

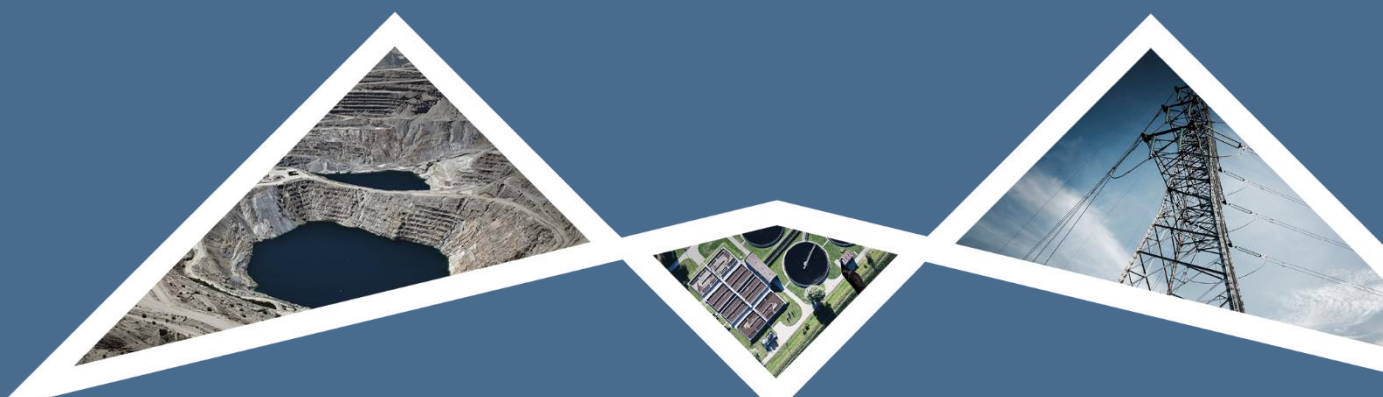


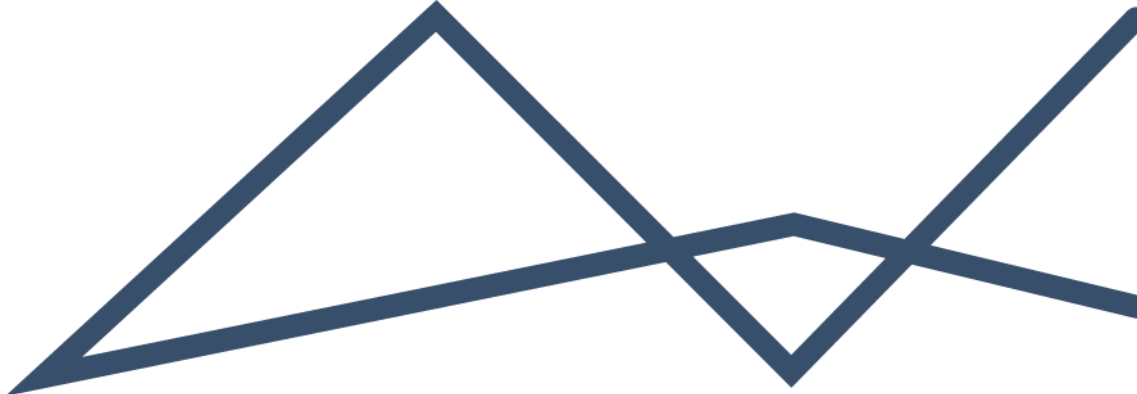
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SERVICES

T 011 789 7170 E info@eims.co.za W www.eims.co.za

EXECUTIVE SUMMARY

HARMONY NOOITGEDACHT TAILINGS STORAGE FACILITY PROJECT





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	NAME	SIGNATURE	DATE
COMPILED:	John Von Mayer	Sent Electronically	2026/05/08
CHECKED:	Liam Whitlow	Sent Electronically	2026/05/08
AUTHORIZED:	Liam Whitlow	Sent Electronically	2026/05/08

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1 EXECUTIVE SUMMARY

Harmony Gold Mining Company Limited (hereafter referred to as Harmony / “the applicant”) has appointed Environmental Impact Management Services (Pty) Ltd (EIMS) as the Environmental Assessment Practitioner (EAP) to undertake the necessary environmental authorisation and associated consultation processes for a proposed new **Tailings Storage Facility (TSF) Project and associated infrastructure** near Welkom in the Matjhabeng Local Municipality in the Free State province.

The applicant owns and operates a number of gold mines and plants in the Welkom region in the Free State and currently deposits tailings onto the Free State South 2 Tailings Storage Facility (TSF), St. Helena 4 TSF, St. Helena 123 TSF, Dam 23 TSF, Brand D TSF and Target 1&2 TSF. The current planned Life of Mine (LOM) of the Free State operations exceed the available deposition capacity of these TSFs and the applicant is therefore proposing to construct the proposed Nooitgedacht TSF to cater for this additional capacity. Nooitgedacht will cater for both the LoM as well as the reclamation of up to 23 additional TSFs over an approximate LoM of up to 2050 (commissioning of the last reclamation station). This Free State Reclamation project will be for the reclamation of up to 3 older TSFs at any one time. This will allow for the continuation of jobs and investment into the Welkom area. Further thereto, the reclamation will result in the removal and cleaning of old historic tailings facility and placing it on one consolidated facility which is well managed and is lined in accordance too the new waste legislation and regulations , thereby removing potential sources of pollution from these old areas and allowing Harmony to rehabilitate the old footprints and open them to other land uses.

The TSF will cover an area of approximately 895 ha. The proposed TSF will be located on Farm portions Mijannie 66 Ptn 0/RE, Goedgedacht 53 Ptn 0, Nooitgedacht 50 Ptn 0, Jacobsdal 37 Ptn 0 and Rheedersdam 31 Ptn 0.

Four new pipelines are required to be constructed:

- Two 10km long slurry lines from Harmony One Plant to the St Helena Booster Pump Station;
- One 16k long slurry line from Brand A TSF to the St Helena Booster Pump Station; and
- One 17km slurry line from the St Helena Booster Pump Station to FSN 1 TSF.

The pipelines will be flanged steel pipelines installed above-ground on pre-cast concrete plinths and a 3.5m wide access road, adjacent to the pipelines, will be cleared/graded to provide access for construction, maintenance and inspections.

The proposed pipelines traverse the following farm portions: Vlakplaats 125 Ptn 3, 4 and 5; Mijannie RE/66 Ptn 0; Toronto RE/115 Ptn 7 and 0; Rietpan 17 Ptn 0; Rietkuil 28 Ptn 0; Rheeders Dam 31 Ptn 0; Farm 41 Ptn 20; Ouders Gift 48 Ptn 0; Nooitgedacht 50 Ptn 0; Goedgedacht 53 Ptn 0; Theronia 71 Ptn 1 and 7; Jacobsrust 118 Ptn 0; St Helena 42 Ptn 2 and 3, Farm 80 Ptn 0, Stuirmanship 92 Ptn 1, 7 and 0, Saaiplaas 690 Ptn 1, 11, 15 and 0; Klippan 14 Ptn 1, 2 and 15, Marmageli 20 Ptn 0 and 157 Ptn 0.

In addition, a new **40 Megalitre (ML) low pressure water storage facility** is required to be constructed at farm Klippan 14 Ptn 2 which will cover an area of up to 2 ha. Return water will be fed to this facility where the water will then be taken to the plants and the active reclamation sites.

EIMS will compile and submit the required documentation in support of applications for:

- Environmental Authorisation (EA) and Waste Management License (WML) in accordance with the National Environmental Management Act – NEMA (Act 107 of 1998)- Listed activity: Listing Notice 2, Activity 15 and various Listing Notice 1 and 3 activities as well as the National Environmental Management: Waste Act – NEMWA (Act 59 of 2008)- Activity B7, B10 and B11; and
- Water Use License (WUL) in accordance with the National Water Act – NWA (Act 36 of 1998). Water uses: Section 21 (c), Section 21 (i) and Section 21 (g). A separate application for a Water Use License (WUL) has been lodged with the Department of Water and Sanitation (DWS) for the water use triggers.



1.1 PURPOSE OF THE EIA REPORT

The purpose of the EIA process is to:

- 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 development footprint on the approved site as contemplated in the accepted Scoping report;
- Identify the location of the development footprint within the approved site as contemplated in the accepted Scoping report 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 nature, significance, consequence, extent, duration and probability of the impacts occurring to inform identified preferred alternatives and the degree to which these impacts can be reserved, may cause irreplaceable loss of resources and can be avoided, managed or mitigated;
- identify the most ideal location for the activity within the development footprint of the approved site as contemplated in the accepted Scoping report based on the lowest level of environmental sensitivity identified during the assessment;
- identify, assess, and rank the impacts the activity will impose on the development footprint on the approved site as contemplated in the accepted Scoping report through the life of the activity;
- identify suitable measures to avoid, manage or mitigate identified impacts; and
- identify residual risks that need to be managed and monitored.

1.2 PUBLIC PARTICIPATION PROCESS

The Public Participation Process (PPP) for the proposed project has been undertaken in accordance with the requirements of the National Environmental Management Act (NEMA) in line with the principles of Integrated Environmental Management (IEM). The PPP commenced on 21 June 2024 with an initial notification and call to register as interested and affected parties (I&APs). The comments received from I&APs during the initial call to register and commenting period so far have been captured in Public Participation Report included as part of the EIA report.

Comments received during this EIA Report review period will also be collated and added to the Public participation report submitted to the Competent Authority (CA) with the Final EIA Report, including an EMPr, for decision-making.

This EIA Report is being made available for public review and comment for a period of 30 days.

All comments and responses from the previous rounds of public participation conducted as part of the previously withdrawn applications for the Nooitgedacht TSF project are still included as part of the current comments and responses as these are still deemed to be applicable to the current application.

1.3 PROJECT ALTERNATIVES AND ENVIRONMENTAL IMPACT ASSESSMENT

Each of the identified risks and impacts at the various project phases were assessed. The assessment criteria include the nature, extent, duration, magnitude / intensity, reversibility, probability, public response, cumulative impact, and irreplaceable loss of resources.

The negative impacts, in particular, will be further interrogated and assessed during the EIA phase of the project. Potential mitigation measures have been identified and will be refined based on input from the Environmental Assessment Practitioner (EAP), public consultation, and specialist assessments during the EIA phase of the



project. The associated EMPr will identify appropriate mitigation mechanisms for avoidance, minimisation and / or management of the negative impacts and enhancement of the positive aspects.

The assessment of location alternatives is limited due to the available open space in close proximity to the mining activities (and especially the gold processing plant). Several alternative sites were identified and assessed as part of a 2008 study completed by Golder Environmental. As part of the 2008 Golder Study various specialist input was obtained from ecological, surface water and groundwater specialists. During a Steering Committee meeting involving various stakeholders including DWS that was convened on 25 October 2007 the site selection findings were discussed and an optimal site selected. Nooitgedacht was agreed upon as the preferred site for the TSF (as agreed by the Steering Committee). The reasons for this is that the proposed footprint is largely brownfields with a partial greenfield take. The resultant negative impacts on agriculture and ecosystems are considered to be negligible but outweighed by the positive attributes of the site.

A biodiversity specialist was appointed to systematically evaluate the potential terrestrial biodiversity impacts associated with the proposed Nooitgedacht Tailings Storage Facility and to guide the application of the mitigation hierarchy in line with current legislation and best-practice guidelines. The specialist found that the Nooitgedacht TSF site selection demonstrated application of the mitigation hierarchy, with clear evidence of avoidance, minimization, and rehabilitation measures being prioritized and integrated into project planning. The remaining residual impacts will require careful management, ongoing monitoring, and, where necessary, the implementation of scientifically robust offset strategies. Continued engagement with regulatory authorities, local stakeholders, and conservation experts will be essential to ensure that the project achieves a balance between development needs and the long-term conservation of the region's unique biodiversity and ecosystem services. Based on this assessment and the alternative analysis conducted, the Nooitgedacht site is still considered the only favourable location for the TSF.

Currently cyclone deposition is the vastly preferred method of deposition for the majority of Harmony's current TSF operations due to the reasons described above. The environmental impacts associated with each deposition method are similar however cyclone deposition has higher water recovery rates and is also preferred from a geotechnical perspective. The Nooitgedacht TSF is designed to have a mix of Spiggot and Cyclone deposition. As such no other deposition methods or technologies have been considered in the EIA phase and cyclone deposition along with Spiggot deposition is nominated as the preferred alternative.

A trade-off study was conducted considering three options for the 40 megalitre Low Pressure (LP) water storage system (two HDPE lined earth dams, two concrete tanks or twelve Steel tanks.). The option with the smallest footprint, at ground level, that provides a simple suction manifold layout and positive suction head for the pumps at all times is the installation of the two 40m diameter concrete tanks.

The most significant risks and impacts identified were those that remain high or moderately high in terms of significance even post mitigation measures being considered. The following identified impacts were determined to have a potentially **moderate - high** final significance at this stage:

- Mortality / disturbance of wildlife, specifically identified Species of Conservation Concern (SCC) ; during construction and operation;
- Fragmentation of ecosystems during construction;
- **Reduction in air quality during operation;**
- Decrease in runoff during construction, operation and decommissioning;
- Pollutants entering the surface water environment during operation;
- Groundwater quality impacts during operation and decommissioning / closure phases;
- Siltation of water resources during operation;
- Disturbance and degradation of wetlands during construction;
- Potential leaks and discharges leading to pollution of surrounding environment during operation;



- Visual impacts on sense of place during operation;
- Loss of land capability during construction;
- Impact on livelihoods during operation;
- Increase in social pathologies during construction;
- Impact on community expectations and social license to operate during construction and operation;
- Impacts on health and wellbeing;
- Reclamation and rehabilitation of Harmony's existing Freestate TSFs (positive impact); and
- Continued employment and economic impacts during construction and operation (positive impact).

Identified areas of very high sensitivity are due to the identified SCC (Species 15) within the proposed TSF footprint as well as a heritage grave site located in the southeast of the TSF site. A relocation plan has been drafted for the SCC species. If relocation is completed these on-site sensitivities will no longer be applicable and will fall away. Given the irreplaceable value and vulnerability of the SCC population at Nooitgedacht, it is essential that a comprehensive Biodiversity Action Plan (BAP) be developed. This plan must include a robust, scientifically justified translocation protocol – designed and implemented in line with best practice, regulatory requirements, and multi-disciplinary stakeholder input – to ensure the long-term viability and conservation of this threatened species. A draft Relocation and Monitoring Plan / Biodiversity Action Plan (BAP) has been drafted and included in this EIA report.

With respect to the grave site, the TSF has been redesigned to avoid this sensitive area. Other medium-high sensitivity areas include various soils, wetlands and hydrology high sensitivity areas. Mitigation will be required to ensure potential impacts relating to these areas are within acceptable limits. Two additional; heritage sites were also identified within the TSF site, and these sites will be removed from site through SAHRA permit applications.

1.4 CONCLUSIONS AND RECOMMENDATIONS

The findings of the specialist studies conclude that there are no environmental fatal flaws that should prevent the proposed project from proceeding, provided that all the recommended mitigation and management measures are implemented. Based on the nature and extent of the proposed project, the local level of disturbance predicted as a result of the construction and operation of the TSF and associated infrastructure, the findings of the EIA studies, and the understanding of the significance level of potential environmental impacts, it is the opinion of the EIA project team that the significance levels of the majority of identified negative impacts can generally be reduced by implementing the recommended mitigation measures.

Despite the negative impacts caused by the TSF, it must be considered that there are positive impacts as well, mostly based on the employment opportunities and SLP initiatives. Based on the nature and extent of the proposed and the predicted impacts as a result of the construction, operation and closure of the facility, the findings of the EIA, and the understanding of the mostly low - moderate post-mitigation significance level of potential environmental impacts, it is the opinion of the EIA project team that the environmental impacts associated with the application for the proposed Nooitgedacht TSF project can be mitigated to an acceptable level and the project should be authorized.