21 April 2022

Dear Interested and/or Affected Party,

NOTIFICATION WITH RESPECT TO THE ENVIRONMENTAL AUTHORISATION APPLICATION FOR THE PROPOSED PLATINUM FLOTATION PLANT EXTENSION AND FINE CHROME RECOVERY PLANT ON PORTION 3 OF THE FARM DE GROOTEBOOM 373 KT, LIMPOPO PROVINCE

Introduction

Glencore Operations South Africa (Proprietary) Limited proposes to establish a Fine Chrome Recovery ("FCR") plant and extend the existing Platinum Group Metals ("PGM") flotation plant at Thorncliffe Mine. The facilities are proposed within the existing mining area on portion 3 of the farm De Grooteboom 373 KT in the Limpopo Province and are proposed to cover an area of 1.8 ha that has previously been disturbed by mining activities.

The site is indicated on the locality maps attached as Appendix A. The centre coordinates of the site are as follows:
Lat: -24.963507
Long: 30.126908

As part of the planning phase of the project, the mine needs to obtain approval from the Department of Mineral Resources and Energy ("DMRE") to amend their current Environmental Authorisation (EA). The Platinum Group Metals ("PGM") flotation plant (also known as the Thorncliffe Tailings Treatment Facility) is an existing plant at Thorncliffe Mine for which an environmental authorization ("EA") was previously awarded by the Limpopo Department of Economic Development, Environment and Tourism ("LEDET") and the Department of Mineral Resources. Ukwazi Mining Studies (Pty) Ltd ("Ukwazi") was appointed to conduct an independent environmental authorization amendment process in this regard.

Project description

Fine Chrome Recovery Plant

The Fine Chrome Recovery ("FCR") plant will be located on a disturbed footprint (0.17 ha) next to the existing chrome tailings retreatment plant. The plant feed will be re-mined and transported to the Fine Chrome Recovery ("FCR") Plant from the Helena and Thorncliffe mine old slime dams. The feed will first be subjected to a trash screen to remove debris. The debris from the trash screen overflow will be discarded on the existing waste stockpile. The trash screen undersize will be pumped to a desliming cyclone, cyclone overflow will report to a thickener and then to the flotation plant. The cyclone underflow will be pumped to the belt magnets at the Fine Chrome Recovery ("FCR") plant for chrome extraction. The FCR tails, which are non-magnetics, will then be pumped back to a thickener and then to the flotation plant. The belt magnet concentrate, which are magnetics, will be pumped to the already existing boom stacker cyclone as a final product.

PGM Plant Extension

The extension to the existing PGM plant will treat both current arising tails from the Thorncliffe, Helena and Magareng chrome concentrator plants, from external sources and from the Thorncliffe tailings dam. The PGM plant will recover platinum group metals and produce a saleable PGM concentrate. The plant will also treat tailings from the proposed FCR plant.The PGM plant is proposed to be extended to the west, with the extension covering an area of 1.6 hectares ("ha") that has been completely transformed by historical mining activities. Ore will be received via pumping from Thorncliffe, Helena, and Magareng Chrome Plants current arising tailings and Thorncliffe re-mined tailings dumps. The re-mined tailings from Thorncliffe will be transferred from the re- mining site to a wash/stock pad area next to the plant where it is washed into the process feed surge tank using high pressure monitor guns. All incoming material will report to the surge tanks. Slurry from the surge tanks will be fed to a feed preparation circuit to render the feed properties suitable for milling. Mills or attritioners will be utilised to pre-treat the PGM plant feed. The material will go through a flotation circuit, whereafter the concentrates will be pumped to the concentrate thickener. The settled thickener underflow will be pumped to a concentrate holding tank. The final concentrate has an option to be filtered or dispatched as slurry. Either in cake or slurry form, it will be loaded into concentrate trucks and then sampled and weighed on a weigh bridge prior to delivery to a smelter or other customers. The concentrate thickener overflow water is reused in the process. The final tailings will be pumped to the Final Tailings Thickener. The thickener underflow will then be transferred via pumping to the Thorncliffe Chrome Concentrator Final Tailings Filter Press. The PGM Plant can also transfer the final tails thickener underflow material to the nearby tailings disposal facility, which utilises cycloning deposition techniques to conserve water and permit an increased rate of rise.

Flow diagrams for the PGM and FCR plants are provided in Appendix B.

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Authorisations required

No NEMA or NEM:WA listed activities will be triggered as a result of the proposed project. The PGM and FCR plants will be located on areas previously disturbed by previous mining activities. The PGM plant is proposed to be extended to the west, with the extension covering an area of 1.6 hectares ("ha") that has been completely transformed by historical mining activities. The FCR plant will cover 0.17 ha and will be located on an area next to the existing chrome tailings retreatment plant that has also been completely transformed.

No listed activities in terms of Government Notice Regulation ("GNR") 983, 984 or 985 (EIA Listing Notices 1, 2 and 3) could be identified. The areas have been disturbed by historical mining activities and the proposed development area is not located in environmentally sensitive areas listed in GNR. 985 (such as critical biodiversity areas). The plants will also not release emissions requiring an atmospheric emission licence as identified according to the listed activities identified in terms of section 21 of the National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) ("NEMAQA").

The project will not require changes to any mine residue stockpiles or deposits, nor will it require new stockpiles or deposits as the residue will be deposited at existing facilities. The plant thus does not trigger any waste management activities listed in Category A or B of GNR 921 of 29 November 2013 (as amended), published in terms of section 19 of the National Environmental Management: Waste Act (Act No. 59 of 2008) ("NEMWA").

Thorncliffe mine is in possession of a water use licence ("WUL") in terms of Section 40 of the NWA. The WUL was issued to Glencore Eastern Mines on 26 April 2019 with Licence no. 06/B42H/IAGJ/8931. The WUL authorises water uses in accordance with Section 21 a, Section 21 b, Section 21 c, Section 21 g, Section 21 i and Section 21 j of the NWA. The plant will not require a water use licence as no water uses requiring authorisation in terms of Section 21 of the National Water Act (Act No 36 of 1998) ("NWA") will be triggered. The plant will not release any effluent. No additional water uses requiring authorisation in terms of Section 40 of the NWA are triggered by the proposed project.

Alternatives considered

Two different sites have been evaluated to determine the best possible area for the PGM plant extension. The preferred site is located directly to the west of the existing PGM plant. The site is indicated as 'PGM Plant Alternative Site 1' in Figure 1 below. The alternative site evaluated for the proposed PGM plant is located to the north of the existing PGM plant site in a largely disturbed area that only has a narrow strip of indigenous vegetation on its eastern border. This site is indicated as 'PGM Alternative Site 2' in Figure 1.

Alternative Site 1 was found to have a negligible ecological impact as no natural vegetation remains. Alternative Site 2 will have a low to medium ecological impact as it is largely disturbed, however the thin strip of natural vegetation (that contains a few protected trees) that remains on the eastern edge makes the site less favourable from an ecological perspective. Alternative Site 2 is expected to have similar noise and air quality impacts compared to Alternative Site 1. Alternative Site 2 is however expected to have a slightly higher visual impact since it will be closer to the tar road running past the mine. Both sites are situated within an existing disturbed area and inside of the mine's dirty water management area and will not require the mine's stormwater management plan to be updated.

Alternative site 1 is the preferred site from an environmental perspective, particularly when considering the negligible ecological impact of the preferred site.

Photographs of the preferred site for the PGM plant extension as well as the proposed site for the FCR plant are provided in Appendix C.

The assessment of the "no-go" alternative is a legal requirement according to NEMA and the EIA Regulations. In this scenario no development will take place. The environment will remain and the impact on the area and potential benefits will not realise. If the proposed PGM plant extension and FCR plant is not built the status quo will be maintained. The no-go alternative will imply that virtually none of the identified impacts (positive and negative) of proceeding with the project will be incurred. The sites identified for both plants are void of natural vegetation due to historical mining activities.

The impacts from the existing mining activities will continue even without the PGM plant expansion being implemented. However, without the project being implemented the mentioned socio-economic benefits from the proposed project will not be realised. This includes positive impacts such as job creation and economic benefits due to optimised mineral extraction from mine waste (tailings). Current indications are that 54 jobs will be created at the PGM plant extension and 28 at the FCR plant during the operational phase.

For the above reasons, the development and operation of the PGM plant extension and FCR plant is considered suitable and the "no-go" alternative is not a recommended option.

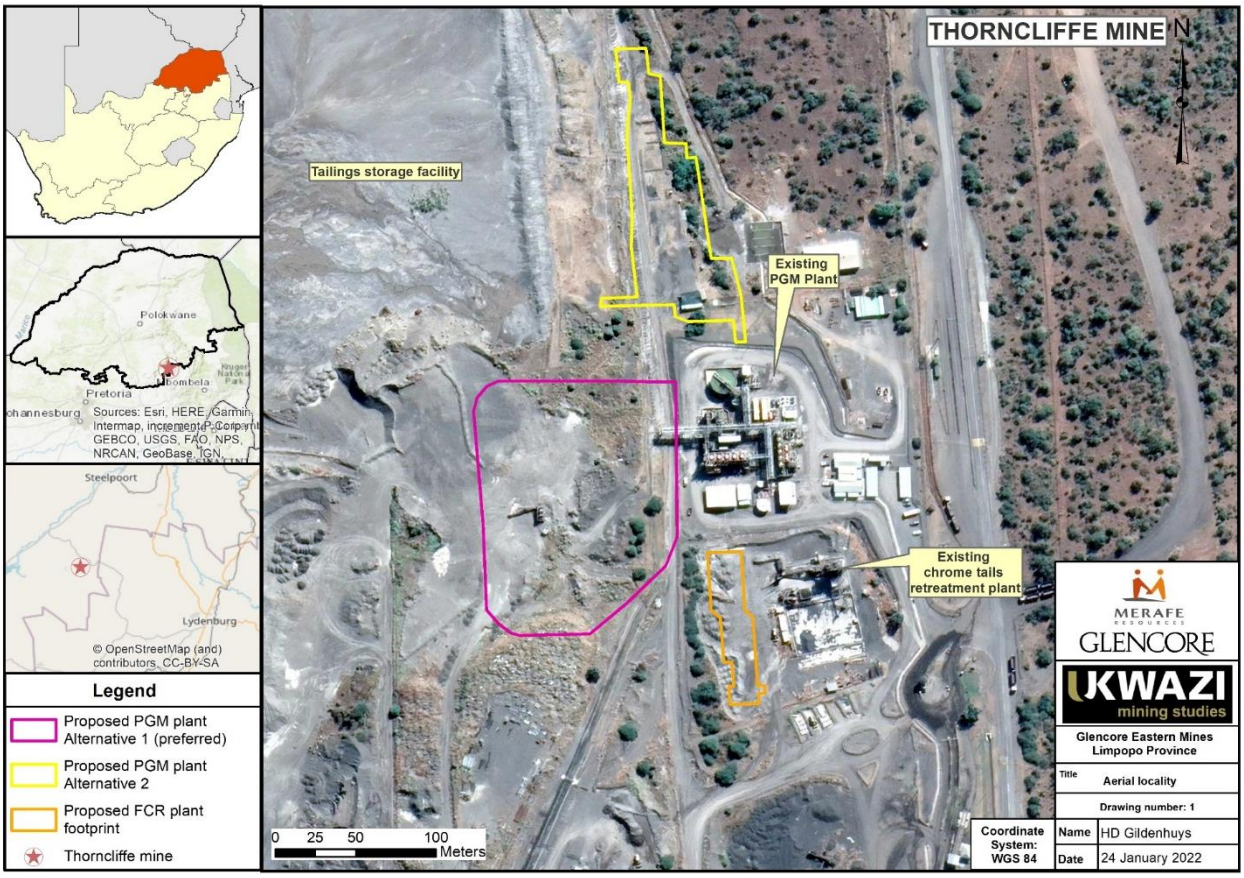

Figure 1: Alternative sites evaluated

Specialist findings

The following specialist assessments were undertaken for the proposed development:

- Air quality professional opinion
- Heritage impact memorandum
- Palaeontological desktop assessment
- Terrestrial biodiversity memorandum
- Hydrogeological assessment
- Surface water assessment

A summary of the findings of the various assessments are provided below:

Air quality professional opinion

The report by Airshed Planning Professionals (2022) stated that the increased air quality impacts during all phases of the project will be localised and is unlikely to increase ambient concentrations at the closest sensitive receptors to the project. The significance of the air quality impacts is therefore considered to be low.

The dust mitigation and monitoring for the site (as provided in the 2018 Environmental Management Programme ("EMPr")) is still valid and no additional recommendations are provided.

Heritage impact memorandum

According to the heritage memorandum by Kruger (2022) the project is situated in a landscape that have been altered extensively as a result of mining, prospecting and the establishment of mine roads and other infrastructure.

During the survey it was found the project areas have been transformed by past and ongoing mining activities and no sites of archaeological and historical value were documented within the proposed project footprints. It is also probable that no heritage resources were impacted upon during site clearing and initial construction, based on observations made on historic aerial images and maps.

Kruger (2022) found that it is highly unlikely that sensitive heritage receptors or remnants remain at the site and the proposed project and related construction activities will have no significant impact on heritage resources or the larger heritage landscape. Mr Kruger recommended that the developer be exempted from further phases of heritage and / or archaeological impact assessments for the environmental authorisation process, subject to final review and

comment by the competent heritage authorities as well as provisions contained the National Heritage Resources Act (NHRA - Act 25 of 1999).

Palaeontological desktop assessment

Dr JF Durand conducted a palaeontological desktop assessment for the Glencore Eastern mines in 2018 that is also valid for this study area. Dr Durand found that the area was generally of no palaeontological importance as it was underlain by norite and pyroxenite of the Dwars River Subsuite. Parts of the Thorncliffe study site are overlain by Quaternary sediments where there is a very low probability that these sediments may be fossiliferous.

Dr Durand (2018) recommended that the mine should be exempted from further palaeontological studies due to the very low probability of fossils occurring in the study area.

Terrestrial biodiversity memorandum

Henning (2022) found the proposed expansion sites to be largely in a degraded state. The preferred development sites for the FCR Plant and PGM Plant extension are of low to zero ecological sensitivity.

The proposed development can therefore be supported without any further biodiversity surveys or studies, provided that the mitigation measures are implemented to limit and / or prevent the potential negative impacts on the area.

Hydrogeological assessment

Vivier & Delicado (2022) found that the areas where the new plant extensions will be located are already disturbed. The proposed FCR and PGM flotation plant extensions do not pose a risk to the groundwater quantity or quality, as the sites are planned to be concrete lined during construction and there is no disposal of mine waste on the extended footprints.

One (1) shallow monitoring borehole (165 mm diameter, 25 m deep) was recommended to be added to the monitoring network downstream of the proposed plants. The groundwater level and water quality should be monitored on a monthly basis.

Vivier & Delicado (2022) stated that the new planned activities as described will not increase the existing impacts to groundwater receptors and recommended that the activity be approved.

Surface water assessment

The report by Redco (2022) stated that the new planned activities as described do not increase the existing impacts to surface water significantly. Possible additional impacts will be mitigated by the mitigation measures in the approved EMPR as well as the following additional mitigation measures:

- Manage runoff from the plant area in its own circuit and provide sediment traps before discharge to the existing system in case of accidental spillage.
- Provide sealed and bunded areas where spillages may be expected and around the plant area.
- Implement water conservation methods and recirculate process and storm water.
- Contain and recirculate the process water in the new plants in its own closed water circuit as far as possible and minimise spillages to the SWD.
- Contain all reagents and possible contaminants in approved bunded areas.

Redco (2022) recommended that the activity could be approved.

Financial provision

All mining infrastructure is planned to be dismantled and/or demolished. The total footprint will be cleared of any mining-related surface infrastructure. The mine infrastructure footprint is to be levelled, rehabilitated with topsoil and revegetated with indigenous grass species similar to that of the surrounding natural environment.

The calculated additional impact on the environmental liability as a result of the proposed project (both plants) is estimated at R 4,972,542.99 (Excl. VAT) and R 5 718 424.44 (Incl. VAT).

Conclusion

The findings of the specialist studies undertaken provide an assessment of both the benefits and potential negative impacts anticipated as a result of the proposed project. The findings conclude that, provided that the recommended mitigation and management measures are implemented, there are no environmental fatal flaws that should prevent the proposed project from proceeding. All negative impacts identified could be mitigated to be of low or negligible significance. Positive impacts expected from the development include an increase in income and employment.

Based on the abovementioned factors, it is recommended that the environmental authorisation for the project could be granted.

Commenting period on Draft EIA & EMPr report

Interested & Affected Parties (I&APs) are requested to contact Ukwazi to be registered and to receive more information on the abovementioned application and/or proposed project activities. I&APs are requested to submit their name, contact information, interest and comments/relevant issues on the matter in writing to Ukwazi.

The Draft Environmental Management Programme (EMPr) Amendment Report for the proposed project is available for review by I&AP's. Please contact Ukwazi (details below) should you wish to obtain a copy of the report.

All comments to be received on or before **30 May 2022** must be submitted to:
Mr Herman Gildenhuys
Tel: 012 665 2154 / 072 625 9537
Fax: 012 665 1176
Mail: Private Bag X159, Centurion, 0046
Email: herman@ukwazi.com

By providing your personal information to be registered as an I&AP on this project you provide consent to Ukwazi to keep and use your personal information for the EA process and any amendments or appeal processes in accordance with the Protection of Personal Information Act (Act 4 of 2013). Please contact Ukwazi for more information.

References

Airshed. (2022). Professional opinion on the potential air quality impacts due to the proposed fine chrome recovery plant and extension to the existing platinum floatation plant at the Glencore Thorncliffe mine in the Steelpoort Valley.

Durand, J.F. (2018). Glencore Eastern Chrome Mines Extension Project (Thorncliffe 374KT, Richmond 370 KT, St George 2 JT, Helena 6 JT and De Grooteboom 373 KT), Sekhukhune District Municipality, Limpopo Province.

Henning, B.J. (2022). Memorandum on the terrestrial biodiversity that forms part of the proposed Glencore Eastern Mines platinum flotation plant and chrome plant expansion sites. AGES Limpopo Pty Ltd.

Kruger, N. (2022). Memorandum on site status and heritage impact of the proposed expansion of the Glencore Thorncliffe platinum flotation plant and chrome plant, Greater Fetakgomo Tubatse Local Municipality, Limpopo Province. Exigo Sustainability.

Redco. (2022). Thorncliffe Mine: Extension of FeCr and PGM plants – Surface Water Assessment Technical Memorandum.

Vivier, K. & Delicado. V. (2022). Technical memorandum: Glencore Thorncliffe PGM & FCR plant expansion – Hydrogeological Assessment. Artesium Consulting Services.

Appendix A: Locality Maps

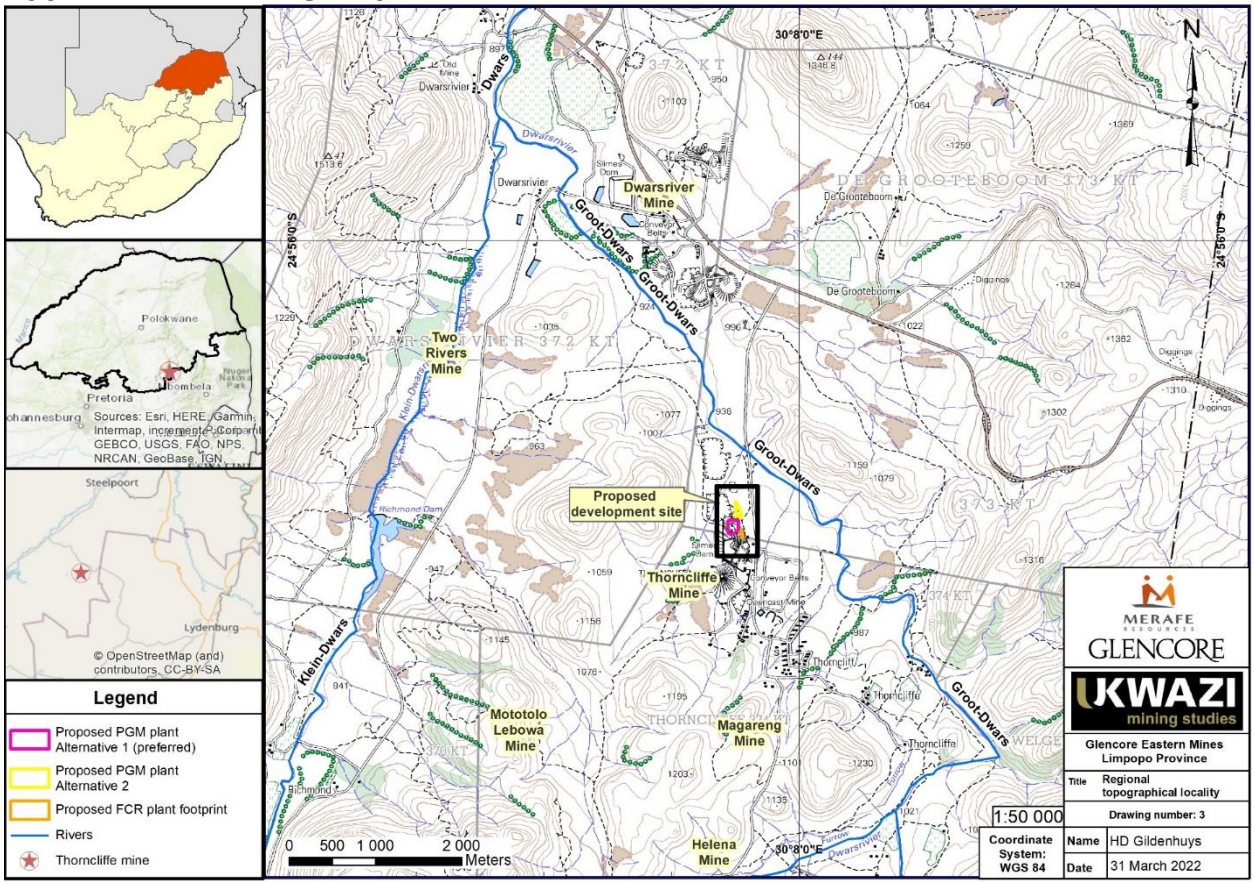

Figure 2: Topographical locality map

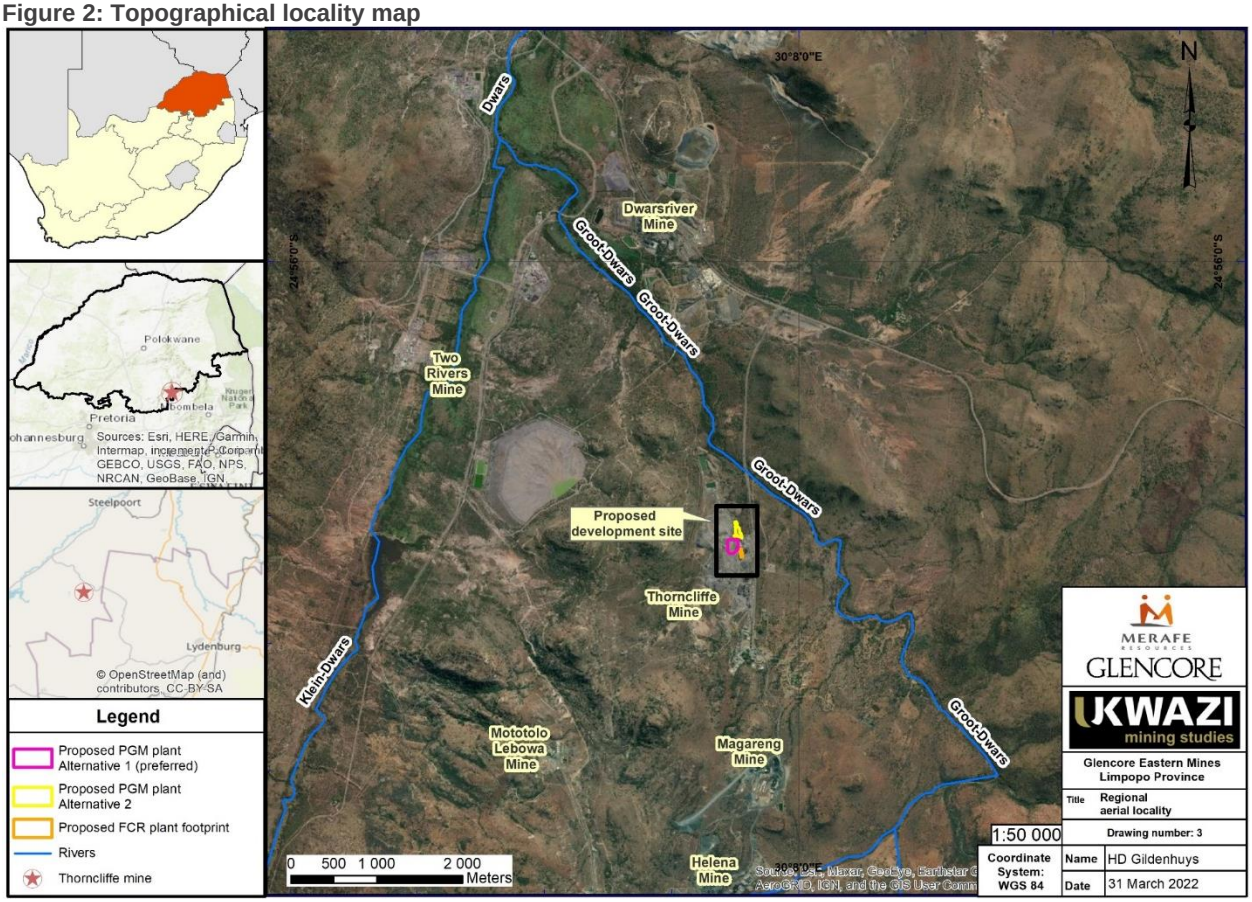

Figure 3: Aerial locality map

Appendix B Plant Flow Diagrams

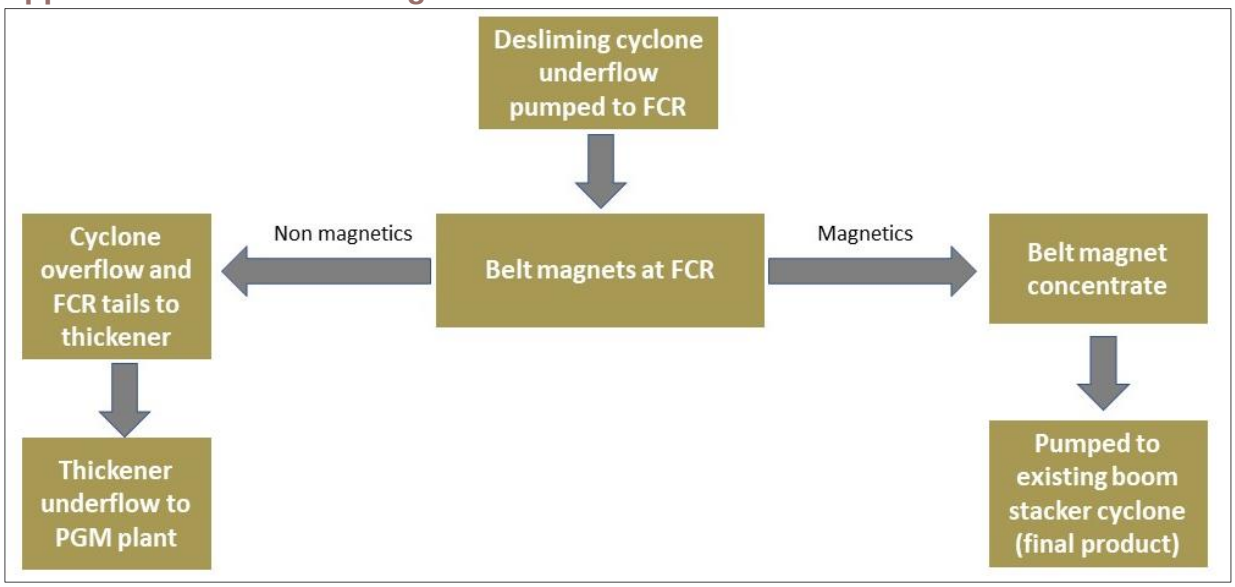

Figure 4: FCR plant process flow diagram

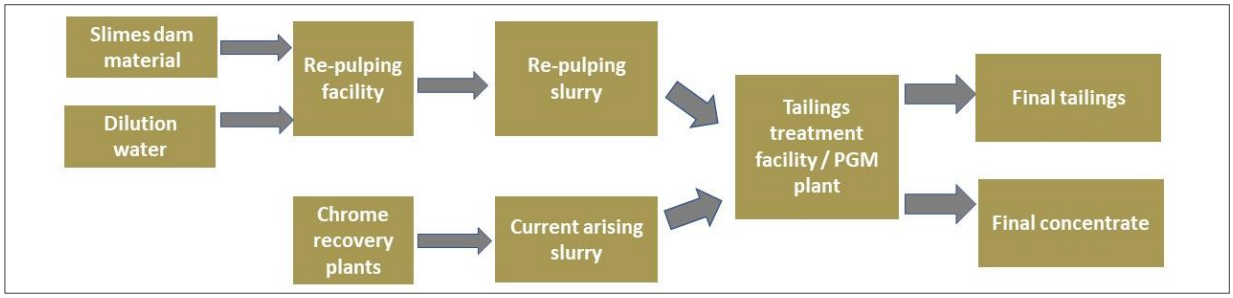

Figure 5: PGM plant schematic diagram

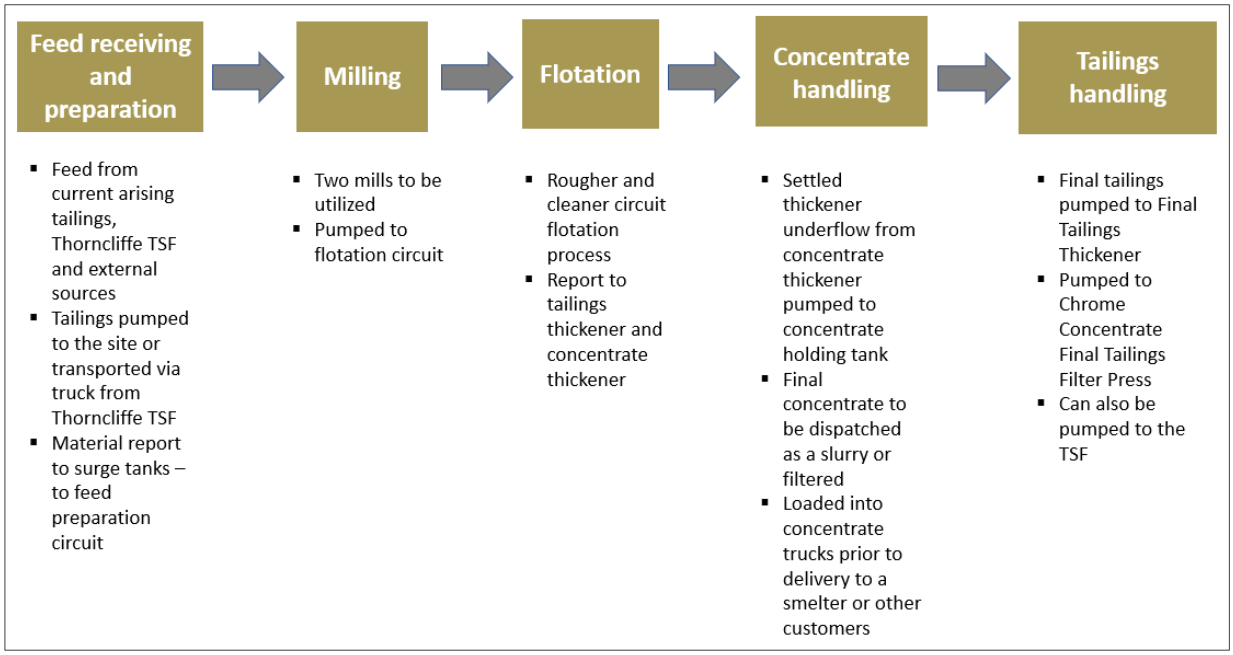

Figure 6: PGM plant process flow diagram

Appendix C Site photographs

Figure 7: Aerial photo showing the footprint area of the proposed FCR plant site and views of the site showing that no natural vegetation remains on site

Figure 8: Aerial photo showing the footprint area of PGM plant extension site Alternative 1 (preferred) and views of the site showing the disturbed nature of the site