



Date: 27 November 2024

Your Reference: I vd Schyff

Our Reference: PF3026

To: Magalies Conservancy/Bewarea

Elize Pieterse - The Chairperson

Tanya Kotze - Secretary

RE: TECHNICAL REVIEW OF DRAFT BUNDU RIETVLEI DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT & INTEGRATED WATER AND WASTE MANAGEMENT PLAN

Bundu Mining (Pty) Ltd (Bundu) intends to restart operations at an old aggregate quarry located 11km east of Hartbeespoort, and 22km west of the City of Tshwane in Gauteng Province. Bundu has therefore applied for a Mining Right to the Department of Mineral Resources and Energy in terms of Section 22 of the Mineral and Petroleum Resources Development Act (MPRDA), No. 28 of 2002 as amended. The application reference number is GP 30/5/1/2/2/10124 MR. The proposed activities also require applications in terms of the National Environmental Management Act (NEMA), No. 107 of 1998 as amended, the National Environmental Management Waste Act (NEMWA), 59 of 2008, and the National Water Act, 1998 (Act 36 of 1998) (NWA). The Mining Right and Environmental Authorisation applications must follow the Scoping and Environmental Impact Assessment process as per the Environmental Impact Assessment Regulations, 2014 as amended. The Water Use License Application (WULA) must follow the process outlined in the Regulations Regarding the Procedural Requirements for Water Use License Applications and Appeals, March 2017 published by the Department of Water and Sanitation (DWS).

Aquastrat Solutions (Pty) Ltd has been appointed as the independent Environmental Assessment Practitioner (EAP) to compile the Environmental Impact Assessment (EIA) Report and Environmental Management Plan (EMP), and Integrated Water and Waste Management Plan (IWWMP) in respect of the applications brought by Bundu Mining to restart operations at an old aggregate quarry. The Draft Environmental Impact Assessment Report (DEIAR) was made available to Interested and Affected Parties (I&APs) for a comment period of 30 days (29 October to 28 November 2024) and the draft IWWMP for a period of 60 days (27th of September 2024 to 28 November 2024).

uKhozi Environmentalists (Pty) Ltd (uKhozi) was requested by Magalies Conservancy to conduct a technical review of the DEIAR and IWWMP. It should be noted that this technical review constitutes a high-level review of key points.

1. LISTED AND SPECIFIED ACTIVITIES

- 1.1 It is stated in Table 5 on P.3 of the DEIAR that *"Only the activities of extracting the mineral from the mining right area trigger NEMA listed activities that require authorisation. Activities associated with the sand removal in the free dig area, processing and supporting services do not trigger any listed activities in terms of the NEMA Listing Notices"*. The DEIAR contains a very vague description of the associated mining activities to be undertaken. It should have been expanded on, with the additional recommended listed activities that should have been considered presented in the table below.

Table 1: Additional recommended listed activities

Applicable Activity and Listing Notice	Description	Applicability to the Project
Activity 6 of GNR 325 (Listing Notice 2):	<i>The development of facilities or infrastructure for any process or activity which requires a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent, excluding-</i> <i>(i) activities which are identified and included in Listing Notice 1 of 2014;</i> <i>(ii) activities which are included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies;</i> <i>(iii) the development of facilities or infrastructure for the treatment of effluent, polluted water, wastewater, or sewage where such facilities have a daily throughput capacity of 2 000 cubic metres or less; or</i> <i>(iv) where the development is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will not exceed 50 cubic metres per day</i>	According to the Draft Integrated Water and Waste Management Plan (IWWMP) the disposal of dirty water in the Return Water Dam and settling dams will require a Water Use License (WUL) in terms of the National Water Act (Act 36 of 1998) (NWA) for Section 21 (g) water use and therefore Listed Activity 6 of NEMA GNR 325 (Listing Notice 2) will be applicable.
Activity 9 of GNR 327 (Listing Notice 1)	<i>The development of infrastructure exceeding 1 000 metres in length for the bulk transportation of water or storm water—</i> <i>(i) with an internal diameter of 0,36 metres or more; or</i> <i>(ii) with a peak throughput of 120 litres per second or more; excluding where—</i> <i>(a) such infrastructure is for bulk transportation of water or storm water or storm water drainage inside a road reserve or railway line reserve; or</i> <i>(b) where such development will occur within an urban area.</i>	This activity will be applicable should the stormwater infrastructure, such as clean and dirty water channels, exceed the stipulated thresholds. Applicability difficult to confirm since no detailed information regarding the proposed stormwater management infrastructure are provided in the reviewed reports.
Activity 10 of GNR 327 (Listing Notice 1)	<i>The development and related operation of infrastructure exceeding 1 000 metres in length for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes –</i> <i>(i) with an internal diameter of 0,36 metres or more; or</i> <i>(ii) with a peak throughput of 120 litres per second or more; excluding where—</i>	This activity will be applicable should the process water/return water pipeline infrastructure exceed the stipulated thresholds. Applicability difficult to confirm since no detail is provided in the reviewed reports.

Applicable Activity and Listing Notice	Description	Applicability to the Project
	<i>(a) such infrastructure is for the bulk transportation of sewage, effluent, process water, waste water, return water, industrial discharge or slimes</i>	
Activity 12 of GNR 327 (Listing Notice 1) amended by GN 517 of 11 June 2021	<i>The development of- (ii) infrastructure or structures with a physical footprint of 100 square metres or more, where such development occurs- (a) within a watercourse; (c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse,</i>	According to the IWWMP a watercourse crossing require authorisation in terms of Section 21 (c) and (i). Culverts will also be required to cross the existing seep wetland. This activity will be applicable if the physical footprint exceed the stipulated threshold ($\geq 100\text{m}^2$).
Activity 19 of GNR 327 (Listing Notice 1) amended by GN 517 of 11 June 2021	<i>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</i>	This activity will be applicable should there be excavation or moving of soil from a watercourse during the upgrading/construction of watercourse crossings and/or culverts along the access road which crosses a wetland.
Activity 14 of GNR 327 (Listing Notice 1)	<i>The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres.</i>	It is stated on P.5 that diesel will be stored but the storage capacity is not indicated. Depending on the capacity of the fuel storage facilities, one of these listed activities may be applicable.
Activity 4 of GNR 325 (Listing Notice 2)	<i>The development and related operation of facilities or infrastructure, for the storage, 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.</i>	

2. GAPS AND INCONSISTENCIES

- 2.1 Appendix 3 of GNR 326 of the NEMA EIA Regulations of 2017 (as amended) lists the information that must be included in an Environmental Impact Assessment Report. The DEIAR does not contain a layout plan of the proposed mining operation as required by Appendix 3(c).
(c) “a plan which locates the proposed activity or activities applied for as well as the associated structures and infrastructure at an appropriate scale”
- 2.2 A 10-year mine plan indicating extent of available resource and direction of mining is included as Figure 3 on P.6 of the DEIAR but according to the report mining will continue for at least 30 years. A 30-year mine plan should have been included.
- 2.3 It is stated on P.10 under **Section (e) POLICY AND LEGISLATIVE CONTEXT** of the DEIAR that *“No water uses in terms of Section 21 are triggered for the mining right activities. A requirement of a water use license for the processing activities will be investigated and applied for by the entity operating the processing plant”*. However, mining activities will involve dewatering which requires authorisation in terms of Section 21 (j): *“Removing, discharging, or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people”*.
- 2.4 It is stated on P.58 of the DEIAR that *“there are no recognised drainage lines or streams/rivers within the application area”* but according to the draft IWWMP a Section 21 (c) and (i) water use is applied for *“Mining in an isolated drainage line”*. Please clarify.
- 2.5 The change in mining depth from 20m in the approved Scoping Report to 50m in the DEIAR should have been listed under Section (t) DEVIATIONS FROM THE APPROVED SCOPING REPORT AND PLAN OF STUDY).
- 2.6 The quantum of financial provision required to manage and rehabilitate the environment (R 191 979.110) indicated in the DEIAR do not correspond with the Rehabilitation and Closure Costs as presented in *Table 5: Final Rehabilitation and Closure Cost Estimate* of the Closure Final Rehabilitation Provision Plan (Globesight, 2024) attached as Appendix 24.
- 2.7 According to the Draft IWWMP *“Bundu Mining Rietvlei will not undertake any “waste management activities” as outlined in GNR 921 which is in contradiction to the DEIAR which states on P.10 that “Overburden and product stockpiles are considered by current legislation as residue stockpiles (by definition). Therefore, Category B Activity 11 (GNR921) is included for authorisation”*.
- 2.8 According to the Geohydrological Study, *“a formal mine plan was not available for the proposed Project. Only the site layout plan was provided”*. We are of the opinion that a mine plan should have formed part of the study to accurately determine the dewatering zone of influence especially considering that groundwater in the area is a sole source of water to residents. Reference must be made to the review submitted by Veltwater Groundwater Specialists on the Geohydrological Assessment (Umhlaba Environmental Consulting CC, 2024).
- 2.9 No site related information pertaining to the current socio economic activities currently characterising the proposed project area and those in close proximity are provided in the DEIAR or Social Impact Assessment (Niara, 2024). In fact, it is stated in the Social Impact Assessment that *“a socio-economic survey of affected households in the primary study area was not undertaken as part of the study”*. In the absence of a socio economic survey the potential negative impacts associated with the proposed mining operation on the current socio economic activities could have been severely underestimated. Reference must be made to the comments submitted by:
- GrayCan Farming (Pty) Ltd; and
 - Johan & Ida vd Schyf on APPENDIX 23 - POULTRY FARM IMPACT ASSESMENT.

3. POLICY AND LEGISLATIVE CONTEXT

- 3.1 No mention is made of the National Environmental Management: Biodiversity Act (Act No. 10 of 2004) (NEMBA) in the DEIAR, even though the *“expansion of the quarry pit would be into a*

Witwatersberg ridge which exhibits largely undisturbed natural habitats within an Ecological Support Area". Please elaborate what measures will be implemented to comply with the NEMBA.

- 3.2 It is noted that no application is required in terms of Regulation 3 of Government Notice (GN) 704 of 4 June 1999 for the exemption from Regulations of the same therefore no mining activities can occur, or residue deposits, dams, reservoirs together with any associated structure or other facility, be placed within 100m of a watercourse.

4. PUBLIC PARTICIPATION

- 4.1 The draft IWWMP was made available for a 60-day commenting period from the 27th of September 2024. However, the following important information required by the Department of Water and Sanitation (DWS), in an email dated 10 October 2024, to process the WULA is missing from the draft report:

- Master Layout Plan indicating all the infrastructure and determined buffers in relation to the delineated watercourses.
- A Hydropedological assessment or motivation for not doing a full assessment.
- Updated geohydrological report indicating drawdown and potential impacts on surface hydrology.
- Updated wetland report indicating potential impacts on the PES and EIS of the watercourses.

- 4.2 In addition to the above, the Civil Design Report which is required as supporting technical information when applying for Section 21 (g) and (j) water uses in terms of the REGULATIONS REGARDING THE PROCEDURAL REQUIREMENTS FOR WATER USE LICENCE APPLICATIONS AND APPEALS (GNR267 of March 2017) did not form part of the draft report distributed for comment.

- 4.3 Considering the above, the draft IWWMP made available for comment is incomplete and must be updated with the required technical information before being made available for a second round of public participation.

5. BASELINE ENVIRONMENT

- 5.1 The "Procedures for the Assessment and Minimum Criteria for Reporting on identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation" ("the Protocols") were published on 20 March 2020 (GNR 320). The National Web based Environmental Screening Tool has characterised the agricultural theme for the area as '**High**' sensitivity according to the table presented on P.61 of the DEIAR. In line with the GNR 320 section 3, subsection 1:

- *An applicant intending to undertake an activity identified in the scope of the protocol, on a site identified on the screening tool as being of "very high" or "high" sensitivity for agricultural resources must submit an Agro-Ecosystem Specialist Assessment unless:*
 - *the application is for a linear activity for which impacts on the agricultural resource are temporary and the land in the opinion of the soil scientist or agricultural specialist, based on the mitigation and remedial measures, can be returned to the current land capability within two years of the completion of the construction phase;*
 - *the impact on agricultural resources is from an electricity pylon; or*
 - *information gathered from the site sensitivity verification differs from the designation of "very high" or "high" agricultural sensitivity, and it is found to be of a "medium" or "low" sensitivity.*

Reference is also made to the following statements in the DEIAR and Social Impact Assessment (Niara, 2024) confirming the importance of the existing agricultural resources within and surrounding the application area:

- *"The critical aspects of water, food and biodiversity security were specifically considered given the existing agricultural / agri-industry activities that dominate the landuse for the greater area".*

- *“While the project offers economic potential, with secondary employment and local economic growth probability, its location within a predominantly farming area presents a range of socio-economic implications that must be carefully considered”.*
- *“There are significant challenges associated with restarting the quarry, particularly regarding its impact on the local farming community. Agricultural activities are sensitive to environmental disruptions such as dust, noise, and water consumption, all of which are common influences of mining operations. The vibrations caused by blasting and the movement of heavy machinery may negatively impact both crop production”. “Without proper mitigation strategies, the project could result in reduced agricultural productivity, with knock-on effects for food security and the local economy”.*

Considering the above, we are of the opinion that an Agro-Ecosystem Assessment should be conducted in line with the requirements of GNR 320 to assess the potential impacts on the existing agricultural/agri -industry activities in the area. The Social Impact Assessment should also be updated with the information from the Agro-Ecosystem Assessment.

5.2 The DFFE EIA Screening Report did not form part of the DEIAR however it might have been included in the Scoping Report which was not reviewed by uKhozi. Having said that, it is unclear why the following specialist studies, which would have been required by the DFFE EIA Screening Report were not conducted:

- Landscape and Visual Assessment. As stated in the DEIAR *“the void created by the pit will be unsightly while the mine is operational and cannot be refilled so will likely remain a scar on the landscape that cannot be rehabilitated back to its prior state”.* *“The resulting void would also have a definite visual impact for receptors north of the application area”.* We are of the opinion that a Landscape and Visual Assessment should therefore have been conducted to fully assess the significance of the visual impacts that will be caused by the mining and associated activities especially since it will result in a permanent scar on the landscape and the number of sensitive receptors.
- Climate Impact Assessment to determine the proposed mine’s impact on climate change.

We acknowledge that a motivation for exclusion of certain specialist studies can be done but are of the opinion that the above listed specialist studies should have been conducted to inform the DEIAR.

5.3 Under the baseline information for surface water no chemical sampling was undertaken at the proposed surface water monitoring points in the Swartspruit River therefore it is unclear how future impacts will be determined if no baseline has been established. It is therefore requested that a condition is included which require sampling prior to the commencement of construction to establish baseline qualities for surface water.

6. NEED AND DESIRABILITY

6.1 While the life of the mine is envisaged to be prolonged and last > 30 years, existing agricultural/agri -industry activities are not dependent on finite resources and could last for considerably longer than the mine. Therefore, to inform the recommendations with respect to the proposed project’s need and desirability, it is important to consider the costs and benefits of the project by taking into account the combined changes to the socio-economic environment linked to the proposed project. We are of the opinion that the cumulative costs and benefits of the project should have been investigated and compared to the No Go Option over a period that extends beyond the life of the mine to motivate the need and desirability of the project.

7. ENVIRONMENTAL SENSITIVITY

7.1 In terms of section 23(1)(d) and 23(4) of the MPRDA a mining right can only be granted if *“the mining will not result in unacceptable pollution, ecological degradation or damage to the environment and an environmental authorisation is issued.”*

Reference is made to the following statement under the Need and Desirability section of the DEIAR:

- *“The proposed expansion of the quarry pit would be into a Witwatersberg ridge which exhibits largely undisturbed natural habitats within an Ecological Support Area. The nature of opencast mining is highly invasive with definite impacts to the natural environment, in this case the loss of indigenous flora and potential habitats for fauna”.*
- *“Mining is indicated as an incompatible land use in accordance with the MSDF (2021) and the CoT Bioregional Plan (2016)”.*

The DEIAR argues that *“the mining area on the ridge was reduced from 110ha to 22.6ha to maximize the remaining ecological support area”*. The Gauteng Department of Agriculture and Rural Development (GDARD) Ridges Guideline (Ridge Guideline, GDARD 2019) has defined general guidelines that must be followed with regard to the amount of development that should be permitted on different ridges according to their class. The vegetation specialist confirmed that the Witwatersberg is categorized as a Class 1 ridge according to these guidelines. The Ridge Guideline (GDARD, 2019) stipulates that no development is to be permitted on any class 1 ridge, and varying levels of development may be permissible with regards to the higher ridge classes – depending on the impact level of the proposed activity and the corresponding spatial scale. Buffers and permitted developments are as follows according to the Ridge Guideline (GDARD, 2019):

- *“Class 1 Ridges: Only low impact activities with an ecological footprint of 5% or less in the 200 m buffer zone of the ridge will be supported and no development will be permitted in the ridge itself”.*

Notwithstanding the optimised layout and proposed mitigation measures, the proposed operation will result in the permanent loss of 13.5 ha (7.5% of the ridge on the property) of currently natural Witwatersberg Ridge areas. In addition to this, 18 ha (53% of the buffer area on the property) of secondary vegetation in the buffer area will also be impacted on according to the Terrestrial Biodiversity and Plant Species Assessment (David Hoare Consulting Pty Ltd, 2024). These values exceed the recommended percentages in the Ridge Guideline (GDARD, 2019) and therefore the project should not be recommended from a biodiversity perspective.

8. IMPACT ASSESSMENT

8.1 Reference is made to the following statement under the conclusion for negative impacts identified by the Social Impact Assessment (Niara, 2024):

“Disruption to Farming Activities: Given that the surrounding area is predominantly agricultural, the restarting of quarry operations could lead to disruptions. Dust, noise, and vibrations from the mining activities may negatively affect crop production, livestock health, and the overall agricultural productivity of nearby farms”.

Yet, the disruption to farming activities did not form part of the impact assessment conducted by Niara. As mentioned above, an Agro-Ecosystem Assessment should be conducted and the Social Impact Assessment updated with the information from this assessment to accurately assess the potential socio economic impact from the disruption of current agricultural economic activities at the proposed project area and other adjacent properties.

8.2 Reference is made to the Water Resource Study (R Tate, 2024) which identified an extensive seep wetland to the north of the mining area which according to the wetland specialist is fed by direct runoff and infiltration from the ridge structure in the south. However, a Hydropedological Assessment was not conducted to assess the potential impact of the proposed mine on the status of the downstream wetland due to the loss in local surface and lateral flow. As recommended in an email from the DWS dated 2024/10/10 a Hydropedological Assessment should be undertaken to determine the percentage water loss due to flow modification in the landscape. The Water Resource Study (R Tate, 2024) must take cognisance of the Hydropedological Assessment's findings and indicate what the change to the PES and EIS will be and if required come up with mitigation measures together with an updated scientific buffer that will cause less impacts to the receiving wetlands and lower flow losses. This information should be incorporated in the EIAR and IWWMP.

8.3 In addition to the above, it is requested that the following potential impacts be included in the Impact Assessment (Appendix 9):

- Dewatering impacting the reserve on a GHRU scale (*assessed in the Geohydrological Assessment but excluded from the Impact Assessment in Appendix 9*).
- Potential impacts of drawdown on surface hydrology.
- Potential impacts on the soils, land use, and capability.
- Potential impacts on the Agro-Ecosystem.
- Potential impacts on climate change.

9. SECTION 21 WATER USES

9.1 From the information presented in Figure 4 of the Draft IWWMP it appears as if the sediment ponds, RWD, and stockpiles will be located within the regulated area of the seep wetland and should therefore have been applied for in terms of Section 21 (c) and (i) as well.

CONCLUSION

It is our professional opinion that the draft reports reviewed have various gaps/discrepancies that need to be cleared. Based on the recommendations in this technical review, the draft reports need to be revised and subjected to a second round of public participation to give effect to an informed decision-making process.

Yours sincerely



TW Olivier (Reg. EAP (EAPASA) No. 2020/1162)
uKhozi Environmentalists (Pty) Ltd
Email: tommy@ukhozi-enviro.co.za
Cell: 082 521 8870