THE PROPOSED ESTABLISHMENT OF BORROW-PIT 2 FOR THE UPGRADING OF ACCESS ROAD D5010 AND D5021 AND ASSOCIATED INFRASTRUCTURE WITHIN THE LEPELLE-NKUMPI AND FETAKGOMO TUBATSE LOCAL MUNICIPALITIES, CAPRICORN AND SEKHUKHUNE DISTRICT MUNICIPALITIES, LIMPOPO PROVINCE (RAL/T1282/2025).

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mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

THE PROPOSED ESTABLISHMENT OF BORROW-PIT 2 FOR THE UPGRADING OF ACCESS ROAD D5010 AND D5021 AND ASSOCIATED INFRASTRUCTURE WITHIN THE LEPELLE-NKUMPI AND FETAKGOMO TUBATSE LOCAL MUNICIPALITIES, CAPRICORN AND SEKHUKHUNE DISTRICT MUNICIPALITIES, LIMPOPO PROVINCE (RAL/T1282/2025).

BASIC ASSESSMENT REPORT

And

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

SUBMITTED FOR ENVIRONMENTAL AUTHORIZATIONS IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 AND THE NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT, 2008 IN RESPECT OF LISTED ACTIVITIES THAT HAVE BEEN TRIGGERED BY APPLICATIONS IN TERMS OF THE MINERAL AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (MPRDA) (AS AMENDED).

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1. 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.

2. Objective of the basic assessment process

The objective of the basic assessment process is to, through a consultative process—

(a) determine the policy and legislative context within which the proposed activity is located and how the activity complies with and responds to the policy and legislative context;

(b) identify the alternatives considered, including the activity, location, and technology alternatives;

(c) describe the need and desirability of the proposed alternatives,

(d) through the undertaking of an impact and risk assessment process inclusive of cumulative impacts which focused on determining the geographical, physical, biological, social, economic, heritage, and cultural sensitivity of the sites and locations within sites and the risk of impact of the proposed activity and technology alternatives on these aspects to determine:

(i) the nature, significance, consequence, extent, duration, and probability of the impacts occurring to; and

(ii) the degree to which these impacts—

(aa) can be reversed;

(bb) may cause irreplaceable loss of resources; and

(cc) can be managed, avoided or mitigated;

(e) through a ranking of the site sensitivities and possible impacts the activity and technology alternatives will impose on the sites and location identified through the life of the activity to—

(i) identify and motivate a preferred site, activity and technology alternative;

(ii) identify suitable measures to manage, avoid or mitigate identified impacts; and

(iii) identify residual risks that need to be managed and monitored.

PART A

3. SCOPE OF ASSSSMENT AND BASIC ASSESSMENT REPORT

3.1.Contact Person and correspondence address

i) Details of the EAP

Name of the Practitioner: Dr Patrick Sithole

Tel No.: 061 535 3141

e-mail address: sitholetp@qems.co.za

ii) Expertise of the EAP.

(1) **The qualifications of the EAP**
(with evidence).

Dr Sithole has a Doctor of Philosophy (Environmental Sciences) Climate Change and Malaria Prevalence from North west University. Please refer to Appendix K attached for evidence.

3.2.Summary of the EAP's past experience.

A Registered natural scientific professional (SACNASP – Environmental and Chemical scientist), Registered Environmental Assessment Practitioner (EAPASA), social and sustainability expert with 24 years of experience. Patrick Sithole specialises in Strategic Environmental, Social and Sustainable Development projects, Climate Change and Health, Environmental Management issues and Construction Supervision of all infrastructural projects. Dr Sithole is also involved in vegetation clearance and pest control projects along infrastructural projects e.g. roads, railway lines, power lines, golf courses and buildings like complexes, houses, malls, etc. Patrick has a very strong business development mindset that has seen him winning and working on projects across Africa and in Europe. His key experience includes the following areas; Environmental (Natural Resource) Management; Environmental Compliance; Social Facilitation and Consultation; Compensation of Land Claims; Climate Change; Climate (Change) and Human Health; Air Quality Management; Renewable Energy; Waste Management; Land Rehabilitation; Water Quality/Demand Management; Strategic Environmental Assessment; Waste Water (sewer) Treatment; Project Management; ISO 9001 and ISO14001; Vegetation Control Bush Clearance (Invasive plants).

4. Location of the overall Activity.

Table 1: Location of the overall activity

Farm Name:	Portion 0 of farm Zwarthoek 501 KS
Application area (Ha)	4.90 Ha
Magisterial district:	Lepelle Nkumpi Local Municipality, Capricorn District Municipality
Distance and direction from nearest town	The proposed borrow pit site is located in Nkotokwane village, 43 South East of Lebowakgomo.
21-digit Surveyor General Code for each farm portion	T0KS00000000050100000

4.2.Locality map

(show nearest town, scale not smaller than 1:250000).

The map has also been attached as Appendix A1



Figure 1: Locality map

4.3.Description of the scope of the proposed overall activity.

Provide a plan drawn to a scale acceptable to the competent authority but not less than 1: 10 000 that shows the location, and area (hectares) of all the aforesaid main and listed activities, and infrastructure to be placed on site

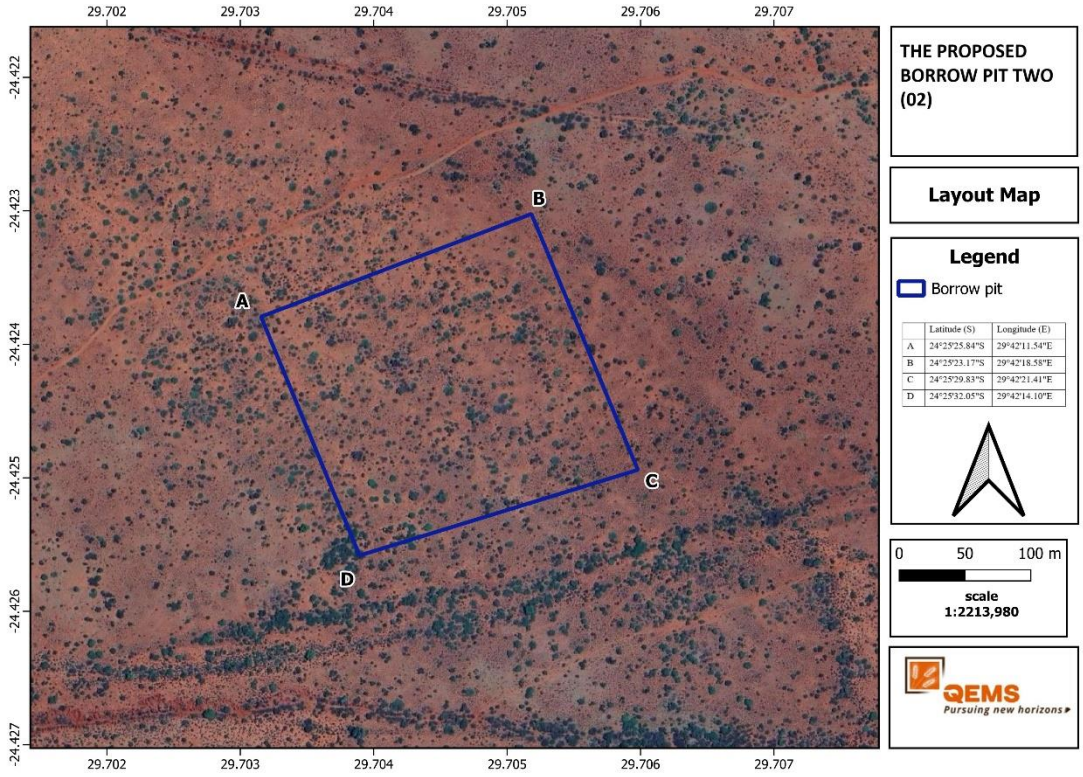


Figure 2: Scope of the proposed overall activity

Roads Agency Limpopo (SOC) Ltd (RAL) is in the process of applying for borrow pit permit from the Department of Petroleum and Mineral Resources (DMPR) Limpopo regional office. The proposed project requires an Environmental Authorization from the Department of Mineral Resources (DMR) in accordance with the Mineral and Petroleum Development Resources Act 28 of 2002 and the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), an EA is required and therefore, RAL is undertaking a Basic Assessment Process (BA).

The materials obtained from the proposed borrow pits will be used for the upgrading of Road D5010 in Nkotokwane, including the installation of culverts, the upgrading of Road D5021 between Nkotokwane and Apel, and the construction of a bridge over the Olifants River. Both roads will be upgraded from gravel to a bituminous-surfaced standard.

The proposed road works will cover a total distance of approximately 3.6 km, comprising 2.2 km of upgrades to Road D5010 and 1.4 km for Road D5021. In addition, the project entails the excavation of five borrow pits to provide the necessary construction materials for the road upgrades and bridge construction. The borrow pit sites are situated near road. The central coordinates for the preferred site are 24°25'27.83"S 29°42'16.14"E. The contractor will rehabilitate the borrow pit site once the road has been completed.

(i) Listed and specified activities

Table 2: Listed and specified activities

NAME OF ACTIVITY **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. for mining**, - excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**Aerial extent of the Activity** **Ha or m²**	**LISTED ACTIVITY** **Mark with an X where applicable or affected.**	**APPLICABLE LISTING NOTICE** **(*GNR 544, GNR 545 or GNR 546)***
Gravel Excavation Gravel stockpiles Loading Hauling and transport	1 Ha	X	Listing Notice 1 (GNR 327), Activity 21
Clearance of vegetation	1 Ha	X	Listing Notice 1 (GNR) 327), Activity 27
The clearance of an area of 300 square metres or more of indigenous vegetation	1 Ha	X	GNR 324 Listing Notice 3, Activity 12e(ii)

4.4.Description of the activities to be undertaken

(Describe Methodology or technology to be employed, including the type of commodity to be prospected/mined and for a linear activity, a description of the route of the activity)

Environmental Authorisation is required for the excavation of a 4.90-hectare borrow pit, from which gravel will be sourced for the upgrading of D5021 and D5010. The project will use an open surface excavation method, beginning with site preparation, which includes clearing vegetation and stripping topsoil. Once the site is ready, quarrying activities will commence, involving gravel extraction, stockpiling, and hauling gravel off-site. The site will later be decommissioned, which will involve removing temporary structures (such as chemical toilets and a temporary campsite where they will be storing their equipment), equipment (like trucks and excavators), and any waste materials. Finally, the site will undergo rehabilitation, which includes reshaping the void, regrading, and resurfacing the area.

5. Policy and Legislative Context

Table 3: Policy and legislation context

APPLICABLE LEGISLATION AND GUIDELINES USED TO COMPILE THE REPORT (a description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process	**REFERENCE WHERE APPLIED**	**HOW DOES THIS DEVELOPMENT COMPLIY WITH AND RESPOND TO THE LEGISLATION AND POLICY CONTEXT.** (E.g. In terms of the National Water Act a Water Use License has/ has not been applied for)
National Environmental Management Act (No 107 of 1998)		This Basic Assessment is being conducted in accordance with the National Environmental Management Act (No. 107 of 1998) to assess any potential environmental impacts and propose appropriate mitigation measures to prevent harm to the environment. During both the construction and operational phases, the contractor is responsible for ensuring that the development adheres to the

		principles of NEMA, and that processes are in place to identify, assess, and manage environmental impacts. The ultimate goal is to ensure that the establishment of the borrow pit is environmentally sustainable.
National Heritage Resources Act (No 25 of 1999)		The National Heritage Resources Act necessity the need for a cultural and heritage impact assessment in areas designated for development that exceed 0.5 hectares (ha). The proposed borrow pit excavation operations are not expected to impact heritage resources, as no significant resources were identified within the footprint of the proposed development.
National Forests Act (Act No 84 of 1998)		A copy of the borrow pit's environmental management programme will be submitted to the Limpopo Department of Agriculture for review/ comments.
National Mineral and Petroleum Resources Development Act (Act No 28 of 2002)		The act makes provision for equitable access to and sustainable development of the nation's mineral and petroleum resources. An application for the Environmental Authorisation to use the borrow pit has been lodged with the DMR.

6. Need and desirability of the proposed activities.

(Motivate the need and desirability of the proposed development including the need and desirability of the activity in the context of the preferred location).

The existing gravel roads D5021 and D5010 from Apel to Nkotokwane are frequently degraded by heavy rainfall, resulting in erosion, potholes, and uneven surfaces that make them difficult to maintain and costly to repair. Regular grading and maintenance efforts are often insufficient to ensure year-round usability, while dust from the gravel roads negatively affects air quality and poses health risks to nearby communities. The poor condition of these roads' limits accessibility, especially during the rainy season when they become muddy and slippery,

hindering mobility for school children, emergency services, and public transport users. Upgrading the roads to a brick pavement surface will significantly improve connectivity to essential facilities such as schools, clinics, markets, and administrative centres in Apel to Nkotokwane and its surrounding areas. Additionally, the current gravel roads pose safety risks due to loose surfaces and poor visibility from dust, leading to higher accident rates; a tarred surface will enhance traction, reduce skidding, and improve overall road safety. From an economic and social perspective, the improved road infrastructure will facilitate the efficient transportation of goods, particularly agricultural products, boost local investment, promote tourism, and stimulate small business growth, while also reducing vehicle maintenance costs and travel times for users. The project aligns with municipal, provincial, and national development objectives aimed at improving rural infrastructure and promoting equitable service delivery, supporting broader goals of rural development and poverty alleviation. Furthermore, it will bring socio-economic benefits such as temporary job creation during construction, opportunities for skills development, improved access to essential services, enhanced quality of life, and an increase in property values and community growth resulting from improved accessibility.

6.1. Motivation for the overall preferred site, activities and technology alternative.

Site area (Borrow pit site)

The proposed site was selected primarily because it contains suitable material for re-graveling. Its proximity to the road will also facilitate the efficient transport of material from the borrow pit to the road under construction. In addition, there are no existing activities or environmentally sensitive features within the site; therefore, the establishment of the borrow pit will not interfere with any other land uses or activities.

Activity

In terms of project motivation, the borrow pit is essential for the road upgrade, which will significantly improve accessibility for residents and visitors to the area. Furthermore, the construction of a tarred road will provide smooth and even surfaces, thereby reducing the risk of accidents associated with poor road conditions.

Technology

The technology to be used will include excavators, trucks, and bulldozers for the excavation, loading, and hauling of gravel material to fill and level the road surface. The gravel will be

properly compacted to ensure a stable and durable road structure. All equipment will be regularly serviced and maintained by the contractor to ensure optimal performance and safety. Emissions from diesel-powered machinery are expected to have minimal impact on local air quality due to proper maintenance and the temporary nature of the construction activities.

6.2. Full description of the process followed to reach the proposed preferred alternatives within the site.

NB!! – This section is about the determination of the specific site layout and the location of infrastructure and activities on site, having taken into consideration the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout.

6.3. Details of the development footprint alternatives considered.

With reference to the site plan provided as Appendix 4 and the location of the individual activities on site, provide details of the alternatives considered with respect to:

a. the property on which or location where it is proposed to undertake the activity;

b. the type of activity to be undertaken;

c. the design or layout of the activity;

d. the technology to be used in the activity;

e. the operational aspects of the activity; and

f. the option of not implementing the activity.

The map has also been attached as Appendix C

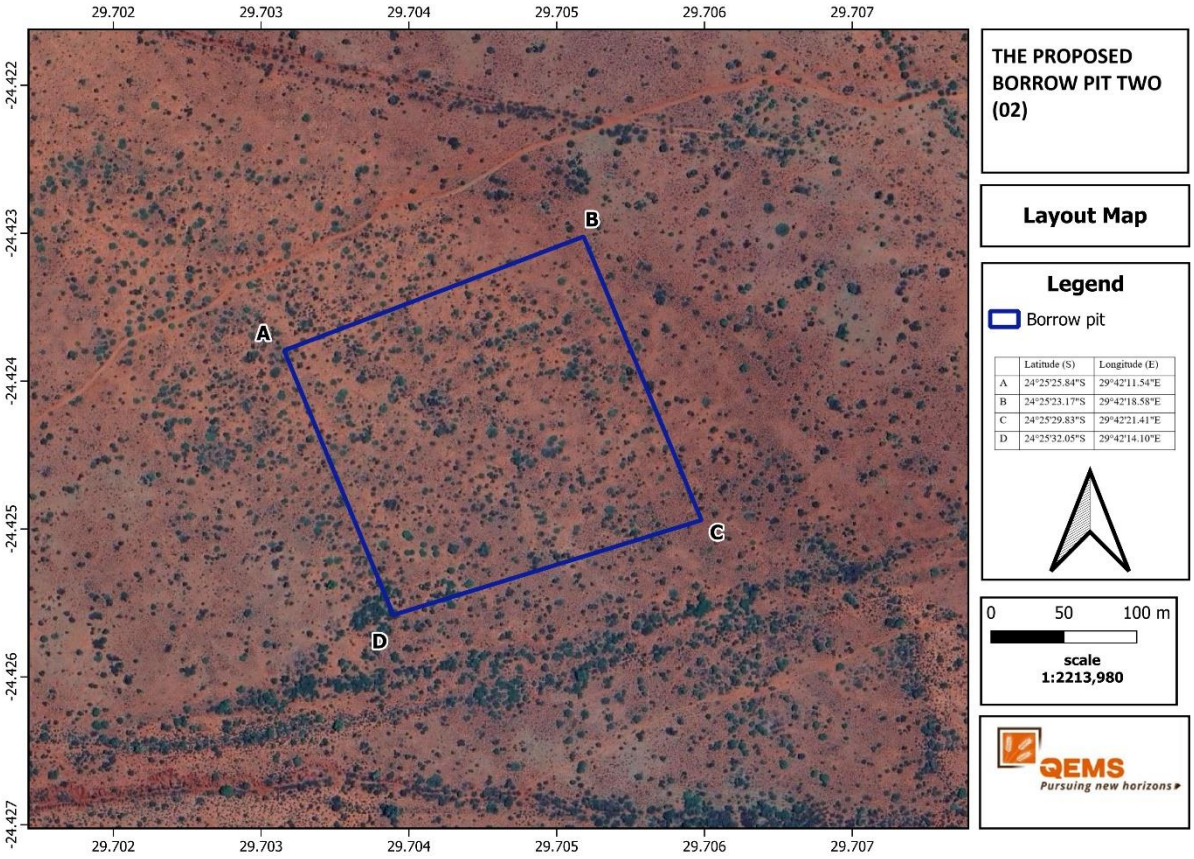


Figure 3: Layout Map

a. The property on which or location where it is proposed to undertake the activity

The proposed borrow pit sites is located portion 0 of farm Zwarthoek 501 KS within Lepelle-Nkumpi Local Municipality, Capricorn District, Limpopo Province.

b. The type of activity to be undertaken

The main activity involves the extraction of gravel to be used for upgrading the Apel to Nkotokwane access roads D5021 and D5010 from gravel to Bituminous surface. This gravel extraction process will be carried out in four main phases. The first phase, site establishment, will include the clearance of vegetation and the stripping of topsoil. The second phase, quarrying, will involve the extraction of gravel, followed by stockpiling, loading, and hauling the material off-site. The third phase, decommissioning, will entail the removal of temporary structures, plant, and equipment, as well as the proper disposal of waste materials. Finally, the fourth phase, rehabilitation, will focus on re-shaping the open voids, regrading, and re-surfacing the area to restore it to a stable and environmentally acceptable condition.

c. The design or layout of the activity

Material will be removed from the proposed borrow pit footprint with an excavator which will be used to excavate material and stockpile the material on site at the demarcated area and then be filled on the road. Once the whole road has been upgraded a rehabilitation plan will have to be implemented on the area.

d. The technology to be used in the activity

The technology to be used includes trucks, an excavator, and a front-end loader. This equipment was selected for its effectiveness and relatively low environmental impact when operated properly. Given its efficiency and suitability for the proposed activities, no alternative technologies were considered necessary.

e. The operational aspects of the activity

- No measurable socio-economic impacts would be expected as a result from this portion of the proposed action.
- No surface water or ground water would be used during operation of the proposed facility.
- Areas disturbed by immediate excavation activities would be re-stabilised as soon as possible to minimise erosional and sedimentation impacts.
- Because of the localised nature of each of excavation effort, no negative impacts would be expected to affect any environmentally sensitive areas or protected species.
- Although none are expected to be encountered, any cultural or archaeological resources discovered during excavation activities would be reported to SAHRA for evaluation and potential recovery.
- During normal operations, no hazardous chemicals would be used at the proposed facility.
- Any spill or leaks (e.g. fuel, hydraulic fluid, and coolant from excavation vehicle) occurring during facility operations would be cleaned-up in accordance with site procedures and protocols.
- Air emissions from excavation operations would be generated by diesel operated equipment (i.e. trucks, backhoes, bulldozers).
- Emissions from these resources would be expected to have only minimal impacts to local air quality.

(f) The option of implementing the activity

The No-Go alternative involves shelving the project and not proceeding with the road upgrade. If this option were implemented, the benefits of improved road infrastructure would not be realized, and the poor condition of the village roads would persist. Consequently, this alternative is not considered feasible.

7. Details of the Public Participation Process Followed

Describe the process undertaken to consult interested and affected parties including public meetings and one on one consultation. NB the affected parties must be specifically consulted regardless of whether or not they attended public meetings. (Information to be provided to affected parties must include sufficient detail of the intended operation to enable them to assess what impact the activities will have on them or on the use of their land.

Public Participation is a key requirement of the EIA process. The PPP was conducted in line with the NEMA EIA Regulations 2014 (Regulation 39-44). The PPP aimed to engage stakeholders or I&APs and provide an opportunity for the expression of public views on the environmental impacts of the applications. All public issues, comments and views on impacts and alternatives are documented, addressed and responded in the EIA process and incorporated into environmental reports for consideration by the decision-making authority (DMR). It was therefore imperative that relevant I&APs are identified and involved in the PPP from the beginning of the EIA process to help focus the EIA plan.

i) Summary of issues raised by I&Aps
(Complete the table summarising comments and issues raised, and reaction to those responses)

Table 4:Summary of issues raised by I&Aps

Interested and Affected Parties **List the names of persons consulted in this column, and** **Mark with an X where those who must be consulted were in fact consulted.**		**Date Comments Received**	**Issues raised**	**EAPs response to issues as mandated by the applicant**	**Section and paragraph reference in this report where the issues and or response were incorporated.**
AFFECTED PARTIES					
Landowner/s	**X**				
Lawful occupier/s of the land					
Landowners or lawful	**X**				

occupiers **on adjacent properties**					
Municipal councillor	**X**				
Municipality					
Organs of state **(Responsible for infrastructure that may be affected Roads Department,** **Eskom, Telkom, DWS**					
Roads Agency Limpopo Shoni Tshivhase					
Communities					

Dept. Land Affairs					
Traditional Leaders					
Dept. Environmental Affairs					
Other Competent Authorities affected					
<u>OTHER AFFECTED PARTIES</u>					
<u>INTERESTED PARTIES</u>					

8. The Environmental attributes associated with the alternatives.

The environmental attributed described must include socio-economic, social, heritage, cultural, geographical, physical and biological aspects)

8.1. Baseline Environment

8.1.1. Type of environment affected by the proposed activity.

(its current geographical, physical, socio-economic, and cultural character)

Vegetation:

The study area is characteristic of the semi-arid savanna (bushveld) biome typical of Limpopo Province. It is defined by gently undulating plains interspersed with occasional low hills, representative of the broader Limpopo interior landscape. The vegetation comprises open to moderately dense woodland, dominated by woody species such as Vachellia (formerly Acacia) spp., Combretum spp., and, in certain areas, Colophospermum mopane. The herbaceous layer is primarily composed of grasses, with Eragrostis and Digitaria species being the most prevalent.

The area shows signs of disturbance due to human activities such as grazing and settlement, resulting in patches of degraded vegetation and localized soil erosion, including the formation of small erosion gullies. Bush encroachment by indigenous woody species is evident in some areas, along with the presence of occasional alien invasive plants. Overall, the vegetation ranges from moderately intact bushveld to disturbed open shrubland.

Geology:

The study area falls within the interior of Limpopo Province and is underlain by geological formations typical of the region, primarily consisting of ancient crystalline basement rocks associated with the Kaapvaal Craton. These rocks are dominated by granites, gneisses, and related metamorphic lithologies, which have undergone prolonged weathering over geological time.

The resulting soils are generally shallow to moderately deep and vary from sandy to loamy textures, depending on the degree of weathering and local topography. In some areas, particularly on lower-lying terrain, clay-rich soils may occur. Soil fertility is typically low to moderate, with

limited organic content, which is characteristic of semi-arid savanna environments.
Drainage is generally moderate to good on elevated and gently sloping areas, while poorly drained conditions may occur in localized depressions. Evidence of surface crusting and localized erosion, including the formation of small gullies (dongas), is present in disturbed areas, primarily as a result of overgrazing and surface runoff.

Climate:
The study area experiences a semi-arid to sub-tropical climate typical of the interior of Limpopo Province. The region is characterised by hot summers and mild to cool winters, with a distinct seasonal rainfall pattern. Rainfall occurs predominantly during the summer months (October to March), often in the form of short-duration, high-intensity thunderstorms. The mean annual precipitation in the area generally ranges between approximately 300 mm and 500 mm. Winters (May to August) are typically dry, with little to no rainfall.

Temperatures are generally high during summer, frequently exceeding 30°C during the day, while winter temperatures are moderate, with cooler nights that may occasionally approach low single digits. Frost is rare but may occur under certain conditions in low-lying areas.
Evaporation rates are relatively high throughout the year, often exceeding precipitation, which contributes to the semi-arid conditions and influences vegetation patterns and soil moisture availability.

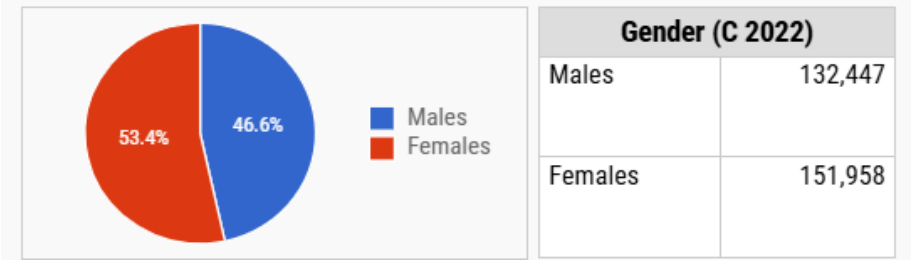
8.1.2. Socio-Economic

Lepelle-Nkumpi Local Municipality

The proposed site falls within the jurisdiction of Lepelle-Nkumpi Local Municipality, Capricorn District, Limpopo Province. The Municipality is a Category B municipality situated within the Capricorn District in the Limpopo Province. The municipality is located 55km south of the district municipality and Polokwane (previously Pietersburg) City. It is the smallest of four municipalities in the district, making up 16% of its geographical area. The municipality is predominantly rural. It is divided into 30 wards, four of them being a township called Lebowakgomo and one of the Capricorn District's growth points.

Population

According to Statistics South Africa Census 2022 and the Lepelle-Nkumpi Local Municipality Integrated Development Plan (IDP), the municipality has a total population of 284,404 people, residing in approximately 78,217 households, with an average household size of 3.6 persons. The municipality is predominantly rural and consists of 30 wards and 94 settlements. Census 2022 further indicates that the population is dominated by females, who account for 151,958 people (53.4%), while males account for 132,447 people (46.6%). The predominance of females may be associated with labour migration patterns, where a proportion of the male population migrates to urban areas in search of employment opportunities. The municipality experienced significant population growth between 2011 and 2022, highlighting an increasing demand for municipal services, infrastructure and socio-economic development initiatives.



Gender (C 2022)	
Males	132,447
Females	151,958

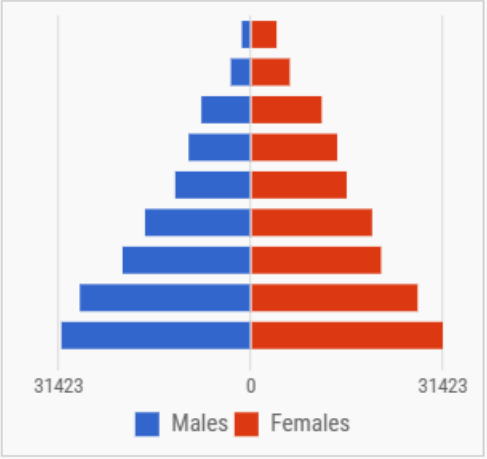
Figure 4:Population Distribution by Gender

Source: Statistics South Africa (Stats SA). 2022 and Census 2022

Age

Based on the Statistics South Africa Census 2022 age distribution for Lepelle-Nkumpi Local Municipality, the population is predominantly young, with the largest proportion in the 0–29 age group. The population pyramid indicates a broad base that gradually narrows with increasing age, reflecting a youthful population structure and a declining proportion of older age groups. Children aged 0–9 years constitute the largest age cohort, accounting for 62,387 people, followed by the 10–19 years age group with 55,251 people, and the 20–29 years age group with 42,280 people. Collectively, these age groups comprise over half of the municipality's population, indicating a high proportion of children, adolescents and young adults. The economically active population is primarily individuals aged 20–59 years, with 37,145 aged 30–39 years, 28,051 aged 40–49 years, and 24,298 aged 50–59 years. The elderly population is comparatively smaller, with 19,679 people aged 60–69 years, 9,626 people aged 70–79 years, and 5,673 people aged 80 years and above.

The population pyramid also shows that females slightly outnumber males across most age categories, particularly in the older age groups, which is consistent with the overall gender distribution within the municipality. The youthful age structure has important implications for planning and development. It suggests a continued demand for educational facilities, healthcare services, employment opportunities, housing and social infrastructure. For environmental impact assessments and development planning, this demographic profile indicates that future developments should consider the growing needs of young and economically active populations while ensuring adequate provision of community services and sustainable infrastructure.

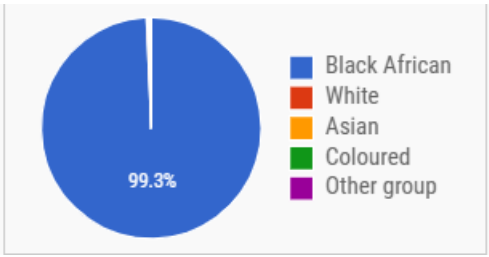


Age Distribution (C 2022)	
80+ years	5,673
70-79 years	9,626
60-69 years	19,679
50-59 years	24,298
40-49 years	28,051
30-39 years	37,145
20-29 years	42,280
10-19 years	55,251
0-9 years	62,387

***Figure 5**: Population Distribution by Age*

Source: Stats SA 2022

Language distribution



Population Group (C 2022)	
Black African	282,315
White	521
Asian	741
Coloured	416
Other group	286

***Figure 6:** Language Distribution.*

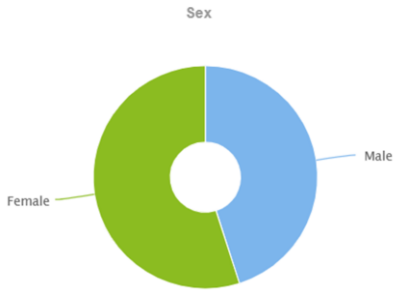
Source: Stats SA 2022

Fetakgomo Tubatse Local Municipality

The proposed site also falls within the jurisdiction of Fetakgomo Local Municipality, Sekhukhune District, Limpopo Province. Fetakgomo is a local municipality (category B4) within the Sekhukhune District Municipality in Limpopo. The name is derived from a Sepedi idiom: "Fetakgomo o sware motho, mafetakgomo ke moriri o a hloga", which implies "putting people first". It borders Makuduthamaga Local Municipality in the south, Greater Tubatse Local Municipality in the east and Lepelle-Nkumpi Local Municipality (Capricorn District Municipality) in the north and west. It is situated about 90 km from Polokwane. Geographically, it is the smallest of the five local municipalities in the district, constituting 8,3% (1 104,75) square kilometres of the district's 13 264 square kilometres.

Population

According to Statistics South Africa Census 2022 and the Fetakgomo Tubatse Local Municipality Integrated Development Plan (IDP 2025/2026), the municipality has a total population of 93,795 people. The municipality is predominantly rural, with settlements distributed across villages and mining communities. The population is overwhelmingly Black African, accounting for 99.4% of the total population. The remaining 0.6% comprises White (0.4%), Indian/Asian (0.1%), and Other population groups (0.1%), while the Coloured population constitutes a negligible proportion.



Sex	Percentage
Female	54,9%
Male	45,1%

***Figure 7**: Population Distribution by Gender.*

Source: Sstatistics South Africa (Stats SA). 2022 and Census 2022

The gender composition indicates that females constitute the majority of the population, representing 54.9%, while males account for 45.1%. This female predominance is characteristic of many rural municipalities in Limpopo and is often associated with labour migration, where a

proportion of the male population relocates to urban centres and mining areas in search of employment opportunities. Understanding the municipality's population composition is important for development planning, as it assists in identifying community needs and informing the provision of infrastructure, public services and socio-economic development initiatives.

Age

Based on the Statistics South Africa Census 2022 age distribution for Fetakgomo Tubatse Local Municipality, the municipality has a predominantly young population, as reflected by the broad base of the population pyramid. The largest proportion of the population falls within the 0–19 years age groups, indicating a high number of children and adolescents. The 0–4 years age group represents the largest cohort, followed closely by the 5–9, 10–14, and 15–19 age groups. This suggests relatively high birth rates and a growing young population.

The population gradually declines with increasing age. The economically active population is mainly concentrated within the 20–39 years age groups, after which the population decreases steadily through the middle-aged and older cohorts. Individuals aged 60 years and above constitute a relatively small proportion of the total population, with the 85 years and older age group representing the smallest segment. The population pyramid also indicates that females slightly outnumber males across most age groups, particularly among the older age categories. This trend is consistent with the municipality's overall gender composition, where females account for 54.9% of the population and males 45.1%.

The youthful age structure has important implications for development planning. It indicates a continued demand for educational facilities, healthcare services, housing, recreational facilities, employment opportunities and other social infrastructure. Furthermore, the substantial proportion of the working-age population highlights the need for sustainable economic development and job creation to support future population growth.

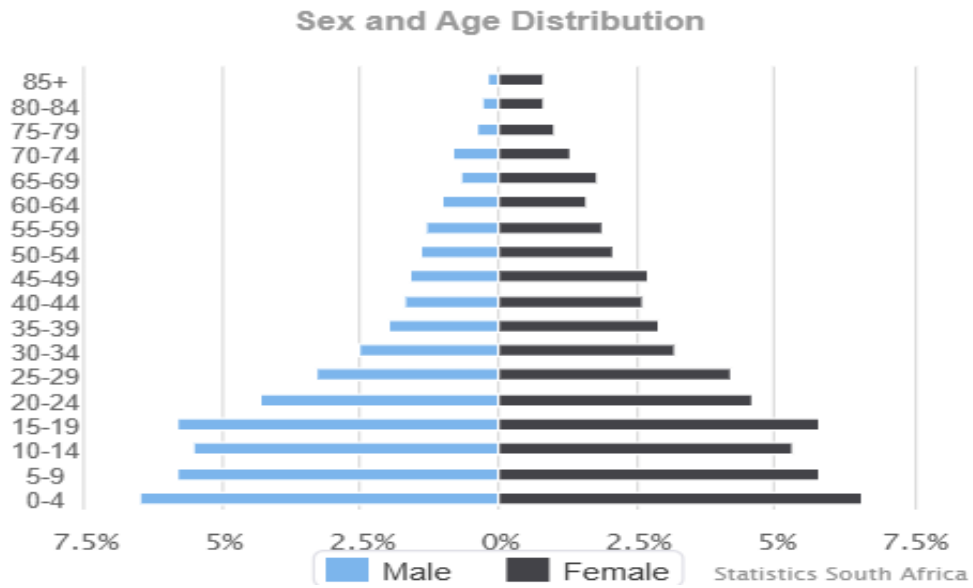


Figure 8: *Population Distribution by Age*

Source: Stats SA 2022

Language distribution

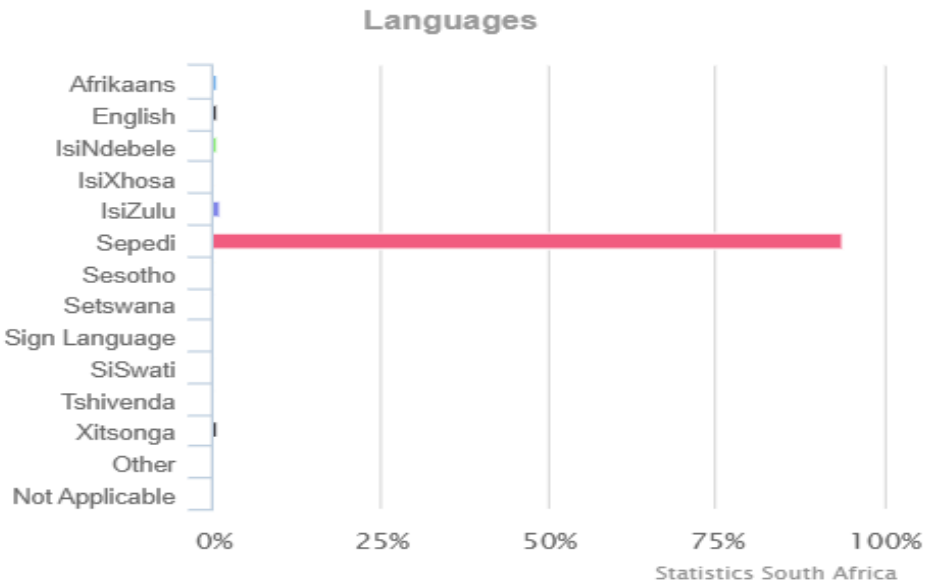


Figure 9: *Language Distribution.*

Source: Stats SA 2022

8.2. Description of the current land uses.

The proposed borrow pit is located on vacant land with minimal activity. The site remains partially disturbed (it is near an existing borrow pit), primarily covered by open woodland and natural grassland, with dominant sickle bush trees. The surrounding area is predominantly grassland and woodland.

8.3.1 Description of specific environmental features and infrastructure on the site.

The area consists of natural vegetation with few sickle bush trees.

8.3.2. Environmental and current land use map.

(Show all environmental, and current land use features)

The map has also been attached as Appendix A3

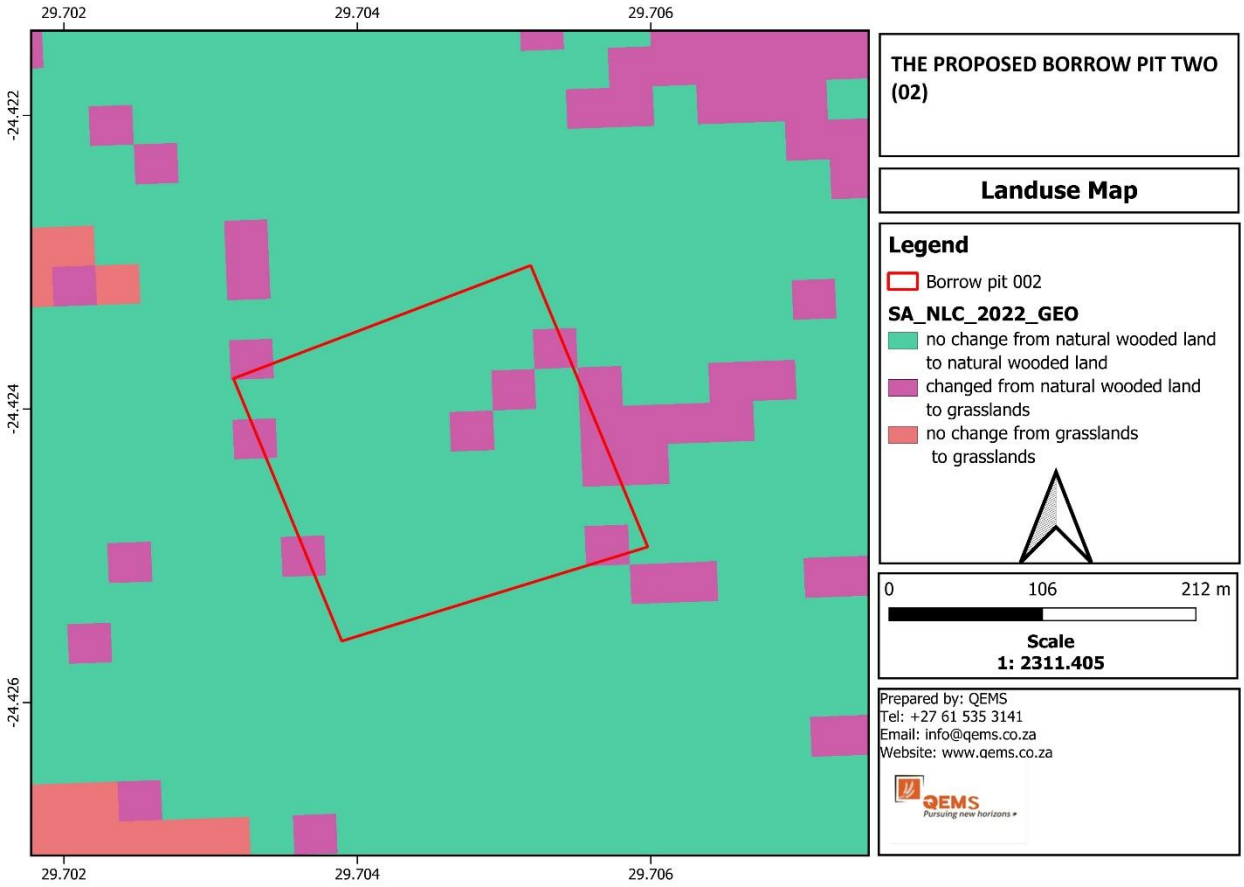


Figure 10:Land use Map

9. Impacts and risks

(Provide a list of the potential impacts identified of the activities described in the initial site layout that will be undertaken, as informed by both the typical known impacts of such activities, and as informed by the consultations with affected parties together with the significance, probability, and duration of the impacts. Please indicate the extent to which they can be reversed, the extent to which they may cause irreplaceable loss of resources, and can be avoided, managed or mitigated).

Potential impact of each main activity in each phase, and corresponding significance assessment

Table 5: Potential impact of activity

ACTIVITY	POTENTIAL IMPACT	SIGNIFICANCE BEFORE MITIGATION						SIGNIFICANCE AFTER MITIGATION					
		M	D	S	P	SS	RATING	M	D	S	P	SS	RATING
PHASE 1 – SITE ESTABLISHMENT													
-Clearance of vegetation and top soil stripping	Dust generation	8	1	3	4	48	M	4	2	1	3	21	L
	Noise disturbance	6	1	2	4	36	M	4	2	2	3	24	L
	Fumes emissions	6	1	3	4	44	M	6	2	1	3	27	L
	Increased traffic volumes	6	2	3	4	44	M	6	2	1	3	27	L
PHASE 2-QUARRYING													
-Extraction of Gravels - Stockpiling -Loading and haulage offsite	Dust generation	8	2	2	5	60	H	6	2	1	3	27	L
	Noise disturbance	6	2	2	5	50	M	4	2	2	3	24	L
	Fumes emission	8	2	3	5	65	H	6	2	1	3	27	L
	Increasing traffic volume	8	2	3	5	65	H	4	2	2	3	24	L
PHASE 3-DECOMMISSIONING													
-Removal of temporary structures Removal of plant and equipment	Noise disturbance	6	1	1	4	48	M	4	1	1	3	18	L
	Fumes emissions	6	2	2	5	50	M	4	2	2	3	24	L

-Removal of waste materials													
PHASE 4-REHABILITATION													
-Reshaping of open void space -Regarding and resurfacing	Dust generation	6	1	1	4	48	M	4	1	1	3	18	L
	Noise disturbance	4	1	1	4	48	M	4	1	1	3	18	L
	Fumes emissions	4	1	1	3	18	L	2	1	1	2	8	L

10. Methodology

Methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks;
(Describe how the significance, probability, and duration of the aforesaid identified impacts that were identified through the consultation process was determined in order to decide the extent to which the initial site layout needs revision).

The assessment of each impact in different phases of the proposed excavation activities was undertaken according to a synthesis of criteria required by the integrated environmental management procedure:

Nature of impact

This is an appraisal of the type of effect the activity would have on the affected environmental component. Its description includes what was being affected, and how. The assessment of the potential identified impacts was done by assessing the impacts before the proposed excavation activities commence and after. The identified impacts were also assessed before implementing the mitigation measure and after. The nature of the impacts was assessed as follows:

Extent

The physical and spatial size of the impact. This was classified as follows:

-Local- The impacted area extends only as far as the activity, e.g. a footprint.

Site- The impact could affect the whole, or a measurable portion of the property.

-Regional-The impact could affect the area including the neighbouring farms, transport routes and the adjoining towns.

-Cumulative -the impact could have a cumulative effect with the surrounding land uses.

Duration

The lifetime of the impact which is measured in the context of the lifetime of the proposed phase (i.e. construction or operation) this was measured as follows:

-Short term -The impact will either disappear with mitigation or will be mitigated through natural process in a short time period.

-Medium term-The impact will last up to the end of the excavation period, where after it will be entirely negated.

-Long term-The impact will continue or last for the entire operational life of the borrow pit but, will be mitigated by direct human action or by natural processes thereafter.

-Permanent-The only class of impact, which will be non-transitory. Mitigation either by man or natural process will not occur in such a way or in such a time span that the impact can be considered transient.

Intensity

This describes how destructive, or benign, the impact is. Does it destroy the impacted environment, alter its functioning, or slightly alter it. These was rated as:

-Low -This alters the affected environment in such a way that the natural processes or functions are not affected.

-Medium-The affected environment is altered, but function and process continue, albeit in a modified way.

-High-Function or process of the affected environment is disturbed to the extent where it temporarily or permanently ceases.

This will be a relative evaluation within the context of all the activities and the other impacts within the framework of the project.

Probability

This describes the likelihood of the impacts actually occurring. The impact may occur for any length of time during the life cycle of the activity, and not at any given time. The classes were rated as follows:

-Improbable

The possibility of the impact occurring is very low, due either to the circumstances, design or experience.

-Probable -There is a possibility that the impact will occur to the extent that provisions must be made therefore.

-Highly probable -It is most likely that the impacts will occur at some or other stage of the development.

-Definite-The impact will take place regardless of any preventative plans, and mitigation measures or contingency plans will have to be implemented to contain the impact.

Determination of significance

Significance was determined through a synthesis of impact characteristics. Significance is an indication of the importance of the impact in terms of both physical extent and time scale, and therefore indicates the level of mitigation required. The classes were rated as follows:

-No significance-The impact is not likely to be substantial and does not require any mitigatory action.

-Low -The impact is of little importance, but may require limited mitigation.

-Medium The impact is of importance and therefore considered to have a negative impact. Mitigation is required to reduce the negative impacts to acceptable levels.

-High-The impact is of great importance. Failure to mitigate, with the objective to reduce

the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation is therefore essential.

The significance of the impact also depends on the consequence and the probability that the impact will occur e.g.
impact significance= (consequence probability)
Consequence= (severity + extent)/2
Severity= [intensity+ frequency + duration]/3

The potential impacts identified significance score rating is computed in terms of the significance score rating formula:

Table 6: Potential impacts identified

FORMULA OF SIGNIFICANCE **Significance Score (SS) = Magnitude (M) + Duration (D) + Scale (S) X Probability (P)**			
SCALE (S)		**MAGNITUDE (M)**	
- NATIONAL	5	-VERY HIGH	10
- REGIONAL (VHEMBE)	4	-HIGH	8
- LOCAL (WITHIN 5KM OF THE MINE AREA)	3	-MODERATE	6
BORROW PIT SPECIFIC	2	-LOW	4
- ACTIVITY SPECIFIC	1	-MINOR	2
DURATION (D)		**PROBABILITY (P)**	
-PERMANENT	5	-DEFINITE	5
-LONG TERM (CEASES WITH OPERATIONAL LIFE)	4	-HIGHLY PROBABLE	4
-MEDIUM TERM (5-15 YEARS)	3	-MEDIUM PROBABILITY	3
-SHORT TERM (0-5 YEARS)	2	-LOW PROBABILITY	2
-IMMEDATE	1	-IMPROBABLE	1

Formula of significance

The significance classes below are derived from the formula:

Table 7: Potential impacts identified

Low significance (Less than 30 significance points)	**Indicates low environmental significance**	**Impacts with little real effect and which should not have an Influence on or require modification of the project design.**
Medium significance (Between 30 and 60 significance points)	Indicates **moderate** environmental significance	An impact or benefit which is sufficiently important to require management and which could have influence on the decision unless it is mitigated
High significance (More than 60 significance points)	Indicates **high** environmental significance	An impact which could influence the decision about whether or not to proceed with the project regardless of any possible mitigation

10.1. Possible positive and negative impacts

The positive and negative impacts that the proposed activity (in terms of the initial site layout) and alternatives will have on the environment and the community that may be affected. (Provide a discussion in terms of advantages and disadvantages of the initial site layout compared to alternative layout options to accommodate concerns raised by affected parties)

Positive impacts of the proposed activity

-The transport services sector would improve

-The surrounding communities will simply access the nearby towns, health centres, education centres etc.

Negative impacts of the proposed activity

-Dust generation

-Noise disturbance.

-Alien species invasion

-Habitat destruction.

-Visual impact.

-Soil contamination

-Waste nuisance

10.2. The possible mitigation measures that could be applied and the level of risk.

(With regard to the issues and concerns raised by affected parties provide a list of the issues raised and an assessment/ discussion of the mitigations or site layout alternatives available to accommodate or address their concerns, together with an assessment of the impacts or risks associated with the mitigation or alternatives considered).

- Dust suppression measures should be implemented in areas susceptible to wind erosion.
- Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during excavation, unless otherwise approved by the ECO in consultation with the potentially affected parties.
- The contractor should avoid burning of the vegetation cover and waste on site.
- Vegetation clearing should only be limited to areas affected by the proposed borrow pit excavations.
- No waste burning o waste burying shall be allowed onsite
- The contractor should make use of the existing access roads where possible and where new access roads are required; they should be located on the perimeter of disturbed areas.
- During the transportation of necessary project components, all vehicles should adhere to the specified speed limits and all drivers shall be in possession of an appropriate valid driver’s license.

10.3. Motivation where no alternative sites were considered.

The proposed borrow pit site was selected based on that there's availability of suitable material, accessibility, existing levels of disturbance and it does not have high sensitivity.

- The proposed borrow pit is situated in close proximity from road D5021 and D5010 making the site easily accessible.
- The preferred has no servitudes for power lines or roads that intersect the site.

10.4. Statement motivating the alternative development location within the overall site.

The proposed development has one proposed site as the borrow pit location. It is a preferred site because it contains suitable material for re-graveling, has minimal vegetation with exposed topsoil, and is located farther away from a river. Its close proximity to the road allows for efficient transportation of materials from the borrow pit to the re-graveling site.

(In respect of the final site layout plan) through the life of the activity. (Including (i) a description of all environmental issues and risks that identified during the environmental impact assessment process and (ii) an assessment of the significance of each issue and risk and an indication of the extent to which the issue and risk could be avoided or addressed by the adoption of mitigation measures.)

The significance of potential environmental impacts identified was determined using a ranking scale, based on the following:

- Duration of occurrence- This describes the duration of the impacts on the environmental parameter.
- Probability of occurrence- This describes the chance of occurrence of an impact.
- Scale/extent of impact- This is defined as the area over which the impact will be expressed.
- Magnitude- This describes the severity of an impact.

The potential impacts identified significance score rating is computed in terms of the significance score rating formula:

Table 8: Assessment of identified potentially significant impact and risk

FORMULA OF SIGNIFICANCE **Significance Score (SS) = Magnitude (M) + Duration (D) + Scale (S) X Probability (P)**			
SCALE (S)		**MAGNITUDE (M)**	
- NATIONAL	5	-VERY HIGH	10
- REGIONAL (VHEMBE)	4	-HIGH	8
- LOCAL (WITHIN 5KM OF THE MINE AREA)	3	-MODERATE	6
BORROW PIT SPECIFIC	2	-LOW	4
- ACTIVITY SPECIFIC	1	-MINOR	2
DURATION (D)		**PROBABILITY (P)**	
-PERMANENT	5	-DEFINITE	5
-LONG TERM (CEASES WITH OPERATIONAL LIFE)	4	-HIGHLY PROBABLE	4
-MEDIUM TERM (5-15 YEARS)	3	-MEDIUM PROBABILITY	3
-SHORT TERM (0-5 YEARS)	2	-LOW PROBABILITY	2
-IMMEDATE	1	-IMPROBABLE	1

Formula of significance

The significance classes below are derived from the formula:

Table 9: Assessment of identified potentially significant impact and risk

Low significance (Less than 30 significance points)	**Indicates low environmental significance**	**Impacts with little real effect and which should not have an influence on or require modification of the project design.**
Medium significance (Between 30 and 60	Indicates **moderate** environmental significance	An impact or benefit which is sufficiently important to require management and which

significance points)		could have and influence on the decision unless it is mitigated
High significance (More than 60 significance points)	Indicates **high** environmental significance	An impact which could influence the decision about whether or not to proceed with the project regardless of any possible mitigation

10.5. Assessment of each identified potentially significant impact and risk

(This section of the report must consider all the known typical impacts of each of the activities (including those that could or should have been identified by knowledgeable persons) and not only those that were raised by registered interested and affected parties).

Table 10: Identified potential significant impact and risk

NAME OF ACTIVITY **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. For mining**,- excavations,	**POTENTIAL IMPACT** (Including the potential impacts for cumulative impacts) (e.g. dust, noise, drainage surface disturbance,	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated (e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)	**SIGNIFICANCE** if not mitigated	**MITIGATION TYPE** (modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance,	**SIGNIFICANCE** if mitigated

blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)				relocation, alternative activity etc. etc) E.g. Modify through alternative method. Control through noise control Control through management and monitoring through rehabilitation.	
Clearance of vegetation and topsoil stripping	Noise disturbance	- Vegetation - Soil - Air	Site establishment phase	Medium	Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday	Low

					during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	
	Fumes emissions			Medium	Avoid burning of the vegetation cover and waste during site establishment.	Low
	Increased traffic emissions			Medium	Fumes emitted from vehicles and equipment shall be monitored and any corrective action required should be taken timeously.	Low
	Habitat destruction			Medium	-Vegetation clearing should only be limited	Low

					to areas affected by the proposed borrow pit excavations. -Make use of existing access roads where possible, where new access roads are required, the footprint of the impact should be kept to a minimal level through for example, use of two-track dirt roads -Access routes (where necessary) should be located on the perimeter of disturbed areas such as cultivated/fallow lands so as not to	

					fragment intact vegetated areas	
	Soil contamination			Low	The contractor must keep spill cleaning kits on site at all times in case of spills. contaminated soil should be excavated then dumped at a registered hazardous landfill site.	Low
	Visual impact			High	The area will be rehabilitated after excavation is concluded and thus the visual impact will be removed and the area will be restored.	Medium

					Stockpiles should not exceed 1.5m in height.	
- Extraction of gravels - Stockpiling -Loading and haulage offsite	Dust generation	- Air - Local residents - Soil	Site establishment phase	High	Dust suppression measures should be implemented in areas susceptible to wind erosion.	Low
	Noise disturbance			Medium	Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	Low

	Fumes emissions			High	Avoid burning waste during quarrying on site.	Low
	Increasing traffic volumes			High	- Transportation of equipment, waste and other necessary project components shall be in accordance with all relevant legislation. Permits for abnormal loads shall be applied for from the relevant authority, where required. - Signage shall be established at appropriate points warning of turning traffic and on - going	Low

					works (all signage should be in accordance with prescribed standards). - Where possible times for arrival and departure of heavy vehicles shall be co - ordinated as far as possible in order to minimise congestion - All vehicles should adhere to the specified speed limits and all drivers shall be in possession of an appropriate valid driver's license	

					- Make use of existing access roads where possible. Where new access roads are required, the footprint of the impact should be kept to a minimal level through for example, use of two-track dirt roads.	
	Visual impact			High	The area will be rehabilitated after excavation is concluded and thus the visual impact will be removed and the area will be restored. Stockpiles should not exceed 1.5m in height.	Medium

	Soil contamination			Low	The contractor must keep oil spill cleaning kits on site at all times in case of spills. Contaminated soil should be excavated then dumped at a registered hazardous landfill site.	Low
	Surface and ground water contamination			Low	-Monitoring for surface and ground water contamination should be undertaken. -Streams, rivers, pans, wetlands and all other water bodies should be adequately protected from pollution.	Low

	Waste generation			Low	-Recyclable waste shall be disposed of into separate skips/bins and removed off-site for recycling. - All solid waste shall be disposed of off-site at an approved landfill Site.	Low
	Alien species invasion			Medium	Alien plants must be removed as soon as they are identified.	Low
- Removal of temporary structures - Removal of plant and equipment	Noise disturbance	Local residents	Decommissioning	Medium	Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday	Low

- Removal of waste materials					during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	
	Fumes emissions			Medium	Avoid burning of and waste during decommissioning on site	Low
-Reshaping of the open void space -Regrading and re-gravelling	Dust generation	Air	Rehabilitation	Medium	Dust suppression measures should be implemented in areas susceptible to wind erosion.	Low
	Noise disturbance			Medium	Noise generating activities should be restricted to between 07h00 and 17h00	Low

					Monday to Friday during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	
	Fumes emissions			Low	Avoid burning of the vegetation cover and waste on site.	Low

The supporting impact assessment conducted by the EAP must be attached as an appendix, marked **Appendix**

10.6. Summary of specialist reports.

(This summary must be completed if any specialist reports informed the impact assessment and final site layout process and must be in the following tabular form): -

Table 11: Summary of specialist report

LIST OF STUDIES UNDERTAKEN	**RECOMMENDATIONS OF SPECIALIST REPORTS**	**SPECIALIST RECOMMENDATIONS THAT HAVE BEEN INCLUDED IN THE EIA REPORT (Mark with an X where applicable)**	**REFERENCE TO APPLICABLE SECTION OF REPORT WHERE SPECIALIST RECOMMENDATIONS HAVE BEEN INCLUDED.**
Heritage Impact Assessment	The report makes the following recommendations: 1. It is recommended that SAHRA endorse the report as having satisfied the requirements of Section 38 (8) of the NHRA. 2. It is recommended that SAHRA decide, in terms of Section 38 (4) of the NHRA, to approve the proposed establishment of Borrow-Pit 2 and the upgrading of access roads D5010 and D5021.	X	Section 9 Recommendation

	3. From a heritage perspective, supported by the findings of this study, the proposed establishment of Borrow-Pit 2 for upgrading of access roads D5010 and D5021 is supported. However, the proposed borrow-pit application should be approved under the condition that other activities do not extend beyond the area considered in this report, and measures must be put in place to protect the identified burial sites. 4. Should chance archaeological materials or human remains be exposed during clearing and construction work on any section of the proposed borrow-pit site and road upgrade, work should cease on the affected area, and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption in construction scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations. 5. Subject to the recommendations herein made and the implementation of the mitigation measures and adoption of the project EMPR, there are no significant cultural heritage resource barriers to the proposed Borrow-Pit 2 and road upgrade. The SAHRA may approve the proposed borrow pit application and road upgrade		

	from a heritage perspective, subject to recommendations provided in this report.		
Terrestrial Biodiversity Impacts Assessment	**CONCLUSION AND RECOMMENDATIONS** Borrow Pit 2 is located within the Endangered Sekhukhune Plains Bushveld vegetation unit and falls within a Critical Biodiversity Area (CBA 2). Although the site exhibits signs of historical disturbance associated with grazing and bush encroachment, it remains dominated by indigenous vegetation and supports protected Shepherd's Trees (Boscia albitrunca), which constitute the primary biodiversity constraint. No alien invasive plant species were recorded during the field assessment. Subject to the implementation of appropriate mitigation measures, including the protection of Boscia albitrunca individuals, strict footprint management and progressive rehabilitation, the anticipated residual biodiversity impacts are expected to be of low to moderate significance. The proposed development of Borrow Pit 2 is therefore considered acceptable from a terrestrial biodiversity perspective. **RECOMMENDATIONS**	X	Section 12 Conclusion and Recommendations

	To ensure that borrow pit development does not compromise the ecological functioning of the Sekhukhune Plains Bushveld or the biodiversity targets identified in the Limpopo Conservation Plan, the following recommendations are made: 1.Strict Footprint Control Limit all borrow pit activities to the approved footprints, with no expansion into surrounding bushveld, particularly within CBA 1 and CBA 2 areas. 2.Protection of Boscia albitrunca Demarcate all Shepherd's Trees within and adjacent to borrow pit footprints. No disturbance, root-zone compaction, or stockpiling may occur within their buffer zones. 3.Avoidance of Sensitive Habitat Features Maintain clear no-go areas around protected trees, intact bushveld pockets, and any microhabitats supporting ecological processes. 4.Invasive Species Management Implement coordinated control of Opuntia ficus-indica and other alien species across all borrow pits. Prevent movement of contaminated soil and rehabilitate disturbed areas promptly. 5.Progressive Rehabilitation Rehabilitate disturbed areas during operations rather than waiting for closure. Use locally indigenous species and restore vegetation structure to support ecological recovery.		

	6.Minimise Soil Disturbance and Erosion Apply erosion-control measures on slopes and stockpiles, especially in areas contributing to downstream hydrological processes. 7.Environmental Awareness Training Train all personnel on protected species, no-go areas, and biodiversity sensitivities to reduce accidental disturbance. 8.Monitoring and Compliance Conduct seasonal monitoring of SCC individuals, invasive species, and rehabilitation progress. Adjust management actions based on monitoring outcomes. 9.Maintain Connectivity and Ecological Function Ensure that borrow pit operations do not obstruct ecological corridors linking bushveld patches to the Olifants River riparian zone. 10.Post-Closure Restoration Implement a final rehabilitation plan that restores ecological support functions, stabilises soils, and promotes long-term vegetation recovery. **Recommendation: Permit Application for the Removal or Disturbance of Shepherd's Trees** Because Boscia albitrunca is a protected tree species under the National Forests Act (Act 84 of 1998), any activity that may result in its removal, damage, pruning, relocation, or disturbance of the root		

	zone requires a formal Protected Tree Permit issued by the Department of Forestry, Fisheries and the Environment (DFFE). It is therefore recommended that the proponent: •Apply for a Protected Tree Permit prior to any borrow pit development that may affect Shepherd's Trees within or adjacent to the approved footprints. •Submit a detailed tree inventory (locations, sizes, condition, and number of individuals potentially affected) as part of the permit application. •Motivate the need for removal or disturbance, demonstrating that avoidance has been considered and that impacts cannot be prevented through redesign or micro-siting. •Include mitigation and rehabilitation commitments in the permit application, such as demarcation of retained individuals, root-zone protection, and post-disturbance restoration. •Await formal written approval from DFFE before undertaking any clearing, excavation, or earthworks that may affect protected trees. Securing the required permit ensures legal compliance and provides a regulated framework for managing impacts on Boscia albitrunca during borrow pit development.		

Agriculture Compliance Statement	The agricultural assessment indicates that the proposed Borrow Pit 02 is not expected to result in significant impacts on agricultural resources or agricultural production potential, provided that the recommended mitigation measures are implemented. The proposed borrow pit is located within Nkotokwane Village, approximately 26 km east of Lebowakgomo Town and 2.05 km west of the Olifants River. The site is currently vacant and is predominantly associated with livestock grazing and firewood collection by the surrounding community. The geological conditions, characterised by calcrete and quartzite rocks, together with limited soil development, restrict the suitability of the site for intensive crop cultivation. The study area is characterised by Land Capability Class IV, which has moderate to severe limitations that restrict its suitability for cultivation and require careful soil management. The land is predominantly suitable for grazing and supporting natural vegetation. The grazing capacity of approximately 11 ha/LSU indicates relatively low grazing potential, requiring conservative stocking rates and effective grazing management. The proposed Borrow Pit 02 may result in temporary disturbance to grazing activities, vegetation clearance, soil compaction, erosion and restrictions on livestock	X	Section 05 Conclusion

	movement. However, these impacts are expected to be localised and of low significance and can be effectively managed through the implementation of the recommended mitigation measures and relevant provisions of the EMPr. The proposed borrow pit is anticipated to operate for approximately two years, after which extraction activities will cease, and rehabilitation will be undertaken. Rehabilitation should include backfilling where feasible, recontouring, topsoil replacement and revegetation with suitable indigenous grass species to restore the site to a stable condition suitable for livestock grazing. The borrow pit must be fenced during the operational phase to prevent livestock from accessing the excavation area. Appropriate traffic management measures, including designated haul routes, warning signage and speed limits, should also be implemented to minimise the risk of livestock injuries and disturbance to surrounding agricultural activities. Following successful rehabilitation and confirmation that the site is safe, the fencing should be removed to allow livestock to resume grazing. The gravel materials extracted from Borrow Pit 02 are required for the proposed road upgrading and bridge construction projects. These developments are expected to provide positive agricultural and socio-economic benefits by improving connectivity		

	between Nkotokwane and Apel Village. Improved bridge infrastructure will facilitate livestock movement across the Olifants River and improve access to grazing areas on both sides of the river. Furthermore, improved road access will assist farmers in transporting agricultural products to nearby towns, mills and markets, thereby supporting agricultural livelihoods and contributing to local food security. In accordance with the applicable agricultural assessment requirements, it is anticipated that the temporarily disturbed agricultural areas can be rehabilitated within two years following the cessation of extraction activities and restored to a condition suitable for grazing. Rehabilitation should aim to restore the site's previous grazing potential and, where feasible, improve the condition of the affected grazing fields. Agricultural activities within the surrounding areas are expected to continue without significant interference. From an agricultural impact perspective, the proposed Borrow Pit 02 is therefore considered acceptable and recommended for approval, provided that the recommended mitigation measures are implemented. Particular attention should be given to restricting		

	extraction activities to the approved footprint, preventing livestock access to the excavation area, maintaining access to surrounding grazing areas, implementing appropriate traffic and erosion control measures, and undertaking effective rehabilitation upon completion of the extraction activities.		

Attach copies of Specialist Reports as appendices D

11. Environmental impact statement

11.1. Summary of the key findings of the environmental impact assessment;

- There is no archaeological or place of historical significance that will be impacted by the proposed borrow pit activities.
- The significance of dust generation would be low if dust suppression measures are implemented in areas susceptible to wind erosion.
- Noise or construction activities should be restricted to between 07h00 and 17h00 Monday to Friday during excavation.
- Alien species invasion would be low if alien plants are removed as soon as they are identified at the borrow pit site.
- Habitat destruction significance would be low if vegetation clearing is only limited to areas affected by the proposed borrow pit excavations.
- Visual impact would be less if the contractor makes use of the existing access roads where possible and where new access roads are required, they should be located on the perimeter of disturbed areas.
- Soil contamination would be low if the excavating machines and transportation trucks are serviced regularly.

11.2. Final Site Map

Provide a map at an appropriate scale which superimposes the proposed overall activity and its associated structures and infrastructure on the environmental sensitivities of the preferred site indicating any areas that should be avoided, including buffers. Attach as **Appendix**

The map has also been attached as Appendix A4

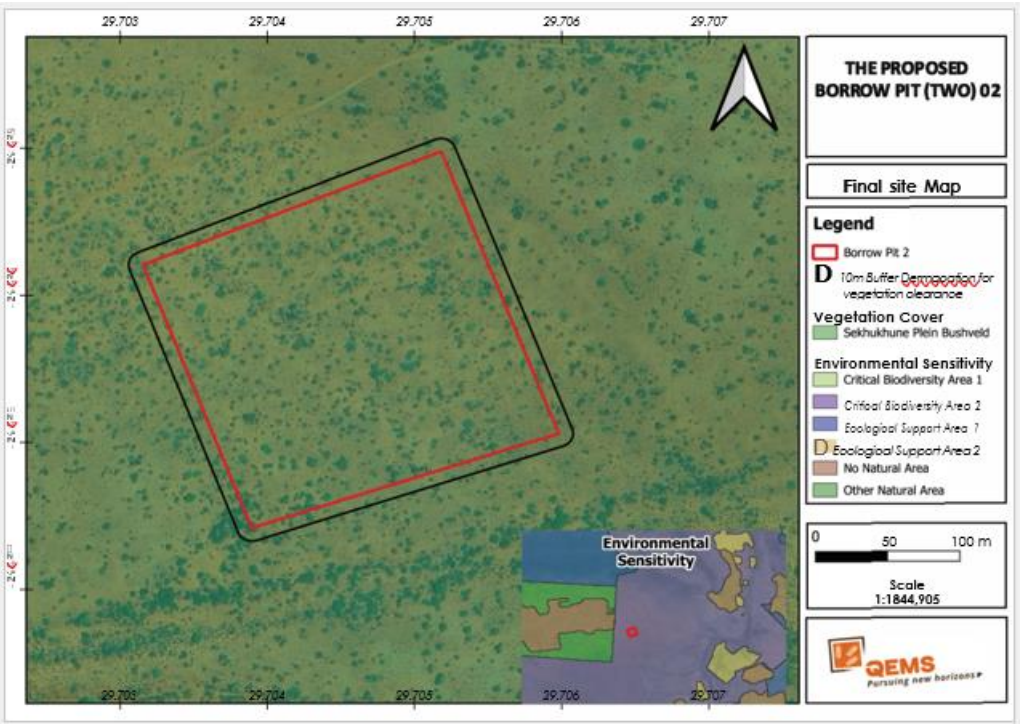


Figure 11: Final Site Map

12. Summary of the positive and negative impacts and risks of the proposed activity and identified alternatives;

Positive impacts of the proposed activity

- The transport services sector would improve
- Road infrastructure would be improved
- Flood impacts will be addressed

Negative impacts of the proposed activity

- The significance of dust generation would be low if dust suppression measures are implemented in areas susceptible to wind erosion.
- Noise disturbance would be low if noise generating activities are restricted to between 07h00 and 17h00 Monday to Friday during excavation.
- Alien species invasion would be low if alien plants are removed as soon as they are identified at the borrow pit site.

- Habitat destruction significance would be low if vegetation clearing is only limited to areas affected by the proposed borrow pit excavations.
- Visual impact would be less if the contractor makes use of the existing access roads where possible and where new access roads are required, they should be located on the perimeter of disturbed areas.
- Soil contamination would be low if the excavating machines and transportation trucks are serviced regularly

13. Proposed impact management objectives and the impact management outcomes for inclusion in the EMPr.

Based on the assessment and where applicable the recommendations from specialist reports, the recording of proposed impact management objectives, and the impact management outcomes for the development for inclusion in the EMPr as well as for inclusion as conditions of authorisation.

- Should any archaeological artefacts be exposed during borrow pit excavation, the excavation in the vicinity of the finding must be stopped immediately. A registered Heritage specialist must be called to the site for inspection. Under no circumstance shall any heritage material be destroyed or removed from the site and the relevant heritage resource agency must be informed about the finding. Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the South African Heritage Resources agency and/ or any of their delegated provincial agencies.
- Dust suppression measures should be implemented in areas susceptible to wind erosion.
- Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during excavation, unless otherwise approved by the ECO in consultation with the potentially affected parties.
- The contractor should avoid burning of the vegetation cover and waste on site.
- Vegetation clearing should only be limited to areas affected by the proposed borrow pit excavations.
- The contractor should make use of the existing access roads where possible and where new access roads are required; they should be located on the perimeter of disturbed areas.

- During the transportation of necessary project components, all vehicles should adhere to the specified speed limits and all drivers shall be in possession of an appropriate valid driver's license

13.1. Aspects for inclusion as conditions of Authorisation.

Any aspects which must be made conditions of the Environmental Authorisation

The applicant to keep copies of the following project documents on site at all times:

- Environmental Authorisation (Once issued)
- Environmental Management Programme
- Rehabilitation Plan
- Closure Plan

- ❖ The Applicant to appoint an ECO to undertake monthly monitoring of the proposed Borrow Pit and associated activities during the construction and rehabilitation phase.
- ❖ The ECO to produce and provide monthly Environmental Compliance Report during the Post-Closure Phase.
- ❖ Should any archaeological artefacts be exhumed during borrow pit excavation, the excavation in the vicinity of the finding must be stopped immediately. A registered Heritage specialist must be called to the site for inspection. under no circumstance shall any heritage material be destroyed or removed from the site and the relevant heritage resource agency must be informed about the finding. Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the South African Heritage Resources Agency and/ or any of their delegated provincial agencies.

13.2. Description of any assumptions, uncertainties and gaps in knowledge.

The assumption is that the proposed borrow pit excavation for gravel material would have low impact to the environment after the implementation of the provided mitigation measures.

14. Reasoned opinion as to whether the proposed activity should or should not be authorised

14.1. Reasons why the activity should be authorized or not.

- The activity should be authorised because the material to be used during the upgrading of the road is available.
- The state of the road is not in line with the basic human rights as it is not drivable and in dire need of rehabilitation to eliminate accidents as well as wear and tear on the cars using it.

- There is no archaeological or place of historical significance that will be impacted by the proposed borrow pit activities, therefore the proposed activity should be authorised.

- Different environmental impacts that might be caused by the proposed borrow pit project have been identified however these impacts will have less significance to the environment if the provided mitigation measures would be well implemented.

- The proposed activity aligns with local and national development objectives, such as improving infrastructure, type of economic growth, and enhancing community access and mobility.

- The location has been chosen to minimize ecological sensitivity, avoiding critical habitat destruction since the site is an abandoned existing borrow pit.

- The activity promises significant benefits, including: improved accessibility for residents, and support for local economies through better transportation infrastructure.

14.2. Conditions that must be included in the authorisation

The applicant to keep copies of the following project documents on site at all times:

- Environmental Authorisation (Once issued)
- Environmental Management Programme
- Rehabilitation Plan
- Closure Plan

- ❖ The Applicant to appoint an ECO to undertake an annual monitoring of the proposed Borrow Pit and associated activities.
- ❖ The ECO to produce and provide annual Environmental Compliance Report during the Post-Closure Phase.
- ❖ Should any archaeological artefacts be exposed during borrow pit excavation, the excavation in the vicinity of the finding must be stopped immediately. A registered Heritage specialist must be called to the site for inspection. under no circumstance shall any heritage material be destroyed or removed from the site and the relevant heritage resource agency must be informed about the finding. Heritage remains uncovered or disturbed during earthworks must not be disturbed further until the necessary approval has been obtained from the South African Heritage Resources Agency and/ or any of their delegated provincial agencies.

15. Period for which the Environmental Authorisation is required.

Throughout the project life circle.

16. Undertaking

Confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic assessment report and the Environmental Management Programme report.

I hereby confirm that the undertaking required to meet the requirements of this section is provided at the end of the EMPr and is applicable to both the Basic assessment report and the Environmental Management Programme report

Financial Provision

State the amount that is required to both manage and rehabilitate the environment in respect of rehabilitation.

16.1. Explain how the aforesaid amount was derived.

R10 000. This amount was derived using the latest Department of Minerals and Petroleum Resources figures on the quantum calculation template.

16.2. Confirm that this amount can be provided for from operating expenditure.

I hereby confirm that this amount can be provided for operating expenditure.

17. Specific Information required by the competent Authority

17.1. Compliance with the provisions of sections 24(4)(a) and (b) read with section 24 (3) (a) and (7)

19.1.1. Impact on the socio-economic conditions of any directly affected person.

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any directly affected person including the landowner, lawful occupier, or, where applicable, potential beneficiaries of any land restitution claim.

1. Preferred

The site is located further away from water resources and farming operation. There is low agricultural sensitivity. The site has minimal impacts on the existing vegetation and the topsoil is exposed. This alternative site offers less disruption to farming and water systems, providing a safer and more sustainable site for development.

Direct Impacts on Landowners:

If the borrow pit gets to be developed on private land, the landowner will have to be incentivized, if required, for any use of land or mineral resources. The evaluation of the impact on landownership is essential to ensure fair compensation and to address concerns over potential long-term land degradation.

Economic Impacts on Lawful Occupiers:

Any individuals lawfully occupying the land will be consulted regarding potential disruption to their living conditions or businesses. This includes evaluating the effects of noise, dust, traffic from haulage vehicles, and loss of land use.

Beneficiaries of Land Restitution Claims:

If the land in question is subject to restitution claims, the evaluation should assess how the development could affect the potential beneficiaries. This includes ensuring that no

development occurs on land that is likely to be returned to communities or individuals as part of a land restitution process.

Environmental Impact:

Without the existence of a borrow pit, the site may have pristine or less disturbed land. The excavation process can introduce several environmental risks, including soil erosion, water pollution, and habitat destruction. These risks should be carefully assessed before any extraction begins.

Conclusion

Preferred is chosen, significant mitigation strategies will need to be implemented, including the use of erosion control measures, water management systems, and noise abatement techniques to minimize disruptions to farming and the environment.

Regular consultation with affected parties, including landowners, occupiers, and potential land restitution beneficiaries, should be carried out to ensure their concerns are addressed and fair compensation is offered.

In either of the alternatives, **community engagement, environmental management, and clear agreements with the community people** are essential to mitigate adverse socio-economic and environmental effects. It is also crucial to consider the long-term sustainability of the extraction activities to ensure that the benefits are maximized, and negative impacts are minimized for affected parties.

19.1.2. Impact on any national estate referred to in section 3(2) of the National Heritage Resources Act.

(Provide the results of Investigation, assessment, and evaluation of the impact of the mining, bulk sampling or alluvial diamond prospecting on any national estate referred to in section 3(2) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) with the exception of the national estate contemplated in section 3(2)(i)(vi) and (vii) of that Act, attach the investigation report as ***Appendix 2.19.2*** *and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).*

Heritage Impact Assessment study is conducted and has been attached as Appendix D.

20. Other matters required in terms of sections 24(4)(a) and (b) of the Act.

(the EAP managing the application must provide the competent authority with detailed, written proof of an investigation as required by section 24(4)(b)(i) of the Act and motivation if no reasonable or feasible alternatives, as contemplated in sub-regulation 22(2)(h), exist.

Alternatives considered for the proposed project is limited to an alternative alignment for the borrow-pit project.

The reason for this is that the Environmental Authorisation will be obtained for the sole purpose of extracting gravel material as in this report. The extraction method to be employed was assessed for the borrow pit, and alternative is considered as part of the application process.

PART B

ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT

1. Draft environmental management programme.

1.1. Details of the EAP,

(Confirm that the requirement for the provision of the details and expertise of the EAP is already included in PART A, section 1(a) herein as required).

I hereby confirm that the requirement for the provision of the details and expertise of the EAP is already included in PART A, section 1(a) herein as required.

1.2. Description of the Aspects of the Activity

(Confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1)(h) herein as required).

I hereby confirm that the requirement to describe the aspects of the activity that are covered by the draft environmental management programme is already included in PART A, section (1)(h) herein as required.

1.3. Composite Map

*(Provide a map **(Attached as an Appendix)** at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that any areas that should be avoided, including buffers)*



Figure 12: Composite Map

2. Description of Impact management objectives including management statements

2.1. Determination of closure objectives.

(Ensure that the closure objectives are informed by the type of environment described)

The contractor shall:

- Provide a landscape that is safe for the community.
- Minimise potential environmental impact and liability arising from mine closure;
- Remove any waste or potentially hazardous materials from site.
- Minimise the potential impacts from decommissioning.
- Develop landforms that return land affected by the excavation to a condition that is suitable for a range of sustainable land uses or create a stable, free draining post excavation landform, which is compatible with the surrounding landscape and which is capable of a productive land use that achieves a land capability equal to that of pre-excavation conditions.
- Establish vegetation that is self-sustaining, perpetual and provides a sustainable habitat for local fauna and successive flora species.

- Use all the suggested mitigation measures during excavation, decommissioning and rehabilitation of the borrow pit to ensure that rehabilitation is done in accordance with DMPR standards, and is compliant to Environmental law.
- Develop land uses that benefit the future use of the site for the local community and to develop a landscape that reduces the requirement for long term monitoring and management.

2.2. Volumes and rate of water use required for the operation.

Water will be required during the operational phase of the project for dust suppression. The water will be transported to the site using mobile water trucks to the site. River water should not be used unless if applied for.

2.3. Has a water use licence has been applied for?

Yes, a General Authorisation (GA) has been applied for since culverts and bridges will be replaced on the proposed upgraded road.

3. Impacts to be mitigated in their respective phases

Measures to rehabilitate the environment affected by the undertaking of any listed activity

Table 12: Impacts mitigations

ACTIVITIES **(E.g. For prospecting -** drill site, site camp, ablution facility, accommodation, equipment storage, sample storage, site office, access route **etc…etc…etc** **E.g. For mining**,- excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)	**PHASE** (of operation in which activity will take place. State; Planning and design, Pre-Constructio n' Constructio n, Operational, Rehabilitati on, Closure, Post closure).	**SIZE AND SCALE of disturban ce** (volumes, tonnages and hectares or m^2)	**MITIGATION MEASURES** (describe how each of the recommendations in herein will remedy the cause of pollution or degradation and migration of pollutants)	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. .With regard to Rehabilitation, therefore state either:-.. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond prospecting as the case may be.

Clearance of vegetation and topsoil stripping	Site establishment phase	1 Hectare	- Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during construction, unless otherwise approved by the ECO in consultation with potentially affected parties. - Avoid burning of the vegetation cover and waste during site establishment. - Fumes emitted from vehicles and equipment shall be monitored and any corrective action required should be taken timeously. - Vegetation clearing should only be limited to areas affected by the proposed borrow pit excavations.	- Noise should be controlled as per Section 34 of the Air quality Act (Act No 39 of 2004).	- The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measure should be implemented during the site clearing phase.

			- The contractor must keep spill cleaning kits on site at all times in case of spills. contaminated soil should be excavated then dumped at a registered hazardous landfill site.		-The provided mitigation measures should be implemented throughout the project period.
			- Make use of existing access roads where possible, where new access roads are required, the footprint of the impact should be kept to a minimal level through for example, use of two-track dirt roads		-The provided mitigation measures should be implemented throughout the project period.
			- Access routes (where necessary) should be located on the perimeter of disturbed areas such as cultivated/fallow lands so as not to fragment intact vegetated areas.		-The provided mitigation measures should be implemented throughout the project period.

- Extraction of gravels - Stockpiling - Loading and haulage offsite	Quarrying	1 Hectare	- Dust suppression measures should be implemented in areas susceptible to wind erosion by using water. - Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during construction, unless otherwise approved by the ECO in consultation with potentially affected parties. - Avoid burning of the vegetation cover and waste during quarrying on site. - Transportation of equipment, waste and other necessary project components shall be in accordance with all relevant legislation. Permits for	- Dust should be controlled as per section 32 of the Air quality Act (Act No 39 of 2004). - Noise should be controlled as per Section 34 of the Air quality Act (Act No 39 of 2004).	- The provided mitigation measures should be implemented during quarrying and rehabilitation phase. - The provided mitigation measures should be implemented throughout the project schedule. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be

			abnormal loads shall be applied for from the relevant authority, where required. - Signage shall be established at appropriate points warning of turning traffic and on - going works (all signage should be in accordance with prescribed standards). - Where possible times for arrival and departure of heavy vehicles shall be co - ordinated as far as possible in order to minimise congestion. - All vehicles should adhere to the specified speed limits and all drivers shall be in possession of an appropriate valid driver's license.		implemented throughout the project period. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be

			- Make use of existing access roads where possible, where new access roads are required, the footprint of the impact should be kept to a minimal level through for example, use of two-track dirt roads. - Access routes (where necessary) should be located on the perimeter of disturbed areas such as cultivated/fallow lands so as not to fragment intact vegetated areas. - The contractor must keep spill cleaning kits on site at all times in case of spills. contaminated soil should be excavated then dumped at a registered hazardous landfill site.		implemented throughout the project period. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be

			- Monitoring for surface and ground water contamination should be undertaken. - Streams, rivers, pans, wetlands and all other water bodies should be adequately protected from pollution. - Recyclable waste shall be disposed of into separate skips/bins and removed off-site for recycling. - All solid waste shall be disposed of off-site at an approved landfill Site. - Alien plants must be removed as soon as they are identified.		implemented during site clearing phase. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be implemented throughout the project period. - The provided mitigation measures should be

					implemented throughout the project period. - The provided mitigation measures should be implemented throughout the project period.
-Removal of temporary structures -Removal of plant and equipment -Removal of waste materials	Decommissioning	1 Hectare	- Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during construction, unless otherwise approved by the ECO in consultation with potentially affected parties. -Avoid burning of the vegetation cover and waste during decommissioning on site.	- Noise should be controlled as per Section 34 of the Air quality Act (Act No 39 of 2004).	- The provided mitigation measures should be implemented starting from the site clearing phase up to the decommissioning phase. - The provided mitigation measures should be implemented throughout the project period.

- Reshaping of the open void space - Regrading and re-gravelling	Rehabilitation.	1 Hectare	-Dust suppression measures should be implemented in areas susceptible to wind erosion. - Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during construction, unless otherwise approved by the ECO in consultation with potentially affected parties. -Avoid burning of the waste on site.	- Dust should be controlled as per section 32 of the Air quality Act (Act No 39 of 2004). - Noise should be controlled as per Section 34 of the Air quality Act (Act No 39 of 2004).	- The provided mitigation measure should be implemented during the rehabilitation phase. - The provided mitigation measure should be implemented throughout the project period. - The provided mitigation measure should be implemented throughout the project period.

3.1.Impact Management Outcomes

(A description of impact management outcomes, identifying the standard of impact management required for the aspects contemplated in paragraph ();

Table 13: Impacts management outcome

ACTIVITY (whether listed or not listed). **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)**.	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc…. etc…)**	**ASPECTS AFFECTED**	**PHASE** In which impact is anticipated **(e.g. Construction, commissioning, operational Decommissioning, closure, post-closure)**	**MITIGATION TYPE** **(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)** **E.g.** • **Modify through alternative method.** • **Control through noise control** • **Control through management and monitoring** • **Remedy through rehabilitation.**	**STANDARD TO BE ACHIEVED** **(Impact avoided, noise levels, dust levels, rehabilitation standards, end use objectives) etc.**

Clearance of vegetation and topsoil stripping	Dust generation	- Vegetation - Soil - Air	Site establishment phase	Dust suppression measures should be implemented in areas susceptible to wind erosion.	Dust should be minimal.
	Noise disturbance			Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	Noise should be minimal.
	Fumes emissions			Avoid burning of the vegetation cover and waste during site establishment.	Burning of vegetation should be avoided.
	Increased traffic emissions			-Fumes emitted from vehicles and equipment shall be monitored and any corrective action required should be taken timeously. -Make use of existing access roads where possible, where	Fumes emission should be minimised.

				new access roads are required, the footprint of the impact should be kept to a minimal level through for example, use of two-track dirt roads.	
	Habitat destruction			-Vegetation clearing should only be limited to areas affected by the proposed borrow pit excavations. -Access routes (where necessary) should be located on the perimeter of disturbed areas such as cultivated/fallow lands so as not to fragment intact vegetated areas	Vegetation clearing should only be undertaken within the authorised 1 hectare.
	Soil contamination			The contractor must keep spill cleaning kits on site at all times in case of spills. Contaminated soil should be excavated then	Soil contamination should be avoided (machines and vehicles on site should be serviced regularly).

				dumped at a registered hazardous landfill site.	
	Visual impact			-The area will be rehabilitated after excavation is concluded and thus the visual impact will be removed and the area will be restored. -Stockpiles should not exceed 2m in height	Visual impact should be temporary.
- Extraction of gravels - Stockpiling - Loading and haulage offsite	Dust generation	- Air - Local residents - Soil	Quarrying	Dust suppression measures should be implemented in areas susceptible to wind erosion.	Dust generation should be minimal.
	Noise disturbance			Noise generating activities Should be restricted to between 07h00 and 17h00 Monday to Friday during construction, unless otherwise approved by	Noise should be minimal.

				the ECO in consultation with potentially affected parties.	
	Fumes emissions			Avoid burning of the vegetation cover and waste on site.	Burning of waste and vegetation on site should be avoided.
	Increasing traffic volume			- Transportation of equipment, waste and other necessary project components shall be in accordance with all relevant legislation. Permits for abnormal loads shall be applied for from the relevant authority, where required - Signage shall be established at appropriate points warning of turning traffic and on - going works (all signage should be in accordance with prescribed standards).	-Vehicle traffic should be avoided.

				- Where possible times for arrival and departure of heavy vehicles shall be co - ordinated as far as possible in order to minimise congestion - All vehicles should adhere to the specified speed limits and all drivers shall be in possession of an appropriate valid driver's licence -Make use of existing access roads where possible, where new access roads are required, the footprint of the impact should be kept to a minimal level through for example, use of two-track dirt roads -Access routes (where necessary) should be located on the perimeter of disturbed areas	-Making use of the existing access road and locating access routes on the perimeter of disturbed areas should be encouraged.

				such as cultivated/fallow lands so as not to fragment intact vegetated areas.	
	Visual impact			-The area will be rehabilitated after excavation is concluded and thus the visual impact will be removed and the area will be restored. -Stockpiles should not exceed 2m in height.	Visual impact should be temporary.
	Soil contamination			The contractor must keep spill cleaning kits on site at all times in case of spills. contaminated soil should be excavated then dumped at a registered hazardous landfill site.	Soil contamination should be avoided (machines and vehicles on site should be serviced regularly).
	Surface and ground water contamination			- Monitoring for surface and ground water contamination should be undertaken.	Contamination of surface and ground water should be avoided.

				- Streams, rivers, pans, wetlands and all other water bodies should be adequately protected from pollution.	
	Waste generation			- Recyclable waste shall be disposed of into separate skips/bins and removed off-site for recycling. - All solid waste shall be disposed of off-site at an approved landfill Site.	Dumping of waste at the borrow pit site should be avoided
	Alien species invasion			Alien plants must be removed as soon as they are identified.	The removal of the alien plants should always be undertaken.
- Removal of temporary structures - Removal of plant and equipment - Removal of waste materials	Noise disturbance	- Air - Local residents	Decommissioning	Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during construction, unless otherwise approved by	Noise should be minimal.

				the ECO in consultation with potentially affected parties.	
	Fumes emissions			Avoid burning of the vegetation cover and waste during decommissioning on site.	Burning of waste and vegetation on site should be avoided.
- Reshaping of the open void space - Regrading and re-gravelling	Dust generation	- Air - Local residents	Rehabilitation	Dust suppression measures should be implemented in areas susceptible to wind erosion.	The generating of dust should be minimal.
	Noise disturbance			Noise generating activities should be restricted to between 07h00 and 17h00 Monday to Friday during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	Noise should be minimal.
	Fumes emissions			Avoid burning of waste on site.	Burning of vegetation cover and waste on site should be avoided

3.2.Impact Management Actions

(A description of impact management actions, identifying the manner in which the impact management objectives and outcomes contemplated in paragraphs (c) and (d) will be achieved).

Table 14:Impact management action

ACTIVITY whether listed or not listed. **(E.g. Excavations, blasting, stockpiles, discard dumps or dams, Loading, hauling and transport, Water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc…etc…etc.)**.	**POTENTIAL IMPACT** **(e.g. dust, noise, drainage surface disturbance, fly rock, surface water contamination, groundwater contamination, air pollution etc….etc…)**	**MITIGATION TYPE** **(modify, remedy, control, or stop) through (e.g. noise control measures, storm-water control, dust control, rehabilitation, design measures, blasting controls, avoidance, relocation, alternative activity etc. etc)** **E.g.** • **Modify through alternative method.** • **Control through noise control** • **Control through management and monitoring** **Remedy through rehabilitation.**	**TIME PERIOD FOR IMPLEMENTATION** Describe the time period when the measures in the environmental management programme must be implemented Measures must be implemented when required. With regard to Rehabilitation specifically this must take place at the earliest opportunity. With regard to Rehabilitation, therefore state either: -. Upon cessation of the individual activity or. Upon the cessation of mining, bulk sampling or alluvial diamond	**COMPLIANCE WITH STANDARDS** (A description of how each of the recommendations in 2.11.6 read with 2.12 and 2.15.2 herein will comply with any prescribed environmental management standards or practices that have been identified by Competent Authorities)

			prospecting as the case may be.	
Clearance of vegetation and topsoil stripping	Dust generation	Dust suppression measures should be implemented in areas susceptible to wind erosion.	The provided mitigation measure should be implemented throughout the project period.	Noise would be controlled as per Section 34 of the Air quality Act (Act No 39 of 2004).
	Noise disturbance	Noise generating activities should be restricted during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	The provided mitigation measures should be implemented throughout the project period.	Burning of vegetation on site should be avoided.
	Fumes emissions	Avoid burning of the vegetation cover and waste during site establishment.	Burning of the vegetation cover and waste should be avoided throughout the project period.	Fumes emitted from vehicles and equipment should be monitored as per the Air Quality Act (Act No 39 of 2004).
	Increased traffic emissions	-Fumes emitted from vehicles and equipment shall be monitored and any corrective action required should be taken timeously.	The provided mitigation measure should be implemented during the site clearing phase.	

	Habitat destruction	Vegetation clearing should only be limited to areas affected by the proposed borrow pit excavations.	The provided mitigation measures should be implemented during the site clearing phase.	Vegetation clearing outside of the 5ha project area should be avoided.
	Soil contamination	-The contractor must always keep spill cleaning kits on site in case of spills. contaminated soil should be excavated then dumped at a registered hazardous landfill site.	The provided mitigation measure should be implemented throughout the project period.	
	Visual impact	- Make use of existing access roads where possible, where new access roads are required, the footprint of the impact should be kept to a minimal level through for example, use of two-track dirt roads -Access routes (where necessary) should be located	The provided mitigation measures should be implemented during the site clearing phase.	

		on the perimeter of disturbed areas such as cultivated/fallow lands so as not to fragment intact vegetated areas		
-Extraction of gravels -Stockpiling -Loading and haulage offsite	Dust generation	Dust suppression measures should be implemented in areas susceptible to wind erosion.	The provided mitigation measure should be implemented during quarrying and rehabilitation phase.	Dust would be controlled as per section 32 of the Air quality Act (Act No 39 of 2004).
	Noise disturbance	Noise generating activities should be restricted during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	The provided mitigation measures should be implemented throughout the project period.	Noise would be controlled as per Section 34 of the Air quality Act (Act No 39 of 2004).
	Fumes emissions	-Avoid burning of the vegetation cover and waste during quarrying on site.	The provided mitigation measures should be implemented throughout the project period.	

	Increasing traffic volumes	-Transportation of equipment, waste and other necessary project components shall be in accordance with all relevant legislation. Permits for abnormal loads shall be applied for from the relevant authority, where required. - Signage shall be established at appropriate points warning of turning traffic and on - going works (all signage should be in accordance with prescribed standards). - Where possible times for arrival and departure of heavy vehicles shall be co -	The provided mitigation measures should be implemented throughout the project period.	

		ordinated as far as possible to minimise congestion - All vehicles should adhere to the specified speed limits and all drivers shall be in possession of an appropriate valid driver's licence - Make use of existing access roads where possible, where new access roads are required, the footprint of the impact should be kept to a minimal level through for example, use of two-track dirt roads. -Access routes (where necessary) should be located on the perimeter of disturbed areas such as cultivated/fallow lands so as		

		not to fragment intact vegetated areas		
	Visual impact		The provided mitigation measures should be implemented during the site clearing phase.	
	Soil contamination	The contractor must always keep spill cleaning kits on site in case of spills. contaminated soil should be excavated then dumped at a registered hazardous landfill site.	The provided mitigation measures should be implemented throughout the project period.	
	Surface and ground water contamination	-Monitoring for surface and ground water contamination should be undertaken. -Streams, rivers, pans, wetlands and all other water	The provided mitigation measures should be implemented throughout the project period.	

		bodies should be adequately protected from pollution.		
	Waste generation	-Recyclable waste shall be disposed of into separate skips/bins and removed off-site for recycling. -All solid waste shall be disposed of offsite at an approved landfill Site.	The provided mitigation measures should be implemented throughout the project period.	
	Alien species invasion	Alien plants must be removed as soon as they are identified.	The provided mitigation measure should be implemented throughout the project period.	
-Removal of temporary structures -Removal of plant and equipment	Noise disturbance	Noise generating activities should be restricted during construction, unless otherwise approved by the	The provided mitigation measure should be implemented starting from the site clearing phase up to	Noise would be controlled as per Section 34 of the Air quality Act (Act No 39 of 2004).

-Removal of waste materials		ECO in consultation with potentially affected parties.	the decommissioning phase.	
	Fumes emissions	Avoid burning of the vegetation cover and waste during decommissioning on site.	The provided mitigation measure should be implemented throughout the project period.	
-Reshaping of the open void space -Regrading and re-gravelling	Dust generation	Dust suppression measures should be implemented in areas susceptible to wind erosion.	The provided mitigation measure should be implemented during quarrying and rehabilitation phase.	Dust would be controlled as per section 32 of the Air quality Act (Act No 39 of 2004).
	Noise disturbance	-Noise generating activities should be restricted during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	The provided mitigation measure should be implemented throughout the project period.	Noise would be controlled as per Section 34 of the Air quality Act (Act No 39 of 2004).

	Fumes emissions	Avoid burning of and waste during quarrying on site.	The provided mitigation measure should be implemented throughout the project period.	

4. Financial Provision

4.2. Determination of the amount of Financial Provision.

4.2.1. Describe the closure objectives and the extent to which they have been aligned to the baseline environment described under the Regulation.

- Provide a landscape that is safe for the community.
- Minimise potential environmental impact and liability arising from excavation activities;
- Remove any waste or potentially hazardous materials from site.
- Minimise the potential impacts from decommissioning.
- Develop landforms that return land affected by excavation to a condition that is suitable for a range of sustainable land uses or create a stable, free draining post excavation landform, which is compatible with the surrounding landscape and which is capable of a productive land use that achieves a land capability equal to that of pre-excavation conditions.
- Establish vegetation that is self-sustaining, perpetual and provides a sustainable habitat for local fauna and successive flora species.
- Use all the suggested mitigation measures during excavation, decommissioning and rehabilitation of the borrow pit to ensure that rehabilitation is done in accordance with DMPR standards, and is compliant to Environmental law.
- Develop land uses that benefit the future use of the site for the local community and to develop a landscape that reduces the requirement for long term monitoring and management.

4.2.2. Confirm specifically that the environmental objectives in relation to closure have been consulted with landowner and interested and affected parties.

I hereby confirm that the environmental objectives in relation to closure have been consulted with the landowner, interested and affected parties and the community, no objections were raised. The residents do not have any issue in giving out their land for extraction of gravel material for the upgrading of road D5021 and D5010.

4.2.3. Provide a rehabilitation plan that describes and shows the scale and aerial extent of the main mining activities, including the anticipated mining area at the time of closure.

REHABILITATION METHODOLOGY

To address the potential negative impacts outlined in the Draft Basic Assessment Report regarding the establishment of a borrow pit for the upgrading of road D5021 and D5010 from Apel to Nkotokwane, the specifications and mitigation measures detailed in this Rehabilitation plan must be followed. Additionally, the general recommendations from the Environmental Management Programme (EMPr) should be strictly adhered to. These include the following:

- Clear demarcation of the Borrow Pit footprint, including access roads, parking, and stockpile areas.
- Preservation of as much indigenous vegetation as possible, particularly large indigenous trees located along the perimeter of the proposed Borrow Pit.
- Immediate initiation of an ongoing, active, and intensive alien invasive plant control program for the proposed site and surrounding areas, utilising best-practice methods.
- Progressive rehabilitation of the Borrow Pit perimeter during and after construction, including:
- Appropriate shaping of slopes (with no steeper gradients than 1(V):3(H)), ensuring that new slopes mirror the natural topography of the surrounding area.
- Replacement of topsoil that was removed and stored during site clearance, restoring it to its original depth.
- Ripping and scarifying of all areas (along the contour) following the application of topsoil.
- Establishment of indigenous ground cover using locally sourced grass seed mix.
- Ongoing removal and control of alien invasive plant species.
- Bench formations of rehabilitation should be implemented since the borrow pit is located at the mountain

STOCKPILES

Upon completion of excavation, the following rehabilitation measures shall be implemented:

- All surplus material within and around the excavations, including stockpiled gravel and oversized rocks (excluding topsoil), shall be returned to the pit, and the sides of the pit shall be graded to a 1:3 slope.
- Stockpiled gravel will remain inside the pit for use in future projects.
- The topsoil stockpiled prior to excavation shall be evenly spread over designated areas of the borrow pit, with a minimum thickness of 75 mm.
- Topsoil from adjacent road clearing activities may be used to supplement the topsoil for excavated areas where the existing topsoil is deemed insufficient by the engineer.
- The topsoil must be properly keyed into the re-profiled surfaces to prevent erosion or washaway.
- The topsoiled surface shall be left intentionally rough (i.e., not smoothed) to promote seedling establishment, reduce water runoff, and enhance infiltration

LANDSCAPING

- All borrow pit slopes must be shaped to create a smooth, rounded concave or convex profile.
- Ensure the safety of hard rock slopes, with benching being the preferred method for stabilization.
- The borrow pit floor should be gently undulating, blending seamlessly with the surrounding landscape.
- The rehabilitated area must visually align with the surrounding environment, and any negative visual impacts should be addressed to the satisfaction of the regional manager.
- No water ponding should occur on rehabilitated borrow pits

RE-VEGETATION

Seeding of replaced topsoil should not be necessary unless the topsoil has been stored for more than 12 months. Once replaced, the topsoil should be left to naturally revegetate, unless natural regrowth does not occur or significant erosion of the topsoil is observed.

Prepared surfaces must be regularly irrigated for the first 30 days, with ongoing monitoring for natural regrowth. If natural vegetation does not begin to establish within 30 to 60 days, planting or seeding may be required, and specialist advice should be sought to determine specific needs.

If the initial approach proves inadequate, the affected areas should be seeded with appropriate grass species to provide initial ground cover and stabilize the soil. Seeds can either be collected onsite (using a mower or by hand) or sourced from a local seed supplier.

Special attention must be given to slopes during rehabilitation, as these areas are more susceptible to erosion before vegetation can establish.

No alien species should be planted in the area, and any invasive alien plants that emerge during rehabilitation must be manually removed.

DRAINAGE

- The borrow pit must be designed to ensure effective drainage, preventing water accumulation that could lead to erosion or instability.
- Proper drainage channels should be established to direct surface water away from the pit and surrounding areas, minimizing the risk of flooding or waterlogging.
- Any low-lying areas within the pit should be graded to encourage natural water flow towards designated drainage points, such as culverts or ditches.
- Regular monitoring of the drainage system should be conducted to ensure its functionality, especially during periods of heavy rainfall.
- Erosion control measures, such as silt fences or check dams, should be used in areas with high runoff to prevent sedimentation and water quality degradation.
- If necessary, sediment ponds should be constructed to capture and treat runoff water before it is released into surrounding environments.
- Drainage features should be maintained and adjusted as needed to ensure long-term stability of the borrow pit and surrounding area.

FURTHER STEPS

Unauthorised personnel, construction vehicles and equipment are strictly prohibited from entering the borrow pit area. Only authorised personal and equipment to be used for rehabilitation purposes may be permitted to enter the borrow area.

CLOSURE

After the borrow pit has been utilised, the Environmental Authorisation holder (RAL) will apply for a closure certificate from the Department of Minerals and Petroleum Resources. The certificate will be issued based on whether all conditions outlined in the plan have

been met and the department's satisfaction with the rehabilitation efforts

4.2.4. Explain why it can be confirmed that the rehabilitation plan is compatible with the closure objectives.

The rehabilitation plan for the proposed borrow pit development is compatible with the closure objectives; it aims to restore the site to a stable and environmentally sustainable condition. Following the completion of excavation activities, the site will undergo reshaping and regrading to match the natural topography, minimizing visual impact and preventing erosion. The area will be resurfaced with appropriate materials to promote vegetation growth and stabilize the soil. Additionally, all temporary structures, equipment, and waste materials will be removed to eliminate any environmental hazards. These rehabilitation measures ensure the site is returned to a condition that supports ecological stability and future use, in line with the closure objectives of minimizing long-term environmental impacts and promoting sustainability.

4.2.5. Calculate and state the quantum of the financial provision required to manage and rehabilitate the environment in accordance with the applicable guideline.

According to the Official guideline as contemplated in Regulation 54(1) to the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) the amount calculated for Borrow Pit is R10 000 (according to the 2005 Guideline for the calculation of the quantum in terms of the MPRDA and Regulations).

The calculations have been attached as Appendix F

4.2.6. Confirm that the financial provision will be provided as determined.

Road Agency Limpopo has confirmed that the financial provision will be provided as determined.

5. Mechanisms for monitoring compliance with and performance assessment against the environmental management programme and reporting thereon.

a) Monitoring of Impact Management Actions
b) Monitoring and reporting frequency
c) Responsible persons
d) Time period for implementing impact management actions
e) Mechanism for monitoring compliance

Table 15: Mechanism for monitoring compliance and performance assessment

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Clearance of vegetation and topsoil stripping	Noise disturbance	During this phase the clearing of the vegetation will take place, as well as the stripping of the topsoil and overburden to expose the underlying material to be utilised.	Noise generation activities should be restricted during construction by the contractor, unless otherwise approved by the ECO in	The provided mitigation measure should be implemented throughout the project period. Two weekly environmental monitoring and

		The topsoil will be cleared by means of a bulldozer. The ECO should monitor if dust generation, noise disturbance, fumes emissions and increased traffic emissions is well managed as a way of avoiding environmental impacts. Noise generating equipment should only be operated during normal working hours, vegetation on site should not be burnt and fumes emitted from vehicles and equipment should be monitored.	consultation with potentially affected parties.	reporting should be conducted by the environmental control officer.
	Fumes emissions			The provided mitigation measure should be implemented throughout the project period. Two weekly environmental monitoring and reporting should be conducted
	Increased traffic emissions		Fumes emitted from vehicles and equipment shall be monitored and any corrective action required should be taken timeously by the contractor.	

				by the environmental control officer.
	Habitat destruction		The contractor should make sure that vegetation clearing is only limited to areas affected by the proposed borrow pit excavations.	
	Soil contamination		The contractor must always keep spill cleaning kits on site in case of spills from trucks and excavating machines. Contaminated soil should be excavated then dumped at a registered hazardous landfill site.	
	Visual Impact		-The area will be rehabilitated after excavation is concluded and thus the visual impact will be removed and the area will be restored. -Stockpiles should not exceed 2m in height	

-Extraction of gravels -Stockpiling -Loading and haulage offsite	Dust generation	-Topsoil stockpiles should be positioned separately from the overburden stockpiles and should not be compacted. The stockpiles should be no more than 2 m in height and should be positioned so as to not cause damming of water run-off. -Before any activities commence, the excavation operations area should be demarcated and a standard stock fence should be erected to prevent unlawful entry to the excavated area as well as for safety reasons. -Access to the proposed excavation area must be controlled and the gate must	Dust suppression measures should be implemented in areas susceptible to wind erosion.	

		remain locked. -To ensure road safety 'heavy vehicle' signs must be erected at the access points to the excavation areas as per the provisions of the Road Traffic Act. Traffic safety measures should be implemented at the exit points of the Borrow Pit.		
	Noise disturbance		Noise generating activities should be restricted during construction, unless otherwise approved by the ECO in consultation with potentially affected parties	
	Fumes emissions		-Avoid burning of the vegetation cover and waste during quarrying on site.	

	Increasing traffic volumes		- Transportation of equipment, waste and other necessary project components shall be in accordance with all relevant legislation. Permits for abnormal loads shall be applied for from the relevant authority, where required. - Signage shall be established at appropriate points warning of turning traffic and on - going works (all signage should be in accordance with prescribed standards). - Where possible times for arrival and departure of heavy vehicles shall be co - ordinated as far as possible in order to minimise congestion.	

			- All vehicles should adhere to the specified speed limits and all drivers shall be in possession of an appropriate valid driver's licence. - Make use of existing access roads where possible, where new access roads are required, the footprint of the impact should be kept to a minimal level through for example, use of two-track dirt roads. -Access routes (where necessary) should be located on the perimeter of disturbed areas such as cultivated/fallow lands so as not to fragment intact vegetated areas	

	Visual impact		-The area will be rehabilitated after excavation is concluded and thus the visual impact will be removed and the area will be restored. -Stockpiles should not exceed 2m in height.	Visual impact should be temporary.
	Soil contamination		The contractor must always keep spill cleaning kits on site in case of spills. contaminated soil should be excavated then dumped at a registered hazardous landfill site.	
	Surface and ground water contamination		-Monitoring for surface and ground water contamination should be undertaken.	

			-Streams, rivers, pans, wetlands and all other water bodies should be adequately protected from pollution.	
	Waste generation		-Recyclable waste shall be disposed of into separate skips/bins and removed off-site for recycling. -All solid waste shall be disposed of offsite at an approved landfill Site.	
	Alien plants invasion		Alien plants must be removed as soon as they are identified.	
-Removal of temporary structures -Removal of plant and equipment	Noise disturbance	During this phase all equipment and temporarily erected structures should be removed from the site. Suitable earthmoving machinery should be utilised to profile the sides of the borrow pit as well as to	Noise generating activities should be restricted during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	The provided mitigation measure should be implemented throughout the project period. Two weekly environmental monitoring and reporting should be conducted

-Removal of waste materials		slope the floor of the borrow pit so that the borrow pit area should be free draining.		by the environmental control officer.
	Fumes emissions		Avoid burning of the vegetation cover and waste during decommissioning on site.	The provided mitigation measure should be implemented throughout the project period. Two weekly environmental monitoring and reporting should be conducted by the environmental control officer
-Reshaping of the open void space -Regrading and re-gravelling	Dust generation	-All remaining dumps, piles and slopes should be sufficiently shaped so as to blend in with the surrounding landscape (as feasibly as possible). Spoil material should	Dust suppression measures should be implemented in areas susceptible to wind erosion.	The provided mitigation measure should be implemented during quarrying and rehabilitation phase. Two weekly

		be used to profile the borrow pit areas and assist in the rehabilitation process. All materials from the remaining dumps should be used for rehabilitation in order to avoid dumps and piles after closure.		environmental monitoring and reporting should be conducted by the environmental control officer.
	Noise disturbance		Noise generating activities should be restricted during construction, unless otherwise approved by the ECO in consultation with potentially affected parties.	The provided mitigation measure should be implemented throughout the project period. Two weekly environmental monitoring and reporting should be conducted by the environmental control officer.
	Fumes	-Once the landscaping process is completed, topsoil should be returned (where available) and spread over the mined areas and re-vegetated. All compacted areas and temporary access roads should be	Avoid burning of waste during quarrying on site.	The provided mitigation measure should be implemented throughout the project period. Two weekly environmental monitoring and reporting should be conducted

		ripped/scarified to facilitate re-vegetation. All the re-vegetated areas should be maintained and monitored up until such time as all of the disturbed areas initiate succession and create a sustainable cover.		by the environmental control officer.

6. Indicate the frequency of the submission of the performance assessment/ environmental audit report.

The independent Environmental Control Officer shall audit the site for environmental compliance once per month and the holder of the authorisation must submit such audit report to the Department within 30 days of completion of the construction phase (i.e. within 30 days of site handover) and within 30 days of completion of rehabilitation activities.

7. Environmental Awareness Plan

7.2. Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work.

Regular monitoring of the work site by the Environmental Control Officer would be undertaken so that all environmental problems encountered are solved punctually and amicably. When the Environmental Control Officer is not available, the Contract Manager/Site Supervisor shall keep abreast of all works to ensure no environmental problems arise.

Two-weekly reports shall be forwarded to the appointed Distribution Engineering Environmental Advisor with all information relating to environmental matters. The following Key Performance Indicators must be reported on a two-weekly basis:

- Complaints received from Landowners and actions taken.
- Environmental incidents, such as oil spills, concrete spills, etc. and actions taken (litigation excluded).
- Incidents possibly leading to litigation and legal contraventions.
- Environmental damage that needs rehabilitation measures to be taken.

The following documentation shall be kept on site:

(a) Access negotiations and physical access plan.

(b) Complaints register.

(C) Site daily diary.

(d) Records of all remediation / rehabilitation activities.

(e) Copies of two-weekly reports to the Engineering Environmental Advisor.

(f) Copy of the Environmental Management Programme (EMPr) file.

7.2. Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment**.**

- Dust suppression measures by using water would be implemented in areas susceptible to wind erosion.
- Noise generating activities would be restricted to between 07h00 and 17h00 Monday to Friday during excavation, unless otherwise approved by the ECO in consultation with the potentially affected parties.
- The contractor would avoid burning of the vegetation cover and waste on site.
- Vegetation clearing would only be limited to areas affected by the proposed borrow pit excavations.
- The contractor would make use of the existing access roads where possible and where new access roads are required; they should be located on the perimeter of disturbed areas.
- During the transportation of necessary project components, all vehicles would adhere to the specified speed limits.

8. Specific information required by the Competent Authority

(Among others, confirm that the financial provision will be reviewed annually).

I hereby confirm that the financial provision will be reviewed annually.

9. UNDERTAKING

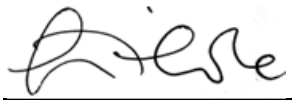
The EAP herewith confirms

f) the correctness of the information provided in the reports ☒

g) the inclusion of comments and inputs from stakeholders and I&APs; ☒

h) the inclusion of inputs and recommendations from the specialist reports where relevant and ☒

i) that the information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected. parties are correctly reflected herein. ☒



Signature of the environmental assessment practitioner:

QEMS

Name of company:

November 2026

Date:

-END-