mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Environmental Impact Assessment
And
Environmental Management Programme

FINAL FOR DMRE SUBMISSION

for Listed Activities Associated with the Proposed Platreef Project, Situated in the Waterberg District Municipality, Limpopo Province

DMRE Reference Number: LP 30/5/2/2/1/10067 MR

Environmental Authorisation in Support of the Platreef Project

SUBMITTED FOR ENVIRONMENTAL AUTHORISATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO. 107 OF 1998) (NEMA) AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2014 (ACT NO. 26 OF 2014) (NEM:WA) IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT NO. 28 OF 2002) (MPRDA) (AS AMENDED).

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Report Type:	**Environmental Impact Assessment and Environmental Management Plan Report**
Project Name:	**Integrated Environmental Impact Assessment for the Proposed Platreef Project, situated in the Waterberg District Municipality, Limpopo Province**
Project Code:	**IVA6895**

Name	Responsibility	Signature	Date
Modiegi Sepogwane	Report Compiler		January 2022
Tshegofatso Msomi	Report Update		October 2022/Updated August 2023
Claire Wannenburgh	Update Reviewer		November 2022/Updated December 2022
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IMPORTANT NOTICE

In terms of the Mineral and Petroleum Resources Development Act (Act 28 of 2002 as amended), the Minister must grant a prospecting or mining right if among others the mining "will not result in unacceptable pollution, ecological degradation or damage to the environment".

Unless an Environmental Authorisation can be granted following the evaluation of an Environmental Impact Assessment and an Environmental Management Programme report in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA), it cannot be concluded that the said activities will not result in unacceptable pollution, ecological degradation or damage to the environment.

In terms of section 16(3)(b) of the EIA Regulations, 2014, any report submitted as part of an application must be prepared in a format that may be determined by the Competent Authority and in terms of section 17 (1) (c) the competent Authority must check whether the application has taken into account any minimum requirements applicable, or instructions or guidance provided by the competent authority to the submission of applications.

It is therefore an instruction that the prescribed reports required in respect of applications for an environmental authorisation for listed activities triggered by an application for a right or a permit are submitted in the exact format of, and provide all the information required in terms of, this template. Furthermore, please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorisation being refused.

It is furthermore an instruction that the Environmental Assessment Practitioner must process and interpret his/her research and analysis and use the findings thereof to compile the information required herein. (Unprocessed supporting information may be attached as appendices). The EAP must ensure that the information required is placed correctly in the relevant sections of the Report, in the order, and under the provided headings as set out below, and ensure that the report is not cluttered with un-interpreted information and that it unambiguously represents the interpretation of the applicant.

OBJECTIVE OF THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

The objective of the environmental impact assessment process is to, through a consultative process: -

- determine the policy and legislative context within which the activity is located and document how the proposed activity complies with and responds to the policy and legislative context;
- describe the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
- identify the location of the development footprint within the preferred site based on an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified development footprint alternatives focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects of the environment;
- determine the: -
    - nature, significance, consequence, extent, duration and probability of the impacts occurring to inform identified preferred alternatives; and
    - degree to which these impacts: -
    - can be reversed;
    - may cause irreplaceable loss of resources, and
    - can be avoided, managed, or mitigated.
- identify the most ideal location for the activity within the preferred site based on the lowest level of environmental sensitivity identified during the assessment;
- identify, assess, and rank the impacts the activity will impose on the preferred location through the life of the activity;
- identify suitable measures to manage, avoid or mitigate identified impacts; and
- identify residual risks that need to be managed and monitored.

EXECUTIVE SUMMARY

Introduction

Ivanplats (Pty) Ltd. (Ivanplats) is currently developing the Platreef Project, an underground Platinum Group Metals (PGM) mine near Mokopane in the Limpopo Province. The Department of Mineral Resources and Energy (DMRE) granted Ivanplats a Mining Right (MR) (Ref. No.: LP 30/5/2/2/1/10067 MR) in 2014 for a period of thirty years for the development of the Platreef Mine on the farms Macalacaskop 243 KR and Turfspruit 241 KR.

The first Environmental Authorisation (EA) granted to Ivanplats by the Limpopo Department of Economic Development, Environment and Tourism (LEDET) was on 27 June 2014. Since then, the following amendments have been issued:

- An amendment EA issued on 19 September 2014 (Ref. No.: 12/1/9/2-W32), authorising the following:
  - Amendment to allow pipelines to cross wetlands and watercourses from the Tailing Storage Facilities (TSF);
  - The inclusion of the need for an annual inspection of the conveyor belt; and
  - Amendment to the wording of various authorisations.
- An EA issued on 30 July 2015 (Ref. No.: 12/1/9/2-W32) in respect of the TSF to be located on the farm Rietfontein 2KS; and
- An amendment EA issued on 18 June 2018 (Ref. No.: LP 30/5/1/2/3/2/1 [10067] EM) in respect to the inclusion of a second shaft and associated infrastructure, as well as the amendment of the Environmental Management Programme (EMPr).

Since the granting of the above-mentioned authorisations, Ivanplats has made further changes to the planned Platreef Mine activities. Any change to the approved mine layout necessitates the requirement for an amendment to the relevant licences, in this case the EA, in terms of Regulation 31 of the Environmental Impact Assessment (EIA) Regulations, 2014 (Government Notice No. R. 982 of 4 December 2014 as amended) (the “EIA Regulations, 2014”). The report has also been compiled to consider International Financial Corporation (IFC) Standards with regards to implementing the principles and guidelines stipulated in the standard.

Further to these Amendments, new infrastructure has also been proposed which triggers Listed Activities in terms of the EIA Regulations, 2014 (as amended) which requires the need for a Scoping and Environmental Impact Reporting (S&EIR) process to be followed.

It is noted that this application will serve as an addendum to all other amendment applications submitted and will thus not replace the existing and approved EMPRs.

As part of the proposed Project, the following changes shown in the table below (Table A) are proposed to be made to the approved EIA/EMPr. It must be noted that the development will occur in two phases (Table A).

Table A: Proposed Amendments to the Approved activities or New proposed Activities

Infrastructure	Description
Phase 1	
Dry Stack Tailings Storage	Site earmarked for the Waste Rock Dump (WRD) to be used as Dry Stack TSF. Part of the Ore stockpile area will also accommodate the waste rock separately.
Ore Stockpile (ROM)	A ROM Stockpile to be constructed. Previously the high- and low-grade ore stockpiles were separated and are now combined.
Crushing and Screening Plant	A new smaller crushing and screening plant (700ktpa) is proposed to be constructed.
Backfill Plant	It is proposed that waste/tailings material with a cement or similar binding material will be backfilled underground
Stormwater Management	Stormwater Management System, consisting of two additional Storm Water Ponds (#4 and #5), various drains and cut off berms will be constructed.
Diesel Generator Plant	The approved 10MW Diesel Generator Plant will be expanded by 10MW or more
Phase 2	
Plant Cut off Drain	An additional cut-off drain will be constructed for the existing concentrator plant.
Stormwater Management	The stormwater drain will be expanded to the Mogalakwena River.
Haul Roads	The internal roads on the mine will be constructed in phases and upgraded.

Digby Wells Environmental (Digby Wells) has been appointed by Ivanplats as the independent Environmental Assessment Practitioner (EAP) to facilitate the application for Environmental Authorisation through a Scoping and EIA process.

To this end, the EA process aims to authorise new Listed Activities triggered in terms of the EIA Regulations, 2014 (as amended) as well as amendments to the approved mine layout which necessitates an amendment application in terms of Regulation 31 of the Environmental Impact Assessment (EIA) Regulations, 2014 (Government Notice No. R. 982 of 4 December 2014 as amended) (the “EIA Regulations, 2014”)..

Project Applicant

The details of the Project Applicant are included in the table below.

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Proposed Changes to the Approved EMPr

The Platreef Mine is currently under development and sinking of Shaft No. 1 has been completed. In addition, certain mine infrastructure has been established to support the sinking of Shaft 1, including the mine's access road, a mine boundary fence, and temporary facilities such as workshops and offices. There has been some surface excavation work at the Shaft No. 2 area, including the construction of a fence and stormwater infrastructure. The curtain grouting around Shaft No. 2 box cut has been completed and currently, the box cut is being excavated. All the activities are contained within an area of 20 ha and demarcated by a project fence. Ivanplats wishes to amend their EIA/EMPr to optimise operations. The following amendments and developments are proposed:

- Changing the WRD to a Dry Stack TSF;
- Construction of an Ore Stockpile (ROM) and waste rock dump;
- The addition of a new smaller crushing and screening plant (700ktpa);
- The construction of a Backfill Plant;
- Stormwater Management System, consisting of two additional Storm Water Ponds (#4 and #5), various drains and cut off berms;
- The previously approved Diesel Generator plant will be expanded by 10MW or more;
- An additional cut-off drain will be constructed for the existing concentrator plant;
- The stormwater drain will be expanded to the Mogalakwena River; and
- The internal roads on the mine will be constructed in phases and upgraded.

Overview of the Platreef Mining Operation Phased Approach

The first phase of the project consists of the further development of the underground workings and the construction of a new additional smaller crushing and screening plant (700ktpa), a Dry Stack TSF and supporting infrastructure.

These operations will be supported by infrastructure that includes a 132 kV Eskom Supply, a bulk water supply from the Masodi WWTW, on site waste handling facilities and a Stormwater Management System, consisting of two additional new Storm Water Ponds (No.4 and No. 5), various drains and cut off berms.

Underground operations will be supported from surface by workshops, warehouses, water storage tanks, water pumps, ventilation fans and explosives storage facilities.

Once the underground workings have been developed to the orebody, stoping will commence using the Drift and Fill method. The mine will be developed using a combination of the Drift and Fill method and the Long Hole Open Stoping method. Most of the mining will be done by Long Hole Open Stoping.

It is anticipated that in the initial stages of mining, backfilling of the works will take place using waste/tailings material with a cement or similar binding material. However, for the majority of the life of mine, back filling of the stopes will be done using of Cemented Paste Filling (CPF) during phase two.

The current philosophy is that the paste fill plant will be developed in two modules to align to the Concentrator plant ramp up, which will be further elaborated and defined with the next phase.

The second phase of the project will commence with the sinking and equipping of Shaft No.2. The larger Shaft No. 2 will allow the mine to increase the underground production in various steps, first to 2.9 Mtpa and then to 5.17 Mtpa, eventually ramped up to 12Mtpa in future. In addition to the Shaft sinking, the second phase of the project will commence with the additional underground development of the mine, the construction of 4.4 Mtpa PGM concentrator (Ramped up to 12Mtpa in future) and the Dry Stack TSF.

As the underground workings expand, additional ventilation fans will be installed within the Mine Area, notable part of the system will include refrigeration plant at Shaft No.1 as well as the raise boring and equipping of approved Vent Raises No. 1, No. 2 and No. 3.

The second phase of the project will also see the construction of additional workshops, storage facilities, permanent office facilities, change houses, training facilities and mining related support infrastructure.

The overall stormwater management infrastructure will be completed during this phase of the project which include the remainder of stormwater drainage, diversion berms, Attenuation Pond and main Storm Water Pond No.3.

To address the additional traffic the internal roads on the mine will be upgraded.

Purpose of this Report

The purpose of an EIA process is to ensure that the potential environmental and social impacts associated with the construction, operation and closure and rehabilitation phases of a project are identified, assessed, and appropriately managed. There are two primary phases of an EIA process, namely the Scoping Phase and the Impact Assessment Phase. Identification of

potential impacts occurs during the Scoping Phase, whilst the assessment and mitigation of those impacts occurs during the Impact Assessment Phase. The impact assessment and mitigation management are presented in this EIA/EMPr Report. Various specialist studies were undertaken during the Project evaluation to inform the EIA/EMPr; these include:

- Surface Water Impact Assessment;
- Wetlands Impact Assessment;
- Hydropedological Assessment;
- Geochemical Assessment;
- Geohydrology Assessment
- Air Quality Impact Assessment;
- Climate Change Impact Assessment;
- Noise Impact Assessment;
- Visual Assessment;
- Social Impact Assessment;
- Heritage Impact Assessment;
- Traffic Impact Assessment; and
- Rehabilitation and Closure Assessment.

A summary of the baseline environment is presented in Section 0 (Part A). Environmental monitoring plans suggested by various specialists are included in Section 8 (Part B) of this report and should be implemented to measure compliance, determine whether mitigation measures are effective and determine trends over the life of the Project.

Environmental Consultants

The contact details for the independent EAP are provided in the table below.

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Approach and Methodology for the Public Participation Process

A Public Participation Process was initiated during the Scoping Phase, which is central to the investigation of environmental and social impacts, as it is important that stakeholders who are

affected by the project are given an opportunity to identify concerns and to ensure that local knowledge, needs, and values are understood and taken into consideration as part of the impact assessment process. The Draft Scoping Report was released to the public for input and comments for a period of 30 days. The commenting period was from 29 October 2021 to 30 November 2021. The comments from the stakeholders are included in the Comment and Response Report that was attached as part of the Scoping Report. The Final Scoping Report was submitted to the DMRE on 10 December 2021 and approved on 21 February 2022, thereby allowing Ivanplats to continue into the EIA Phase. Following the approval, an Appeal was lodged against the acceptance of the Scoping Report by the DMRE. The Appeal process has subsequently been concluded on 23 September 2022 and Ivanplats were allowed to continue with the EIA phase of the project.

The Draft EIA/EMP will be submitted to the public for input and comments for a period of 30 days. The commencing period was from the **14 November 2022** and ended on **14 December 2022**. The electronic Draft EIA/EMP was able to be accessed and downloaded from the Digby Wells website www.digbywells.com (Public Documents) and the data-free service portal. A Hard copy of the Draft EIA/EMP was made available to the public at the Mokopane public library.

Focus Group Meetings (FGMs) were held during this commenting period to present the Draft EIA/EMP and obtain comments from the Interested and Affected Parties (I&APs). The Draft EIA/EMP was updated with comments received from I&APs. The final EIA/EMP was submitted to the DMRE for adjudication on 15 December 2022.

Following the submission of the final EIA/EMP, a site visit was held between the DMRE and Ivanplats representatives on 3 August 2023 and a hybrid meeting held on 7 August 2023 between DMRE, Ivanplats and Digby Wells representatives, the DMRE issued a letter to Ivanplats on 8 August 2023. The DMRE requested an update of the EIA/EMP on the activities that require environmental authorisation. Following the changes made to the final EIA/EMP, the updated report was resubmitted to the public for review and comment. It must be noted that no new listed activities were added, or changes made to specialist studies. The commenting period was from **22 August 2023 to 21 September 2023**. The electronic copy of the EIA/EMP was accessible from the Digby Wells website www.digbywells.com (Public Documents, the data-free service portal and newspaper advertisement published on Bosveld local newspaper on week of 24-30 August 2023. A hard copy of the EIA/EMP was made available to the public at the Mokopane public library. No comments were received during the commenting period.

Project Alternatives

A Project alternative is defined as a possible course of action, in place of another, that would meet the same purpose and need (Department of Environmental Affairs and Tourism (DEAT), 2004). Section 9.1, Part A, provides the details of the development footprint alternatives considered for this Project. The following alternatives were considered in this EIA/EMPr:

- Site;

- Activity
- Design and layout;
- Mining Method
- Technology; and
- The 'No-Go" alternative.

Environmental Baseline

The proposed Platreef Project area is characterised by warm, wet summers and dry winters. The area is located on the Northern Limb of the Bushveld Igneous Complex. The area is undulating and is located within the dominant Ae, Ah and Ib land types of the 2328 Pietersburg and 2428 Nylstroom land type maps (Land Type Survey Staff, 1989). These land types indicate that the underlying geology consist mainly of hornfels, shale, quartzite, conglomerate, granite and biotite granite.

The proposed Project is situated within the Savanna biome, which is the largest biome in Southern Africa. It consists of a grassy ground layer and a woody plant upper layer. It is known as Shrubveld when the woody layer is in close proximity to the grass layer and as Bushveld in any intermediate phases. The Project area occurs within four vegetation types namely, the Makhado Sweet Bushveld, Mamabolo Mountain Bushveld, Polokwane Plateau Bushveld and Waterberg Mountain Bushveld.

The current land use activities within the proposed areas are mainly artisanal and small mining, cultivation, residential areas, and livestock farming. The diffuse nature of the wetlands on site has been reduced and head-cut erosion has taken place. Livestock overgrazing and trampling have also contributed to the erosion in freshwater systems and drainage lines. The establishment of Alien Invasive Plants (AIPs) has resulted in a loss of vegetation integrity due to the decrease in biodiversity associated with land uses.

The Platreef Project area is located on the watershed boundary of quaternary catchments A61F and A61G within the Limpopo Water Management Area 1 (WMA 1). It is drained by the Mogalakwena River on the western fringe and its tributaries, the Rooisloot and Dithokeng.

Environmental Impact Summary

The EIA Report, the associated specialist studies and the Public Participation Process (PPP) were undertaken in compliance with relevant South African legislation. A quantitative impact rating methodology was applied to determine the significance of the expected impacts pre-mitigation and post-mitigation. Table A provides a summary of the key impacts (of moderate and major significance only) expected during the various phases of the Project. This report lists and assesses all the potential impacts, together with the associated mitigation measures.

Table A: Summary of the Key Impacts Associated with the Proposed Activities

Activity	Aspect	Impacts	Rating (Pre-Mitigation)	Rating (Post Mitigation)
Construction Phase				
Alteration to the natural topography and drainage processes as a result of excavations and construction of infrastructure such as the box cut.	Hydropedology	• Alteration of surface and subsurface drainage patterns and reduced catchment water yield reporting to Mogalakwena River and tributaries.	Moderate (negative)	Minor (negative)
Alteration to the natural topography and drainage processes as a result of excavations, construction, extension of haul road and construction of stormwater pond 4 and 5.	Surface Water	• Interception of rainfall, runoff and subsurface flow leading to reduced downstream runoff yield.	Moderate (negative)	Minor (negative)
Activities associated with construction	Socio-economic	• Impacts Associated with population influx.	Moderate (negative)	Minor (negative)
	Socio-economic	• Community unrest due to perceived lack of economic opportunities and unmet expectations.	Moderate (negative)	Minor (negative)
	Socio-economic	• Health and safety impacts.	Moderate (negative)	Minor (negative)
	Socio-economic	• Creation of temporary employment.	Minor (positive)	Minor (positive)
	Socio-economic	• Opportunities and Capabilities within the Supply Chain .	Minor (positive)	Moderate (positive)
Operational Phase				
Operation of surface infrastructure within the infrastructure area (Dry Stack TSF, the Ore Stockpiles (ROM) and Waste Rock Stockpile, new additional crushing and screening plant and related infrastructure).	Visual	• Alterations of the natural visual character of the region; • Long term vegetation loss; and • Land cover and land use changes.	Moderate (negative)	Minor (negative)
Operation of the Dry Stack TSF	Visual		Moderate (negative)	Moderate (negative)
• Operation of the crushing and screening plant; • Operation of the ventilation fans; • Use of access and haul roads for transporting material to ore stockpile areas and waste rock dumps; and • Concurrent rehabilitation of the Dry Stack TSF and waste and ore stockpile as mining progresses.	Air Quality	• Generation of dust, leading to poor air quality; • Soiling of surfaces due to dust fall; and • Particulates and gaseous emissions from the underground via the ventilation shaft	Major (negative)	Negligible (negative)

Activity	Aspect	Impacts	Rating (Pre-Mitigation)	Rating (Post Mitigation)
• Removal of rock (blasting); • Operation of production shafts and conveyor systems; • Ventilation raises and fans; • Operation of the plants (Crushing, Screening, etc.); • Stockpiling: waste rock berms, waste rock stockpiles ore stockpiles; and • Hauling: Internal haul and access roads.	Noise	• Noise emissions from equipment/machinery will increase the noise levels at sensitive receivers and may result in a noise disturbance.	Major (negative)	Minor (negative)
Water use and storage on-site – during the operation water will be required for various domestic and industrial uses.	Socio-economic	• Increased competition for water resources.	Major (negative)	Moderate (negative)
Removal of rock (blasting).	Socio-economic	• Impacts associated with blasting on community.	Moderate (negative)	Minor (negative)
All project related activities associated with operation.	Socio-economic	• Impacts associated with decreased community health, safety, and security.	Moderate (negative)	Minor (negative)
All project related activities associated with operation.	Socio-economic	• Creation of employment, work skills development and experience.	Minor (positive)	Moderate (positive)
All project related activities associated with operation.	Socio-economic	• Opportunities and capabilities within the supply chain.	Minor (positive)	Moderate (positive)
All project related activities associated with operation.	Socio-economic	• Multiplier effects on the local and regional economy.	Minor (positive)	Moderate (positive)
All project related activities associated with operation.	Socio-economic	• Social Development as part of SLP.	Minor (positive)	Moderate (positive)
Decommissioning Phase				
Decant of Acid Mine Drainage (AMD).	Surface Water	• Contamination of surface water resources by acid mine drainage	Moderate (negative)	Minor (negative)
Decommissioning	Socio-economic	• Economic Boom-Bust after the Construction and Operation	Moderate (negative)	Minor (negative)
Land subsidence due to removal or displacement of subsurface, vadose zone or deep underground earth materials	Hydropedology	• Potential risk of subsidence	Moderate (negative)	Minor (negative)
• Demolition and removal of mine infrastructure (Stormwater Pond 3, workshops, haul roads, processing plant etc.) and resultant disturbance of soils and erosion by overland flow; and • Hydrocarbons and other chemical spills and leakages from demolition equipment, moving vehicles and machinery during decommissioning activities.	Hydropedology	• Deterioration of water quality of receiving waterbodies caused by hydrocarbon waste and other contaminants	Moderate (negative)	Negligible (negative)
Hydrocarbons and other chemical spills and leakages from demolition equipment, moving vehicles and machinery during decommissioning activities.	Surface Water	• Deterioration of water quality of receiving waterbodies caused by hydrocarbon waste and other contaminants.	Moderate (negative)	Negligible (negative)

Activity	Aspect	Impacts	Rating (Pre-Mitigation)	Rating (Post Mitigation)
Backfilling and re-profiling of disturbed sites, where applicable.	Hydropedology and Surface Water	• Improvement of surface drainage which increases streamflow regime in nearby watercourses following re-profiling of rehabilitated landscapes.	Moderate (negative)	Moderate (negative)

Conclusions and Recommendations

The specialist studies that were undertaken during the EIA Phase aimed to identify and weigh anticipated significant impacts and risks associated with the proposed Platreef Project. The findings of the impact assessments have shown that the proposed Project activities will have impacts on the receiving environment. The most significant negative impacts identified are associated with site clearing during the construction phase and general operational and maintenance activities during the operational phase. These activities may result in soil erosion and subsequent sedimentation of watercourses leading to water quality deterioration and alteration of surface and subsurface drainage patterns and reduced catchment water yield reporting to Mogalakwena River and tributaries. The Platreef Project will have a visual impact on the receiving environment. The most significant visual impact of the proposed Project will be from the Dry Stack tailings TSF due to the proposed footprints and height dimensions of this infrastructure.

Wetlands were recorded and cover approximately 157.38 ha which amounts to 1.45% of the total Project Area. The proposed mining activities will have minor impacts on wetlands. An artificial wetland was identified within the proposed infrastructure area. The impacts to this wetland are negligible due to its artificial nature. The highest impacts relating to the proposed activities will be to the Small Spruit Channelled Valley Bottom (CVB) and the Nyl River Floodplain as these systems are the most natural and provide various biodiversity and environmental services. Wetlands will not be directly impacted by the proposed surface infrastructure; however, residual impacts need to be avoided and minimised as far as possible.

Surface infrastructure and the box cut will variably impact on subsurface fluxes towards the Mogalakwena River and its tributaries as they are established to certain depths into the soil profile. Interruption of subsurface flow paths will reduce the flow regime in the affected watercourses, but flows are expected to improve following mine decommissioning, rehabilitation, and re-profiling of affected landscapes, where applicable.

The findings from the noise impact assessment have indicated major impacts on the nearby sensitive receivers from Project related activities. However, the implementation of mitigation measures in addition to the waste rock berm during the different phases of the Project is recommended and is predicted to result in minor impacts post-mitigation. A graveyard and heritage resources were identified within the Project area. The mitigation measures proposed have been described in Section 5 (Part B) of this EIA.

Adequate mitigation measures have been included into the EMPr to reduce the significance of all the identified negative impacts. Most negative impacts can be reduced through the implementation of mitigation measures. Nevertheless, the visual impact assessment, for example, revealed moderate impacts which cannot be mitigated.

The socio-economic study has identified key positive impacts which will result from the Project. If the proposed Project is authorised some positive social and economic impacts will be realised at local, regional, and national level. The Project will contribute to the existing operation, which has created long-term employment opportunities, and which generates

revenue feeding into the regional and national economies in a sector which is employing a growing portion of the workforce.

Monitoring plans, which should be implemented throughout the life of the mine, have also been provided to ensure that adverse impacts are recognised, and continuous improvements are developed and monitored throughout the lifespan of the Project. Based on the findings of the impact assessment, and with the understanding that the mitigation measures proposed herein will be implemented, and the conditions of the environmental authorisation enforced by the relevant authorities will be adhered to, the EAP is of the opinion that an environmental authorisation for the proposed development should be granted.

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