIA which are deemed to be of significant cultural or heritage value are to be maintained onsite. RPM-RS may negotiate with the SAHRA if RPM-RS deem the recommendation unreasonable.	2	2	5 (L)
Health and Safety							
Social ills associated with the temporary influx of contractors and employees into the area during the decommissioning activity.	2	3	5 (L)	Employment is to be undertaken in accordance with RPM-RS's Employment Policy and where possible all labour and contractors must be sourced locally within the municipality. No recruitment at the construction-site is permitted.	5	5	24 (H) (positive)
				The labour and recruitment Policy must be developed, displayed and implemented by the contractor.	5	5	24 (H) (positive)
				Principles of Black Economic Empowerment (BEE), gender equality and non-discrimination must be implemented where possible.	5	5	24 (H) (positive)
				All affected landowners, are to be notified of any disruptions in writing prior to commencement and kept up to date of schedule changes.	5	5	24 (H) (positive)
				A complaints register should be kept at an accessible point on the site. The following must be recorded: <ul style="list-style-type: none"> ■ Time, date and nature 	5	5	24 (H) (positive)



				<p>of complaint;</p> <ul style="list-style-type: none"> ■ Response and investigation undertaken; and ■ Corrective and preventative actions taken and by whom. 			
Potential injury from onsite accidents from machinery, equipment or vehicles during decommissioning.	5	3	22 (H)	PPE should be worn onsite at all times (hard hat, dust mask, steel tip boots, gloves, eye protection, ear plugs when required, high visibility vests and an overall, etc.).	2	2	5 (L)
				A safety induction presentation should be undertaken by the employees before entering the site.	2	2	5 (L)
				Decommissioning activities should only be conducted during daylight hours.	2	2	5 (L)
				Toolbox talks should be held on a weekly basis within which health and safety related issues are raised and addressed.	2	2	5 (L)
				Ensure a person qualified in first aid is available throughout the demolition/dismantling activities and retain a first aid kit onsite. A monitoring checklist should be maintained to ensure that the contents of the first aid kit is tracked to ensure 24/7 availability in the case of an emergency.	2	2	5 (L)
				Employees should be trained in health and safety policies, environmental	2	2	5 (L)

				awareness, emergency preparedness and HIV/AIDS awareness.			
Exposure of VOCs to employee's onsite/downwind during decommissioning activity specifically associated with hydrocarbon spillages and transformer rupture.	3	2	9 (M)	Ensure that employees are wearing appropriate PPE (emphasis on the respiratory equipment).	2	2	5 (L)
				Inform employees if a large spillage has taken place or if a risk is expected in terms of VOCs during an upcoming demolition activity.	2	2	5 (L)
				Compile an incident report in the case of any significant environmental related issue onsite. The report is to include reference to the cause of the incident, the impact resulting, the persons involved in resolving the incident and the action plan in place to avoid re-occurrence.	2	2	5 (L)
Potential fires onsite may impact on onsite employee safety.	2	2	5 (L)	Ensure a person qualified in firefighting is available throughout the Proposed Project activities.	2	2	5 (L)
				Reference to fires is to be included in the site induction in terms of the action plan should a fire be discovered.	2	2	5 (L)
				The central services fire department should be notified of the demolition schedule to remain aware of the potential for fires on the site. The department is to be updated in the case of any schedule changes.	2	2	5 (L)

				Appropriate PPE should be worn when undertaking activities of known fire risk.	2	2	5 (L)
				Ensure that fire extinguishers are available at all times at strategic locations on the site during decommissioning and remediation activities. A fire extinguisher plan should be displayed around the site at conspicuous locations.	2	2	5 (L)
				Emergency telephone numbers should be maintained and displayed onsite in the case of any emergencies onsite, including that of fires.	2	2	5 (L)
Employment							
The decommissioning activity may result in temporary employment.	4	5	23 (H) (positive)	Recruitment for the Proposed Project is to be undertaken in accordance with the contractor's labour and recruitment policy.	5	5	24 (H) (positive)
				No person may be allowed to part take in demolition activities unless trained to do so in terms of technical capability and health and safety related issues.	5	5	24 (H) (positive)
				The contractor is to issue the employee with training records following the successful completion of training courses.	5	5	24 (H) (positive)
				The training records are to be maintained onsite for monitoring and auditing purposes.	5	5	24 (H) (positive)
Potential accidents resulting from transport vehicles could have an adverse impact on both the social and biophysical	3	5	20 (H)	Site vehicles should enter the road network at scheduled intervals	2	2	5 (L)

environment.				(avoiding peak traffic hours) which will reduce the risk of accidents on the public road network.			
				The emergency response procedure should be followed in case of emergencies such as accidents.	2	2	5 (L)
				If a spillage results from the accident, the spilled material is to be removed from the accident scene and the impact resulting remediated immediately.	2	2	5 (L)
				In the event that the accident involves another vehicle the relevant authorities are to be notified of the incident and responsive action implemented based on legal and insurance requirements.	2	2	5 (L)
The decommissioning activity may result in temporary skills development.	1	1	1 (L) (positive)	Where possible, labour must be sourced locally within the municipality.	5	5	24 (H) (positive)
				Principles of equality, gender equality and non-discrimination must be implemented.	5	5	24 (H) (positive)

Indirect Impacts:

Impact Description	C	L	Impact Rating	Recommendation	C	L	Impact Rating
Waste Management							
During the decommissioning and dismantling of infrastructure associated with the Klipfontein Concentrator, mismanagement of reusable, recyclable and redundant materials may result in the generation of solid waste that will require disposal.	3	4	17 (H)	All inert waste is to be collected and transferred by a permitted waste contractor and disposed of at a permitted landfill site. All records of waste removed, transported and disposed of is to be retained for a period of 5 years. Similarly, safety disposal certificates are to be retained as proof	2	3	8 (M)



				of correct disposal.			
Traffic							
Potential accidents resulting from transport vehicles could have an adverse impact on both the social and biophysical environment.	5	2	19 (H)	Vehicles leaving the site should be scheduled at intervals and no transportation should be allowed after dark.	2	2	5 (L)
				Each vehicle transporting contaminated material should have an emergency response procedure in case of emergencies.	2	2	5 (L)
Employment							
As reusable, recyclable and redundant materials may be made available for commercial resale, permitted communities may be positively affected by the Proposed Project.	4	3	18 (H) (positive)	All reusable, recyclable and redundant material should be sold to local Small Medium Micro Enterprises (SMME) where possible in order to support local business. The contractor appointed is to remove the material to the salvage yard where it can be sold.	5	5	24 (H) (positive)
				The reusable, recyclable and redundant material cannot be sold directly from the site due to health and safety related issues/requirements.	5	5	24 (H) (positive)
				Central Services are to arrange for the material to be stored at a facility which is sufficient to handle the volume of material and subsequently sell the material.	5	5	24 (H) (positive)
				RPM-RS is to consider undergoing a local SMME notification process to ensure that all local enterprises are aware of the potential opportunity afforded. RPM-RS is to maintain all records of notification.	5	5	24 (H) (positive)
				In the case of dangerous goods, the purchaser is to be authorised to handle such materials (i.e. be in possession or the relevant dangerous goods transport certificate and ensure that the destination is authorised to facilitate the storage, management or use of such a material).	5	5	24 (H) (positive)

Cumulative Impacts:

- *Dust Generation* – The cumulative impact of dust generation has a potentially medium significance as the mine does not currently generate dust within the sites proposed for dismantling. However, with the implementation of mitigation measures, as described above, the significance of this impact will be low.
- *Increased Traffic Flow* – The demolition activities will result in the transportation of various materials by road. This will result in a moderate increase of vehicle movement on and around site during the Decommissioning and Demolition Phase. However, with the implementation of

mitigation measures, as described above, the significance of this impact will be low.

- *Waste* – Disposal of waste generated from the dismantling activities could have a cumulative impact on the available space of the landfill. As the majority of the waste generated will be reused/recycled or sold as scrap, it is anticipated that this cumulative impact will not be significant.
- *Employment Opportunities* – As reusable, recyclable and redundant materials may be made available for commercial resale, permitted communities may be positively affected by the Proposed Project.

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.

The information contained in the Draft BA Report provides a detailed description of the Proposed Project, the motivation to undertake the work and the stakeholder consultation process that was followed. The report also provides an environmental impact assessment that identified potential impacts that may arise from the decommissioning activities and an EMPr that considers the impacts of the Decommissioning Phases associated with the Proposed Project.

Provided that the measures set out in the EMPr are adhered to, no significant negative biophysical or socioeconomic impacts should arise during the decommissioning activity.

It is the view of the EAP that the Proposed Project is needed to ensure the long-term health and safety of surrounding communities and the natural environment.

Alternative A (preferred alternative)

The preferred alternative involves the undertaking of the dismantling and demolition activities via a specialised contractor. The materials that can be reused, recycled or have commercial value will be transported to an offsite recycling company, whereas redundant equipment and materials that may be reused by RPM-RS will be stored onsite in workshops. Uncontaminated waste will be collected by a licensed waste contractor and transported by road to a suitable licensed landfill facility. The contaminated soil on site resulting from historic activities at the Klipfontein Concentrator will not be remediated as part of the Proposed Project however, will be investigated upon mine closure in line with mine closure objectives.

No-go alternative (compulsory)

Should environmental authorisation not be granted by the NWDEDECT, the infrastructure associated with the Klipfontein Concentrator will not be dismantled and removed which will have direct costs implications related to unnecessary care and maintenance. The existence of the redundant Klipfontein Concentrator poses a safety risk to any members of the public whom gain access to the facility (unauthorised).

During the dismantling activities, reusable, recyclable and materials with commercial value will be salvaged from the redundant concentrator and either stored onsite for future RPM-RS reuse or transported to offsite registered recycling merchants. The said activities will not be implemented should the Proposed Project not be authorised.

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
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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):

--

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:

The conditions are set out in the draft EMPr (**Appendix F**).

All the conditions in the EMPr must be implemented by the responsible parties.

Is an EMPr attached?

Yes✓	No
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The EMPr must be attached as **Appendix F**.

SECTION F: APPENDICES

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

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

Appendix A: Maps/Figures

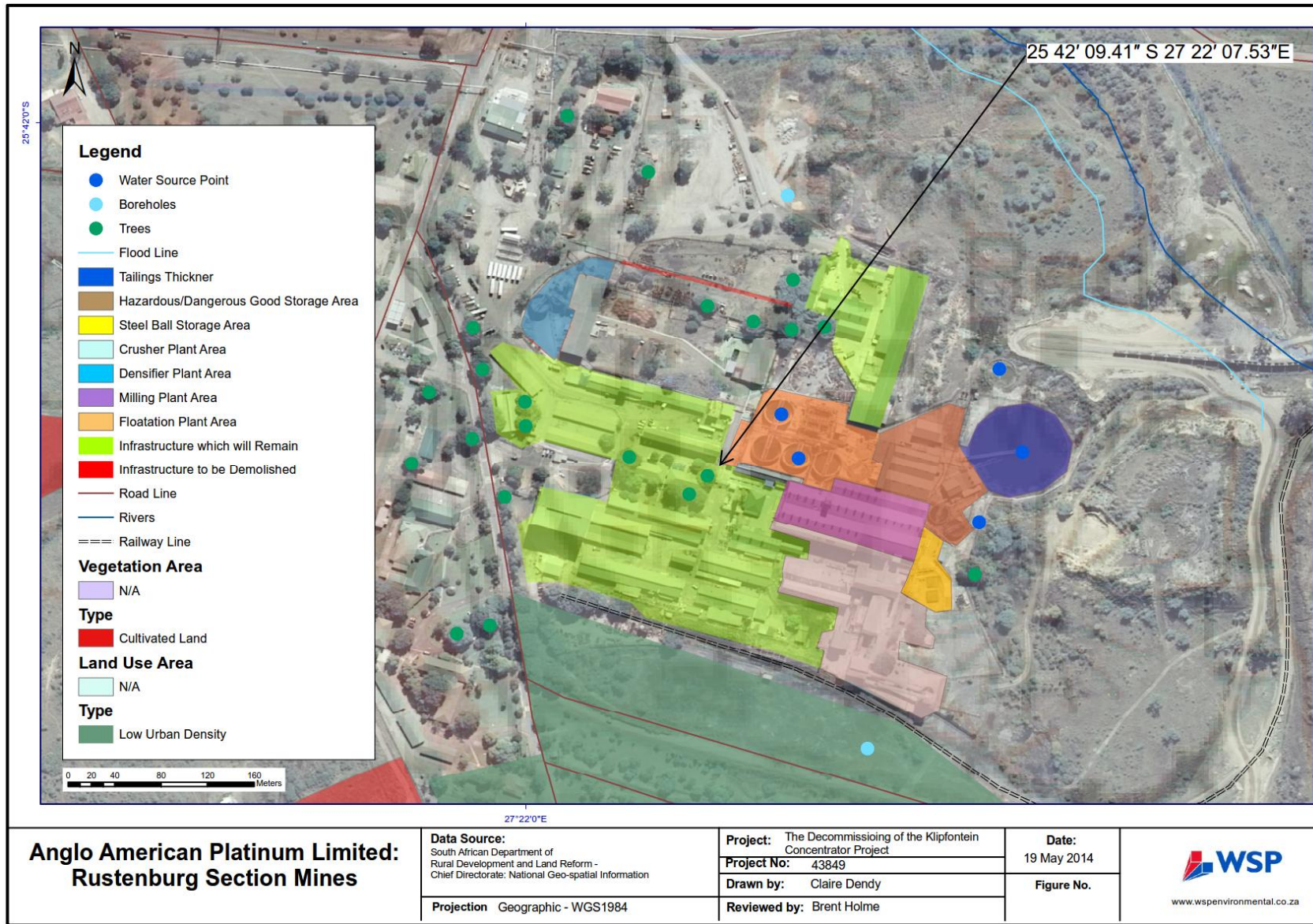


Figure 1: Site Plan

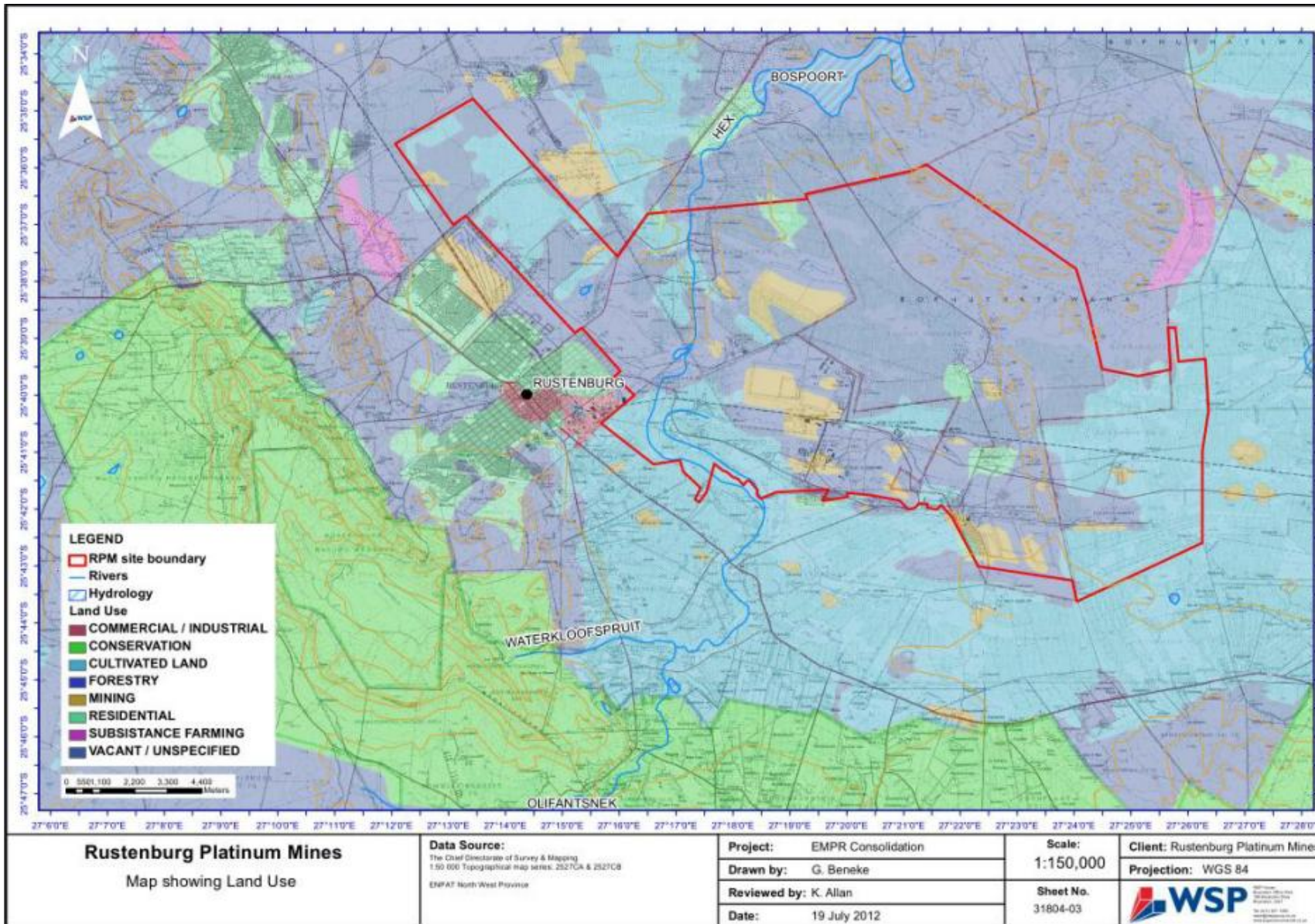


Figure 2: Current Land Use

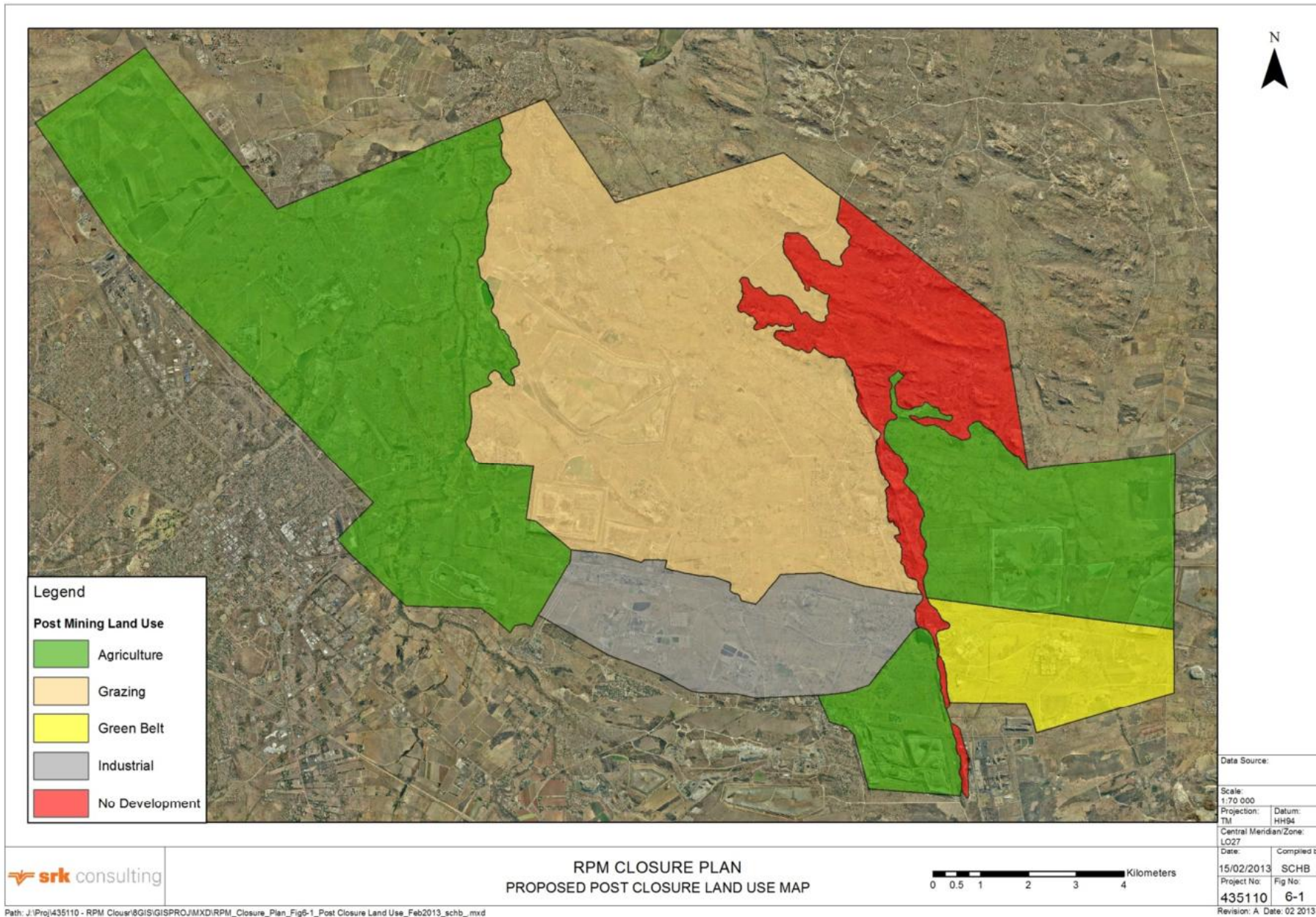


Figure 3: Conceptual Planned Land Uses (RPM-RS Final Closure Plan, 2012)

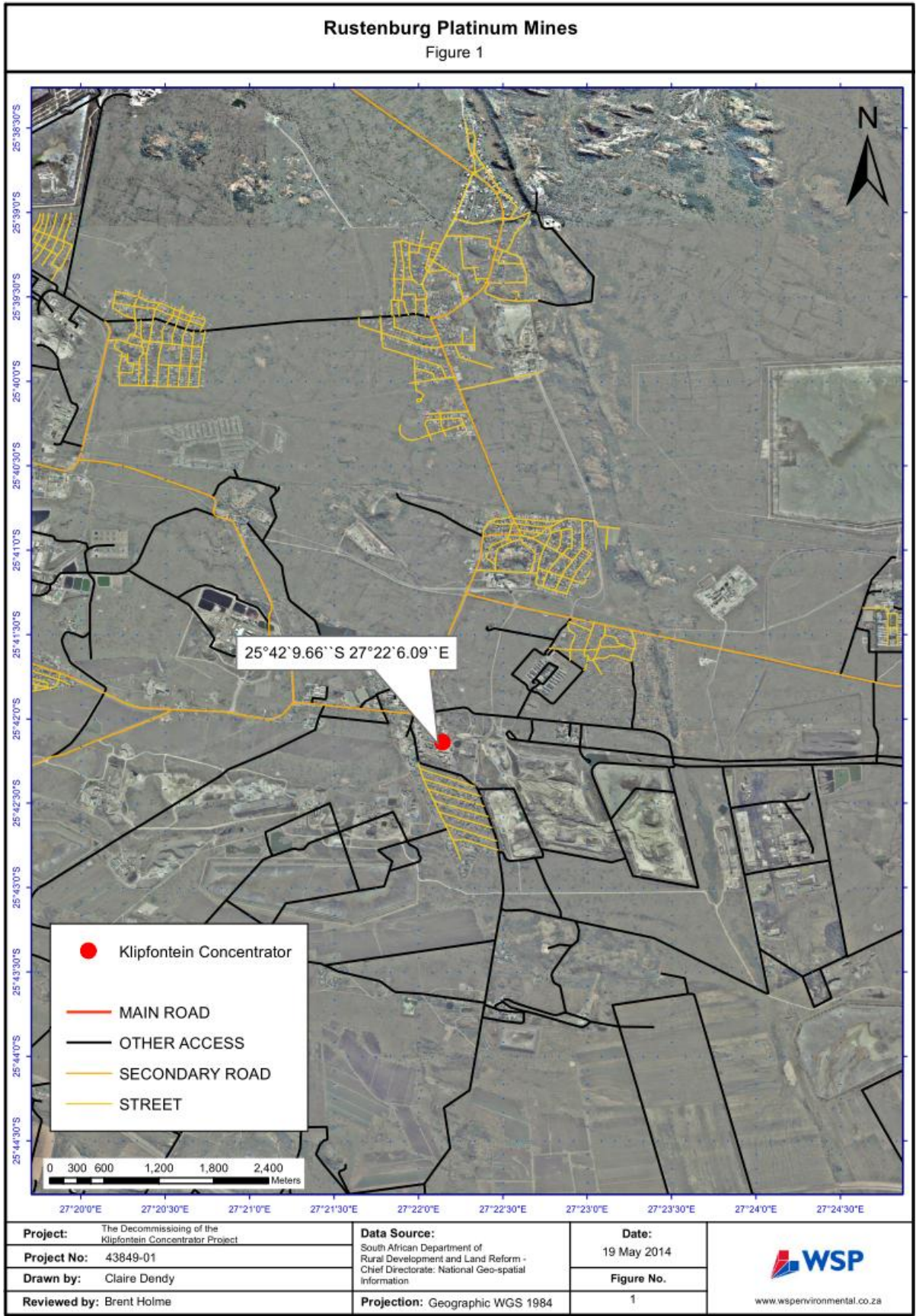


Figure 4: A3 locality map

Appendix B: Site Photographs

Appendix C: Facility Illustration(s)

Figure 1: Facility Illustration Flow Diagram

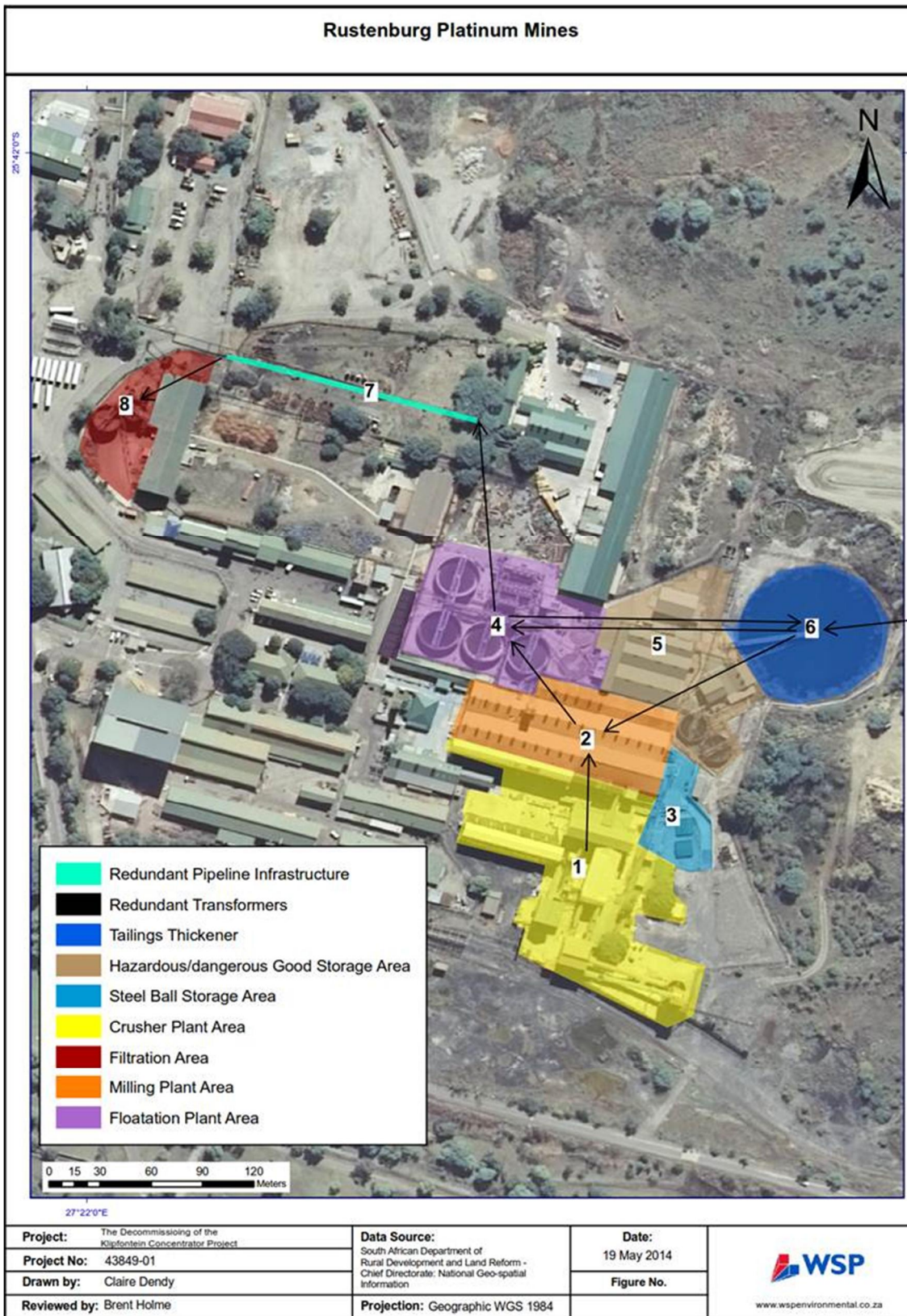


Figure 2: Facility Illustration Photo Plate

Appendix D: Specialist reports (including terms of reference)

Appendix E: Public Participation

Appendix F: Environmental Management Programme Report (EMPr)

Appendix G: Other Information

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