LIMPOPO
PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

BASIC ASSESSMENT REPORT - EIA REGULATIONS, 2010

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.

File Reference Number:	
	(For official use only)
NEAS Reference Number:	
Date Received:	
Due date for acknowledgement:	
Due date for acceptance:	
Due date for decision	

Kindly note that:

1. The report must be compiled by an independent Environmental Assessment Practitioner.

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. 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 Department of Economic Development, Environment and Tourism as the competent authority (Department) for assessing the application, it may result in the rejection of the application as provided for in the regulations.

5. An incomplete report may be returned to the applicant for revision.

6. Unless protected by law, all information in the report will become public information on receipt by the department. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

7. The Act means the National Environmental Management Act (No. 107 of 1998) as amended.

8. Regulations refer to Environmental Impact Assessment (EIA) Regulations of 2010.

9. The Department may require that for specified types of activities in defined situations only parts of this report need to be completed. No faxed or e-mailed reports will be accepted.

10. This application form must be handed in at the offices of the Department of Economic Development, Environment and Tourism:-

Postal Address:	**Physical Address**:
Central Administration Office Environmental Impact Management P. O. Box 55464 **POLOKWANE** 0700	Central Administration Office Environmental Affairs Building Cnr Suid and Dorp Streets **POLOKWANE** 0699

Queries should be directed to the Central Administration Office: Environmental Impact Management:-

For attention: Mr E. V. Maluleke
Tel: (015) 290 7138/ (015) 290 7167
Fax: (015) 295 5015
Email: malulekeev@ledet.gov.za

View the Department's website at http://www.ledet.gov.za/ for the latest version of the documents.

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" or appointment of a specialist for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

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

Rustenburg Platinum Mines propose to erect a chrome recovery plant at its Amandelbult Section in order to extract chrome, which is a by-product of the platinum beneficiation process. The proposed chrome recovery plant will be installed prior to the secondary circuit, MIG process and scavenger flotation. The new chrome recovery plant will be of a modular design consisting of twin modules of spiral concentrators, employing a multi-stage configuration of separators and spirals. The two final chrome concentrates will be pumped to the respective stockpile areas via their own dewatering separators. From the siding the chrome material will be loaded via front end loaders into trucks or wagon trains were it will be exported to the Port of Richards Bay.

Chrome from the stockpile will be transported from a despatch facility via either a rail siding and rail link to the existing railway system or a proposed tarred access road and thereafter connecting with the existing regional road network to transport the final product. These facilities will comprise typical infrastructure i.e. weighbridges and Front End Loaders.

Proposed Access Road

The proposal is to construct a 1km and 8m wide tarred access road which is dedicated to the provision of access to a proposed Chrome Recovery Plant and The Amandelbult Concentrator.

Proposed Railway line extension

The proposal is to extend the existing railway line to construct a 1.5km rail siding which will be able to accommodate a 100 wagon train. The proposed rail siding is approximately 1.5km in extent with a servitude of approximately 30 in extent. The purpose of the rail siding will be to connect the CRP to the existing railway line for the distribution of the chrome.

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;

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

(b) the type of activity to be undertaken;

(c) the design or layout of the activity;

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

(e) the operational aspects of the activity; and

(f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the Department 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.

The construction of a short extension and rail siding will provide a link to this existing railway line and will thus allow transport of the stockpiled chromite concentrate via rail. The option to load and dispatch the chromite concentrates by road will also be provided. In this instance, trucks will be used to transport the stockpiled concentrates to the Transnet depot in Pretoria using the existing national road network. Two options to dispatch the final Chrome product has been identified (either via road or rail), however both has to be applied for and constructed due to potential and very real service disruptions by Transnet. Both transport infrastructure is therefore being applied for and assessed.

During the initial planning phase a railway alignment investigation was undertaken by the railway engineers RNH. Based on the project requirements detailed above, potential future extensions associated with the existing Concentrator Plant as well as the requirements of Eskom the alignment presented in this report (see Figure 1) was deemed to be the most technically feasible. Please refer to the railway siding alternatives initially considered in Figure 2.

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

3. ACTIVITY POSITION

There are no alternative locations as the alignment of the railway siding as well as the access road was dictated by the position of CRP and its associated stockpiles.

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, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites, if applicable.

	Latitude (S):			**Longitude (E):**		
Alternative:						
Alternative S1[2] (preferred or only site alternative)	°	'	"	°	'	"

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

Alternative S2 (if any)	°	'	"	°	'	"
Alternative S3 (if any)	°	'	"	°	'	"

In the case of linear activities:

Alternative:	**Latitude (S):**			**Longitude (E):**		
Alternative S1 (preferred or only route alternative) – **Railway Line**						
• Starting point of the activity	27◦	20'	30.4"	24◦"	48'	3.2"
• Middle/Additional point of the activity	27◦	20'	14.8"	24◦	48'	2.5"
• End point of the activity	27°	19'	48.3"	24°	47'	46.9"
Alternative S1 (preferred or only route alternative) – **Access Road**						
• Starting point of the activity	27°	20'	2.3"	24°	47'	52.5"
• Middle/Additional point of the activity	27°	20'	7.3"	24°	47'	59.3"
• End point of the activity	27°	20'	12.7"	24°	48'	2.8"

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

4. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative: N/A	**Size of the activity:**
Alternative A1[3] (preferred activity alternative)	m^2
Alternative A2 (if any)	m^2
Alternative A3 (if any)	m^2

or,

<u>for linear activities:</u>

Alternative:	**Length of the activity:**
Road (preferred activity alternative)	1000m
Railway Line (preferred activity alternative)	1500m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Size of the site/servitude: _____

[3] "Alternative A.." refer to activity, process, technology or other alternatives.

Alternative:

Road (preferred activity alternative)	8 000m^2
Railway Line (preferred activity alternative)	45 000m^2

5. SITE ACCESS

Does ready access to the site exist?	**YES**	**NO**
	✓	
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

Not Applicable

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

6. SITE OR ROUTE PLAN

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. See Figure 1 in Appendix A

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 Department of Water Affairs);
- 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.

7. 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. See Appendix B

8. 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. See Design drawings in Appendix C

11. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion? The expected capital value includes the Chrome Recovery Plant, for which the listed activities are required to service.	R 400 Million	
What is the expected yearly income that will be generated by or as a result of the activity?	2 years post construction approximately R 210 Million a year.	
Will the activity contribute to service infrastructure?	YES ✓	NO
Is the activity a public amenity?	YES	NO ✓
How many new employment opportunities will be created in the development phase of the activity?	100	

What is the expected value of the employment opportunities during the development phase?	Approximately R 40 Million for both on construction and operational personnel
What percentage of this will accrue to previously disadvantaged individuals?	60%
How many permanent new employment opportunities will be created during the operational phase of the activity?	50
What is the expected current value of the employment opportunities during the first 10 years?	Approximately R 40 Million for both on construction and operational personnel
What percentage of this will accrue to previously disadvantaged individuals?	60%

9(b) Need and desirability of the activity

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

NEED: The proposed access road and rail siding is intended to provide access and infrastructure for distribution of the final chrome product to the extracted at proposed Chrome Recovery Plant at the Amandelbult Concentrator. Should the access road and rail siding not be constructed the feasibility of the Chrome Recovery Plant will be significantly reduced and the risk is that the R400 million investments will not be realised.			
i.	Was the relevant municipality involved in the application?	YES ✓	NO
ii.	Does the proposed land use fall within the municipal Integrated Development Plan?	YES ✓	NO
iii.	If the answer to questions 1 and / or 2 was NO, please provide further motivation / explanation:		
	Not Applicable		

DESIRABILITY:

i.	Does the proposed land use / development fit the surrounding area?	YES ✓	NO
ii.	Does the proposed land use / development conform to the relevant structure plans, Spatial development Framework, Land Use Management Scheme, and planning visions for the area?	YES ✓	NO
iii.	Will the benefits of the proposed land use / development outweigh the negative impacts of it?	YES ✓	NO
iv.	If the answer to any of the questions 1-3 was NO, please provide further motivation / explanation:		
	Not Applicable		
v.	Will the proposed land use / development impact on the sense of place?	YES	NO ✓
vi.	Will the proposed land use / development set a precedent?	YES	NO ✓
vii.	Will any person's rights be affected by the proposed land use / development?	YES	NO ✓
viii.	Will the proposed land use / development compromise the "urban edge"?	YES	NO ✓
ix.	If the answer to any of the question 5-8 was YES, please provide further motivation / explanation.		
	Not Applicable		

BENEFITS:			
i.	Will the land use / development have any benefits for society in general?	YES ✓	NO
ii.	Explain:		
	The proposed development would contribute to the country's GDP as a portion of the chrome will be earmarked for the export market.		
iii.	Will the land use / development have any benefits for the local communities where it will be located?	YES ✓	NO
iv.	Explain:		

	The proposed development will create employment (300 during construction and 60 during the operational phase) as well as business opportunities for locals during both the construction and operational phase of the project. In addition, the establishment of a Community Trust as well as the proposed Community ownership potential, creates an opportunity to support local economic development in the area. These initiatives represent a significant social benefit to the surrounding communities.

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

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

Title of legislation, policy or guideline:	Administering authority:	Date:
Minerals and Petroleum Resources Development Act	DMR	20 May 2013
Environmental Impact Assessment Regulations	LEDET	11 January 2013

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES ✓	NO
If yes, what estimated quantity will be produced per month?	54 m^3	

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

It is anticipated that the solid waste that will be produced during the construction period of the will include construction debris contaminated by oils, empty drums, empty paint and coating containers, waste paint and/or solvents, waste concrete, rubble, scrap metal, waste cable, waste plastic, batteries, light bulbs, circuit boards, domestic waste, pallets etc.

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

General and domestic waste generated will be collected and transported by an Independent waste handling company and disposed of at Thabazimbi Landfill Site. Any hazardous waste generated will be transported by Enviroserv Waste Management and disposed of at Holfontein Landfill Site

Will the activity produce solid waste during its operational phase?	YES ✓	NO
If yes, what estimated quantity will be produced per month?	18 m^3	

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

The waste hierarchy of prevent, minimise, reduce, re-use, recycle and disposal should be applied be applied. This includes separation, treatment and on/off-site handling. A record of all waste mass per waste type generated by the CRP is to be kept.

The types of non-mineral waste expected to be produced by the proposed development are:

- General waste: domestic and building waste;
- Industrial waste: wood, rubber, paper and refurbishable waste (pumps, valves etc,); and
- Hazardous waste: hydrocarbon or chemical contaminated waste.

Industrial waste is to be handled at designated waste areas. All scrap metal should be sorted and sold to scrap metal dealers. Used tyres are to be taken back to the suppliers and used oil is returned to suppliers for refining. Wastes such as paper and fluorescent tubes should be sorted for recycling at source.

It should be ensured that used/ expired/ surplus products and/or their containers are locally returnable (e.g. tyres, batteries and oils), procurement contracts require the suppliers to take responsibility for their removal from the site for correct off-site management. Clear responsibility for the waste generated by the operation is required. The operation should, where applicable, apply a cradle-to-grave approach to ownership of waste management and disposal.

It is anticipated that the bulk of the hazardous chemicals transported and stored on site will be hydrocarbons, namely diesel and oils. All hazardous substances will be controlled by the existing mine stores at Amandelbult, applying the same procedures that are currently in use. Qualified carriers should be appointed to transport/ deliver hazardous substances, in accordance with formal documented procedures, legal and other requirements. The necessary approvals for the hazardous substances present on site will be obtained. A procedure should be established for the review and approval of new hazardous substances, with conditions if necessary, before they are allowed on site

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

General and domestic waste generated will be collected and transported by an Independent waste handling company and disposed of at Thabazimbi Landfill Site. Any hazardous waste generated will be transported by a private waste contractor and disposed of at Holfontein Landfill Site

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 department 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 department and request a change to an application for scoping and EIA.

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

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

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO ✓
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 Department to determine whether it is necessary to change to an application for scoping and EIA.

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

If yes, provide the particulars of the facility:

Facility name:	Amandelbult Mine Sewage Plant		
Contact person:	Nishi Haripursad		
Postal address:	Anglo Platinum , Amandelbult Mine, Limpopo		
Postal code:			
Telephone:	014 598 2169	Cell:	
E-mail:	nishi.haripursad@angloamerican.com	Fax:	

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

All stormwater emanating from the proposed access road and railway line will be directed to the Mines existing Pollution Control Dam for reuse and recycling.

11(c) Emissions into the atmosphere

Please refer to the Air Emissions Specialist Study in Appendix D

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

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

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

Construction Phase

During the construction phase there is the potential for dust generation. The possible sources of increased dust during construction include wind erosion on exposed surfaces cleared for the proposed access road and railway extension as well as heavy construction activity such as vehicle entrainment and material and debris handling.

Using the dispersion model (refer to the Air Quality Assessment Report attached as Appendix D of the BAR for the modeling methodology) the annual average PM10 concentrations for each specified receptor point were calculated. According to the predictions generated from the model used, the annual average PM10 concentrations will be slightly elevated at the receptors in close proximity to the construction activity (<300 m), with concentrations exceeding the annual PM10 standard (50 µg/m^3) at five receptors, Hostel 01, Hostel 02, Hostel 03, Village 02 and the Environmental Offices (Figure 13 of the Air Specialist Report in Appendix D). With the highest annual average concentration predicted at the Environmental Offices, which are located south from the proposed CRP project area. The daily average PM10 concentrations predicted indicate that the same five receptors will exceed the daily standard (Figure 14 of the Air Specialist Report in Appendix D). If mitigation measures are implemented, no receptors will exceed any national standard.

Using the dispersion model the annual and daily average PM2.5 concentrations for each specified receptor point were predicted. According to the predictions generated from the model used, the annual average PM2.5 concentrations will be slightly elevated at the receptors close to the construction activity (<300m), the highest annual average concentration is predicted at the boundary fence of the Mine Hostel (Hostel 01), located 50 m from the construction area. It is predicted that no receptors however will exceed the current PM2.5 national annual standard (25 µg/m3) (Figure 15 of the Air Specialist Report in Appendix D). It is predicted that the average daily PM2.5 concentrations (65 µg/m3) however will be exceeded at the Environmental Office and Village 02 if mitigation measures are not implemented.

Operational Phase

During the operational phase the sources of emissions are predicted to be particulate matter generation from the transport of chromite to and from the stockpiling area, windblown dust from exposed areas as well as dust from vehicle entrainment on unpaved roads. It should however be noted that it is the intention to tar the proposed access road.

The predicted daily average PM10 concentrations within the CRP project area will exceed current national standard and several of the future standards if mitigation measures are not implemented. The predicted annual average PM10 concentrations are all well below the current and future standards for PM10, with the exception of Village 01 which exceeds both current and future standards during the worst case scenario, without the implementation of mitigation measures.

Based on the dispersion model the predicted daily and annual average PM2.5 concentrations will not exceed the current standards if mitigation measures are implemented (Figure 19 and 20 of the Air Specialist Report in Appendix D). If mitigation measures are not implemented however it is predicted that the daily average PM2.5 concentrations at Village 02 will exceed future standards.

Decommissioning Phase

During the decommissioning, closure and post- closure phases the following possible sources of fugitive dust were identified:

- Grading of sites;
- Infrastructure demolition;
- Infrastructure rubble piles;
- Transport and dumping of building rubble; and
- Preparation of soil for revegetation- ploughing and addition of fertiliser, compost etc.

The above activities could potentially increase dust levels and decrease ambient air quality during the decommissioning phase. However, the decreased ambient air quality levels will be temporary and are therefore considered to be of a low significance rating prior to as well as after the implementation of mitigation measures.

11(d) Generation of noise

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

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

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

The noise associated with the railway siding and access road will mainly be intermittent from the loading of product into the trucks or wagons. The noise generated will not exceed that which is currently being experienced at the existing concentrator plant, which is currently within the SANS 10103 maximum limit for noise levels in residential areas.

12. WATER USE

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

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

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: Not Applicable

Litres	
YES	NO ✓

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

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted. Not Applicable

13. ENERGY EFFICIENCY

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

Lighting will be supplied for the road. Design measures for the lighting employed to save energy include: reduction of luminaries e.g. from 4 to 2 for the 15m median masts, which now have improved reflectors, resulting in energy savings of 50%; and use of energy efficient high pressure sodium and mercury vapour lamps.

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

Not applicable

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g. A): ☐

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

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

YES	NO ✓

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.

Information applicable to the Access Road and Railway Siding

Property description/physical address:	Amandelbult Platinum Mine, Limpopo

(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 Amandelbult 383, Thabazimbi Municipality, Waterberg District Municipality

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 ✓
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, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection)

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1: Access Road

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

Alternative S1: Rail way Siding

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

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site: Applicable to the proposed access road and railway siding

2.1 Ridgeline		2.6 Plain	
2.2 Plateau		2.7 Undulating plain / low hills	✓
2.3 Side slope of hill/mountain		2.8 Dune	
2.4 Closed valley		2.9 Seafront	
2.5 Open valley			

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: Applicable to the proposed access road and Railway Siding		**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

Applicable to the proposed Access Road and Railway Siding

Indicate the types of groundcover present on the site:

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

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

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.

Please refer to the Ecologist Specialist Report in Appendix D.

5. LAND USE CHARACTER OF SURROUNDING AREA

Applicable to the proposed access road and railway siding

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:

5.1 Natural area	✓	5.22 School	
5.2 Low density residential	✓	5.23 Tertiary education facility	
5.3 Medium density residential		5.24 Church	
5.4 High density residential		5.25 Old age home	
5.5 Medium industrial [AN]		5.26 Museum	
5.6 Office/consulting room		5.27 Historical building	
5.7 Military or police base/station/compound		5.28 Protected Area	
5.8 Spoil heap or slimes dam [A]	✓	5.29 Sewage treatment plant [A]	
5.9 Light industrial		5.30 Train station or shunting yard [N]	
5.10 Heavy industrial [AN]	✓	5.31 Railway line [N]	✓
5.11 Power station		5.32 Major road (4 lanes or more)	

5.12 Sport facilities		5.33 Airport [N]	
5.13 Golf course		5.34 Harbour	
5.14 Polo fields		5.35 Quarry, sand or borrow pit	
5.15 Filling station [H]		5.36 Hospital/medical centre	
5.16 Landfill or waste treatment site		5.37 River, stream or wetland	
5.17 Plantation		5.38 Nature conservation area	
5.18 Agriculture		5.39 Mountain, koppie or ridge	
5.19 Archaeological site		5.40 Graveyard	
5.20 Quarry, sand or borrow pit		5.41 River, stream or wetland	
5.21 Dam or Reservoir		5.42 Other land uses (describe)	

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

Not Applicable

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

If YES, specify and explain:	Not Applicable
If NO, specify:	The primary objective of the proposed railway siding and access road is to provide access to and a means of distributing the finished product associated with a proposed Chrome Recovery Plant to be built adjacent to the existing Anglo Concentrator Plant. The proposed access road and railway siding will not influence the day-to-day operations of the existing Concentrator Plant.

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

If YES, specify and explain:	Not Applicable
If NO, specify:	Not Applicable

6. CULTURAL/HISTORICAL FEATURES

Applicable to the proposed access road and Railway Siding. Refer to the Heritage Specialist Report in Appendix D

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

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

Briefly explain the findings of the specialist:	Not Applicable

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

If yes, please 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.

SECTION C: PUBLIC PARTICIPATION

Please refer to the Comments Report in Appendix E for proof of compliance.

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 department) at a place conspicuous to the public at the boundary or on the fence of—

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

  (ii) any alternative site mentioned in the application;

(b) giving written notice to—

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

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

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

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

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

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

  (vii) any other party as required by the department;

(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 local municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official *Gazette* referred to in subregulation 54(c)(ii); and

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

(i) illiteracy;

(ii) disability; or

(iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

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

(b) state—

(i) that the application has been submitted to the department 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

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

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the department 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 these Regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

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

Please refer to the Comments Report in Appendix E for proof of compliance.

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 these Regulations and be attached to this application. The comments and response report must be attached under Appendix E.

Please refer to the Comments Report in Appendix E for proof of compliance

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. Refer to the Authorities Contact details in Appendix E.

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.

Name of Authority informed:	**Comments received (Yes or No)**
Heritage Resources Agency	Pending
Thabazimbi Municipality	Yes (Verbal comments at the Community Engagement Forum). Written comments pending
Waterberg District Municipality	Pending
Roads Department	Pending
Department of Mineral Resources	Pending
Department of Water Affairs	Yes (Verbal comments at the Public Meeting). Written comments pending

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 subregulation to the extent and in the manner as may be agreed to by the department.

Proof of any such agreement must be provided, where applicable.

Has any comment been received from stakeholders?	**YES**	**NO**
	✓	

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application): Please refer to copies of the feedback received in Appendix E.

In order to ascertain the concerns or issues regarding the proposed access road and railway siding a public involvement process was undertaken. The public participation process includes the publication of media notices, the erection of site notices, distribution of background information documents, commenting of this Draft Basic Assessment Report, focus group meetings with community leaders as well as community meetings.

The comments received from Interested and Affected Parties are summarised below. Please refer to the Comments and Response Report for the actual comments received and associated response.:

- Queried what the public consultation process would entail and whether I&APs would have access to all the relevant reports;
- Queried whether proposed development would impact on the ground and/ or surface water quality.
- Queried whether the proposed development would impact on the ambient air quality.
- Queried what the rehabilitation plan would be for the proposed development
- Queried what employment and procurement opportunities would be associated with the development.

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.

Based on the public involvement exercise undertaken the following issues was raised by I&APs:

- Concern was raised regarding the potential ground and/ or surface water impacts
- Concern was raised regarding the potential impact on the ambient air quality

- Queried what the rehabilitation plan would be for the proposed development
- Queried what employment and procurement opportunities would be associated with the development and what the social impact would be on the surrounding communities.

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): Please also refer to the full assessment in Appendix G.

Concern: Potential ground and/ or surface water impacts
Response: The proposed development impact on ground and surface water has been assessed and the impact is considered to be low with the implementation of mitigation measures.
Concern: Potential impact on the ambient air quality
Response: The proposed development impact on the ambient air conditions has been assessed and the impact is considered to be low with the implementation of mitigation measures. This impact is however largely related to the Chrome recovery plant and associated stockpiles, which are not listed activities in terms of the EIA Regulations.
Concern: Rehabilitation of disturbed areas once the mine is closed.
Response: As part of the requirements of the MPRDA, a rehabilitation plan and financial provision has been developed for this project, including the removal and rehabilitation of the access road and railway siding.
Concern: Potential social impact
Response: The social impact of the proposed development was assessed and a Social Impact Assessment undertaken. The impacts with the implementation of mitigation measures is considered to be medium (positive).

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

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

Alternative (preferred alternative) Applicable to the Road and Rail Siding. Refer to Appendix G for impact assessment report, together with the specialist studies.

Planning and Design Phase

Direct impacts:

Aspect	Description	Rating after the implementation of mitigation measures
Ecology	The alignment of the road will impact on 8000m^2 veldt which is considered to be low to medium in sensitivity.	Low
	The alignment of the rail siding will impact on approximately 15000 m^2 of natural veldt which is	Medium

	considered to have low to medium ecological sensitivity and approximately 7500m^2 veldt which is potentially medium to high in ecological sensitivity.	
Ambient noise levels	An increase in the ambient noise levels particularly at the hostels and the Rethabile mine Village	Low
Traffic	The increase in traffic movement could impact on the adjacent communities from a safety and road usage perspective.	Low

Indirect impacts:

There will be no explorative activities or field studies conducted during the planning and design phase. There are no indirect impacts associated with the planning and design phase.

Cumulative impacts:

There will be no explorative activities or field studies conducted during the planning and design phase. There are no cumulative impacts associated with the planning and design phase

Construction Phase

Direct impacts:

Aspect	**Description**	**Rating after the implementation of mitigation measures**
Stormwater Management (Surface water)	Spillages of uncontained waste and the incorrect storage of building rubble and mixing of concrete may impact the stormwater and surface water.	Low
Ecology	The clearing of vegetation in order to construct the proposed access road will impact on 8000m^2 veldt which is considered to be low to medium in sensitivity.	Low
	The alignment of the rail siding will impact on approximately 15000 m^2 of natural veldt which is considered to have low to medium ecological sensitivity and approximately 7500m^2 veldt which is potentially medium to high in ecological sensitivity.	Medium
	The presence of the construction site may result in negative faunal interactions that could be associated with construction personnel including poaching, trapping and hunting of faunal species, as well as possible collisions of fauna with construction vehicles. Furthermore, construction will result in high levels of noise, vibrations and the operation of floodlights, should construction continue at night. This will disturb the fauna utilising the surrounding vegetation, especially nocturnal species, and could result in a localised decrease in biodiversity as faunal species move away from the disturbance into the surrounding areas. Food and rubbish left by construction workers can attract wildlife to the area, increasing risk of negative interactions.	Low
Ecology	During construction, vegetation will be removed and soil disturbed. The seed of alien invasive species	Low

	that occur on and in the vicinity of the construction area could spread into the disturbed and stockpiled soil and into adjacent areas including the undisturbed Thornveld which includes the game camp. In addition, the construction vehicles and equipment were likely used on various other sites and could introduce alien invasive plant seeds or indigenous plants not belonging to this vegetation unit to the construction site. This impact is also relevant during the operational phase due to vehicle movement to and from the site.	
	Dust caused by construction of infrastructure including roads could impact negatively on ecological processes such as photosynthesis of plants and persistence of pollinators on the site and surrounds.	Low
Noise	Noise generated during the construction phase of the project may have a negative impact on the surrounding communities. As such the residents may be adversely affected by the noise generation.	Low
Social	The proposed development would result in employment opportunities during the construction phase (300 including the construction of the Chrome Recovery Plant). The contractors camp associated with the proposed construction Phase could potential influence and impact on the social dynamics of the surrounding communities.	Medium (positive) Low
Ambient Air Quality	Dust from the construction may accumulate in the air surrounding the site. This may influence the existing ambient air quality.	Low
Land and Soil Capability	The clearing of vegetation and stripping of topsoil for the establishment of the CRP and associated infrastructure, road and railway extension may result in an increase in surface run-off. This increase in surface run-off could increase the erosion potential in the area, which would reduce the fertility of soils and affect land capability. Erosion may also result in the loss of soils for rehabilitation purposes. The incorrect handling and stockpiling of topsoil could result in the loss of soil fertility. Soils may become contaminated by the incorrect disposal of hazardous and non-hazardous waste generated during the construction phase and as part of the contractors lay down area and chemical toilets. Spillage of oils, greases, diesel, cement etc. during the establishment of infrastructure, or from construction vehicles could lead to the contamination of soils.	Low
Traffic	The proposed upgrading of transportation infrastructure to service the chrome recovery plant is comparatively minor (1.5 km rail and 1km road). Construction will mostly happen away from existing operational activities and provided that the	Medium

	necessary traffic accommodation (road signage, flagmen, traffic signals and demarcation of the construction activities are planned and monitored, no significant safety hazard is anticipated in this mine-controlled environment.	

Indirect impacts:

There are no indirect impacts predicted for the construction phase.

Cumulative impacts:

Aspect	Description	Rating after the implementation of mitigation measures
Stormwater Management	Spillages of uncontained waste and the incorrect storage of building rubble and mixing of concrete may impact the stormwater and surface water which has the potential to seep into groundwater and soil resources, both locally and downstream of the site.	Low
Noise	The existing ambient noise character at the proposed study area is industrial in nature due to the noise generated by the existing adjacent Amandelbult Concentrator Plant. Noise generated during the construction of the proposed access road and rail siding may result in an increase in the ambient noise levels which may result in the noise levels at the sensitive receptors (Mine Hostel and Rethabile Mine Village) exceeding the SANS guideline limits for residential areas (55 dBA during the day and 45 dBA at night). However with the implementation of the mitigation measures proposed the impact is considered to be low in significance due to the nature of the potential noise pollution.	Low
Traffic	The road network within the mining area is restricted and the additional construction related vehicle movement may impact negatively on other traffic movement through the area by causing congestion.	Low

Operational Phase

Direct Impacts

Aspect	Description	Rating after the implementation of mitigation measures
Stormwater Management (Surface water)	If un-contained, discharges/spillages/rainfall run-off from the proposed development flow via the drainage channel beginning at the mine hostel and into the Bierspruit, adding TDS and other pollutants to the river. The flow in this river is highly seasonal with zero flow during the dry season. Run-off during the rainy season will be diluted to a certain extent by flow in the river, but during the dry season the contamination level in the stream could rise to levels	Low

	toxic to aquatic organisms in the river/.	
Ecology	The chrome concentrate could distribute contaminates through dust particles as well as water contamination through run-off.	Medium
	The proposed infrastructure would also contribute to the fragmentation of the Thornveld habitat. The construction of the eastern portion of the railway line in the undisturbed Thornveld containing the game camp could lead to an increase in faunal injuries and even mortalities due to collisions with the trains. Furthermore, the increase in the number of vehicles can also result in more frequent faunal accidents. The spread of alien invasive plant species is often facilitated by linear infrastructures such as conveyor belts and railway lines and therefore the construction of the proposed railway line into undisturbed Thornveld is likely to provide such a corridor which can facilitate the spread of alien invasive species into this sensitive area.	Low
Noise	Noise generated during the operational phase, which is associated with the vehicle and train movement along the access road and rail siding, of the project may have a negative impact on the surrounding communities. As such the residents may be adversely affected by the noise generation.	Low
Social	The proposed development would not generate employment opportunities during the operational phase. However without the access road and railway siding is required to service a new Chrome Recovery Plant, which will employ 60 people during the operational phase.	Medium (positive)
Ambient Air Quality	Potential chrome fall-out during the transportation of the product is not considered to have an impact on the ambient air quality. The proposed access road will also ne tarred and impact on the air quality due to the used thereof is not expected.;	Low
Traffic	The road network within the mining area is restricted and the additional construction related vehicle movement may impact negatively on other traffic movement through the area by causing congestion.	Medium
Land and Soil Capability	Soils may become contaminated by hydrocarbon spills from vehicles used to transport the chromite.	Low

Indirect impacts:

There are no indirect impacts predicted for the construction phase.

Cumulative impacts:

Aspect	**Description**	**Rating after the implementation of mitigation**

		measures
Stormwater Management (surface water)	If un-contained, discharges/spillages/rainfall run-off from the CRP complex will flow via the drainage channel beginning at the mine hostel and into the Bierspruit, adding TDS and other pollutants to the river. The flow in this river is highly seasonal with zero flow during the dry season. Run-off during the rainy season will be diluted to a certain extent by flow in the river, but during the dry season the contamination level in the stream could rise to levels toxic to aquatic organisms in the river.	Low
Ecology	Numerous platinum mines are located in QDGC2426 which includes the town of Thabazimbe in Limpopo province and the cumulative effect of habitat destruction as well as heavy metal pollution through dust, air and water generated by all these mines have a significant effect on the regional biodiversity. The transportation of chemical and metallurgical grade chromites from the stockpiles to end users by road and rail could spread these heavy metals over a large area.	Low
Noise	There will be intermittent noise from the loading of product into the trucks or wagons every second day. The noise generated will not increase the ambient noise level above which is already experienced at the existing concentrator plant , however due to the close proximity of the Mine Hostels and Rethabile the cumulative impact of the proposed developments and concentrator plant operation may be a nuisance to the residents	Low
Traffic	The road network within the mining area is restricted and the additional construction related vehicle movement may impact negatively on other traffic movement through the area by causing congestion.	Low

Decommissioning and Closure Phase

Direct Impact

Aspect	Description	Rating after the implementation of mitigation measures
Ecology	During the decommissioning phase, a considerable quantity of large vehicles will be needed for the demolition and stripping of the CRP and associated infrastructure, which may result in the spread of alien invasive vegetation. Dust from vehicle movement settling on leaves could reduce growth in vegetation and impact on the habitat of the fauna in the area. However with the implementation of rehabilitation measures the areas affected by the proposed developments will be rehabilitated to grazing potential.	Low Low (positive)

Surface and Ground water	The incorrect disposal of waste generated by decommissioning activities (hazardous and non-hazardous and the spillage of hydrocarbons could contaminate the groundwater resources and surface water resources through contaminated run-off and seepages. In addition, increased run-off could result in an increase in erosion and the associated transportation of silt to the natural watercourse.	Low
Ambient Air Quality	During the decommissioning phase activities (such as the grading of sites, transport and dumping of overburden for filling, preparation of soil for revegetation- ploughing and addition of fertiliser, compost etc.) could potentially increase dust levels and decrease ambient air quality during the decommissioning phase. However, the decreased ambient air quality levels will be temporary and are therefore considered to be a low significance rating prior to as well as after the implementation of mitigation measures.	Low
Ambient noise levels	During the decommissioning phase, the earth moving activities and the demolition of the road and railway extension could result in a temporary increase in ambient noise levels which may be a nuisance to the residents of the Mine Hostels and Rethabile.	Low
Traffic	The increase in traffic movement could impact on the adjacent communities from a safety and road usage perspective .	Low
Soil and Land Capability	Soils may become contaminated by the incorrect disposal of waste and the spillage of hydrocarbons or chemicals during decommissioning and rehabilitation activities which would contaminate the soil compromising future land use and land capability. Following the rehabilitation of the land and vegetation during the closure phase, the soil will be returned to its original chemical composition and no erosion is expected to occur. Run-off water is expected to be clean therefore the potential for soil contamination will no longer exist.	Low

Indirect impacts:

There are no indirect impacts predicted for the decommissioning and closure phase.

Cumulative impacts:

Aspect	**Description**	**Rating after the implementation of mitigation measures**
Stormwater Management	Spillages of uncontained waste and the incorrect storage of building rubble and mixing of concrete	Low

	may impact the stormwater and surface water which has the potential to seep into groundwater and soil resources, both locally and downstream of the site.	
Noise	The proposed access road and railway siding, will be constructed in close proximity to the existing Concentrator Plant and its existing ambient noise level.	Low
Traffic	The road network within the mining area is restricted and the additional construction related vehicle movement may impact negatively on other traffic movement through the area by causing congestion.	Low

Mitigation measures:

Soil and Land Capability

Construction

- The topsoil should be removed as per the double strip method in order to preserve the seeds, nutrients and micro-organisms that are found within the top 15cm of topsoil;
- Soils should not be stripped when wet as this can lead to compaction and loss of the structure of the soil;
- Stockpiles should be re-vegetated and slopes kept to less than 1:3 to protect the topsoil from erosion, to discourage weed growth and to maintain the active populations of beneficial microorganisms;
- The stockpiles should be located where they will not be disturbed by future activities or future development of buildings or infrastructure and where possible upstream of the CRP's natural stormwater flow path;
- The stockpiles are to be clearly demarcated. No vehicle should be allowed to drive on the topsoil stockpiles;
- Stockpiles should be no more than 2.5m high to best retain the organic components of the topsoil;
- Stockpiles should be provided with retaining- and stormwater diversion berms and silt traps to prevent the loss of topsoil and contamination of water sources due to runoff in the wet season;
- Soil stripping should be done during the winter month as it will help maintain the structural integrity of the soils;
- Cement mixing undertaken outside of the central batching area must be undertaken in a mixing plant/ bin or on an impermeable surface (bunded area);
- Ensure that the bunded impermeable surface where the bulk batching of cement is undertaken is connected to the dirty stormwater system; and
- Cement should be delivered in bags and stored on pallets in a dry covered area within the storm water bunded area**.**

Operational Phase

- To prevent diesel and oil spills, all vehicles and equipment should be kept in good working condition and all leaks repaired immediately; and
- A 210 litre drum for the collection of spilled oils and fuels, together with a plastic tarpaulin to catch spills and leaks before they can contaminate soil and underlying groundwater, must be available on-site at all times;

Decommissioning Phase

- Before placing or re-spreading topsoil AAP should consider whether the locations for the spreading of the available topsoil are chemically compatible with the available topsoil and whether there is sufficient stockpiled topsoil to complete the planned task;
- Soils should be replaced to a similar depth as was encountered prior to the construction operation, but at least to a depth that will sustain grazing (400mm) land capability;

- Where topsoil supply is limited the following should be considered:
    - Topsoil and the vegetation should be laid in strips alternating with areas on which there has been no placement of topsoil as this will increase the coverage; and
    - An underlying layer of subsoil will commonly produce better results than a thin layer of topsoil alone. This will serve to "stretch" the supply of topsoil. Also, in the application of topsoil, even if there is very little available, the smallest quantities will commonly introduce essential micro-organisms and seeds into the growth region;
- Chemical testing of the topsoil should be carried out prior to replacing the topsoil;
- Topsoil should be fertilized according to the requirements identified through chemical testing;
- Topsoil should also be ameliorated and seeded accordingly;
- The areas to be rehabilitated should be levelled so as to emulate the pre-construction contours, and soils should ideally not be placed on slopes with a gradient greater than 6% to limit the potential for erosion; and
- The recommended vegetation species should be used for re-vegetation.

Ecology

Construction Phase

- Update the existing ecological specialist report by undertaking a summer survey to determine whether there are any species of conservation concern within the access road and rail siding footprint. The ecological (faunal and floral) surveys should be conducted during summer months to establish the following:
    - Comprehensive species list including sensitive, rare, threatened and protected species;
    - Detailed amphibian surveys;
    - Baseline data which can be used to establish vegetation monitoring plans as well as monitoring plans for any species of conservation concern (fauna and flora);and
    - Identify species or areas of high sensitivity based on summer surveys.
- Should species of conservation be found within the development footprint, they are to be salvaged and relocated to the existing Amandelbult game reserve.
- The connectivity of the game camp at Amandelbult and the game camp at Dishaba is investigated to determine the extent that the newly constructed railway line will have on faunal species of conservation concern recorded at Dishaba.
- Should it not be possible to institute a salvage and relocation programme the Applicant should consider realigning the affected portion of the rail siding as far south as possible to avoid impacting the centre of the game camp.
- If the diversion berms are constructed in areas containing natural vegetation, these berms should be re-vegetated with the same species dominating the surrounding vegetation and the re-vegetation of these berms should be overseen by a suitably qualified botanist;
- An independent Environmental Control Officer (ECO) should be appointed to oversee all construction and mining activities;
- No open fires should be allowed in areas containing natural vegetation, especially during the dry season;
- Formalise access roads and make use of existing roads and tracks where feasible, rather than creating new routes through naturally vegetated areas;
- Offices and change rooms should be landscaped with indigenous plant species that will be beneficial to faunal species such as bats and birds. Bat and owl nesting boxes could be erected to encourage these species to reside in the area which will result in environmentally friendly insect and rodent control;
- An education programme should be compiled for all contractors, subcontractors and workers to ensure compliance to all aspects of the EMPr as well as educating personnel in the safe and proper conduct within areas of natural habitat;

- No wild animal may under any circumstance be handled, removed or be interfered with by construction workers;
- No wild animal may be fed on site;
- No wild animal may under any circumstance be hunted, snared, captured, injured or killed. This includes animals perceived to be vermin. Checks of the surrounding natural vegetation must be regularly undertaken to ensure no traps have been set. Any snares or traps found on or adjacent to the site must be removed and disposed of;
- As far as possible, domestic cats should be removed from the site;
- To prevent possible collisions with animals, drivers of construction vehicles must remain vigilant to the possibility of animals crossing their paths and a strict speed limit of 30 km/h should be adhered to;
- All food should be securely stored away to prevent attraction of faunal species and all rubbish should be disposed of away from the site. Bins located around the infrastructure should have tightly fitting lids to prevent faunal species raiding the bins and thereby becoming habituated to humans.
- Surrounding natural vegetation should not be disturbed to minimize chances of invasion by alien vegetation;
- All alien seedlings and saplings must be removed as they become evident for the duration of construction and operational phase;
- Manual / mechanical removal is preferred to chemical control;
- An alien invasive eradication and monitoring plan must be compiled and implemented whereby all emergent invasive species are removed during construction. The monitoring plan must also ensure that the re-emergence of invasive species is monitored continuously during the operational and decommissioning phases and that monitoring and eradication continues post decommissioning;
- Suppress dust on construction roads and construction site using potable water;
- Relevant dust control regulations must be adhered to;
- No fires should be permitted on site;
- A waste management plan should be developed and implemented;
- Erosion control measures should be implemented;
- Implement dust suppression methods to control and minimise dust generation; and
- Harvesting of vegetation should be discouraged.

Operational Phase

- The chromite stockpile should be constructed on a concrete slab of at least 30cm thick to prevent heavy metals from leaching into the soil. This stockpiling area should also be edged with gutters to prevent any water run-offs during the rainy season;
- Dust which is generated during operations such as excavation, dumping, loading and transportation poses the highest risk of pollution and it is therefore important to limit the amount of dust generated through the use of strong covers over stockpiles and during transport;
- Disturbance of natural vegetation should be avoided where possible since these areas are more vulnerable to infestations;
- Vehicles should be inspected and cleaned of any vegetation before entering the site;
- Monitor and implement an alien invasive species control and eradication programme;
- No fires should be permitted on site;
- A waste management plan should be implemented;
- Erosion control measures should be implemented;
- Implement dust suppression methods to control and minimise dust generation; and

- Harvesting of vegetation should be discouraged.

Decommissioning Phase

- Vegetation rehabilitation should be conducted by a suitably qualified botanist to ensure maximum representation of biodiversity within the rehabilitated area;
- An alien vegetation management plan should be developed by a suitably qualified botanist to eradicate any alien invasive plant species which are within the study area;
- No fires should be permitted on site;
- A waste management plan should be implemented;
- Harvesting of vegetation should be discouraged;
- A rehabilitation plan will be developed and implemented to rehabilitate the access road and railway extension area to grazing potential; and
- AAP will monitor the re-vegetation process for one year post-closure.

Surface Water

Construction Phase

- All waste should be disposed of correctly;
- Ensure that the bulk batching of cement is undertaken in a bunded impermeable surface area connected to the dirty stormwater system;
- Cement mixing undertaken outside of the central batching area must be undertaken in a mixing plant/ bin or on an impermeable surface;
- Cement will be delivered in bags and will be stored on pallets in a dry covered area within the storm water bunded area;
- To prevent diesel and oil spills, all vehicles and equipment will be kept in good working condition and all leaks repaired immediately;
- All mine and contractor-owned generators will be placed on drip trays to catch all spills and leaks, while all maintenance work on equipment, vehicles, machinery, etc. will be done over a plastic tarpaulin or steel drip trays; and
- A 210 litre drum for the collection of spilled oils and fuels, together with a plastic tarpaulin to catch spills and leaks before they can contaminate soil and underlying groundwater, must be available on-site at all times.

Operational Phase

- Implement a clean and dirty water managemnet system to prevent the mixing of clean and dirty water and to contain run-off from access road and railway siding;
- To prevent diesel and oil spills, all vehicles and equipment will be kept in good working condition and all leaks repaired immediately;
- All mine and contractor-owned generators will be placed on drip trays to catch all spills and leaks, while all maintenance work on equipment, vehicles, machinery, etc. will be done over a plastic tarpaulin or steel drip trays; and
- A 210 litre drum for the collection of spilled oils and fuels, together with a plastic tarpaulin to catch spills and leaks before they can contaminate soil and underlying groundwater, must be available on-site at all times.

Decommissioning Phase

- All waste should be disposed of correctly;
- To prevent diesel and oil spills, all vehicles and equipment will be kept in good working condition and all leaks repaired immediately;
- A 210 litre drum for the collection of spilled oils and fuels, together with a plastic tarpaulin to catch spills and leaks before they can contaminate soil and underlying groundwater, must be available on-site at all times.

Ambient Air Quality

Construction Phase

- All access roads should be adequately maintained so as to minimise dust. Methods such as wet suppression, paving or chemical stabilisation should be implemented;
- AAP should stabilise all surface areas which are exposed for longer than two weeks. During the construction phase, it is recommended that wet suppression be utilized to stabilize the exposed areas;
- All stockpiles should be maintained for as short a time as possible and a water spray system should be operated at any gravel stockpile, or stockpiles should be enclosed within berms to shield the material from wind;
- During the transfer of material to piles, drop heights should be minimised to control dispersion of materials being transferred;
- Dust and mud should be controlled at vehicle entry and exit points to prevent the dispersion of dust and mud beyond the site boundary; and
- The speed of trucks should be restricted to a maximum speed of 40 km/h on the access road and 20 km/h on internal roads to avoid excessive dust being generated or deterioration of the road surface.

Operational Phase

- While being transported, by both road or rail, the chrome product should be covered to prevent the spread of dust;
- Dust and mud should be controlled at vehicle entry and exit points to prevent the dispersion of dust and mud beyond the site boundary;
- Any complaints relating to dust should be recorded. Should dust from the stockpile and roads become a nuisance, management measures, including the establishment of screens or berms, should be investigated to address these; and
- The speed of trucks should be restricted to a maximum speed of 40 km/h on the access road and 20 km/h on internal roads to avoid excessive dust being generated or deterioration of the road surface.

Decommissioning Phase

- AAP should implement dust suppression measures to contain dust created during demolition, grading and the transport of rubble and topsoil.

Noise

Construction Phase

- Construction operations will be limited to daylight (working) hours;
- Any complaints relating to noise will be recorded and AAP will respond to complaints appropriately;
- All vehicles and heavy equipment will be fitted with exhaust silencers; and
- Unnecessary noise generated from equipment will be avoided through ensuring that all machinery is regularly services and well maintained, with records of maintenance being kept on-site.

Operational Phase

- The operation of the railway siding and hauling of final product along the access ropad will be limited to daylight hours (07h00 to 16h00);
- Any complaints received will be responded to and if necessary management measures put in place;
- All vehicles and heavy equipment will be fitted with exhaust silencers; and
- Unnecessary noise generated from equipment will be avoided through ensuring that all machinery is regularly services and well maintained, with records of maintenance being kept on-site.

Decommissioning phase

- Decommissioning activities such as disassembly/ destruction of structures and buildings should take place during daylight hours; and
- All vehicles and heavy equipment will be fitted with exhaust silencers.

Traffic

Construction, Operational and Decommissioning Phase

- Appropriate safety signage (road signs and markings) will be erected for road users;
- Fit heavy vehicles with reverse sirens,
- Drive with headlights on to be enforced;
- The speed of construction vehicles will be restricted to a maximum speed of 40 km/h on the access road and 20 km/h on internal roads. The speed limit on national roads will also be adhered to; and
- AAP will not permit the drivers to deviate from the designated access roads on-site or from the proposed national route.

Social impact

Construction Phase, Operational Phase and Decommissioning Phase

- Employment opportunities should be prioritised for residents from local communities surrounding Amandelbult.;
- Implement a 'locals first' policy, especially for semi and low-skilled job categories;
- The employment percentage (in terms of HDSA and women) should be in line with the commitments made in the SLP~~.~~;
- The local authorities, community representatives, and organisations on the interested and affected party database should be informed of the final decision regarding the project and the potential job opportunities for locals and the employment procedures that Anglo intends following for the construction phase of the project~~.~~;
- Where feasible, training and skills development programmes for locals should be initiated prior to the construction phase~~.~~;
- Recruitment rules and requirements will be included in the contractors' contract;
- Encourage contractors to utilise local employment, services and consumables~~.~~;
- Where feasible, efforts should be made to employ local contactors that are compliant with Black Economic Empowerment (BEE) criteria; and
- Compile and enforce a Contractors Code of Conduct, which would as a minimum cover the following aspects:
    - Security
    - Prohibition of alcohol and other controlled substances
    - Prohibition of firearms and weapons
    - Behavior of workforce
    - Designated smoking areas
    - Enforcement of fire/ evacuation procedure
    - Adherence to driving procedure
    - Non-business access to surrounding communities and villages
    - Housekeeping and maintenance

3. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative) Road and Rail Siding

The proposed road and rail siding is required in order to service a proposed Chrome Recover Plant.

Planning and Design Phase

During the planning and design phase the impacts identified relate to the impacts on traffic, ecology and ambient noise level as a result of the alignment of the access road and the rail siding. With the implementation of the mitigation measures provided the impact on ambient noise levels and traffic is considered Low in significant and the impact on ecology is considered Medium in significance. Please refer to Appendix G for the impact rating.

Construction phase

During the construction the negative environmental impacts identified relate to the impact on ecology, surface water, ambient air quality, the social dynamics of the adjacent communities, traffic, soil and land capabilities and ambient noise levels. With the implementation of the mitigation measures provided the afore-mentioned impacts (with the exception of traffic and ecology) are considered to be low in significant. Traffic and ecology is considered to be medium in significance. The positive social impact associated with employment and procurement is considered to be medium positive in significance. Please refer to Appendix G for the impact rating.

Operational Phase

During the operational phase the negative environmental impacts identified relate to the impact on ecology, surface water, ambient air quality, traffic, soil and land capabilities and ambient noise levels. With the implementation of the mitigation measures provided the afore-mentioned impacts (with the exception of traffic) are considered to be low in significant. Traffic is considered to be medium in significance. The positive social impact associated with employment and procurement is considered to be medium positive in significance. Please refer to Appendix G for the impact rating.

Decommissioning and Closure Phase

During the decommissioning and closure phase, the negative environmental impacts identified relate to the impact on ecology, surface water, ambient air quality, traffic, soil and land capabilities and ambient noise levels. With the implementation of the mitigation measures provided the afore-mentioned impacts are considered to be low in significant. Although with the rehabilitation of the access road and railway siding a low positive impact on the ecology is expected. Please refer to Appendix G for the impact rating.

No-go alternative (compulsory)

The proposed access road and rail siding is intended to provide access and infrastructure for distribution of the final chrome product to the extracted at proposed Chrome Recovery Plant and the Amandelbult Concentrator. Should the access road and rail siding not be constructed the feasibility of the Chrome Recovery Plant will be significantly reduced and the risk is that the R400 million investments will not be realised. In addition the 300 employment opportunities during the construction phase and 60 during the operational phase will also not be realised.

Alternative B

Not Applicable

Alternative C

Not Applicable

For more alternatives please continue as alternative D, E, etc.

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

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

Not applicable

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

The following conditions are recommended: • The applicant should implement the EMPr as detailed in Appendix F • The applicant should adhere to and implement the mitigation measures as detailed in Section 2 of this report.

Is an EMPr attached?	YES ✓	NO

The EMPr must be attached as Appendix F.

SECTION F: APPENDIXES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

SECTION G: DECLARATION BY THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

I, **Karen-Dawn Koen** –

(a) act as the independent environmental practitioner in this application;
(b) do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2010;
(c) do not have and will not have a vested interest in the proposed activity proceeding;
(d) have no, and will not engage in, conflicting interests in the undertaking of the activity;
(e) undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the Environmental Impact Assessment Regulations, 2006;
(f) will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
(g) will ensure that the comments of all interested and affected parties are considered and recorded in reports that are submitted to the Department in respect of the application, provided that comments that are made by

interested and affected parties in respect of a final report that will be submitted to the Department may be attached to the report without further amendment to the report;

(h) will keep a register of all interested and affected parties that participated in a public participation process; and

(i) will provide the Department with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not.

Signature of the Environmental Assessment Practitioner:

Prime Resources (Pty) Ltd

Name of company:

01 August 2013

Date: