



LIMPOPO

PROVINCIAL GOVERNMENT

REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM

Eng: Mogashoa MS Tel: 015 290 7162 Fax: 015 295 6016 E-mail: mmogashoa@medet.gov.za Reference: 12/19/2-W/32

Platreef Resources (Pty) Ltd
P O Box 782078
SANDTON
2146

Fax: 086 687 2018

Attention: Mr Gerick Mouton

ENVIRONMENTAL AUTHORISATION FOR THE PROPOSED PLATREEF UNDERGROUND MINE ON THE FARMS TURFSPRUIT 241 KR, MACALACASKOP 243 KR AND RIETFontein 2 KS WITHIN MOGALAKWENA LOCAL MUNICIPALITY OF WATERBERG DISTRICT MUNICIPALITY

With reference to the abovementioned application, please be advised that the Department has decided to grant authorisation. The environmental authorisation and reasons for the decision are attached herewith.

In terms of regulation 10(2) of the Environmental Impact Assessment Regulations of 2010, you are instructed to notify all registered interested and affected parties, in writing and within 12 (twelve) calendar days, of the date of the Department's decision in respect of your application as well as the provisions regarding the making of appeals that are provided for in the Regulations.

Should you wish to appeal any aspect of the decision, you must, *inter alia*, lodge a notice of intention to appeal with the MEC for Economic Development, Environment and Tourism, within 20 days of receiving this letter, by means of one of the following methods:

By facsimile : (015) 295 5015
By post : Private Bag X9484, **POLOKWANE**, 0700
By hand : Environmental Affairs Office, Corner Suid and Dorp Streets, **POLOKWANE**, 0699

Should you decide to appeal, you must serve a copy of your notice on intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection.

Yours faithfully,


SENIOR/MANAGER

ENVIRONMENTAL IMPACT MANAGEMENT

DATE: *27/06/2014*

Cc: Digby Wells Environmental

Attention: Lucy Koeslag

Fax: 011 789 9498

HEAD OFFICE



**DEPARTMENT OF
ECONOMIC DEVELOPMENT, ENVIRONMENT & TOURISM**

ENVIRONMENTAL AUTHORISATION

Authorisation reference number: 12/19/2-W32

Last amended: First Issue

Holder of authorisation: Platreef Resources (Pty) Ltd

Location of activity:
The proposed site is located on farms Turfspruit 241
KR, Macalacaskop 243 LR and Rietfontein 2 KS
within Mogalakwena Local Municipality in
Waterberg District.

DECISION

ACRONYMS

1. **NEMA:** The National Environmental Management Act, 1998 (Act 107 of 1998), as amended.
2. **EIA:** Environmental Impact Assessment.
3. **Regulations:** EIA Regulations of 18 June 2010 in terms of Chapter 5 of NEMA.
4. **Department:** Department of Economic Development, Environment and Tourism.
5. **EA:** Environmental Authorisation.
6. **EMPr:** Environmental Management Programme

The Department is satisfied, on the basis of information available to it and subject to compliance with the conditions of this EA, that the applicant should be authorised to undertake the activities specified below.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

ACTIVITIES AUTHORISED

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 the Department hereby authorises Platreef Resources (Pty) Ltd (herein referred to as holder of EA) with the following contact details –

Mr Gerick Mouton
P.O. Box 782078
SANDTON
2146

Fax: 086 687 2018

Tel: 011 088 4300

HEAD OFFICE

to undertake the following activities:

Listed in the EIA Regulations R. 544 of 2010 as:-

Activity 9(i)(ii) - "The construction of facilities or infrastructure exceeding 1000 meters in length for the bulk transportation of water, sewage or storm water";

Activity 11(i)(v)(vi) - "The construction of dams, bulk storm water outlet structures, where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line";

Activity 12 - "The construction of facilities or infrastructure for the off stream storage of water, including dams and reservoirs, with a combined capacity of 50000 cubic metres or more";

Activity 13 - "The construction of facilities or infrastructure for the storage of water, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a capacity of 80, but not exceeding 500 cubic metres";

Activity 22 (i)(ii) - "The construction of road, outside urban areas with a reserve wider than 13,5 metres or, where no reserve exists where the road is wider than 8 metres";

Activity 26 - "Any process or activity identified in terms of section 53(1) of the National Environmental Management Biodiversity Act, 2004 (Act no 10 of 2004)";

Activity 42 - "The expansion of facilities or infrastructure for the storage of water, or for the storage and handling, of a dangerous good, where the capacity of such storage facility will be expanded by 80 cubic metres or more";

Listed in the EIA Regulations R. 545 of 2010 as:-

Activity 3 - "The construction of facilities or infrastructure for the storage of water, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres";

Activity 15 - "Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more";

Activity 19 - "The construction of a dam, where the highest part of the dam wall, as measured from the outside toe of the wall to the highest part of the wall, is 5 metres or higher or where the high water mark of the dam covers an area of 10 hectares or more";

Listed in the EIA Regulations R. 546 of 2010 as:-

Activity 2 (i)(ff) - "The construction of reservoirs for bulk water supply with a combined capacity of more than 250 cubic metres outside urban areas in areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPA or the core area of a biosphere reserve";

Activity 4(i)(g) - "The construction of a road wider than 4 metres with a reserve less than 13,5 metres outside urban areas in areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPA or the core area of a biosphere reserve";

Activity 9(iii)(cc) - "The construction of cableways and funiculars. In urban areas, areas on the water course side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined";

Activity 10 - "The construction of facilities or infrastructure for the storage of water, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of more 30 but not exceeding 80 cubic metres";

Activity 13 - "The clearance of an area of one hectare or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation. Outside urban areas in areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPA or the core area of a biosphere reserve";

Activity 16(ii)(hh) - "The construction of: buildings with a footprint exceeding 10 square metres in size; or infrastructure covering 10 metres or more. Outside urban areas in areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPA or the core area of a biosphere reserve";

Activity 19(ii)(gg) - "The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre. Outside urban areas in areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPA or the core area of a biosphere reserve";

Activity 23 - "The expansion of facilities or infrastructure for the storage of water, or for the storage and handling, of a dangerous good, where such storage facilities will be expanded by 30 cubic metres but less than 80 cubic metres";

as described in the Environmental Impact Assessment Report (EiAR) received by the Department on 02 May 2014, at:

Alternative S1	Latitude	Longitude
Farms Turfspruit 241 KR, Macalacaskop 243 KR and Rietfontein 2 KS within Mogalakwena Local Municipality in Waterberg District.	24° 06' 35.34" South	28° 58' 27.46" East

The proposed project entail the development of an underground mine and associated infrastructure on the farms Turfspruit 241 KR, Macalacaskop 243 KR and Rietfontein 2 KS within Mogalakwena Local Municipality in Waterberg District, Limpopo Province. The associated infrastructure for the proposed underground mine include:

- Facilities for the storage and handling of general waste;
- On-site change houses;
- Abution facilities with sewage treatment plant;
- Underground access shafts;
- Tailings storage facility, option 1;
- Water supply dams;

- Mine residue facility return water dams, pollution control dams, clean and dirty water storm water control;
- Facility for the storage and handling of dangerous substances;
- Power lines; pipelines, conveyors, roads, telephone lines, communication and lightning masts;
- Mineral processing plant;
- Offices, workshops and administrative buildings;
- Access and haul roads on the mine property;
- Drainage structures; and
- Communication network and waste rock dump option 5.

The granting of this EA is subject to the conditions set out below and in Annexure 2 (Departmental standard conditions).

The Environmental Management Programme (EMPr) attached as part of reports for the above development submitted as part of the application for an EA is hereby approved and must be adhered to throughout the life cycle of the activity.

These activities must commence within a period of three (3) years from the date when the EA was issued. If commencement of the activities does not occur within that period, the EA lapses and a new application for EA must be made in order for the activities to be undertaken. Any request for extension of the validity period of the EA must be lodged with the Department at least 60 days before the expiry date of the EA.

EA CONDITIONS

1. The bulk sampling shaft that was approved by this Department on 27 March 2014 has been incorporated in this EA and will be used as production shaft 1 for the proposed mine.
2. The proposed mine and its associated infrastructure must not encroach into the Willinger Nature Reserve. No mining infrastructure must be placed within the sensitive landscapes such as intact ridges, bushveld habitat and riparian areas.
3. A 300m buffer must be observed from the boundaries of all the mining infrastructure and water courses, drainage lines and wetland areas identified within the proposed mine development site.
4. The protected plant species identified within the proposed mining site must not be removed, cut and/or destroyed unless the necessary permission is granted by the Department of Agriculture, Fisheries and Forestry (DAFF) in terms of the National Forests Act, 1998, (Act no. 84 of 1998).
5. The natural areas within the proposed site must be conserved as much as possible. Corridors linking the natural areas within the proposed development site and natural areas outside of the development footprint must be created to aid in the conservation of ecosystems, flora and fauna.
6. Alien plant species exist on the proposed development site, therefore, an alien plant eradication plan must be developed and implemented throughout the life of the mine.
7. The red data species *Oreochromis mossambicus*, which is near threatened identified within the associated river systems must be monitored and managed according to its status as included in the Red Data Book.

8. All the heritage resources identified on the site must be managed as per the approval of the South African Heritage Resources Agency. Furthermore, all the graves identified on site must not be removed without permission from SAHRA.
9. During the sinking of the shaft, cable anchors must be installed where major faults and large wedges are identified and stress measurements around the shaft must be undertaken on a monthly basis. More support must be provided on the shaft to prevent rock and soil collapse when necessary. Further to this, resin bars to a length of 2.4 metres must be utilised where weak intervals of greater than 1m thick exists.
10. The safe scope angle for the silty sand, which is relatively flat at 25 degrees must be allowed in the design of the shaft collars.
11. The relevant Waste Management Licences (WML) must be obtained prior to commencement of such activities as the proposed landfill site that requires WML on site.
12. Rubber conveyor belts must be replaced annually in order prevent wear and tear.
13. Metal surfaces must be painted in non-reflective, natural colours, blending with the surrounding landscape.
14. Specifically designed lighting equipment that minimises the upward spread of light near to and above the horizontal must be used such as outdoor low and yellow intensity globes which point inward of the facility.
15. Effluent sampling, testing and reporting must be undertaken and records of such activities be documented. Water abstraction and effluent must be managed so as to replicate the volumes of local aquatic ecosystems.
16. The treated effluent quality to be discharged from the waste water treatment plant must adequately meet DWA General Limit for waste / effluent water discharge principles, standards and guidelines
17. An additional survey on aquatic ecosystems must be conducted during high water flow periods in order to identify their temporal trends and be followed by quarterly bio-monitoring.
18. Berms, cut off trenches and surface water management systems must be erected to divert dirty water to the pollution control dams and to prevent water pollution within the proposed site.
19. Only tested and uncontaminated waste rock must be re-used for construction purposes within the proposed mine and all contaminated waste rock materials must be used for backfilling or alternatively be disposed of on waste rock dump.
20. The waste rock dump must be monitored on a quarterly basis for stability and potential acid mine drainage, and the associated surface runoff must be collected and discharged into the return water dam.
21. Tipping of waste rock into the waste rock dump must occur between 06h00 in the morning and 18h30 in the evening.

22. Mine infrastructure must be placed away from flood lines determined within the proposed mine development site in the event where this is not possible applicable Water Use Licences must be obtained from the Department of Water Affairs.
23. All other applicable Water Use Licences and Water Use Authorisations required in terms of the National Water Act must be obtained from DWA prior to commencement of the activity on site.
24. Monitoring and reporting on the state of the surface water resources must be carried out on a monthly basis to detect early and mitigate appropriately the impacts from the mining activities as they arise.
25. The groundwater level and quality monitoring must be conducted throughout the Life of the Mine. The monitoring programme must observe groundwater flow direction, quality and level trends with relation to the pre-mining reference conditions, and ultimately monitor and mitigate impacts during the construction, operation and closure phases of the proposed development.
26. Where groundwater contamination has been detected within the mining area, the Department of Water Affairs must be notified immediately and remediation efforts agreed upon with the Department of Water Affairs must be undertaken immediately.
27. Filtration systems must be used to remove underground air pollutants prior to their release to the surface via the vent and efficient diesel fuel must be used for heavy underground machinery.
28. The underground mine must be dewatered, spills and pollutant accumulations must be diverted to lined pollution control dams and subsequently to water treatment facilities and dirty water must be recycled for process water. Cut off drains must be built on the downslope of the TSF to capture any shallow seepage of pollutants.
29. The recommended specifications for the mine's stopping methodology must be adhered to in order to prevent potential subsidence and the mine shafts must be monitored annually for the risk of subsidence.
30. Ambient air quality monitoring must be undertaken to establish baseline conditions, prior to the on-site operations. Fallout monitoring must be carried out to assess the level of nuisance dust associated with the mine operations. Topsoil must not be removed during windy periods and all stockpiled topsoil must be re-vegetated.
31. Soil erosion assessments and remediation must be carried out within the mining area during both the construction and operational phases after rain events to check for erosion channels. The areas affected by erosion must be rehabilitated immediately and a report to that effect be submitted to this Department within 7 days of completion of rehabilitation works.
32. A 500m safe blasting distance from the boundaries of the communities affected must be observed.
33. The following proposed road upgrades must be approved by Road Agency Limpopo prior to commencement thereof:
 - Upgrading of N11 and Proposed Mine Access A, which will include upgrading of deceleration lane of 60m and acceleration lane of 60m, a separate right turn 60 m on the N11, a 60m pass by lane on the N11 and public transport laybys.

- Upgrading of N11 and proposed mine Access B, which will include upgrading of deceleration lane of 60m and acceleration lane of 60m, a separate right turn 60m on the N11, and a 60 m pass by lane on the N11;
 - Installation of traffic signal on the N11 and R518; and
 - Surfacing of the internal access roads within the proposed mine area.
34. Support must be provided to local health authorities in extending care and treatment programs as well as to the community based information health campaigns communicable diseases.
35. Approval for provision of electricity must be obtained from Eskom in respect of the proposed development.
36. All the social issues raised in the Social Impact Assessment Report in respect of employment, economic and physical displace, land claims etc. must be well addressed in the social labour plan to be approved by the Department of Mineral Resources.


**SENIOR GENERAL MANAGER
ENVIRONMENT AND TOURISM**

DATE: 27.8.16

ANNEXURE 1: REASONS FOR THE DECISION

1. Background

The amended application from Platreef Resources (Pty) Ltd is for an EA for activities listed in the EIA Regulations of 2010 as:

Listed in the EIA Regulations R. 544 of 2010 as:-

Activity 9(i)(ii) - "The construction of facilities or infrastructure exceeding 1000 meters in length for the bulk transportation of water, sewage or storm water";

Activity 11(iv)(v) - "The construction of dams, bulk storm water outlet structures, where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line";

Activity 12 - "The construction of facilities or infrastructure for the off stream storage of water, including dams and reservoirs, with a combined capacity of 50000 cubic metres or more";

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Activity 15 - "Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more";

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sites or 5 kilometres from any other protected area identified in terms of NEMPA or the core area of a biosphere reserve";

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The proposed project entail the development of an underground mine and associated infrastructure on the farms Turfspruit 241 KR, Macalacaskop 243 KR and Rietfontein 2 KS within Mogalakwena Local Municipality in Waterberg District, Limpopo Province. The associated infrastructure for the proposed underground mine include:

- Facilities for the storage and handling of general waste;
- On-site change houses;
- Ablution facilities with sewage treatment plant;
- Underground access shafts;
- Tailings storage facility option 1;
- Water supply dams;
- Mine residue facility return water dams, pollution control dams, clean and dirty water stormwater control;
- Facility for the storage and handling of dangerous substances;
- Power lines; pipelines, conveyors, roads, telephone lines, communication and lightning masts;
- Mineral processing plant;

- Offices, workshops and administrative buildings;
- Access and haul roads on the mine property;
- Drainage structures; and
- Communication network and waste rock dump option 5.

Platreef Resources (Pty) Ltd appointed Lucy Koesling of Digby Wells Environmental in terms of Regulation 16 of the EIA Regulations of 2010 to undertake a Scoping and EIR process.

2. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The information contained in the amended application form received by the Department on 24 January 2013;
- b) The EIA received by the Department on 02 May 2014;
- c) The objectives and requirements of the applicable and relevant legislation, policies and guidelines and the EIA Regulations of 2010;
- d) The Geotechnical Investigation for the Design and Construction of the Platreef Vertical Production Shaft dated March 2013 compiled by D Govender of SRK Consulting and attached to the EIA as Appendix B;
- e) The Geotechnical Investigation for the Design and Construction of the Platreef Vertical Production Shaft 2 dated May 2014 compiled by Denisha Sewunon of SRK Consulting and attached to the EIA as Appendix B;
- f) The Pre-feasibility Study Geotechnical Investigation for the Design and Construction of the Platreef, Mokopane dated February 2014 compiled by Denisha Sewunon of SRK Consulting and attached to the EIA as Appendix B;
- g) The Civil Geotechnical Investigation for the Platreef Shaft Area dated February 2013 compiled by D.W. Warwick of SRK Consulting and attached to the EIA as Appendix B;
- h) The Geotechnical Investigation: Platreef Mokopane, Early Works Project Phase dated February 2014 compiled by P. Aucamp of SRK Consulting and attached to the EIA as Appendix B;
- i) The Waste Impact Assessment Report dated July 2013, compiled by Golder Associates and attached to the EIA as Appendix C;
- j) The Waste Rock Dump Selection Report dated September 2013, compiled by Golder Associates and attached to the EIA as Appendix D;
- k) The Topography and Visual Aspects Impact Assessment Report dated October 2013, compiled by Stephanie Crone of Digby Wells Environmental and attached to the EIA as Appendix F;

- l) The Fauna and Flora Impact Assessment Report dated October 2013, compiled by Rudi Greffrath of Digby Wells Environmental and attached to the EIAR as Appendix G;
- m) The Aquatic Impact Assessment Report dated December 2013, compiled by Bret Reimers of Digby Wells Environmental and attached to the EIAR as Appendix H;
- n) The Wetland Impact Assessment Report dated December 2013, compiled by Andrew Husted of Digby Wells Environmental and attached to the EIAR as Appendix I;
- o) The Air Quality Impact Assessment Report dated October 2013, compiled by Matthew Ojedele of Digby Wells Environmental and attached to the EIAR as Appendix J;
- p) The Noise Impact Assessment Report dated 16 September 2013, compiled by Lukas Sadler of Digby Wells Environmental and attached to the EIAR as Appendix K;
- q) The Soil Impact Assessment Report dated October 2013, compiled by Hendrik Smith of Digby Wells Environmental and attached to the EIAR as Appendix L;
- r) The Hydrological Impact Assessment Report dated September 2013, compiled by Dr Amanada Cassa of Golder Associates and attached to the EIAR as Appendix M;
- s) The Hydrogeological and Ground Water Impact Assessment Report dated November 2013, compiled by Dr E. Van Wyk of Golder Associates and attached to the EIAR as Appendix N;
- t) The Heritage Impact Assessment Report dated October 2013, compiled by Natasha Higgit and Shanzadee Karodia of Digby Wells Environmental and attached to the EIAR as Appendix O;
- u) The Social Impact Assessment Report dated December 2013, compiled by Jury Enwee of Digby Wells Environmental and attached to the EIAR as Appendix P;
- v) The Health Impact Assessment Report dated October 2013, compiled by Rudi Greffrath of Digby Wells Environmental and attached to the EIAR as Appendix G;
- w) The Traffic Impact Assessment Report dated 11 September 2013, compiled by Reuben Demetrio of Impoju Engineering Services and attached to the EIAR as Appendix R;
- x) The Conceptual Rehabilitation Plan dated October 2013, compiled by Caroline Wellington of Digby Wells Environmental;
- y) The Water Use License application for the mine dated and submitted to DWA on 23 April 2014;
- z) The budget quotation for electricity supply from Eskom dated 01 October 2013;
 - aa) A sufficient Public Participation Process (PPP) was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations of 2010 for public involvement attached to the EIAR as Appendices D1-D14; and
- bb) The findings of site inspection conducted on 16 October 2013 by Ms Malungani TP, Ms Mogashoa MS and Mr. Tshuketana MM of this Department.

3. Key factors considered in making the decision

All Information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) A sufficient Public Participation Process (PPP) was undertaken and the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations R. 543 of 2010 for public involvement; and
- b) The environmental impacts associated with the proposed activities will be addressed by the implementation of proposed mitigation measures outlined in the EIAR compiled by Lucy Koeslag of Digby Wells Environmental.

4. Findings

After consideration of the Information and factors listed above, the Department made the following findings –

- a) All environmental issues identified and commitments to sound environmental management which are incorporated in the EMPr compiled by Lucy Koeslag of Digby Wells Environmental can be used to avoid potential negative impacts;
- b) The potential impacts on the proposed site were clearly investigated and mitigation measures outlined;
- c) The Geotechnical Investigation for the Design and Construction of the Platreef Vertical Production Shaft indicates that highly fractured rock were identified at 1106,65 m to the end of the pit and there may be a squeezing potential for the rock facilitated by the stresses that are present at these depth. Therefore, numerical modelling must be undertaken to evaluate the rock further and stress measurements must be taken to provide data on the stresses acting on the shaft;
- d) The Geotechnical Investigation for the Design and Construction of the Platreef Vertical Production Shaft 2 indicates that the rock mass is of suitable quality for the sinking of the shaft to a depth of 1100m;
- e) The Pre-feasibility Study Geotechnical Investigation for the Design and Construction of the Platreef, Mokopane indicates geotechnical risks can be managed through visual slope monitoring during mining and early placement of backfill if conditions deteriorate excessively;
- f) According to the Civil Geotechnical Investigation for the Platreef Shaft Area, settlement values for various size and types of foundations are presented for the clayey sand in the upper 2m. This material is considered unsuitable for founding due to its high collapse potential. Therefore, foundations with bearing pressure of up to 500kPa must be placed on the ferruginised gravel with at least very dense consistency, which occurs from an average of 1,8m;

- g) According to the Geotechnical Investigation: Platreef Mokopane, Early Works Project Phase, the engineering geological constraints that are likely to affect the civil construction project in the project area are considered to be collapsible soil present in the upper ± 3 m of the soil profile. The upper soils i.e. 0 to approximately 3m also classify as moderate potential expansiveness;
- h) According to the Waste Impact Assessment Report, the most technically and economically feasible option for placement of the general waste landfill site is option 1, which has sufficient available transformed land and it will utilise the infrastructure to be developed for the rest of the mine plant and thus requires no additional facilities;
- i) The outcome of the Waste Rock Dump Selection Report rating shows site 5 is the preferred site for placement of the waste rock dump as it will be located close to the main shaft area and the ecological sensitivity of the site is moderate to low;
- j) The Topography and Visual Aspect Impact Assessment Report from the results of the T&VA the proposed Platreef underground mine can proceed provided that the recommended mitigation measures are implemented;
- k) According to the Fauna and Flora Impact Assessment Report, the proposed site offers a high biodiversity value owing to the presence of sensitive landscape such as intact ridges, bushveld habitat as well as riparian areas. The Witvlieter Nature Reserve and the sensitive landscapes have been delineated as a sensitive area where no mine infrastructure must be placed;
- l) According to the Aquatic Impact Assessment Report, the aquatic ecosystems associated with the proposed site are considered to be seriously modified as a result of impaired water quality as a consequence of excessive sewage effluent and urban runoff;
- m) According to the Wetland Impact Assessment Report, the proposed activities are for underground mining and none of the surface infrastructure with the exception of some of the Tailings Storage Facility (TSF) options that coincide with wetlands;
- n) According to the Air Quality Impact Assessment Report dust, PM_{10} and $PM_{2.5}$ were recorded as having exceeded the set standards on a number of occasions during the undertaken monitoring. Therefore, it is recommended that a pollutants monitoring programme for all air pollutants must be initiated for the proposed mine development and a report as such be submitted to the Department;
- o) According to the Noise Impact Assessment Report, the continuous noise activities during construction as well as operational phase will not impact on the surrounding communities because of the already high baseline levels as well as the major noise sources from the mining activities is expected to be limited to site;
- p) According to the Soil Impact Assessment Report the impacts on the soil related to the underground mining are low and it is possible to rehabilitate the soil, land capability and land use;
- q) According to the Hydrological Report the water courses that have been assessed have undesirable standards of TDS for drinking water with the exception of the upper most region of the site, where there are high concentrations of dissolved manganese, aluminium and iron

which could be due to geological influences. A water monitoring programme has been set up to collect flow and water quality data on the project area;

- r) According to the Hydrogeological and Ground Water Impact Assessment Report, groundwater occurs widely across the Platreef Mine study area forming a shallow inter-granular and fractured aquifer system. Therefore, all the proposed mitigation measures must be implemented to minimise the impacts on the groundwater regime;

- s) According to the Heritage Impact Assessment, a total of three archaeological sites, one historical wert and 55 burial grounds were identified within the project area. Areas associated with intangible heritage were identified within the TSF option 2 and 3, the alternative plant area and the operational area. All of this sites are located within the proposed infrastructure footprint areas and will be impacted upon by the proposed development and potential impacts on these resources can be avoided through the implementation of the recommended mitigation measures;

- t) According to the Social Impact Assessment Report, the consequence and/or probability of most negative social impacts will be reduced if all mitigation measures are implemented as recommend in the report;

- u) According to the Health Impact Assessment Report, the existing health needs and the health impacts that may be exerted by the proposed development of the community must be considered and managed through a Community Health Management Plan (CHMP);

- v) According to the Traffic Impact Assessment Report the expected traffic increase that will be emanate as a result of the proposed development can be accommodated on the existing road networks provided the proposed upgrades are undertaken;

- w) The Conceptual Rehabilitation Plan recommends that financial provision of closure and rehabilitation be updated annually. Long term management of rehabilitated areas must be required through contractual agreements with land owners and there should be continuous monitoring of rehabilitation processes;

- x) Proof of newspaper advertisements and a site notice are attached as Appendices D-5 and D-6 to the EIA. Therefore, the public participation process undertaken confirms that the applicant has satisfied the minimum requirements as prescribed in the EIA Regulations of 2010 for the involvement of interested and affected parties for the proposed development as follows:

- Newspaper advertisements were placed in the "*Limpopo Mirror, Bosveldier, Daily Sun, Noordlike Nuus, and Seipone News*" on 21 June 2013;
- Notices were placed at the project site;
- Notices were sent to key stakeholders and the registered interested and affected parties; and
- All the issues and objections raised by the interested and affected parties were adequately addressed and SAHRA is yet to make a decision regarding the management of heritage resources and archaeological features observed on site.

- y) Findings of the site visit conducted on 16 October 2013 by Ms Malungani TP, Ms Mogashoa MS and Mr. Tshuketana MM of this Department are as follows:

- Some parts of proposed site are within previously ploughed areas;
 - Prospecting activities were observed on the proposed site;
 - Surrounding land uses are residential, commercial and agricultural;
 - The proposed development is characterised by medium to large trees and grass;
 - Temporary offices in support of the prospecting activities for the proposed mine were observed on site;
 - There is a drainage channel in the vicinity of the area where the Tailings Storage Facility is proposed; and
 - Burial grounds and archaeological features were observed on site and they have already been marked.
- z) The proposed development is beneficial as it involves the establishment of an underground mine which will contribute to the economic growth of the region and the Province.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the EA, the proposed activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. The authorisation is accordingly granted.

ANNEXURE 2

DEPARTMENTAL STANDARD CONDITIONS

1. SCOPE OF AUTHORISATION

- 1.1 The holder of the EA shall be responsible for ensuring compliance with the conditions contained in this EA. This includes any person acting on the holder's behalf, including but not limited to, an agent, servant, contractor, sub-contractor, employee, consultant or person rendering a service to the holder of the EA.
- 1.2 Any changes to, or deviations from, the project description set out in this EA must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the EA to apply for further authorisation in terms of the Regulations.
- 1.3 The activity, which is authorised, may only be carried out at the property indicated in the EA.
- 1.4 The holder of the EA will be held liable for any damages to the environment and associated costs, which results from any activity related to the construction and/or operation of the proposed project.
- 1.5 Where any of the holder of the EA's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, the holder of the EA must notify the Department as soon as the new details become known to the holder of the EA.
- 1.6 The Department reserves the right to monitor and audit the development throughout its full life cycle.
- 1.7 This EA does not negate the holder of the EA's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

2. APPEAL OF AUTHORISATION

- 2.1. The holder of the EA must notify all registered interested and affected party, in writing and within 12 (twelve) calendar days, of receiving notice of the Department's decision.
- 2.2. The notification referred must –
 - 2.2.1 specify the date on which the EA was issued;
 - 2.2.2 inform all the interested and affected party of the appeal procedure provided for in Chapter 7 of the Regulations;

2.2.3 advise all the interested and affected party that a copy of the EA will be furnished on request; and

2.2.4 give the reasons for the decision.

3. COMMENCEMENT OF THE DEVELOPMENT

3.1 In order to ensure their safety, all employees must be given the necessary personal protective equipment.

3.2 This EA must be provided to the site operator and the requirements thereof must be made fully known to him/her.

3.3 Appropriate notification signs must be erected at the construction site, warning the public (residents, visitors etc) about the hazards around the construction site and presence of heavy vehicles and machinery.

3.4 Hauling routes for construction vehicles and machinery must be clearly marked and appropriate signalling must be posted to that effect. Further, movement of construction vehicles and machinery must be restricted to areas outside of the drainage line/wet area.

3.5 Construction must include appropriate design measures that allow surface and subsurface movement of water along drainage lines so as not to impede natural surface and subsurface flows. Drainage measures must promote the dissipation of stormwater run-off.

3.6 Vegetation clearing must be kept to an absolute minimum. Mitigation measures must be implemented to reduce the risk of erosion and the invasion of alien species.

3.7 The holder of the EA must note that in terms of the National Forest Act (Act No. 84 of 1998), protected plant species (also listed in Limpopo Environmental Management Act, 2003 (Act No. 7 of 2003) must not be cut, disturbed, damaged, destroyed, and their product must not be possessed, collected, removed, transported, exported, donated, purchased or sold unless permission is granted by the Department of Agriculture, Fisheries and Forestry.

3.8 All construction areas (e. g. material lay down area), topsoil and sub-soils must be protected from contamination or pollution and stockpiling must not take place in drainage lines or where it would impede surface water runoff.

3.9 If any soil contamination is noted during the construction and operational phase of the proposed activities, the contaminated soil must be removed to a suitable waste disposal facility and the site must be rehabilitated to the satisfaction of this Department and DWA. The opportunity for the on-site remediation and re-use of contaminated soil must be investigated prior to disposal and this Department must be informed in this regard.

3.10 Should infill material be required for any purpose, the use of borrow pits must comply with the provisions of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002) administered by the Department of Mineral Resources (DMR).

- 3.11 An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate avoidance, reduction, recycling, re-use and disposal where appropriate. Uncontaminated builders' rubble generated during the construction can be re-used as back filling material on site. Ensure that no refuse or builders' rubble generated on the premises is placed, dumped or deposited on adjacent properties or public places and open spaces during or after construction.
- 3.12 Section 28 of the NEMA places a duty of care on the holder of the EA to ensure that reasonable measures are taken to prevent pollution or degradation of the environment from occurring, continuing or recurring. Should any environmental damage result from this development or the operation thereof, the holder of the EA, must within 14 days of the damage being caused, rectify the situation at his/her own expense.
- 3.13 Movement of construction vehicles and machinery must be restricted to areas outside of the drainage lines/wet area.
- 3.14 Construction vehicles must be serviced and maintained in a manner whereby excessive smoke and noise production is reduced to acceptable levels, and to prevent oil leaks. Contaminated soil must be remediated on site or removed to an appropriately authorised landfill site.
- 3.15 Dust and nuisance must be minimised through damping down of unsurfaced areas.
- 3.16 Residents (if any) on the property and surrounding area must be informed if any unusually noisy activities are planned. Noise impacts must be reduced over distance at a rate of 1db (decibel) per 13 metres.
- 3.17 Chemical sanitation facilities or systems such as "toilets" that do not rely on seepage of liquids must be provided with a ratio of one for every 15 workers. These must be placed such that they prevent spills or leaks to the environment and must be maintained according to operating instructions and the contents thereof must be disposed of at an authorised waste water treatment works.
- 3.18 Mixing of cement, concrete, paints, solvents, sealants and adhesive must be done in specified areas on concrete aprons or on protected plastic linings to contain spillage or overflows onto soil to avoid contamination to underground water and environmental damage.
- 3.19 Construction activities must be suspended and a representative of the South African Heritage Resources Agency (SAHRA) and/ or Limpopo Heritage Resources Agency (LIHRA) be contacted immediately in the event of finding or uncovering any subterranean (middens, graves, etc.).
- 3.20 Care must be taken to ensure that the material and excavated soil required for backfilling are free of contamination from hydrocarbons.
- 3.21 The hydraulic fluids or chemicals required during construction must be stored in a concrete lined surface with bund walls and shall be designed in such a manner that any spillage can be

contained and reclaimed without any impact on the surrounding environment. Should any spills occur it should be cleaned immediately by removing the spillage together with the polluted soil and dispose it in an authorised disposal site permitted to dispose of such waste. The Regional Office of the Department of Water Affairs must be notified within 24 hours of an incident that may pollute surface and ground water.

4. MANAGEMENT OF THE ACTIVITY

- 4.1 A copy of this EA must be kept at the property / on-site office where the activity (ies) will be undertaken. The EA must be produced to any authorised official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the EA who works or undertakes work at the property.

- 4.2 The contents of the EMPR and its objectives must be made known to all contractors, subcontractors, agents and other people working on the site, and any updates or amendments to the EMPR must be submitted to the Department for approval.

- 4.3 Regular monitoring and maintenance of storm water drainage facilities must be conducted at all times and repaired, if damaged, as directed by this Department or any other relevant authority.

- 4.4 The holder of the EA shall note that in terms of Section 19(1) of the National Water Act, 1998 (Act No. 36 of 1998), "An owner of the land, a person in control of land or a person who occupies or uses the land on which- (a) any activity or process is or was performed or undertaken; or (b) any other situation exists, which caused or is likely to cause pollution of a water source must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring". Therefore any pollution incident(s) associated with the proposed project shall be reported to the relevant Regional Office of the Department of Water Affairs within 24 hours.

5. REPORTING TO THE DEPARTMENT

- 5.1 The holder of the EA must notify the Department, in writing and within 48 (forty eight) hours, if any condition of this EA cannot be or is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance. Non-compliance with a condition of this EA may result in criminal prosecution or other actions provided for in NEMA and the Regulations.

- 5.2 Fourteen (14) days written notice must be given to the Department that the activity's operational phase will commence. Commencement for the purposes of this condition includes site preparation.

- 5.3 Any complaints received from the registered interested and affected parties (I&APs) during the construction and operational phase of the activity must be attended to as soon as possible and addressed to the satisfaction of all concerned I&APs.

- 5.4 The holder of the authorisation must ensure that an up to date emergency register is kept during the construction and operation of the project. This register must be made available upon request by the Department.

- 5.5 The holder of the EA must notify the Department within thirty (30) days after the completion of the construction activities.

6. SITE CLOSURE AND DECOMMISSIONING

- 6.1 Should the activity ever cease or become redundant, the holder of EA shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.