



GA Environment

QUARRY 6A- DRAFT SCOPING REPORT

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED MINING OF QUARRY 6A
ASSOCIATED WITH THE UPGRADE OF NATIONAL ROAD R573 (MOLOTO ROAD), GAUTENG
PROVINCE

DMRE REFERENCE NUMBER: TO BE ASSIGNED

NOVEMBER 2020

DRAFT SCOPING REPORT
for
THE PROPOSED MINING OF QUARRY 6A ASSOCIATED WITH THE UPGRADE OF NATIONAL ROAD R573 (MOLOTO ROAD), GAUTENG PROVINCE

Prepared for:

South African National Roads Agency SOC Ltd
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Pretoria

Submitted to:

Department of Mineral Resources and Energy
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Braamfontein

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18 November 2020

PROJECT INFORMATION

Title: Environmental Impact Assessment for the Proposed Mining of Quarry 6A associated with the upgrade of National road R573 (Moloto Road), Gauteng province

Competent Authority: Department of Mineral Resources and Energy

Reference No.: To be assigned

Applicant: South African National Roads Agency SOC Ltd

Environmental Assessment Practitioner: GA Environment (Pty) Ltd.

Compiled by: Kirthi Peramaul

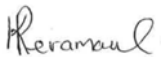


Reviewer: Dirk Prinsloo

Date: 18 November 2020

DOCUMENT HISTORY AND QUALITY CONTROL

Revision	Revision Date	Revision Comments	Originator	Reviewed By
1	9 th November 2020	Draft report for Internal Review	Kirithi Peramaul	Dirk Prinsloo

SIGNING OF THE ORIGINAL DOCUMENT

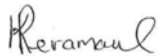
Original	Prepared by	Reviewed by	Approved by
Date: 18th November 2020	Name: Kirithi Peramaul	Name: Dirk Prinsloo	Name: Nkhensani Khandlhela
Version 1	Signature: 	Signature: 	Signature: 

DISTRIBUTION LIST

Name	Organisation	Designation
Martin Boonstra	KBK Engineers	Technical Director
Riaan Oerlemans	SANRAL	Project Manager: Design & Construction

AFFIRMATION OF ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP)

I **Kirithi Peramaul**, an EAP employed by **GA Environment (Pty) Ltd** declare that the information provided in this report is correct and relevant to the activity/ project, that comments from Interested and Affected Parties have been incorporated into this report, that the report has included inputs from Specialists and that all relevant project information was made available to Interested and Affected Parties.

17th November 2020**SIGNATURE OF EAP****DATE**

LIST OF ABBREVIATIONS / ACRONYMS

CBA	Critical Biodiversity Area
EA	Environmental Authorisation
EIA	Environmental Impact Assessment
EAPASA	Environmental Assessment Practitioners Association of South Africa
ESA	Ecological Support Area
CA	Competent Authority
COT	City of Tshwane
DEFF	Department of Environment, Forestry and Fisheries;
DSR	Draft Scoping Report
DWS	Department of Water and Sanitation
GDARD	Gauteng Department of Agriculture and Rural Development
EMPR	Environmental Management Programme
FSR	Final Scoping Report
I&APs	Interested and Affected Parties
NFEPA	National Freshwater Ecosystem Protected Area
NEM:BA	National Environmental Management: Biodiversity Act (Act 10 of 2004)
NEMA	National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998)
PPP	Public Participation Process
SACNASP	South African Council for Natural Scientific Professions
SANBI	South African National Biodiversity Institute
SDF	Spatial Development Framework

GLOSSARY OF TERMS

This section provides a catalogue of terms and definitions, which may be used in this report.

Term	Definition
Alien Invasive Species	Species of plants, animals or other organisms that are not indigenous to a region and which easily spread and destroy the indigenous plant species, taking over an area and causing biological and socio-economic harm.
Borrow Pit	An area where material usually soil, gravel, sand, or weathered rock, has been dug for use as a natural granular material for use in road construction.
Scoping and EIA Process	An environmental assessment process that is undertaken in line with Listing Notices 1 and 2 the NEMA EIA Regulations with the aim of obtaining Environmental Authorisation.
Competent Authority	An organ of state charged by the National Environmental Management Act (NEMA) with evaluating the environmental impact of an activity and, where appropriate, with granting or refusing an environmental authorisation in respect of that activity.
Conservation Plan Areas (C-Plan Areas)-	<p>A tool developed by the Gauteng Department of Agriculture and Rural Development (GDARD) to identify sensitive areas. The main purposes of this tool is to:</p> <ul style="list-style-type: none"> • serve as the primary decision support tool for the biodiversity component of the Environmental Impact Assessment (EIA) process; • inform protected area expansion and biodiversity stewardship programmes in the province; and serve as a basis for development of Bioregional Plans in municipalities within the province. <p>Some of the aspects that inform the identification of C-Plan Areas include Critical Biodiversity Areas (CBAs), Ecological Support Areas (ESA's), Watercourses, Ridges, Protected Areas, etc</p>
Critical Biodiversity Area	Areas that are deemed important to conserve ecosystems and species. For this reason, these areas require protection.
Cultural significance	means aesthetic, architectural, historical, scientific, social, spiritual, linguistic, or technological value or significance.
Development	means the building, erection, construction or establishment of a facility, structure or infrastructure, including associated earthworks or borrow pits, that is necessary for the undertaking of a listed or specified activity, but excludes any modification, alteration or expansion of such a facility, structure or infrastructure, including associated earthworks or borrow pits, and excluding the redevelopment of the same facility in the same location, with the same capacity and footprint.
Ecological Support Area	Areas that support the ecological functioning of protected areas or CBAs or provide important ecological infrastructure.
Environmental Assessment Practitioner	individual responsible for the planning, management, coordination or review of environmental impact assessments, strategic environmental assessments, environmental management programmes or any other appropriate environmental instruments introduced through regulations.
Environmental Authorisation	This is a decision by a Competent Authority to authorise a listed activity in terms of the National Environmental Management Act (NEMA). The authorisation means that a project, either in totality or partially, can commence subject to certain conditions. The Competent Authority has a right to refuse to grant authorisation for a project in totality or partially.

Term	Definition
Environmental Impact Assessment Process:	An environmental assessment process that is undertaken in line with Listing Notice 2 the NEMA EIA Regulations with the aim of obtaining Environmental Authorisation.
Environmental Management Programme:	A programme with set objectives and timeframes that seek to achieve a required end state and describes how activities that have or could have an adverse impact on the environment will be mitigated, controlled and monitored.
Flora	plant life that occurs in a specific geographical region and/habitat.
Fauna	animal life that occurs in a specific geographical region and/habitat.
Heritage Resource	means any place or object of cultural significance.
Indigenous Vegetation	plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten years.
Interested and Affected Party	in relation to an application for Environmental Authorisation, this refers to an interested and affected party whose name is recorded in the register opened for that application in terms of regulation 42 of the NEMA EIA Regulations. This party will ideally be interested in the development but also affected by the proposed application and have a certain interest in the application.
Quarry	An open excavation from where rock is obtained, usually by blasting, in order to produce rock aggregate for use in road construction.
Regulated area of a watercourse:	<ul style="list-style-type: none"> • The outer edge of the 1:100-year flood line and /or delineated riparian habitat whichever is the greatest measured from the middle of a river, spring, natural channel, lake or dam; • In the absence of a determined 1:100-year flood line or riparian area, the area within 100m from the edge of a watercourse where the edge of the watercourse is the first identifiable annual bank fill flood bench (subject to compliance to section 144 of the Act); • 500m radius from the delineated boundary of any wetland or pan.
Threatened or Protected Species	These refers to either plants or animals that are at a threat of Extinction or are protected due to their high conservation value or national importance.
Watercourse	(a) a river or spring; (b) a natural channel in which water flows regularly or intermittently; (c) a wetland, lake or dam into which, or from which, water flows; and (d) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse, and a reference to a watercourse includes, where relevant, its bed and banks;
Wetland	land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

SCOPING REPORT

FOR LISTED ACTIVITIES ASSOCIATED WITH MINING RIGHT AND/OR BULK SAMPLING ACTIVITIES INCLUDING TRENCHING IN CASES OF ALLUVIAL DIAMOND PROSPECTING.

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).

NAME OF APPLICANT: South African National Road Agency Soc Ltd (SANRAL)

TEL NO: (012) 426 6234

FAX NO: (012) 348 1512

POSTAL ADDRESS: Private Bag X 17, Lynnwood Ridge, 0040

PHYSICAL ADDRESS: 38 Ida Street, Menlo Park, Pretoria, 0081

FILE REFERENCE NUMBER SAMRAD: To be assigned

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 permit are submitted in the exact format of, and provide all the information required in terms of, this template. Furthermore, please be advised that failure to submit the information required in the format provided in this template will be regarded as a failure to meet the requirements of the Regulation and will lead to the Environmental Authorisation being refused.

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

OBJECTIVE OF THE SCOPING PROCESS

- 1) The objective of the scoping process is to, through a consultative process—
 - (a) Identify the relevant policies and legislation relevant to the activity;
 - (b) Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
 - (c) Identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process;
 - (d) Identify and confirm the preferred site, through a detailed site selection process, which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;
 - (e) Identify the key issues to be addressed in the assessment phase;
 - (f) Agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and
 - (g) Identify suitable measures to avoid, manage, or mitigate identified impacts and to determine the extent of the residual risks that need to be managed and monitored.
-

SCOPING REPORT

2) Contact Person and correspondence address

a) Details of:

i) **The EAP who prepared the report**

Name of the Practitioner: Kirthi Peramaul

Tel No.: 011 312 2537

Fax No. : 011 805 1950

e-mail address: environment@gaenvironment.com/ kirthip@gaenvironment.com

ii) **Expertise of the EAP.**

(1) **The qualifications of the EAP**

(With evidence attached as **Appendix A**).

Mrs Peramaul holds a BSc (Hons) degree in Environmental Monitoring and Modelling. She is currently registered with the South African Council of Natural Scientific Professions (SACNASP) as a Professional Natural Scientist (Registration No 400012/18: Environmental Science) and as a Registered Environmental Assessment Practitioner with the Environmental Assessment Practitioners Association of South Africa (EAPASA) (Registration No 2020/1537).

(2) **Summary of the EAP's past experience.**

(Attach the EAP's curriculum vitae as **Appendix A**)

Mrs Peramaul is an Environmental Assessment Practitioner with twelve (12) years of professional experience in the water and environmental sector. Kirthi specialises in environmental authorisations, environmental compliance monitoring, environmental management plans, water use authorisation, stakeholder engagement, risk assessments and blue and green drop auditing. She has been involved in projects related to Waste Management, Linear Infrastructure, as well as Mixed-Use developments. Her contribution as an auditor in South Africa's incentive-based regulation programmes (blue and green drop) allowed her to be part of water safety planning (water treatment) and the wastewater risk abatement planning processes of various municipalities within South Africa.

b) **Description of the property**

Table 1: Description of the Property

Farm Name:	Remainder of Farm Doornpoort 295JR
Application area (Ha)	603 hectares
Magisterial district:	City of Tshwane Metropolitan Municipality
Distance and direction from nearest town	Approximately 22km north east from the Pretoria City Centre
21 digit Surveyor General Code for each farm portion	T0JR00000000029500000

c) Locality map

(Show nearest town, scale not smaller than 1:250000 attached as **Appendix B**).

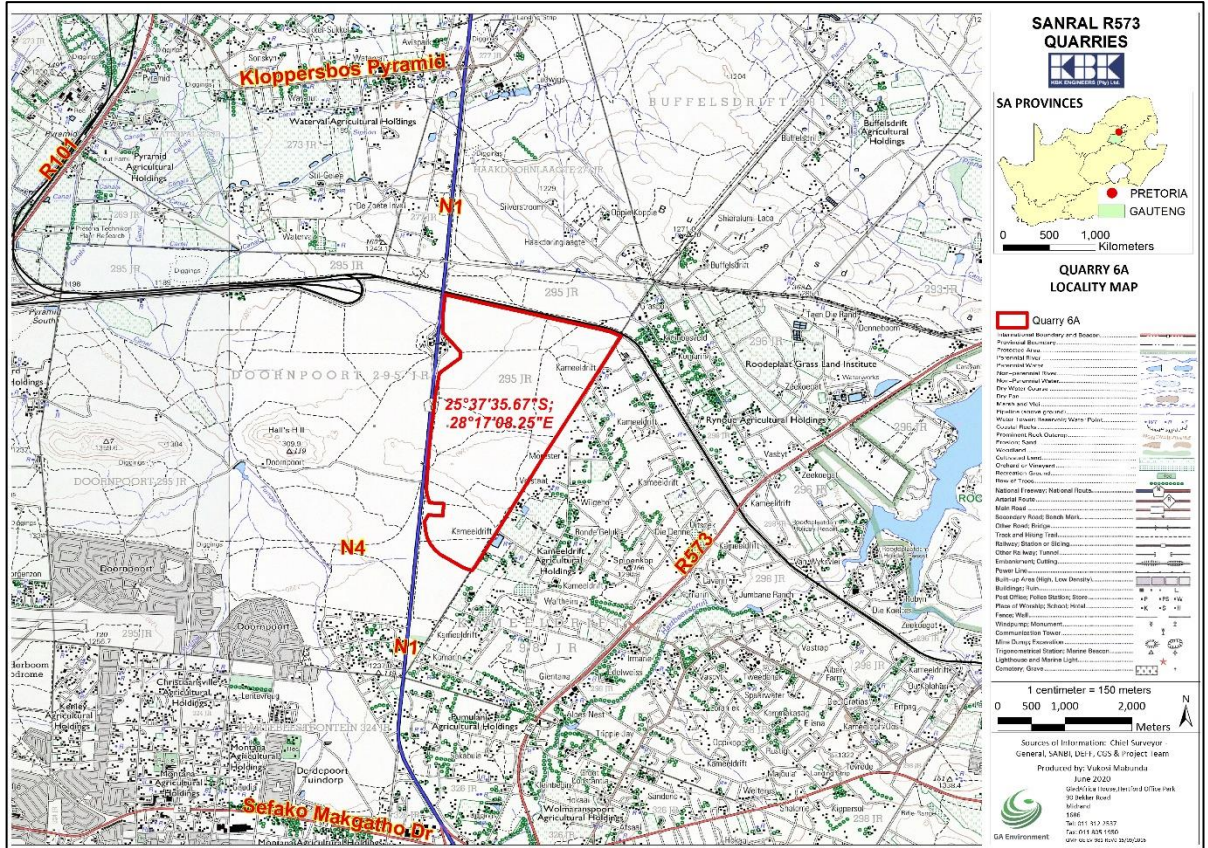


Figure 1: Project Locality Map

d) Description of the scope of the proposed overall activity.

i) Listed and specified activities

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 and attach as **Appendix C**

Table 2: Listed Activities in Terms of the NEMA EIA Regulations (2014) as amended

NAME OF ACTIVITY (All activities including activities 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.)	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)/NOT LISTED
Mining of minerals for the proposed R573 Moloto Construction. Site preparation including clearing and grubbing	603 ha	Activity 15 The clearance of an area of 20 hectares or more of indigenous vegetation X	G.N.R 984
	603 ha	Activity 12 The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. X	G.N.R 985

ii) Description of the activities to be undertaken

(Describe Methodology or technology to be employed, and for a linear activity, a description of the route of the activity)

It is noted that in terms of Section 106 of the MPRDA, SANRAL is exempted from applying for a Mining Right to develop a quarry for the purposes of sourcing road building material. However, SANRAL is still required to obtain Environmental Authorisation in terms of NEMA. This application is for the clearance on indigenous vegetation in order to develop the proposed Quarry.

Project Background

It is the intention of the South African National Roads Agency Soc Ltd to establish various Quarries to provide the necessary construction materials for the proposed upgrading of national road R573-1 (K139) from Stormvoël Road in Tshwane (km 0,00) to the Gauteng / Mpumalanga Provincial Border (± 48.00 km). The upgrading of the R573 Moloto Road includes the following projects:

- Upgrading of the entire length of the R573/1 Moloto Road to a 4-lane barrier-divided dual carriageway from Stormvoël Road to the Gauteng border;
- Construction of the southern link between Stormvoël Road and Bavianspoort Road;
- Construction of the new PWV2 link between the N1/N4 Interchange and the R573/1 Moloto Road;
- Construction of the Moloto Road / Sefako Makgatho Road Interchange;
- Construction of the Big Tree Mall Interchange;
- Construction of the De Wagendrift bypass along the R573/1; and

- Various upgrades to local roads and upgrading of intersections to small interchanges (Including Moepel Overpass; Baviaanspoort Road East extension; Dewar, Sakabuka and Maroela interchanges and road developments).

The SANRAL appointed KBK Engineers to provide engineering services for the proposed development. KBK Engineers appointed GA Environment (Pty) Ltd on behalf of SANRAL as independent Environmental Consultants to undertake the required Environmental approvals for the mining of four Quarries for the purpose of the proposed development. All four Quarries are situated along the R573 Moloto Road and are as follows:

- **Quarry 6A;**
- Quarry 6B;
- Quarry 4 and
- Quarry 5.

This Scoping report serves to present the identified environmental impacts for **Quarry 6A** which is hereafter referred to as the study area. Separate Environmental Applications will be compiled for each of the quarries identified above and will be submitted to the Department of Mineral Resources and Energy (DMRE).

Project Location

The proposed Quarry 6A is located approximately 2.5km to the northwest of the R573 (Moloto Road) roadway, immediately to the northeast of the N1/N4 highway intersection and bordering the N1 highway to the east (**Figure 1**). The site centre geographic coordinates are 25°37'35.67" S, 28°17'08.25" E. The project area is located on the Remainder of the farm Doornpoort 295JR within the City of Tshwane Metropolitan Municipality, Gauteng Province. The site can be accessed from the railway service road north of the property and via Maroele Road through privately owned land (**Figure 2**).



Figure 2: Access to the Site gained from Maroela Road

Communities in the vicinity of the project area include Doornpoort, Rynoue and Mondustria and Agricultural holdings. The majority of the study area comprises of mostly undeveloped land interspersed with gravel roads and is located within a rural setting characterised by agricultural holdings.

Project Description

The proposed study area where Quarry 6A is located, is considered as a potential source of rock material that can be crushed to produce G1 aggregate and crushed G6 gravel by-products. Approximately 66 000m³ of overburden is to be removed from the Quarry area and stockpiled on site. The Quarry should yield approximately 584 000m³ of unprocessed bedrock material suitable for the production of crushed G1 aggregate and an estimated volume of 114 000m³ of material can be crushed and processed as possible G6 material. The rock material will only be stored temporarily in stockpiles on site before being crushed and taken off site.

It is important to note that the proposed Quarry 6A will include various mining areas that are referred to as Borrow Pits 1, 2, 3, & 4 and Quarry 1. Such referencing has been provided by the Design Engineer for ease of identification of the available material on site. The proposed development of Quarry 6A includes the following proposed infrastructure areas as presented in **Figure 3**:

- **Quarry 6A Borrow Pit 1 (Q6ABP1)** includes a crushing area, a spoil area, a generator and fuel storage area and temporary toilets – 18.74ha;
- **Quarry 6A Stockpile 1 (Q6AS1)**, comprises of a topsoil/ overburden stockpile area – 19.52ha;
- **Quarry 6A Borrow Pit 2 (Q6ABP2)** includes a crushing area, a spoil area, a generator and fuel storage area and temporary toilets – 19.81ha;
- **Quarry 6A Stockpile 2 (Q6AS2)**, comprises of a topsoil/ overburden stockpile area – 17.98ha;
- **Quarry 6A Quarry 1 (Q6AQ1)**, includes a crushing area, a spoil area, a generator and fuel storage area and temporary toilets – 19.46ha;
- **Quarry 6A Quarry Stockpile 1 (Q6AQS1)** comprising a topsoil/ overburden stockpile area – 16.83ha;
- **Quarry 6A Borrow Pit 3 (Q6ABP3)** includes a crushing area, a spoil area, a generator and fuel storage area and temporary toilets – 18.48ha;
- **Quarry 6A Stockpile 3 (Q6AS3)**, comprises of a topsoil/ overburden stockpile area – 15.71ha;
- **Quarry 6A Borrow Pit 4 (Q6ABP4)** includes a crushing area, a spoil area, a generator and fuel storage area and temporary toilets – 19.02ha; and
- **Quarry 6A Stockpile 4 (Q6AS4)**, comprises of a topsoil/ overburden stockpile area – 8.33ha.

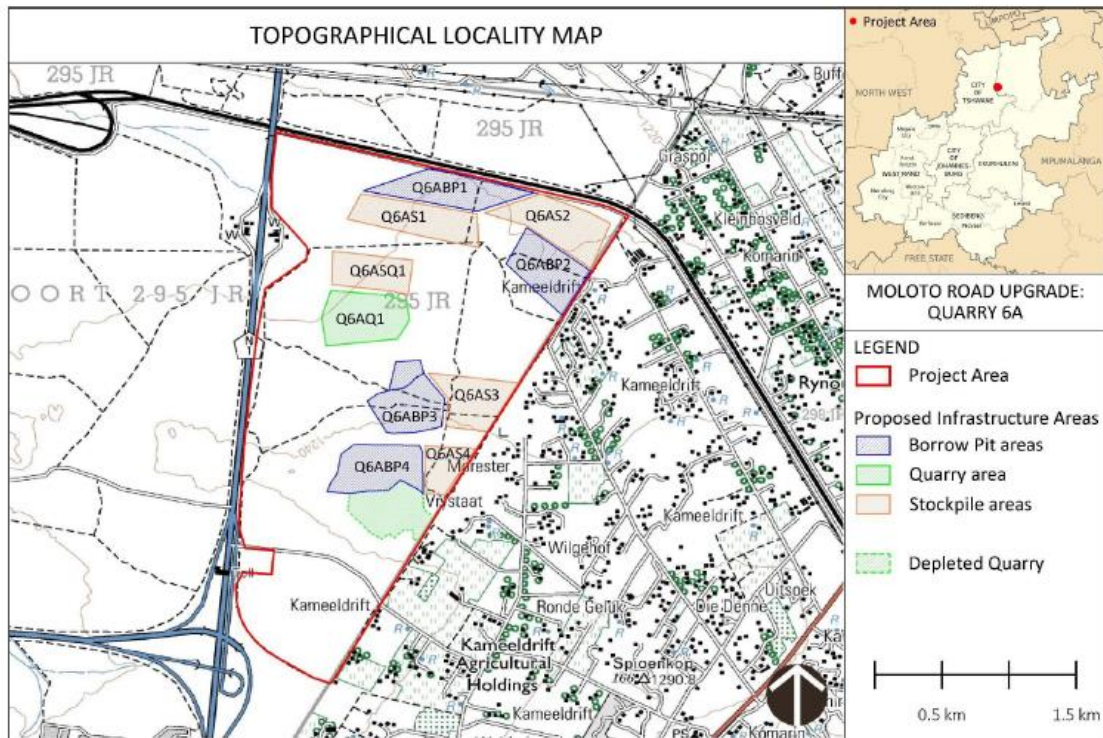


Figure 3: Proposed infrastructure Areas on the Proposed Study Area

The material that will be excavated from the Quarries and Borrow Pits would be processed at the crushing plant which will be situated within the study area. Once processed the material will be stockpiled and transported to the construction sites by haul vehicles. The potential environmental impacts associated with these quarries and borrow pits, crushing areas and spoil areas, generators, fuel storage area and temporary toilets will be assessed in this Environmental study.

Access Roads

Various haulage route options will be considered for the proposed Quarry. Haulage routes will include, the railway maintenance track towards the north of the site, Tamboti Road, Maroela Road, along the proposed PWV2 alignment (adjacent to the Kameeldrift police station) as well as additional internal road links. Public roads that will be used for the haulage of material will be maintained as needed during material production. No new access roads will be constructed for the haulage of material to the respective sites. Potential environmental impacts associated with the haulage and access roads are also considered in this report.

Waste Management

All waste generated during the construction and operational phase of the quarry will be temporarily stored at suitable locations (e.g.in receptables/skips) and will be removed at regular intervals and disposed of at appropriately licensed municipal waste site or acceptable disposal facility. The anticipated waste volumes or quantities do not trigger the need to apply for a Waste Licence.

Site Demarcation

The study area will be temporarily fenced off for the entire duration of the project until the site has been completely rehabilitated.

Water and Sanitation

Sanitation services will be required for onsite personnel during the construction and operational phase of the project. Chemical toilets will be used and serviced regularly by a registered Waste Contractor. Water may be required for dust suppression especially during crushing operations. The appointed

Contractor responsible for the operation of the Quarry 6A will be responsible for ensuring that the relevant permits/authorisations are in place based on their assessment of suitable water sources.

e) Policy and Legislative Context

Table 3: Policy and Legislative 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
<p><u>Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996)</u></p> <p>The environmental right is mentioned in Section 24 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996). This states the following: <i>"...everyone has the right to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation, and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development"</i>.</p> <p>The State must therefore respect, protect, promote, and fulfil the social, economic, and environmental rights of everyone and strive to meet the basic needs of previously disadvantaged communities. The Constitution therefore recognises that the environment is a functional area of concurrent national and provincial legislative competence, and all spheres of government and all organs of state must cooperate with, consult and support one another if the State is to fulfil its constitutional mandate.</p>	<p>The issuing of an environmental authorisation or other permits or licence for any aspect of the proposed Quarry 6A will ensure that the environmental right enshrined in the Constitution contributes to the protection of the biophysical and socio-economic environment.</p>
<p><u>National Environmental Management Act, 1998 (Act No. 107 of 1998)</u></p> <p>In order to bring section 24 of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996) into realisation, the National Environmental Management Act, 1998 (NEMA) (Act No. 107 of 1998) was promulgated to serve to <i>'provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote cooperative governance and procedures for co-ordinating environmental functions exercised by organs of state; to provide for certain aspects of the administration and enforcement of other environmental management laws; and to provide for matters connected therewith'</i>.</p> <p>Chapter 5 of NEMA outlines the general objectives and implementation of Integrated Environmental Management (IEM), which provides a framework for the integration of environmental issues into the planning,</p>	<p>The proposed project will trigger listing activities from Listing Notice 2 and Listing Notice 3 of the EIA Regulations as provided in Table 2, Section d (i).</p>

<p>design, decision-making and implementation of plans and development proposals. Section 24 provides a framework for granting of Environmental Authorisations. In order to give effect to the general objectives of IEM, the potential impacts on the environment of listed activities must be considered, investigated, assessed, and reported on to the competent authority.</p> <p>Environmental Impact Assessment (EIA) Regulations were promulgated in December 2014 (as amended) in terms of Section 24(5) and Section 44 of the National Environmental Management Act (NEMA), Act 107 of 1998. In terms of the 2014, EIA Regulations the triggered listed activities fall under Listing Notices 1, 2 and 3 which are further discussed as follows:</p> <ul style="list-style-type: none"> • <i>Listing Notice 1 (Regulation 983) define activities which will trigger the need for a Basic Assessment process;</i> • <i>Listing Notice 2 (Regulation 984) define activities which trigger a Scoping and Environmental Impact Assessment (EIA) process.</i> • <i>Listing Notice 3 (Regulations 985) refers to certain listed activities located in specifically defined geographical areas for which a Basic Assessment process would be required.</i> 	
<p><u>Department of Environmental Affairs Screening Tool</u></p> <p>On 5 July 2019, The Department of Environment, Forestry and Fisheries gave Notice of the Requirement to submit a Report generated by the National Web-based Environmental Screening Tool in terms of section 24(5)(h) of the NEMA, 1998 (Act No 107 of 1998) and regulation 16(1)(b)(v) of the EIA regulations, 2014, as amended. The submission of this report is compulsory when submitting an application for environmental authorisation in terms of regulation 19 and regulation 21 of the Environmental Impact Assessment Regulations, 2014 effective from 4 October 2019.</p>	<p>A copy of the DEFF Screening report is provided in Appendix F of this report.</p>
<p><u>National Environmental Management: Waste Act 59 of 2008 (Act No. 59 of 2008)</u></p> <p>This Act aims to regulate waste management to protect human health and the environment by putting measures in place to prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources. The Applicant shall ensure compliance with this Act by implementing practical measures to avoid or reduce unnecessary generation of waste and where the waste is generated measures such as re-using, recycling and recovery of waste shall be encouraged.</p>	<p>A waste licence is not required for the proposed Quarry 6A. The general principles of responsible waste management will be incorporated in the EMPr during the EIA phase to manage waste related activities during construction and operational phase of the project.</p>
<p><u>National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)</u></p> <p>The purpose of this Act is to provide for the:</p> <ul style="list-style-type: none"> • Management and conservation of South Africa's biodiversity within the framework of the National Environmental Management Act, 1998; 	<p>According to the Gauteng Department of Agriculture and Rural Development (GDARD) Conservation Plan data, the central portion of the study area is associated with a Critical Biodiversity Area (CBA), and a portion of the</p>

<ul style="list-style-type: none"> • The protection of species and ecosystems that warrant national protection; • The sustainable use of indigenous biological resources; • The fair and equitable sharing of benefits arising from bio-prospecting involving indigenous biological resources; • The establishment and functions of a South African National Biodiversity Institute <p>Chapter 7 of the NEMBA regulations govern the 'PERMIT SYSTEM FOR LISTED THREATENED OR PROTECTED SPECIES'. In order to remove or relocate any Threatened species or Protected species identified on the site, the relevant permits must be applied for.</p>	<p>study area along its northern boundary is indicated to fall within an ESA. The proposed project will involve the removal of indigenous vegetation. A Terrestrial Ecological Assessment will be undertaken during the EIA phase of the project. The findings of the study as well as the specialist recommendations will be provided in the EIA report.</p>
<p><u>National Forests Act, 1998 (Act No 84 of 1998)</u></p> <p>The purpose of the Act is to promote the sustainable management and development of forests and to provide protection for certain forests and trees in terms of:</p> <ul style="list-style-type: none"> • Section 15 (1) of the National Forest Act (Act 84 of 1998), any person wishing to cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree or any forest product derived from a protected tree must apply for a license from the Minister or any delegated institution or authority. • Government Notice 38215, Notice of the List of Protected Tree Species under the National Forests Act, 1998 (Act No 84 of 1998) was gazetted in November 2014. 	<p>The proposed project will require the removal of trees. A Terrestrial Ecological Assessment will be required to determine if any protected tree species will potentially be affected by the proposed Quarry 6A. Should the proposed project require the removal of any protected tree species, then the application for a tree removal permit will have to be lodged with DEFF.</p>
<p><u>National Water Act, 1998 (Act No. 36 of 1998)</u></p> <p>The National Water Act, 1998 (Act No. 36 of 1998) aims to provide for management of the national water resources in order to achieve sustainable use of water for the benefit of all water users. This act requires that the quality of water resources is protected as well as the integrated management of water resources with the delegation of powers to institutions at the regional or catchment level. The purpose of the Act is to ensure that the nation's water resources are protected, used, developed, conserved, and managed in ways which take into account:</p> <ul style="list-style-type: none"> • Meeting basic human needs of present and future generations; • Promoting equitable access to water; • Redressing the results of past racial discrimination; • Promoting the efficient, sustainable and beneficial use of water in the public interest; facilitation social and economic development; • Providing for the growing demand for water use; • Protecting aquatic and associated ecosystems and their biological diversity; • Reducing and preventing pollution and degradation of water resources; • Meeting international obligations; 	<p>According to the South African National Biodiversity Institute (SANBI), data set National Freshwater Ecosystem Priority Area (NFEPA) wetlands were historically present towards the south east of the site. Ground truthing of the site however did not reveal any wetlands identified on site. A Wetland and Aquatic assessment will be undertaken during the EIA phase of the project to identify any potential sensitive features within the study area. Should the proposed Quarry be situated within a Department of Water and Sanitation's Regulated area then a Water Use Authorisation will be required for the proposed Quarry.</p>

<ul style="list-style-type: none"> • Promoting dam safety; and • Managing floods and drought. <p>In pursuit of these objectives, Chapter 4 of the act regulates water use, while Section 21 lists eleven water use types that are regulated [Section 21 (a) – (k)]. Watercourses and wetlands are protected in terms of this section, as both are regarded as water resources. The list of the regulated areas inclusive of the 500m distance, but specific to the delineated boundary are as follows:</p> <ul style="list-style-type: none"> • <i>The outer edge of the 1:100 year flood line and /or delineated riparian habitat whichever is the greatest measured from the middle of a river, spring, natural channel, lake or dam;</i> • <i>In the absence of a determined 1:100 year flood line or riparian area, the area within 100m from the edge of a watercourse where the edge of the watercourse is the first identifiable annual bank fill flood bench (subject to compliance to section 144 of the Act);</i> • <i>500m radius from the delineated boundary of any wetland or pan.</i> 	
<p><u>National Environmental Management Air Quality Act (Act 39 of 2004)</u></p> <p>The purpose of the act is to reform the law regulating air quality in order to protect the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development while promoting justifiable economic and social development; to provide for national norms and standards regulating air quality monitoring, management and control by all spheres of government; for specific air quality measures; and for matters incidental thereto. Section 32 of the Act relates to the control of dust and Section 34 of the Act relates to the control of Noise.</p>	<p>An Air Emission Licence is not required as the anticipated dust that will be released will be managed through the National Dust Control Regulations (2013). The principles provided in Section 32 and 34 of the Act will be included into the EMPr during the EIA phase, in order to manage and minimise dust and noise related activities generated during the construction and operational phase of the project.</p>
<p><u>National Heritage Resources Act, 1999 (Act No. 25 of 1999)</u></p> <p>The objective of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) is to introduce an integrated system for the management of national heritage resources. The identification, evaluation and assessment of any cultural heritage site, artefact or find in South Africa is required by this Act. Section 38 of this Act pertains to Heritage resources management and Section 38(1) states the following <i>Subject to the provisions of subsections (7), (8) and (9), any person who intends to undertake a development categorised as—</i></p> <ul style="list-style-type: none"> <i>(a) the construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;</i> <i>(b) the construction of a bridge or similar structure exceeding 50 m in length;</i> <i>(c) any development or other activity which will change the character of a site—</i> <ul style="list-style-type: none"> <i>(i) exceeding 5 000 m² in extent; or</i> <i>(ii) involving three or more existing erven or subdivisions thereof; or</i> 	<p>Based on the triggered activities in Section 38 of the Act, a Heritage Impact Assessment will need to be undertaken for the project. The findings of the Heritage Impact Assessment will be provided in the EIA report.</p>

<p><i>(iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or</i> <i>(iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;</i> <i>(d) the re-zoning of a site exceeding 10 000 m2 in extent; or</i> <i>(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority,</i> <i>must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature, and extent of the proposed development.</i></p>	
<p><u>Mineral and Petroleum Resource Development Act 28 of 2002</u></p> <p>The purpose of the Act is to regulate the prospecting for and the optimal exploitation, processing and utilization of minerals; to regulate the orderly utilization and the rehabilitation of the surface of land during and after prospecting and mining operations; and to provide for matters connected therewith. In terms of Section 22 of the Act, a Mining Right must be obtained prior to the commencement of any mining activities.</p>	<p>It is noted that in terms of Section 106 of the MPRDA, SANRAL is exempted from applying for a Mining Right to develop a quarry for the purposes of sourcing road building material. However, SANRAL is still required to obtain Environmental Authorisation in terms of NEMA.</p>
<p><u>Gauteng Environmental Management Framework</u></p> <p>The Gauteng Department of Agriculture and Rural Development have developed an Environmental Management Framework Tool to streamline the requirements for an Environmental Impact Assessment (EIA) and reduce the need for the undertaking of EIA requirements, a reduction in timeframes for approvals and as a contribution towards reducing the cost of doing business in Gauteng. In this tool, a number of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) listed activities are excluded from the requirement to obtain an Environmental Authorisation (EA). Government Notice 164 in Government Gazette No. 41473 of 2 March 2018 presents a list of activities that are excluded from the need to obtain an Environmental Authorisation as they occur within Zones 1 and 5 of the Gauteng Provincial Environmental Management Framework (GPEMF).</p>	<p>Majority of the site falls within Zone 1 (urban development zone), and the area situated with the centre of the site falls within Zone 4 (Normal Control Zone). The proposed site is not considered for exclusion as the site is characterised by two zones as per the EMF.</p>
<p><u>Gauteng Conservation Plan (C-Plan)</u></p> <p>The Gauteng C-Plan focuses on the mapping of biodiversity priority areas within the Gauteng Province and is compiled by the Gauteng Department of Agriculture and Rural Development (GDARD). The C-Plan was consulted in order to determine the location of areas of increased ecological or conservation importance and sensitivity within the vicinity of the study area. This was undertaken by an investigation of biodiversity priority areas which include Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs).</p>	<p>According to the Gauteng Department of Agriculture and Rural Development (GDARD) Conservation Plan data, the central portion of the study area is associated with a Critical Biodiversity Area (CBA), and a portion of the study area along its northern boundary is indicated to fall within an ESA. A Terrestrial</p>

	<p>Ecological Assessment will be undertaken during the EIA phase of the project. The findings of the study as well as the specialist recommendations will be provided in the EIA report.</p>
<p><u>City of Tshwane Spatial Development Framework (2012)</u></p> <p>The vision of the City is to become the African City of Excellence. The purpose of the Spatial Development Framework (SDF) is to provide a spatial representation of the City's vision and to be a tool to integrate all aspects of spatial planning. According to the SDF (2012) the following shall be addressed to achieve the vision of the City:</p> <ul style="list-style-type: none"> • Addressing social need; • Restructuring of a spatial inefficient City • Promotion of sustainable use of land resources • Strategic direction around infrastructure provision; • Creating opportunities for both rural and urban areas; • Guiding developers and investors as to appropriate investment localities; • Rural Management programmes to improve livelihoods and simulate employment <p>An implementation mechanism for the for the municipal SDF was development by the City. One on the mechanisms being the compilation of Regional Spatial Development Frameworks for each of the City's seven regions. The proposed project falls within Region 5 of the city. One of the key opportunities as identified in the regional SDF is transport. The Moloto Road corridor project has been identified as a strategic road link of the region.</p>	<p>The proposed Quarry 6A is for the sourcing of Material for the R573 Moloto Road upgrade. The proposed Quarry 6A will therefore support the strategic objectives and will contribute to improved mobility with the region.</p>

f) 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 proposed Quarry 6A will supply construction material for the proposed upgrading of national road R573-1 (K139) from Stormvoël Road in Tshwane (km 0,00) to the Gauteng / Mpumalanga Provincial Border (\pm 48.00 km). The rationale for the proposed upgrade is provided below:

- The R573 Moloto Road is one of South Africa's busiest and most important economic routes connecting Gauteng, Mpumalanga, and Limpopo provinces with an extremely high number of buses and light motor vehicles. The road links small towns and rural settlements with Pretoria and carries inter-district traffic between these locations, hence the road is an important regional mobility function but has an equally significant accessibility function (KBK Engineers, 2020).
- The road has been dubbed the "road of death" due to the high number of accidents that has happened on it over the years. According to the media release issued on the 31st July 2018 by Pretoria News, the Moloto road has not been upgraded for many years and has been exposed to increasing traffic over the years. Statistics taken from a period of 29 months, January 2012 to May 2014, show that there were 489 crashes on Moloto Road, resulting in 158 fatalities and 594 serious injuries (iol, 2018).
- In order to address safety, mobility functions and ensure that reasonable access is provided to adjacent properties and areas to enable the future land use development, SANRAL is proposing the upgrade of the R573 Moloto Road.

Large volumes of construction material would be required for the proposed project, hence the development of a local source of material would be highly beneficial. Obtaining the required quality and quantity of material from commercial sources would not be financially viable. Substantial cost savings would result by eliminating the cost of procurement and transportation of large volumes of material from existing commercial sources. Material investigations have also revealed that the proposed study area holds material reserves to meet the project requirements in conjunction with various other sites as provided in Section 2d (ii) of the report. In addition, the study area was previously mined for the purpose of road materials for the N1 and the proposed site falls within close proximity of the proposed road upgrades. Such will avoid potential risks associated with road safety on the surrounding road networks and carbon emissions as the distance travelled by the haul vehicles will be reduced.

g) Period for which the environmental authorisation is required

The Environmental Authorisation is required for the entire duration of the mining activities. SANRAL intends to commence with the construction phase during the second quarter of the 2022. It is anticipated that the mining activities will last up to May 2030. Final confirmation of the completion of the mining of the quarry cannot be confirmed, the dates provided are tentative.

h) Description of the process followed to reach the proposed preferred site.

NB!! – This section is not about the impact assessment itself; It is about the determination of the specific site layout having taken into consideration (1) the comparison of the originally proposed site plan, the comparison of that plan with the plan of environmental features and current land uses, the issues raised by interested and affected parties, and the consideration of alternatives to the initially proposed site layout as a result.

In terms of the EIA Regulations published in Government Notice (GN) R982 of 2014, as amended in 2017, feasible and reasonable alternatives must be identified and considered within the Scoping and EIA process. According to the above-mentioned, an alternative is defined as "*...in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to the:*

- (a) property on which or location where it is proposed to undertake the activity;
 - (b) type of activity to be undertaken
 - (c) design or layout of the activity;
 - (d) technology to be used in the activity;
 - (e) operational aspects of the activity; and
- Includes the option of not implementing the activity.”*

The purpose of alternatives as defined in the Department of Environmental Affairs and Tourism’s (now Department of Environment, Forestry and Fisheries) 2004 Integrated Environmental Information Series on the Criteria for determining alternatives in EIA, ‘ *is to find the most effective way of meeting the need and purpose of the proposal, either through enhancing the environmental benefits of the proposed activity, and or through reducing or avoiding potentially significant negative impacts.*’

In terms of Section 24 of NEMA, the proponent is required to demonstrate that alternatives have been described and investigated in sufficient detail during the Scoping and EIA process. It is important to highlight that alternatives must be practical, feasible, reasonable, and viable to cater for an unbiased approach to the project and in turn to ensure environmental protection.

The role of alternatives is to find the most effective way of meeting the need and purpose of the proposal, either through enhancing the environmental benefits of the proposed activity, and or through reducing or avoiding potentially significant negative impacts.

The alternatives considered for the proposed Quarry is provided in Section 2(h) (i) below.

(i) **Details of all alternatives considered.**

With reference to the site plan provided as **Appendix C** 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

According to the design engineers (KBK Engineers), six (6) potential Quarry sites and eight (8) Borrow Pits sites were identified following a geotechnical desktop study (**Figure 4**). As majority of the R573 Moloto Road is bordered by residences or small holdings (extensively inhabited areas in general), areas for safe reliable quarrying were severely limited. Many of the sites presented in **Figure 4** were eliminated following an environmental screening process which also involved discussions with the landowners. Due to the difficulty in procuring the land, various other sites were identified and investigated by geotechnical drilling (**Figure 5**). The results of the site investigations are presented in **Table 4** below. From the eight sites that were investigated only four of them were feasible. It is important to note that separate environmental Authorisation process is currently underway for each of the preferred sites, highlighted in grey in **Table 4**.

Table 4:Results from the Material Investigations

Site	Material Source	Coordinates	Suitability
Borrow Pit 4	N/A	25° 28' 43.2"S 28° 36' 16.3"E	Material is not suitable for proposed use and was not investigated any further.
Borrow Pit 6	G7 & G9	25° 38' 29.6"S	The site holds significant potential to supply gravel material. However additional provision must be made for excavation aids and material crushing in order to achieve sufficient borrow pit depths to produce the estimated material volumes.
Borrow Pit 6 additional area	G9	28° 17' 09.6"E	
Borrow Pit 7	G7	25° 36' 46.4"S 28° 17' 34.7"E	The site holds potential to supply gravel material. However additional provision must be made for excavation aids and material crushing in order to achieve sufficient borrow

			pit depths to produce the estimated material volumes.
Borrow Pit 8	N/A	25° 30' 36.3"S 28° 31' 46.0"E.	Material and environmental (i.e. possible wetland) restrictions make this site unsuitable.
Quarry 4	G1 & G7	25° 28' 43.2"S 28° 36' 16.3"E.	Pivotal source of G1 and G7 material produced from crushed rock to service the northern half of the project.
Quarry 5	G5, G6, G7	25° 32' 05.5"S 28° 30' 59.4"E.	This quarry is the only material source proven to hold large volumes of G5 crushed rock material which will be vital. The source should be dedicated to producing crushed G5 material (and G6 by-products).
Quarry 6.4/6B	G1, G5 & G6	25° 36' 31.9"S 28° 15' 31.3"E.	Quarry 6.4/6B is the largest source of G1 material for this project and benefits from G5 and G6 by-products.
Quarry 6.5/6A	G1 and G6	25° 36'46.4"S 28° 17' 34.7"E.	Quarry 6.5/6A is a viable source of G1 material, with proven supplementary G6 by-products to be produced from crushing overburden materials. Acquire property for material production.

Quarry 6A is considered to be adequately sized to allow for stockpiling of material, establishment of the Contractors camp, and crushing equipment. The site is relatively undeveloped with a depleted Quarry towards the south east. The material testing undertaken by the geotechnical specialists revealed that the site will provide a viable source of material for the upgrade of the R573.

Route Locality Plan : R573 (Moloto Road) - Scale : NTS

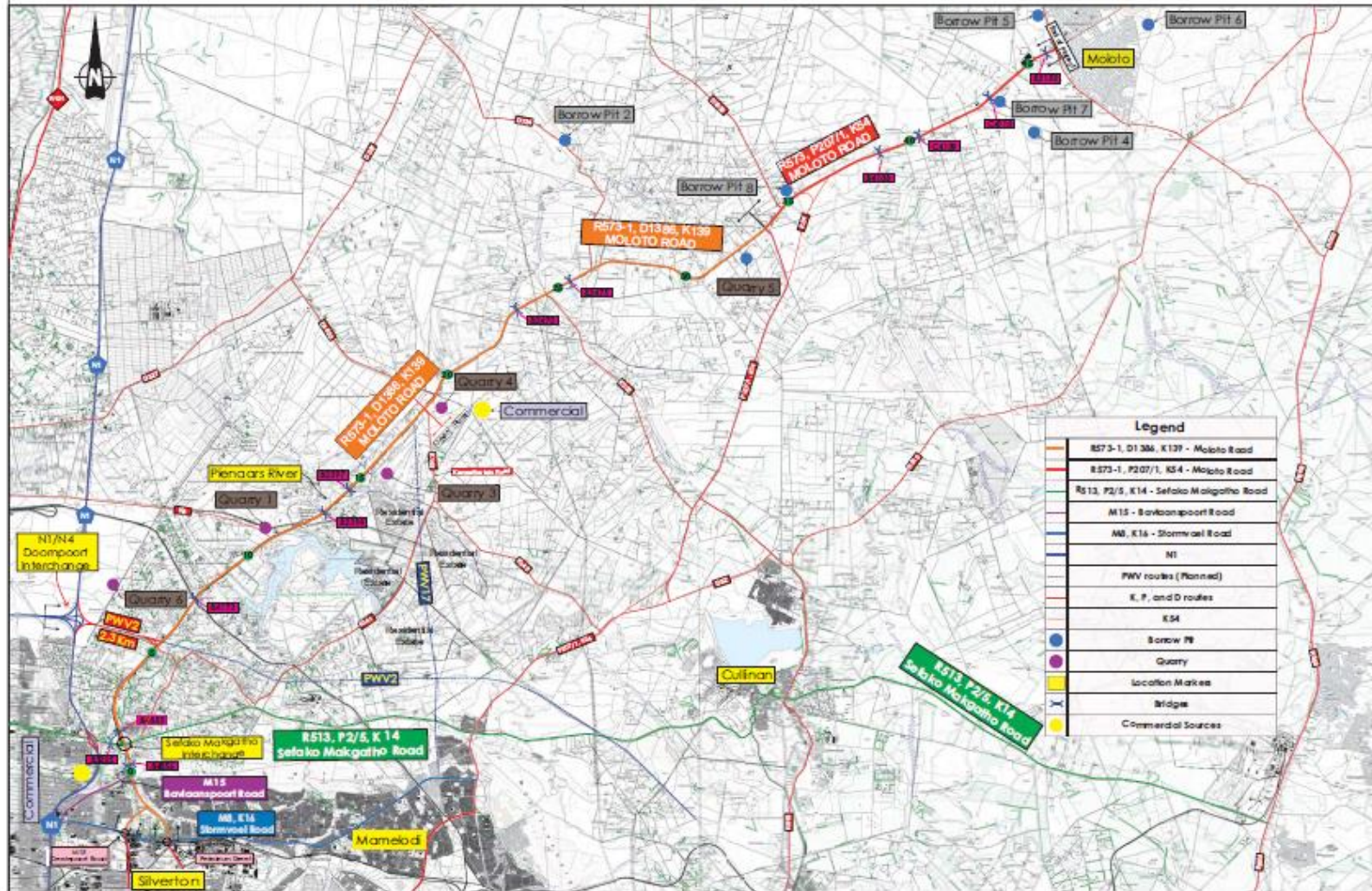


Figure 4: Quarry and Borrow pit sites identified

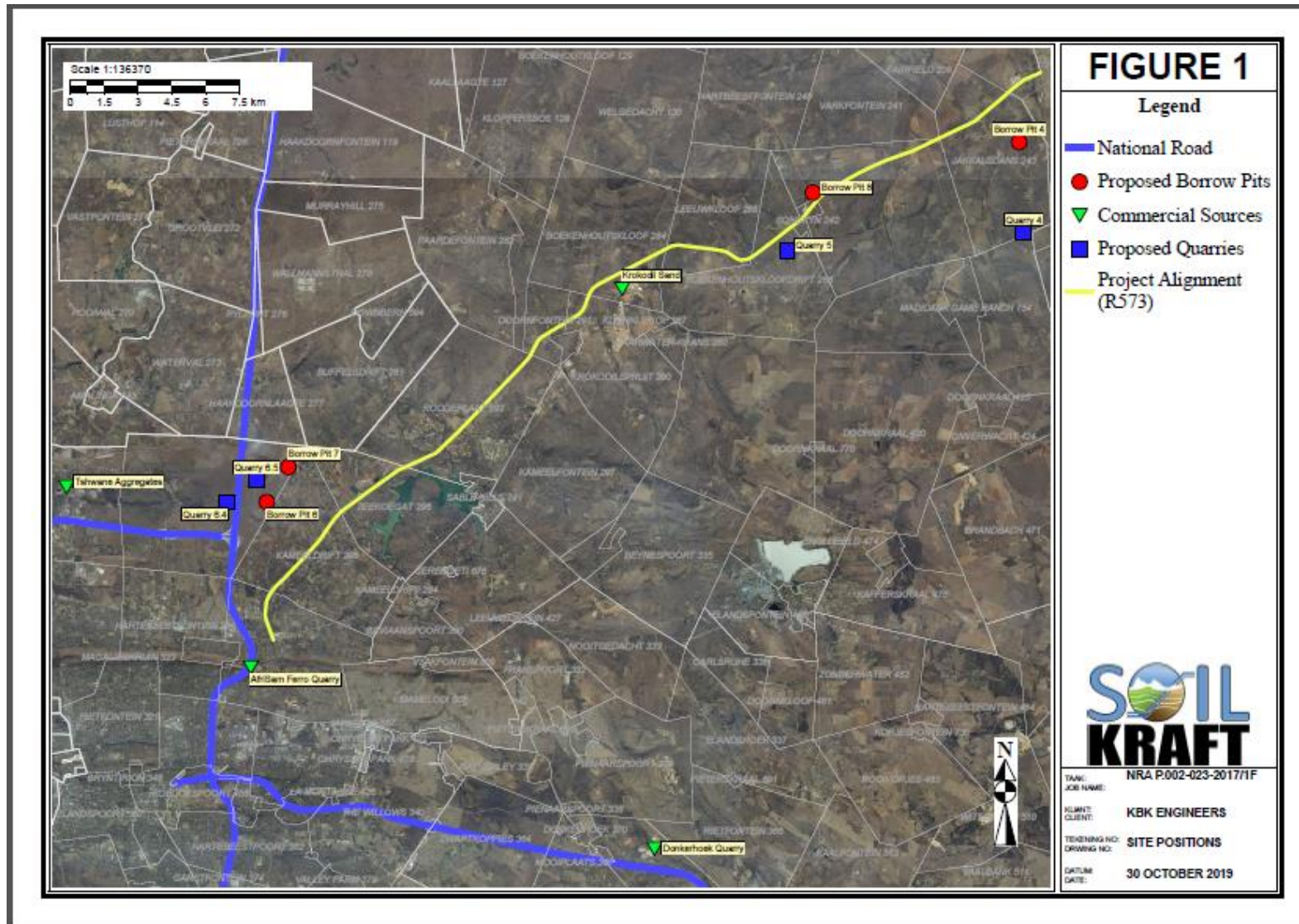


Figure 5: Quarry and Borrow Pit sites where material investigation was undertaken

(b) the type of activity to be undertaken;

The application for Environmental Authorisation is based on the need for material sources. The need for material sources defines the activity to be undertaken which is mining, therefore no activity alternatives were assessed during the scoping phase.

(c) the design or layout of the activity;

The proposed layout as presented in Figure 3 and **Appendix C** as provided by the design engineer is based on the outcome of the materials investigation and the availability of suitable material. During the materials investigation test pits were excavated to test the viability of the proposed site. Layout alternatives will be considered during the EIA phase of the project, as the specialist assessments will be undertaken, and the specialist's findings and recommendations will be considered by the design engineers.

(d) the technology to be used in the activity;

No technology alternatives have been assessed.

(e) the operational aspects of the activity; and

Two options were considered for the operational aspects of the Quarry. These are as follows:

Option 1: Opencast mining using excavators and crushing and screening area on site;

Option 2: Opencast mining using excavators, transporting material for crushing and screening to an area offsite

The advantage of Option 1 is that less time will be required for the processing of material and the operations of having all facilities on site is cost effective. The operations could potentially have a smaller carbon footprint due to reduced haulage of material resulting in less diesel use. The disadvantage is that there would be a potential increase in noise levels and an increase in dust disturbance.

The advantage of Option 2 is that less noise and dust will be generated on site. The disadvantage is that there are greater financial implications to have crushing and screening offsite as materials will have to be transported off site to be processed.

Based on the assessment of the two options, Option 2 will not be assessed further during the EIA phase of the project due to the substantial increased financial obligations for the transport of material to an offsite crusher.

(f) the option of not implementing the activity.

The option of not implementing the activity is referred to as the No-Go alternative. The Potential Impacts as discussed in Section vii would not materialise. The implications of implementing the no-go alternatives are as follows:

- The condition of the R573 will remain, safety and traffic concerns will prevail. The condition of the R573 will continue to deteriorate. The R573 links small towns and rural settlements with the City of Tshwane and carries inter-district traffic between these locations, hence the road is an important regional mobility function but has an equally significant accessibility function. As such the poor condition of the road will have an effect on the economy.
- The direct economic benefits associated with the Quarry 6A operation for sourcing of material for the upgrade of the R573 Moloto Road would be lost. Furthermore, any possible indirect economic benefits of the quarry operation (related to the procurement of goods and services and the spending power of employees) would not materialise.
- Construction materials would have to be obtained from commercial sources, there would be other potential negative impacts associated with the movement of haul vehicles over large

distances on the surrounding provincial and national road network (e.g. damage to roads from heavy loads, road safety and air pollution). Obtaining the required quality and quantity of material from commercial sources would not be financially viable. Substantial cost savings would result by eliminating the cost of transportation of large volumes of material from existing commercial sources.

- The No-Go alternative assumes that the project as proposed does not go ahead. This alternative would result in no environmental impacts on the natural environment or surrounding communities,

(ii) **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.

The NEMA (1998) EIA Regulations, 2014, as amended, prescribe that the Scoping and EIA process must include the undertaking of public participation in accordance with the Chapter 6 of the Regulations. The purpose of the Public Participation Process is to provide all potential and / or registered Interested and Affected Parties (I&APs hereafter), including the competent authority and any other stakeholder or organ of state, an opportunity to become involved in the Scoping and EIA process and provide comments during the various phases of the project. Involvement by I&APs is critical, as it contributes to a better understanding of the proposed project among I&APs, raises important issues that need to be assessed and provides local insight that will enhance the Scoping and EIA process. This Section of the report provides details on the Public Participation Process followed during the Scoping Phase for the proposed project. It must be noted that the initial public participation commenced in July 2018. The project was then placed on hold by the project applicant.

In addition to Chapter 6 of the NEMA EIA Regulations, 2014 as amended, on the 5th of June 2020, the Minister of Environment, Forestry and Fisheries issued directions regarding the measures to address, prevent and combat the spread of the COVID-19 relating to the National Environmental Management Permits and Licences. A Public Participation Plan was submitted to the DMRE on the 22nd of June 2020. Public Participation for the proposed project commenced on the 6th of July 2020. The Public Participation Plan is attached to **Appendix E**.

The Public Participation process for both Quarry 6A & 6B was combined due to the close proximity of the sites. Hence all comments received from stakeholders (for both Quarry 6A & 6B) have been captured in the scoping report.

i. Identification of Interested and Affected Parties

Interested and Affected Parties (I&APs) were identified through various means from the inception phase of the project. These means included the placement of an advertisement in a local newspaper the placement of Site Notices and the distribution of Notification Letters. Each of these are discussed below.

ii. Notification Letters

Regulation 41(2)(b) of the NEMA (1998) EIA Regulations, 2014, as amended requires that written notification be given to various parties who include the following:

- (i) the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken;*
- (ii) owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken;*
- (iii) the municipal councillor of the ward in which the site and alternative site is*

situated and any organisation of ratepayers that represent the community in the area;
(iv) the municipality which has jurisdiction in the area;
(v) any organ of state having jurisdiction in respect of any aspect of the activity;
and
(vi) any other party as required by the competent authority;

An example of the Notification Letter that was compiled for the proposed development is attached as **Appendix D1**. The document provided a background on the project, the proposed activities as well as information on how one can register as an Interested and Affected Party (I&AP) on the project in order to be able to be kept abreast of all developments. Notification letters were compiled and distributed to all adjacent landowners on the 27th of July 2018 and yet again on the 6th of July 2020. Knock and Drop Registers were completed for all I&APs that received a notification letter on the aforementioned dates. The knock and drop register is attached to **Appendix E9**. Electronic version of the notification letters have also been sent to I&APs and is currently ongoing.

iii. Newspaper Advertisement

Regulation 41(2)(c) and (d) of the NEMA (1998) EIA Regulations, 2014, as amended requires that PPP includes the placement of a Newspaper Advertisement to notify all potential I&AP's about the proposed project and to invite them to register as I&APs and provide comments on the project. An advertisement was placed on page 2 of the Pretoria News on the 9th of July 2020 and on Page 4 of the Pretoria North Rekord on the 10th of July 2020. The proof of the placement of the Newspaper Advertisement is attached as **Appendix D2**.

iv. Notice Boards/Site Notices

In accordance with the NEMA (1998) EIA Regulations, 2014, as amended, a notice board detailing the proposed activity as well as the contact details of the EAP was placed on site. Site notices presenting the project were erected on site and at visible and accessible locations close to the site on the 27th of July 2018. The locations of the placement of the notice boards are as follows and provided in **Appendix D3**.

- Lalapalm Road (25°38'34.99 S 28°17' 17.53"E)
- Corner of Ficus lane and Lalapalm Road (25°38'42.53"S 28°17'29.65"E)
- Maroela Road (25°38'17.90"S 28°17'43.66"E)
- Corner of Maroela Road and Lalapalm Road (25°38'44.04"S 28°17'34.11E)
- Maroela Road (25°39'21.46"S 28°17'25.10"E); and
- Corner of Karee street and Maroela Road (25°39'54.32"S 28°17'28.40"E)

Site notices were yet again placed on the 6th of July 2020 at the following locations:

- Lalapalm Road (25°38'34.99 S 28°17' 17.53"E)
- Corner of Ficus lane and Lalapalm Road (25°38'42.53"S 28°17'29.65"E)
- Super Spa Zambezi Retail Park (25°41'0.14"S 28°17'50.12"E)
- Kameeldrift police station (25°39'2.20"S 28°18'26.75"E)
- Kameeldrift weg shopping centre (25°39'36.90"S 28°18'41.83"E)
- Corner of Karee street and Maroela Road (25°39'54.32"S 28°17'28.40"E)
- Maroela Road (25°39'21.46"S 28°17'25.10"E);
- Raasblaar Street (25°37'10.29"S 28°18'11.06"E)
- Tambotiweg (25°37'27.38"S 28°17'50.00"E)

- Corner of Tambotiweg and Sekelbos Road (25°38'39.92"S 28°18'31.86"E)

v. Availability of Draft Scoping Report for review

The DSR will be issued out for public review for a legislated period of at least 30 days. This DSR has been made available for public review and registered I&APs have been notified via email. The provision of the DSR for review will allow I&APs adequate time to review the details of the project and provide, in writing, comments and concerns relating to the proposed development. All registered I&APs will be informed of the availability of the report through various means and proof of the notification will be kept. The following commenting authorities will be provided with a copy of the report in both electronic as well as hardcopy format:

- Gauteng Department of Agriculture and Rural Development;
- City of Tshwane: Roads and Transport Department;
- Provincial Heritage Resource Agency Gauteng (PHRA-G);
- City of Tshwane: Environmental Planning and Open Space; and
- South African Heritage Resources Agency.

SMS, e-mail notifications and telephone calls will be utilised to notify all registered I&AP's about the availability of the report.

vi. I&APs Register and Comments & response report

From the onset of the project, a database of persons, organizations and organs of state identified as I&APs or registered as I&APs was opened and is updated as and when required. The I&APs register is included in **Appendix D4**. Comments received from various I&APs have been captured in the Comments and Response Report. The Comments and Response report is attached to **Appendix D5**.

vii. Focus Group Meetings/Public Open Day

No public open days have been held to date with I&APs. Depending on the comments received during the public review period for the Draft Scoping Report, a public open day/focus group meeting will be arranged accordingly. However, a focus group meeting was held with the ward councillors of Ward 96 and Ward 87 of the CoT. The minutes of the meeting is attached to **Appendix D6**.

Scoping Report

(iii) Summary of issues raised by I&APs

(Complete the table summarising comments and issues raised, and reaction to those responses)

The table below provides a summary of the stakeholders consulted to date. A high-level summary of the issues raised has been included on the table. All comments provided to date regarding the proposed project has been detailed in the comments and response report which is provided in **Appendix D5** Public Participation is ongoing and the table will be updated as the Scoping Process unfolds.

Table 5: 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 the applicant
AFFECTED PARTIES				Responses are included in the Comments and Response report attached to Appendix D5 .
Landowner/s				
First Land Development Limited	X		No comments received to date	
Lawful occupier/s of the land				
Not Applicable				
Landowners or lawful occupiers on adjacent properties				
Belinda Boshoff	X	27 th July 2018 & 28 th August 2020	Dust and heavy traffic on Maroela Road. Blasting will be a problem with animals on her property.	
Gonda van Ekeren	X	31 st July 2020	When will the upgrading of Moloto Road begin? Will be directly affected by the operations of the Quarry. Will Maroela and Lalapalm Road be tarred. Currently a lot of traffic on these roads, with dust during the winter months and mud during the summer months.	
Adri de Kock	X	31 July 2018	Condition of the existing roads and the current traffic experienced. School children make use of these roads, and with the haulage vehicles this will be a safety problem. Dust and blasting are a concern.	
Rainer Kreft	X	31 st July 2018	The Quarry is a safety and health risk for himself and adjacent landowners. According to the CoT website the road is for residential use and not primary metropolitan distributor.	
Jaap Rademeyer	X	14 August 2018	Requested information regarding the roads to be used to access the Quarry and haulage vehicles, the size of the Quarry, operating times, safety of school pupils, and the number of trucks per day that will be used for haulage.	
Christa Droste	X	3 August 2018	Concerns regarding dust and noise.	

Scoping Report

Jurie Wessels/Marie Wessels	X	16 th August 2018	Concerns regarding the current condition of Maroela Road.
Steven Geldenhuys	X	10 th August 2020	Objected the proposed Quarry. Requested details regarding blasting and dust control measures. Increase toll fees on the on the N1 north from the Doornpoort plaza onwards so that more vehicles can make use of this national road, rather than spending billions on revamping the R573. The increased stream of cars on the N1 will make up for this deficit in toll fees, and then one could spend a fraction of the proposed budget to expand the on/off routes to Moloto and extended towns. Resides 200m from the proposed Quarry, blasting will have an effect on his infrastructure.
Mr Zak Labuschagne	X	18 August 2020 & 19 th August 2020	Requested which roads will be used for the haulage of vehicles, and the I&AP database. Number of people to be employed at the Quarry & where will the staff reside, blasting and the lifetime of the Quarry.
Ms Sonja Scheepers	X	17 August 2020	Strongly objects the proposed Quarry. Due to the following reasons: <ul style="list-style-type: none"> • The environment will ultimately be destroyed; • Questioned the credibility of an EIA as all impacts translate as low; • Landowner consent has not yet been obtained but the EIA process still continues; • No consultation from the deeds office that a National Road is proposed adjacent to the property; • Traffic Pollution, health issues, climate and environmental damages, mist levels and noise that emanates from the R573.
Mr Tom Muller	X	26 August 2020	Concerns regarding the current state of Maroela Road and the potential groundwater impacts.
Municipal councillor			
Councillor Freddie Pienaar (Ward 87 City of Tshwane)	X	2 nd July 2020	Concerns about blasting and dust. Community upliftment and job creation is vital. How will this be addressed by SANRAL?
Municipality			
City of Tshwane: Environmental Planning and open space	X		No comments received to date
City of Tshwane: Roads and Transport Department Transportation Planning Division	X		No comments received to date
Organs of state (Responsible for infrastructure that may be affected Roads Department, Eskom, Telkom, DWA.			
Department of Water and Sanitation	X		No comments received to date

Scoping Report

Transnet	X	19 th August 2020	What will the nearest distances be between the blasting points on site to the railway line, together with all drawings, aerial photos
City of Tshwane: Transport Department Infrastructure Design, Construction and Maintenance Division	X		No comments received to date
Communities			
Dept. Land Affairs			
Department of Rural Development and Land Reform	X	25 th August 2020	Confirmed that there are land claims against the property. A 30-day notice shall be given to the department before the project commences.
Traditional Leaders			
The Ward councillor confirmed that there were no traditional leaders within the ward. GA Environment has requested confirmation of such from COGTA.			
Dept. Environmental Affairs			
Gauteng Department of Agriculture and rural development	X		No comments received to date
Other Competent Authorities affected			
South African Heritage Resources Agency	X		No comments received to date
Provincial Heritage Resource Agency-Gauteng	X		No comments received to date
Gauteng Department of Roads and Transport	X		No comments received to date
OTHER AFFECTED PARTIES			
Wildlife and Environment Society of South Africa			No comments received to date
INTERESTED PARTIES			

Scoping Report

(iv) The Environmental attributes associated with the sites

1. Baseline Environment

(a) Type of environment affected by the proposed activity.

(Its current geographical, physical, biological, socio- economic, and cultural character).

This Section serves to describe the environmental setting of the area identified and will also provide a description of the overall character and other sensitivities that were identified in the surrounding environment.

Climate

Pretoria has a humid subtropical climate with long hot rainy summers and short mild winters (Wikipedia, 2020). An average high temperature of 29°C and an average low temperature of 18°C with January being the warmest month (**Figure 6**). June is the coldest month of the year with an average high temperature of 19°C and an average low temperature of 5°C.

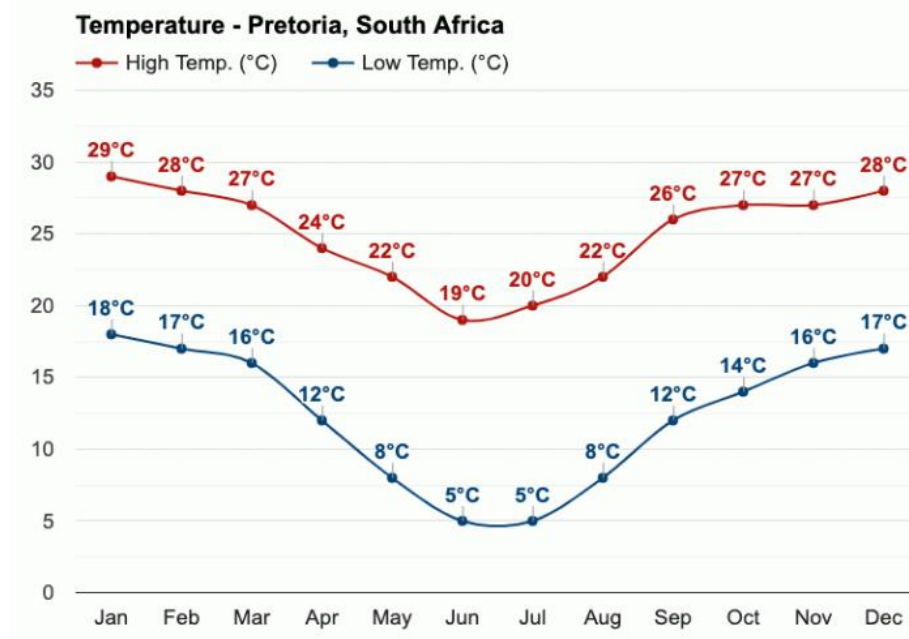


Figure 6: Average temperature for Pretoria (weather-atlas)

Pretoria experiences rainfall throughout the year, as there are approximately 88 rainfall days and 732mm is accumulated. The month with the most rainfall is January with an average of 155mm, and July has been recorded as the month with the least rainfall where 3mm has been recorded (**Figure 7**).

Scoping Report

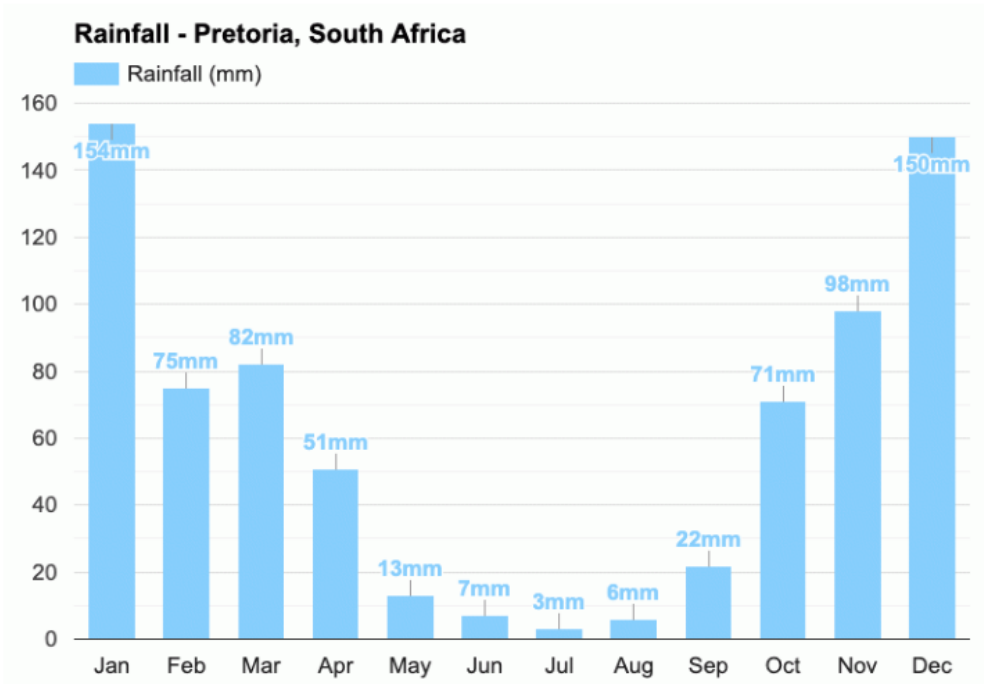


Figure 7: Average Rainfall for Pretoria (weather-atlas)

Topography

The project area is located at around 1 224 metres above mean sea level (m.a.m.s.l.) in the north, sloping slightly upwards in a southern direction to an elevation of around 1 237 m.a.m.s.l. in the south (Figure 8).



Figure 8: Google Earth elevation profile through the project area (shown in red) from north to south

From the Google Earth elevation profile illustrated, it can be seen that steeper slopes are located towards the centre of the project area, indicating a low ridge or extensive rocky outcrop in this location, while the northern and southern portions of the project area appear relatively level, with the exception of a prominent rocky outcrop in the vicinity of the existing depleted quarry in the southeast of the project area.

Gauteng Conservation Plan

The Gauteng C-Plan focuses on the mapping of biodiversity priority areas within the Gauteng Province and is compiled by the Gauteng Department of Agriculture and Rural Development (GDARD). The C-Plan was consulted in order to determine the location of areas of increased ecological or conservation importance and sensitivity within the vicinity of the study area. This was undertaken by an investigation of biodiversity priority areas which include Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs). Desktop studies indicate that the central portion of the study area is associated with a CBA (Figure 9).

Scoping Report

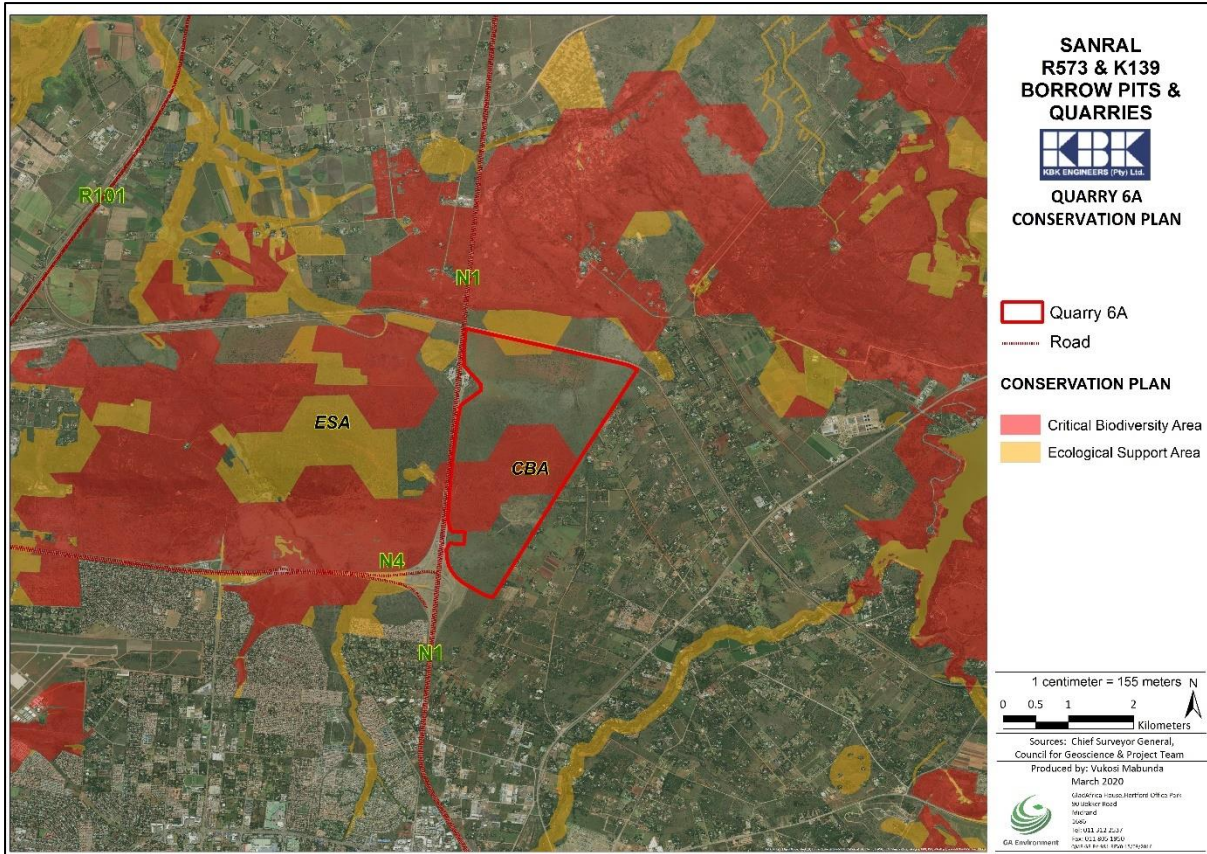


Figure 9: Gauteng C-Plan of the Study Area

A portion of the study area along its northern boundary is indicated to fall within an ESA.

Gauteng Environmental Management Framework

The Gauteng Department of Agriculture and Rural Development have developed an Environmental Management Framework Tool to streamline the requirements for an Environmental Impact Assessment (EIA). In addition to reduce the need for the undertaking of EIA requirements and a reduction in timeframes for approvals and as a contribution towards reducing the cost of doing business in Gauteng. In this tool, a number of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) listed activities are excluded from the requirement to obtain an Environmental Authorisation (EA). Government Notice 164 in Government Gazette No. 41473 of 2 March 2018 presents a list of activities that are excluded from the need to obtain an Environmental Authorisation as they occur within Zones 1 and 5 of the Gauteng Provincial Environmental Management Framework (GPEMF). **Table 6** indicates the various zones of the GPEMF including *Zones 1 and 5*.

Table 6: Gauteng Provincial Environmental Management Framework Zones

ZONE	INTENTION
<p>Zone 1: Urban development zone</p>	<p>The intention with this zone is to streamline urban development activities in it and to promote development infill, densification and concentration of urban development, in order to establish a more effective and efficient city region that will minimise urban sprawl into rural areas. The study area falls with this zone.</p>

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ZONE	INTENTION
Zone 2: High control zone (within the urban development zone)	This zone is sensitive to development activities. Only conservation should be allowed in this zone. Related tourism and recreation activities must be accommodated in areas surrounding this zone
Zone 3: High control zone (outside the urban development zone)	This zone is sensitive to development activities and in several cases also have specific values that need to be protected. Conservation and related tourism and recreation activities should dominate development in this zone.
Zone 4: Normal control zone	Intention This zone is dominated by agricultural uses outside the urban development zone. Agricultural and rural development that support agriculture should be promoted
Zone 5: Industrial and large commercial focus zone Intention	The intention with Zone 5 is to streamline non-polluting industrial and large-scale commercial (warehouses etc.) activities in areas that are already used for such purposes and areas that are severely degraded but in proximity to required infrastructure. The study area also falls with this zone.

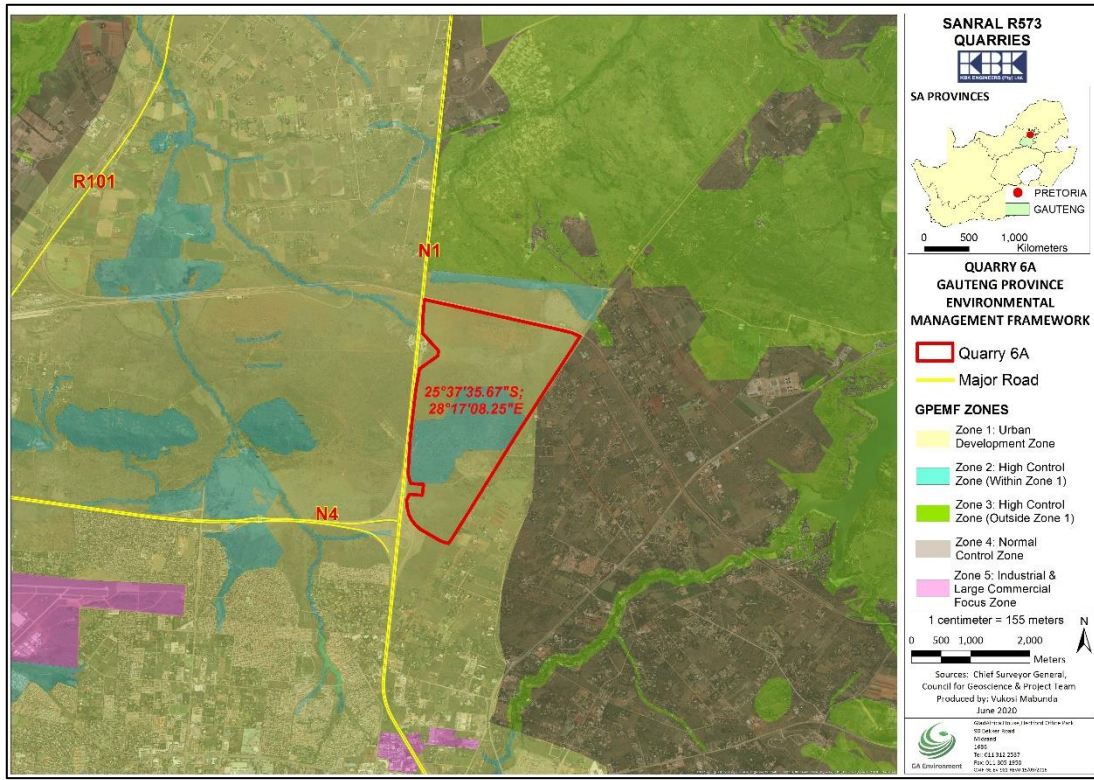


Figure 10: Quarry 6A EMF Map

According to **Figure 10**, majority of the site falls within Zone 1 (urban development zone), and the area situated with the centre of the site falls within Zone 4 (Normal Control Zone). The proposed site is not considered for exclusion as the site is characterised by two zones as per the EMF.

Vegetation

Scoping Report

The study area is located across two vegetation types as defined by Mucina & Rutherford (2006), namely Marikana Thornveld (EN) and Norite Koppies Bushveld (Least Threatened). The location of the project area in relation to these vegetation types are illustrated in **Figure 11**.

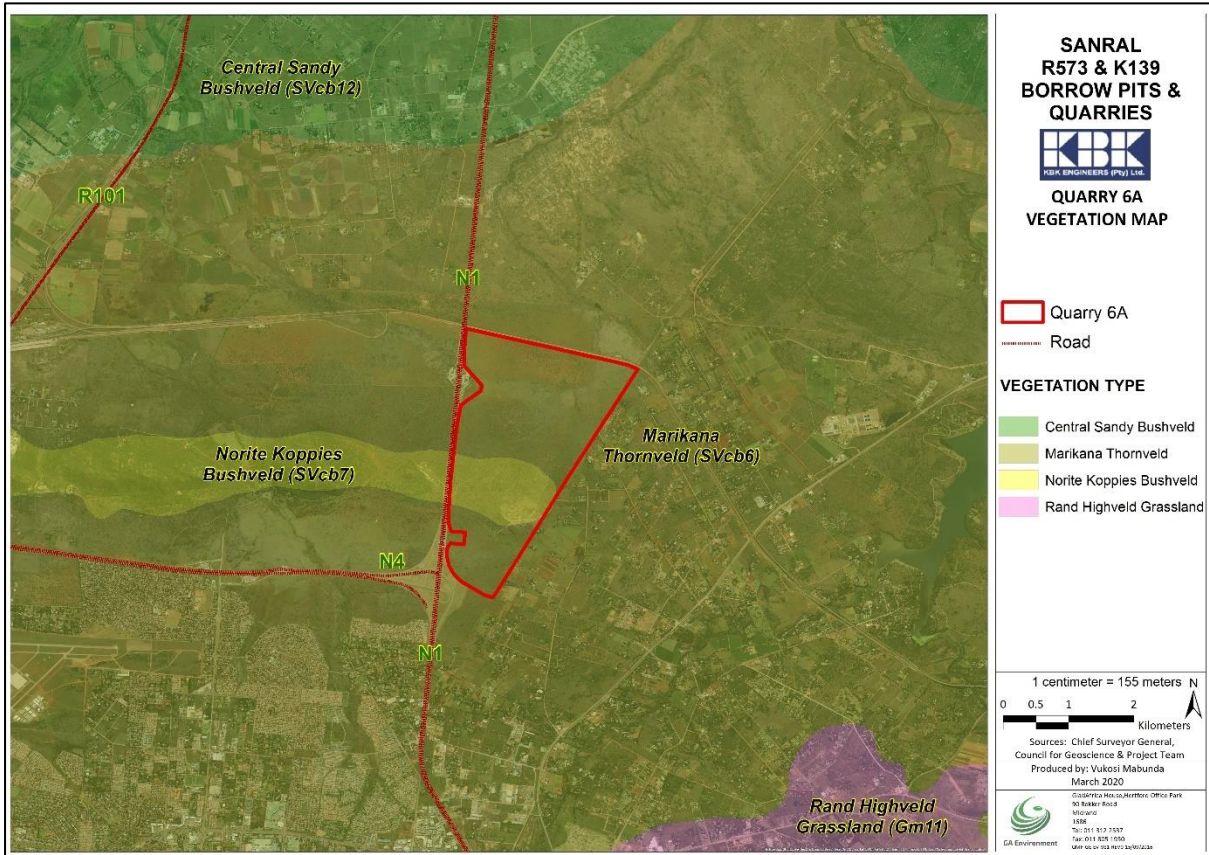


Figure 11: Vegetation in Relation to the proposed Study Area

The Marikana Thornveld vegetation has a conservation status of Endangered, occurs in valleys and slightly undulating plains, and some lowland hills. The characteristic vegetation is Open *Vachellia (Acacia) karroo* woodland. Shrubs are more dense along drainage lines, on *termitaria* and rocky outcrops or in other habitat protected from fire.

The Norite Koppies Bushveld vegetation has a conservation status of least threatened. The noritic outcrops and koppies many appearing as inselbergs above the surrounding landscape. The characteristic vegetation is low, semi-open to closed woodland up to 5m tall, consisting of dense deciduous shrub and trees with very sparse undergrowth on shallow soils, with large areas not covered by vegetation. Tree and shrub layers are continuous. A Terrestrial Biodiversity Assessment will be undertaken during the EIA phase of the project to confirm the possible sensitive floral species that occur within the study area.

Fauna

The structure of the landscape and associated vegetation communities strongly influences faunal diversity through the provision of food resources, habitat corridors and refugia. The central portion of the project area comprises rocky bushveld and low ridge habitat associated with the Norite Koppies Bushveld vegetation type. Rocky outcrops provide foraging and refuge opportunities for faunal species as well as acting as important ecological features. A Terrestrial Biodiversity Assessment will be undertaken during the EIA phase of the project to confirm the possible fauna that occur within the proposed study area.

Scoping Report

Hydrological

The project area is situated within Quaternary Catchments A23B and A23E, with main drainage lines in the region including the Hartbeesspruit to the southeast, and the Pienaars River to the northeast (**Figure 12**).

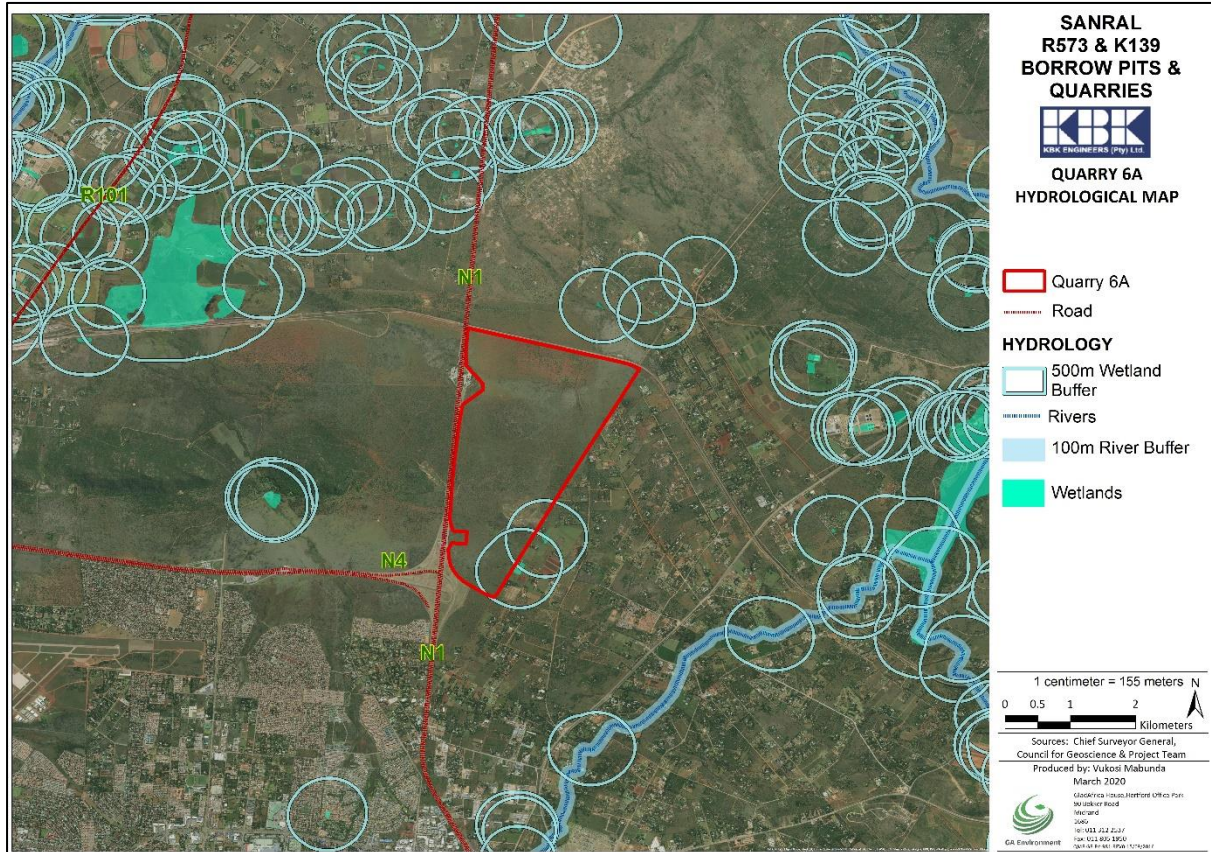


Figure 12: Hydrological Features Associated with the Study Area

According to the SANBI data set National Freshwater Ecosystem Priority Area (NFEPA) wetlands were present towards the south east of the site. Ground truthing of the site however did not reveal any wetlands identified on site. No drainage lines or surface water feature occur within the study area. A Wetland and Aquatic assessment will be undertaken during the EIA phase of the project to identify any potential sensitive features within the study area.

The legislation governing any activities within the watercourse is discussed in **Section e** of this DSR.

Geology

According to the Geotechnical Investigation undertaken by Soilkraft CC, the study the area is underlain largely by norite bedrock of the Bushveld Igneous Complex. **Figure 13** presents the lithology of the study area, showing that the site is located on a geological area known as Gabbro & Norite, and Magnetite Gabbro.

Scoping Report

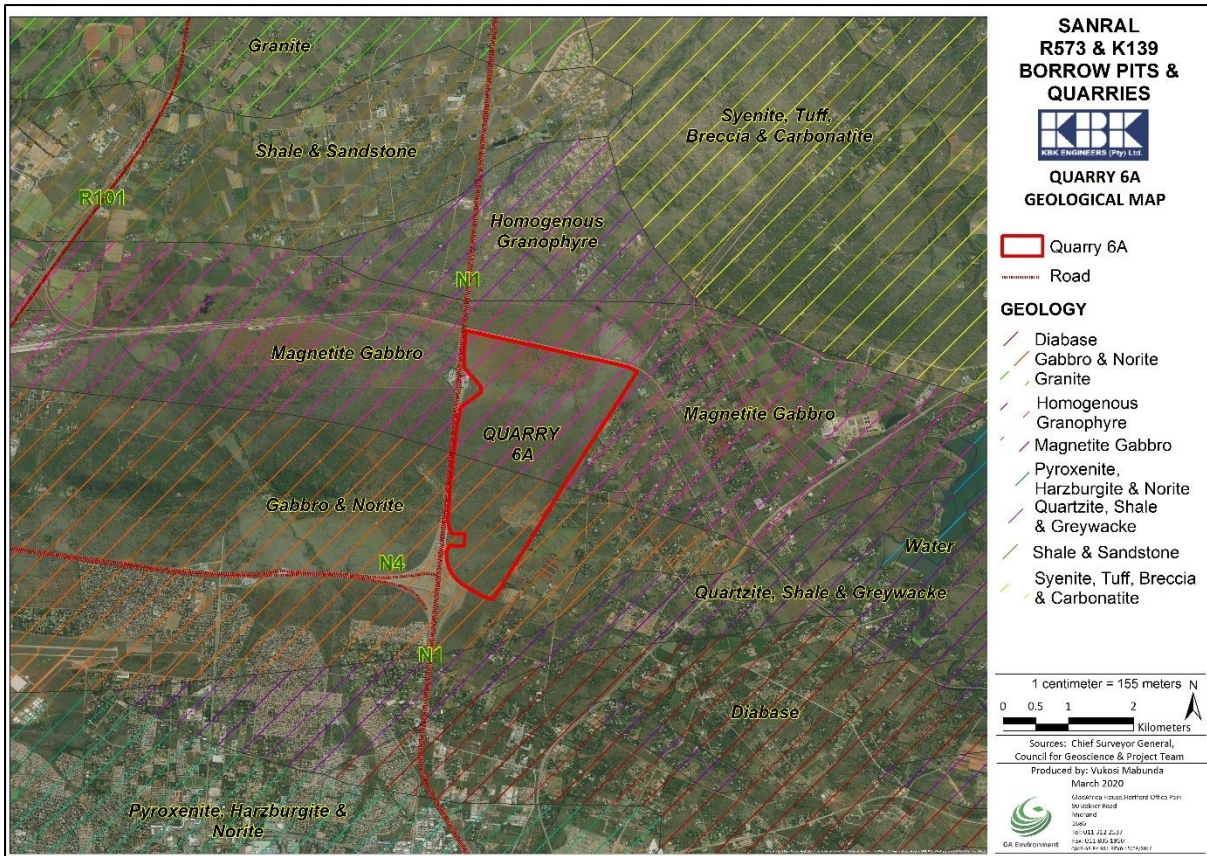


Figure 13: Geology in Relation to the Proposed Study Area

The Geotechnical Investigation has revealed that potential source of rock material that can be crushed to produce G1 aggregate and crushed G6 gravel by-products.

Heritage and Palaeontological Features

The Palaeontological sensitivity map as provided on the South African Heritage Resources Information System (SAHRIS) was consulted to verify the Palaeontological sensitivity of the proposed study area (**Table 7 and Figure 14**). In terms of the Palaeontological Sensitivity Map, the site sensitivity is insignificant/zero and no palaeontological studies are required.

Table 7: Palaeontological Sensitivity Index

Colour	Sensitivity	Required Action
RED	VERY HIGH	Field assessment and protocol for finds is required
ORANGE/YELLOW	HIGH	Desktop study is required and based on the outcome of the desktop study, a field assessment is likely
GREEN	MODERATE	Desktop study is required
BLUE	LOW	No palaeontological studies are required however a protocol for finds is required
GREY	INSIGNIFICANT/ZERO	No palaeontological studies are required
WHITE/CLEAR	UNKNOWN	These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Scoping Report



Figure 14: Palaeontological Sensitivity Map (SAHRIS)

In addition to the above, it must be mentioned that the proposed activities trigger the need for a Heritage Impact Assessment. This is based on Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) which pertains to Heritage Resources Management based on the undertaking of certain activities. A Heritage Impact Assessment will be undertaken during the EIA phase of the project.

Socio-Economic

The proposed study area is situated within the City of Tshwane Metropolitan Municipality. The Metropolitan covers an area of 6360km² with a population of 3 275 152. The study area is situated with ward 87 of the Municipality. Ward 87 covers an area of 50.2km² with a population of 29 931.

According to the 2011 census, the population of Ward 87 was 29 931. Of these 7% were coloured, 42% black and 49% white as depicted in **Figure 15**. Of the total population 69% were between the ages of 18 and 64 with 50% of the population consisting of males (Census, 2011).

Scoping Report

Age

32

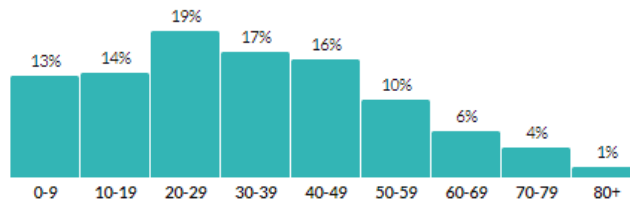
Median age

about 10 percent higher than the figure in Gauteng: 28

about 1.3 times the figure in South Africa: 25

Population by age range

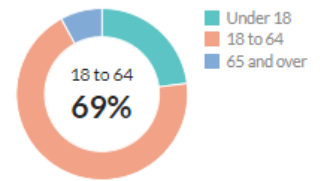
Chart Options



Source: Census 2011

Population by age category

Chart Options



Source: Census 2011

Population

29 931

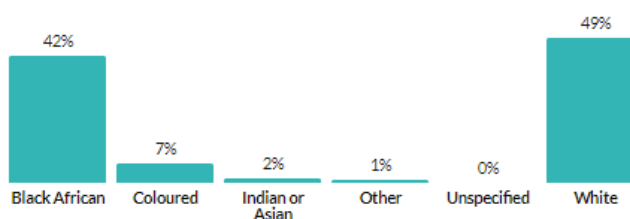
People

Gauteng: 12,272,263L

South Africa: 51,770,560L

Population group

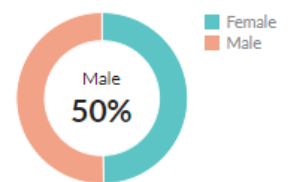
Chart Options



Source: Census 2011

Sex

Chart Options



Source: Census 2011

Figure 15: Ward 87 Demographics (<https://wazimap.co.za/profiles/ward-87>)

a) Employment

In 2011, 60.3% of the community members within Ward 87 were employed with 77% of these employed in the formal sector. The average annual income is R 117 000 which is double of the average annual income of Gauteng which is R 57 500 as presented in **Figure 16** below.

Scoping Report

Employment

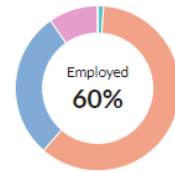
60.3%

Employed

about 20 percent higher than the rate in Gauteng: 50.59%

about 1.5 times the rate in South Africa: 38.87%

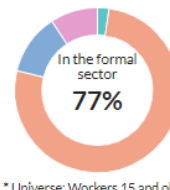
Population by employment status



* Universe: Individuals 15 and older
Source: Census 2011

Chart Options

Sector of employment



* Universe: Workers 15 and older
Source: Census 2011

Chart Options

Annual income

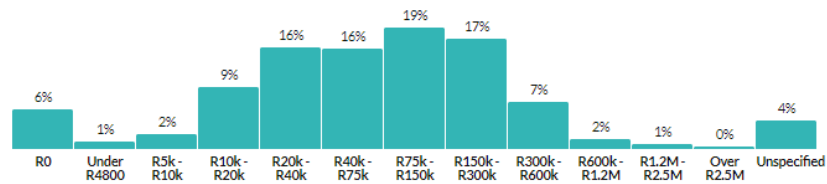
R117 000

Average annual income

about double the amount in Gauteng: R57 500

more than double the amount in South Africa: R30 000

Employees by annual income



* Universe: Employed individuals
Source: Census 2011

Chart Options

Figure 16: Ward 87 Employment and Income Statistics (<https://wazimap.co.za/profiles/ward-87>)

b) Service Delivery

Ninety-two (92%) of households obtain water from a regional or local service provider, 4% from a borehole, and the remainder from other sources (Figure 17).

Water

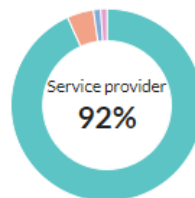
92%

Are getting water from a regional or local service provider

about the same as the rate in Gauteng: 93.52%

about 20 percent higher than the rate in South Africa: 76.89%

Population by water source



Source: Census 2011

Chart Options

Toilet facilities

87.2%

Have access to flush or chemical toilets

about the same as the rate in Gauteng: 85.69%

about 1.4 times the rate in South Africa: 62.52%

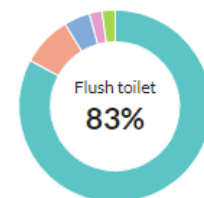
0.8%

Have no access to any toilets

about two-thirds of the rate in Gauteng: 1.19%

less than a fifth of the rate in South Africa: 5.22%

Population by toilet facilities



Source: Census 2011

Chart Options

Figure 17: Ward 87 Housing and Service Delivery

Approximately 87.2% have access to flush or chemical toilets whilst 0.8% of the population have no access to toilets.

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(b) Description of the current land uses.

The study area, which is 603 hectares (ha) in extent, and comprises of mostly undeveloped land interspersed with gravel roads and is located within a rural setting characterised by agricultural holdings. Historical disturbances within the project area comprises of agricultural fields located within the northern portion of the study area, and an existing, depleted quarry of 16.78ha in extent located within the southeast. The proposed study area is situated on privately owned land and is used for grazing and cattle farming. The road infrastructure within the area is poorly developed and comprises of unsurfaced roads. The Roodeplaat dam is situated approximately 18km east of the proposed study area with the N1 that borders the site to the east.

(c) Description of specific environmental features and infrastructure on the site.

Refer to the sensitivity map (**Figure 18**) which shows sensitive environmental features within the study area. During the EIA phase of the project specialist assessment will be conducted whereby this section of the report will be updated.

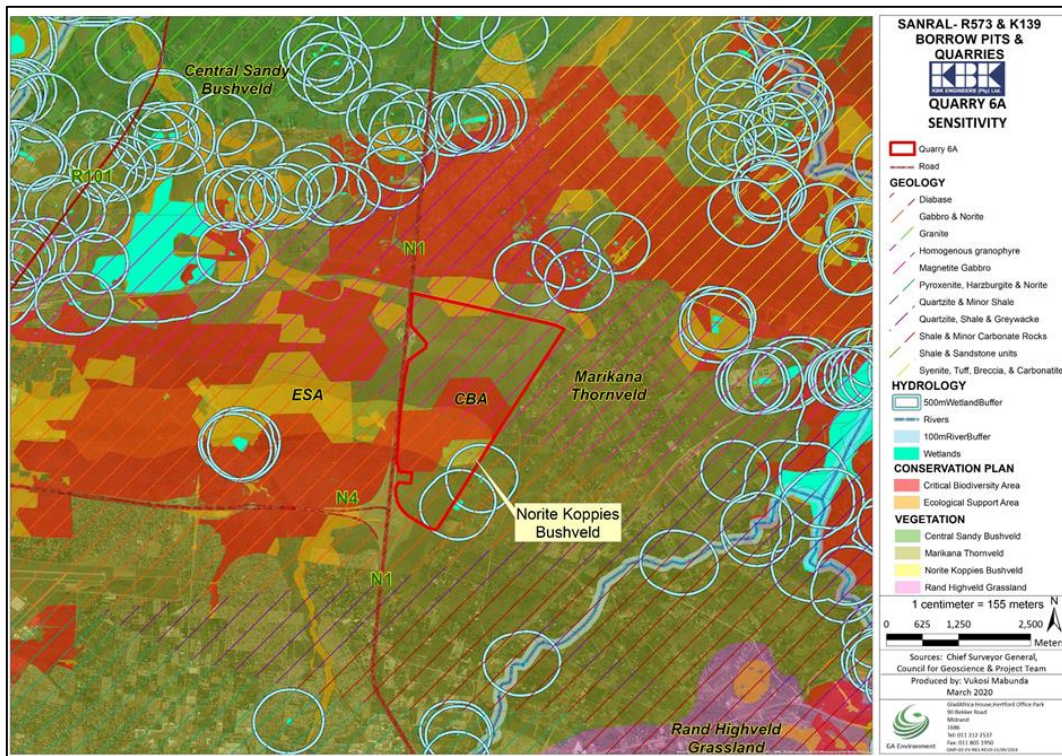


Figure 18: Sensitivity Map

No infrastructure was identified on site other than a water holes for the cattle, a kraal and existing fencing (**Figure 19**).

Scoping Report



Figure 19: Infrastructure identified on site

(d) Environmental and current land use map

(Show all environmental, and current land use features)

Figure 20 shows the landcover of the current Quarry 6A site and the surrounding land cover. The area east and south of the site is dominated by an urban/built up area. The area towards the north and east as well as on site are characterised woodland and thicket bushland, bush clumps and high fynbos. On site, the remains of an existing quarry is evident with pockets of wetland towards the north and further south.

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In accordance with the NEMA EIA regulations (Government Notice R.982, promulgated in terms of Section 24 of the National Environmental Management Act, 1998 (Act 107 of 1998)), as amended the Environmental Assessment Practitioner (EAP) is required to assess the significance of potential impacts in terms of the following criteria as outlined in Appendix 1:

- cumulative impacts;
- nature, significance and consequences of the impact and risk;
- extent and duration of the impact and risk;
- probability of the impact and risk occurring;
- the degree to which the impact and risk can be reversed;
- the degree to which the impact and risk may cause irreplaceable loss of resources; and
- the degree to which the impact and risk can be avoided, managed, or mitigated.

Activities within the framework of the proposed development and their respective construction and operational phases, give rise to certain impacts. For the purpose of assessing these impacts, the project has been divided into three phases from which impacting activities can be identified, namely:

Construction phase:

This phase refers to all the pre-construction and construction related activities on site, until the contractor leaves the site.

Operational phase:

This includes all post construction activities, including the operation and maintenance of the proposed development.

The assessment of the impacts will be conducted according to a synthesis of criteria required by the integrated environmental management procedure. The methodology that will be used comprises of the following four steps:

- Step 1: Identification of positive and negative impacts of the project;
- Step 2: Identification of the significance rating of the impact before mitigation;
- Step 3: Identification of the mitigation measure and the mitigation efficiency; and
- Step 4; Identification of the significance rating of the impact after mitigation;

Activities that will be undertaken to give effect to the proposed development gives rise to certain impacts. For the purpose of assessing these impacts, the project has been divided into the following phases discussed in **Table 8**.

Table 8: Project phases in a development

PHASES OF A PROJECT IN WHICH IMPACTS WILL OCCUR
Status Quo
The study area as it currently exists.
Pre-construction phase
All activities on site up to the start of construction, not including the transport of

Scoping Report

materials, but including the initial site preparations. This also includes the impacts that would be associated with planning.
Construction phase
All the construction and construction-related activities on site, until the contractor leaves the site.
Operational phase
All activities after construction, including the operation of the Quarry.
The activities arising from each of the relevant phases have been included in the impacts assessment tables. The assessment endeavours to identify activities that would require environmental management actions to mitigate the impacts arising from them. The criteria against which the activities were assessed are given in the next section.

Assessment Criteria

The assessment of the impacts will be conducted according to a synthesis of criteria required by the guideline documents to the EIA regulations (2006) and integrated environmental management series published by the Department of Environmental Affairs and Tourism (DEAT) currently DEFF. In addition to this, it is a requirement of (NEMA 2014 Regulations (as amended), Appendices 1 and 2 that an Impact and Risk Assessment process be undertaken for Basic Assessments and Environmental Impact Reporting. The Assessment Criteria is based on the following:

- Nature of Impact,
- Extent;
- Duration;
- Intensity;
- Probability;
- Determination of significance; and
- Reversibility of impact.

Each of these is explained in **Table 9**.

Table 9: Methodology used in rating impacts of a project

ASSESSMENT CRITERIA
a) Nature of Impact
This is an appraisal of the type of effect the proposed activity would have on the affected environmental component. The description should include what is being affected, and how.
b) Extent
The physical and spatial size of the impact. This is classified as:
i) Site
The impact could affect the whole, or a measurable portion of the site.
ii) Local
The impacted area extends only as far as the activity, e.g. a footprint of the specific activity

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ASSESSMENT CRITERIA

iii) Regional

The impact could affect areas such as neighbouring farms, transport corridors and the adjoining towns.

c) Duration

The lifetime of the impact; this is measured in the context of the lifetime of the proposed project.

Short term

The impact will either disappear with mitigation or will be mitigated through natural process in a span shorter than any of the phases.

ii) Medium term

The impact will last up to the end of the phases, whereafter it will be entirely negated.

iii) Long term

The impact will continue or last for the entire operational life of the development but will be mitigated by direct human action or by natural processes thereafter.

iv) Permanent

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

d) Intensity

Is the impact destructive or benign? Does it destroy the impacted environment, alter its functioning, or slightly alter it? These are rated as:

i) Low

The impact alters the affected environment in such a way that the natural processes or functions are not affected.

ii) Medium (Moderate)

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

iii) 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.

e) 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 are rated as follows:

i) Improbable

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

ii) Probable

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

Scoping Report

iii) Highly probable

It is most likely that the impacts will occur at some or other stage of the development. Plans must be drawn up before the undertaking of the activity.

iv) Definite

The impact will take place regardless of any prevention plans, and mitigation actions or contingency plans are relied on to contain the effect.

f) Determination of significance

Significance is 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 are rated as follows:

i) No significance

The impact is not substantial and does not require any mitigation.

ii) Low

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

iii) Medium (Moderate)

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

iv) High

The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable.

g) Reversibility of impact

Natural or human aided intervention:

(i) Irreversible

The impact will be permanent.

(ii) Short term

The impact is reversible within two years after construction.

(iii) Long term

The impact is reversible within 2 to 10 years after construction.

f) The degree to which the impact can cause irreplaceable loss of resources

(i) Low

The impact result in the loss of resources but the natural, cultural, and social processes/functions are not affected.

(ii) Medium

The loss of resources occurs but natural cultural and social processes continue, albeit in a modified manner.

(iii) High

The impact result in irreplaceable loss of resource.

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(vii) 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)

Table 10: Positive and Negative Impacts Associated with Quarry 6A

Environmental Aspect	Project Phase	Potential Impact	Impact (Positive/Negative)
Fauna	Construction/ Operation	<ul style="list-style-type: none"> • Clearing of vegetation and fencing of the study area can result in disruption of the faunal habitat; • Fencing of the Quarry area could limit movement of faunal species; • Movement of construction vehicles and mining activities (noise and dust) could adversely affect fauna in terms of loss of species diversity; and • Loss of species diversity. 	Negative
Flora	Construction / Operation	<ul style="list-style-type: none"> • Loss of floral species diversity may take place during the construction and operational phases of the project as a result of initial clearing of vegetation during site establishment and preparing surface areas for excavation activities and stockpiling; • Initial clearing of vegetation during site establishment and preparing surface areas for excavation activities and stockpiling; and • Clearance of vegetation for construction activities may result in proliferation of alien and invasive floral species may outcompete certain species. 	Negative
Soils and land Capability	Construction	<ul style="list-style-type: none"> • The commissioning of a Quarry on the proposed site can result in loss of land use for cattle farming; 	Negative
	Operation	<ul style="list-style-type: none"> • Potential disturbance on soil includes compaction owing to vehicle traffic and increased surface runoff from the compacted areas; • Soil pollution may emanate from petroleum hydrocarbon contamination owing to vehicle and machinery breakdown; • The proposed construction of the Quarry will require the clearance of vegetation and stripping of topsoil resulting in the loss of the original spatial distribution of the natural soil forms and horizon sequences; and • Loss of topography and drainage patterns. 	Negative

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Surface Water	Construction/operation	<ul style="list-style-type: none"> • Surface water runoff due to mining activities can result in soil erosion and impact surface water quality; and • The compaction of soil and the clearing of vegetation during the operational and construction phase will result increased surface runoff and soil erosion. 	Negative
Groundwater	Construction/Operation	<ul style="list-style-type: none"> • Potential contamination of groundwater due to spillages and leaks of hazardous substances, improper stormwater management, and fuel/oil leaks from vehicles during the operation of the Quarry; • Potential use of groundwater for mining operations could lower the levels of the aquifer; and • Impact of the geology during the mining operations could potentially disturb the flow patterns of the groundwater. 	Negative
Air Quality	Construction	<ul style="list-style-type: none"> • Emissions will be generated during site clearing (removal of vegetation); • Movement of vehicles and site establishment; and • Undertaking of a baseline survey of dust fall. 	Negative
	Operation	<ul style="list-style-type: none"> • Implementation of a dust fall monitoring programme; • Decrease in the air quality due to particulate emissions from blasting activities; screening, and material handling; • Vehicle movement on unsurfaced haul roads resulting in dust emissions and release of carbon emissions; • Excessive dust levels as a result of blasting; • Wind erosion on exposed areas; and • Increase in traffic on the local road networks resulting in increased air emissions. 	Negative
Noise	Construction	<ul style="list-style-type: none"> • Activities undertaken during the construction/establishment of the Quarry will generate noise. 	Negative
	Operation	<ul style="list-style-type: none"> • Noise will be generated from the blasting and crushing activities undertaken; • Noise generation as a result of haulage vehicles; and • Excessive noise levels as a result of blasting. 	Negative
Traffic	Construction/Operation	<ul style="list-style-type: none"> • Increase in traffic on the local road networks to due haulage. 	Negative

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Visual	Construction/Operation Operation	<ul style="list-style-type: none"> • Reduction in visual quality due to the removal of vegetation; • During the construction phase of the project it is anticipated that construction vehicles in the area as well as excavations will have a potentially negative impact on the surrounding land use; and • The placement of stockpiles could result in visual intrusion on the adjacent landowners. 	Negative
Cultural and Heritage	Construction/Operation Operation	<ul style="list-style-type: none"> • Risk of heritage and cultural resources being damaged / destroyed through mining activities. 	Negative
Waste Management	Construction	<ul style="list-style-type: none"> • The Clearing of site will result in waste generation (vegetation). 	Negative
	Operation	<ul style="list-style-type: none"> • Building and domestic waste will be generated during the operation of the Quarry; • Littering and improper waste storage may attract vermin resulting in a negative visual appeal of the area; and • Improper disposal of hazardous waste (e.g. chemicals, oils, soil contaminated by spillages, diesel rags). 	Negative
Socio-economic Environment	Construction	<ul style="list-style-type: none"> • Potential loss of Urban Development areas as per GPEMF; • Temporary loss of existing land use through clearance of mining areas; • Temporary use of local road network by delivery and haul vehicles; • Damage to existing infrastructure eg fences, water hole etc; • Population influx due to job seekers to the area which could pose a number of risks to the local community; and • Creation of local employment and business opportunities. 	Negative
	Operation	<ul style="list-style-type: none"> • The mining of the Quarry will result in road material for the upgrading of the R573 and upgrades of local link roads resulting in improved road safety, improved access, improved mobility and promotion of future land use development in the area; • Proposed development would create a number of local employment and business opportunities during operation; and • Opportunity for skills development and on-site training. 	Positive

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- (viii) **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).

Mitigation measure for the proposed Quarry have been provided in Section 9. This section will be presented in detail once the specialist assessments have been undertaken and recommendations provided.

- (ix) **The outcome of the site selection Matrix. Final Site Layout Plan**
Provide a final site layout plan as informed by the process of consultation with interested and affected parties)

Figure 21 provides a Site layout plan of the preferred alternative.

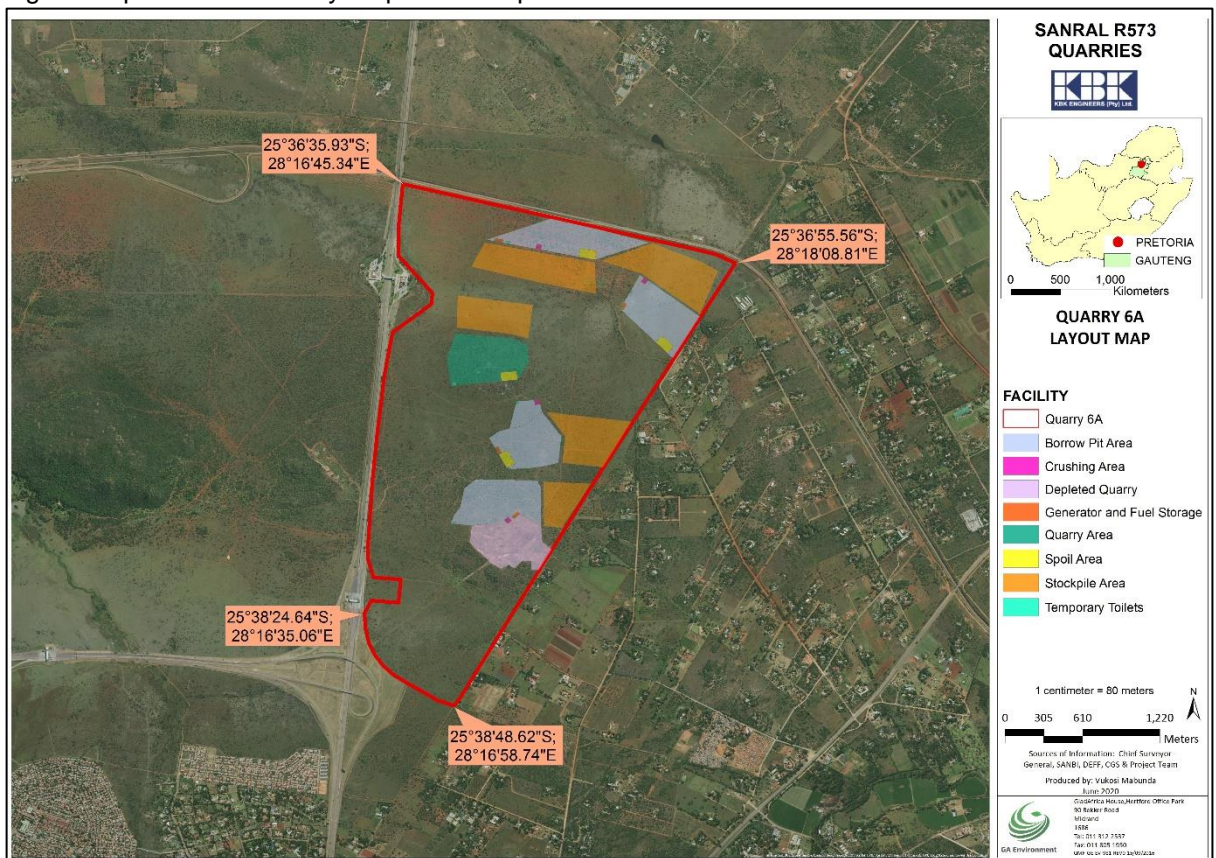


Figure 21: Site Layout (preferred alternative)

The site layout as presented in Figure 21 will be assessed during the EIA phase.

- (x) **Motivation where no alternative sites were considered**

Not applicable as alternatives were considered and provided in Section 2h of the report.

- (xi) **Statement motivating the preferred site**

(Provide a statement motivation the final site layout that is proposed)

Quarry 6A is considered to be adequately sized to allow for stockpiling of material, establishment of the Contractors camp, and crushing equipment. The site is relatively undeveloped with a depleted Quarry towards the south east. The material testing undertaken

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by the geotechnical specialists revealed that the site will provide a viable source of material for the upgrade of the R573.

(xii) Plan of study for the Environmental Impact Assessment process

1. Description of alternatives to be considered including the option of not going ahead with the activity

Refer to Section 2h for a description of the alternatives that have been considered.

2. Description of the aspects to be assessed as part of the environmental impact assessment process

(The EAP must undertake to assess the aspects affected by each individual mining activity whether listed or not, including activities such as blasting, Loading, hauling and transport, and mining activities such as Excavations, stockpiles, discard dumps or dams, water supply dams and boreholes, accommodation, offices, ablution, stores, workshops, processing plant, storm water control, berms, roads, pipelines, power lines, conveyors, etc...etc...etc.).

An aspect is anything (activity, development, element etc.) that can bring about impacts. The following environmental aspects have been identified by the EAP, and could potentially cause impacts during the construction and operational phase of the project:

- Soils Land Use Land Capability;
- Terrestrial Ecology;
- Surface water;
- Groundwater;
- Air Quality;
- Cultural and Heritage;
- Visual Environment;
- Social Environment;
- Waste Management;
- Traffic and Safety; and
- Noise impacts.

The above-mentioned aspects will be further assessed during the EIA phase of the project.

Detailed studies focused on the development footprint will be provided during the EIA Phase. These studies are as follows:

- Terrestrial Biodiversity Assessment;
- Heritage Impact Assessment;
- Wetland and Aquatic Assessment.

The findings and recommendations of the aforementioned studies will be included in the EIA report.

3. Description of aspects to be assessed by specialists

Terrestrial Biodiversity Assessment

Desktop studies indicate that the central portion of the study area is indicated to be associated with a CBA and the area along its northern boundary is indicated to fall within an ESA. An area of more than 20 hectares will be cleared in order to accommodate the proposed Quarry. A Terrestrial Biodiversity Assessment will be undertaken to assess the potential impacts that may occur as a result of the proposed project and to provide site specific mitigation measures and ongoing management measures that will be required to reduce such impacts should the project be approved.

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The Terms of Reference for the Terrestrial Biodiversity Assessment include the following:

- To provide an overview of applicable environmental legislation as well as national and regional planning guidelines to be considered in planning the project;
- To provide a broad description of the biophysical characteristics of the project area and their surroundings as applicable to the terrestrial biodiversity assessment;
- To categorise and describe the vegetation and habitat present within the project area according to relatively homogeneous habitat units and to provide an overview of vegetation structure, floral species composition (including alien species), faunal associations and species diversity of each habitat unit;
- To identify floral and faunal Species of Conservation Concern (SCC) that could potentially occur in the project area and surrounds, to confirm their presence where possible and to identify whether suitable habitat for such species is available;
- To provide an indication of the conservation importance and ecological sensitivity of each habitat unit identified within the project area and to identify No Go areas where applicable; and
- To assess the potential impacts that may occur as a result of the proposed project and to provide site-specific mitigation measures and ongoing management measures that will be required to reduce such impacts should the project be approved.
- Provide rehabilitation measures for the rehabilitation phase of the proposed Quarry.

Wetland & Aquatic Assessment

According to the SANBI data set National Freshwater Ecosystem Priority Area (NFEPA) wetlands were present towards the south east of the site. The Terms of Reference for the Wetland Assessment include the following:

- Delineate the wetland and riparian areas;
- Classify the watercourse according to the system proposed in the national wetlands inventory if relevant,
- Undertake functional and integrity assessment of wetlands areas within the area assessed as specified in General Notice 267 of 24 March 2017;
- Undertake an impact assessment as specified in the NEMA 2014 regulations,
- Undertake a risk assessment as specified in General Notice 509 in published in the Government Gazette 40713 of 24 March 2017,
- Recommend suitable buffer zones, both generic (as required in GDARD, 2014) and scientific as specified in General Notice 267 of 24 March 2017, following Macfarlane *et al* 2015; and
- Discuss appropriate mitigation and management procedures relevant to the conserving wetland areas on the site.
- Rehabilitation plan/measures for the wetland.

Heritage Impact Assessment

The proposed activities trigger the need for a Heritage Impact Assessment. This is based on Section 38 of the National Heritage Resources Act, 1999 (Act No. 25 of 1999).

The Terms of Reference for the Heritage Impact Assessment include the following:

- Undertaking of a Desktop Assessment to obtain background information regarding the know Heritage resources with the proposed development site;
- Identifying of possible archaeological, cultural, and historic sites within the proposed development area during the site assessment;
- Evaluate the potential impacts of construction, operation, and maintenance of the proposed development on archaeological, cultural, and historical resources;

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- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural, or historical importance; and
- Identifying key uncertainties and risks.

4. Proposed method of assessing the environmental aspects including the proposed method of assessing alternatives

Please refer to **Section vi** regarding the Methodology used in determining the significance of environmental impacts.

5. The proposed method of assessing duration significance

Please refer to **Section vi** regarding the Methodology used in determining the significance of environmental impacts.

6. The stages at which the competent authority will be consulted

The competent authority for the proposed Quarry is the Department of Mineral Resources and Energy (DMRE). The DMRE has already been consulted and will be consulted during the following stages of the Scoping and EIA Process (Figure 21).

Pre-Application Meeting

A pre-consultation meeting was held with the DMRE on the 24th of January 2020 to confirm the authorisation requirements. The attendance registers and the minutes of the meeting are provided in **Appendix E** of this report.

Scoping Phase

The application for Environmental Authorisation and the Draft Scoping report will be submitted to the DMRE for review and comment (30-day legislated comment period). Once the 30-day comment period has lapsed and the DMRE has provided their comments on the Draft Report, the Final Scoping report will be submitted to the DMRE. The Draft scoping report will be submitted with the Mining Right Application form and a Reference Number will be issued.

EIA Phase

The draft EIA report will be compiled and submitted to the DMRE after receiving approval from DMR on the FSR, as per the 2014 EIA Regulations (as amended).

The process that will be followed is diagrammatically presented in **Figure 22**.

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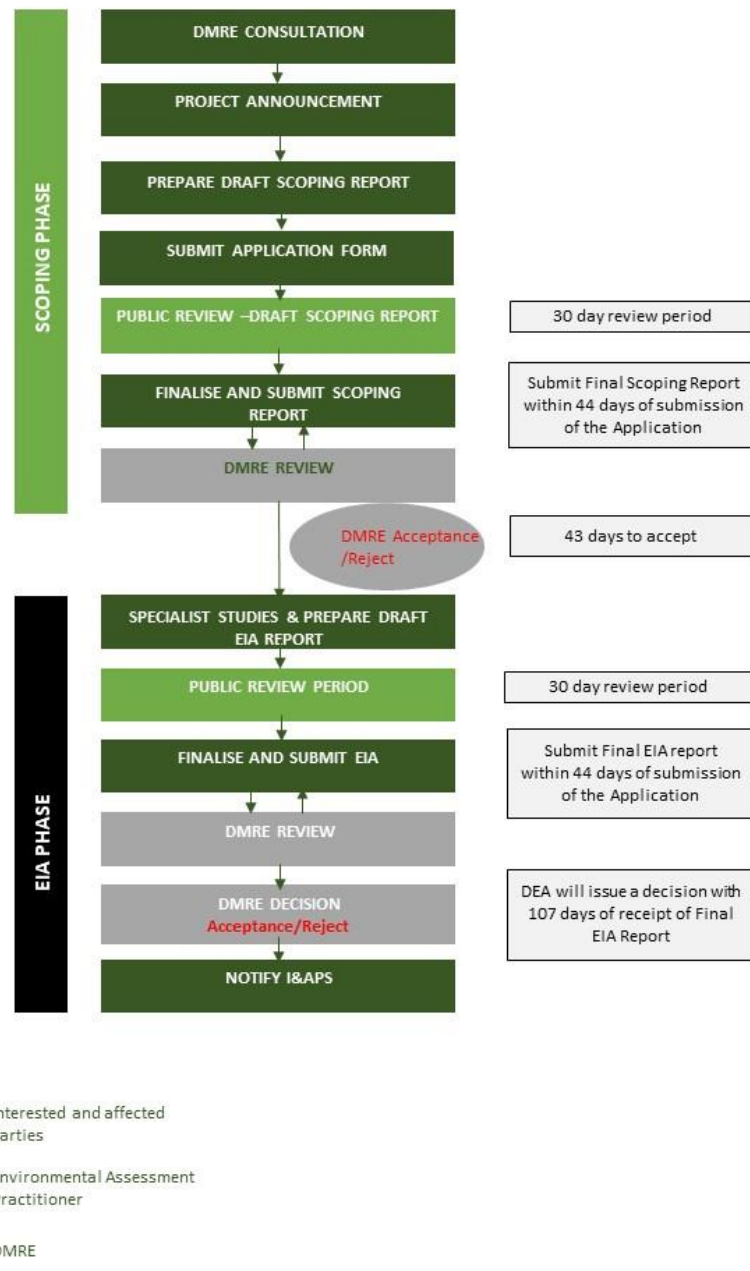


Figure 22: Scoping and EIA Process

7. Particulars of the public participation process with regard to the Impact Assessment process that will be conducted

a) Steps to be taken to notify interested and affected parties

(These steps must include the steps that will be taken to ensure consultation with the affected parties identified in (h) (ii) herein).

Public participation during the EIA phase will continue similarly to the process undertaken for the Scoping Phase. The key tasks that will form part of the public participation process in the EIA phase include:

- Ongoing identification of I&APs;

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- Placement of the Draft EIA Report for public comment;
- Continued consultation within key stakeholders and I&APs; and
- Continued recording of issues and responses.

b) Details of the engagement process to be followed

(Describe the process to be 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 and records of such consultation will be required in the EIA at a later stage).

Refer to **Section 7a** which provides details of the engagement process to be undertaken.

c) Description of the information to be provided to Interested and Affected Parties

(Information to be provided must include the initial site plan and sufficient detail of the intended operation and the typical impacts of each activity, to enable them to assess what impact the activities will have on them or on the use of their land).

Section 7a provides a detailed description of the Public Participation process that has/will be undertaken:

- A Notification Letter has been compiled and distributed electronically and door to door to adjacent landowners and potentially affected Interested and Affected Parties. The document provided a background on the project, the proposed activities, including a locality map showing the site boundaries as well as information on how one can register as an Interested and Affected Party (I&AP) on the project in order to be able to be kept abreast of all developments;
- This Draft Scoping report has been made available for public review. The report will be placed at a public venue within close proximity of the proposed development, which is dependent on the COVID 19 directions issued at the time by the Minister of Environment, Forestry and Fisheries. An electronic version of the report will also be made available to the public by providing them with a Uniform Resource Locator (URL) link where the report can be downloaded;
- The draft EIR/EMP will be made available for public review and comments including all specialist assessments undertaken for the proposed project.

8. Description of the tasks that will be undertaken during the environmental impact assessment process

In order to adequately assess and provide sufficient responses to the issues raised during the Scoping Phase, the following tasks will be undertaken during the EIA Phase:

- Reviewing the approval for the Scoping and Plan of Study for EIA including the relevant conditions of approval;
- Ongoing public participation;
- Undertaking of specialist investigations on all the significant issues identified and raised in the Scoping Process;
- Evaluate and summarise the findings of the specialist reports;
- Undertaking a detailed impact assessment process, assessing alternatives, and providing potential mitigation measures;
- Documenting the findings of the Impact Assessment into an Environmental Impact Report (EIR); and

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- Compiling an Environmental Management Programme.

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9. Measures to avoid, reverse, mitigate, or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored

Table 11: Mitigations Measures to Manage Identified Impacts

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, and 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 through rehabilitation.	POTENTIAL FOR RESIDUAL RISK
Clear and Grub, Mining Activities, Civil Work	<ul style="list-style-type: none"> • Loss of Flora 	<ul style="list-style-type: none"> • Amount of vegetation, particularly indigenous vegetation cleared should be limited to only what is required. • All permanent and temporary project infrastructure should avoid areas of increased ecological sensitivity as far as possible. • Construction vehicles should be restricted to travelling only on designated roadways, to limit the ecological footprint of the proposed development activities; and • The site shall be rehabilitated as far as possible to its natural state after construction. 	Medium
Clear and Grub, Mining Activities, Civil Work	<ul style="list-style-type: none"> • Loss of Fauna 	<ul style="list-style-type: none"> • No areas should be cleared of natural vegetation if not required for construction and operational purposes of the quarries and borrow pits; • All permanent and temporary project infrastructure should avoid areas of increased ecological sensitivity as far as possible; • Construction vehicles should be restricted to travelling on designated roadways only and vehicle access beyond the designated project footprint areas should be prohibited to minimize/avoid faunal mortalities; and • No wild animals may under any circumstance be handled, removed, or be interfered with by construction workers. 	Medium
Site Establishment and infrastructure establishment	<ul style="list-style-type: none"> • Loss of soil resources and land capability through pollution and physical disturbance 	<ul style="list-style-type: none"> • Topsoil should be excavated and stockpiled separately from the subsoils to be used during the rehabilitation; • Drip trays shall be provided in construction areas for stationary plant and for "parked" plant; Drip trays, sumps and bunds must be emptied regularly, especially before a known rain event and after a rain event, and the contents disposed of at a licensed disposal facility; 	Low

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		<ul style="list-style-type: none"> All vehicles and equipment shall be kept in good working order and serviced regularly; Leaking equipment shall be repaired immediately or removed from the Site; and A stormwater management plan, must be compiled and implemented by the Contractor to take the increased surface water run-off rates and volumes and their erosion potential into consideration. 	
Clear and Grub, Mining Activities, Crushing, Civil Work	<ul style="list-style-type: none"> Impact on heritage and cultural resources 	<ul style="list-style-type: none"> Should any graves be uncovered during the construction phase of the project, the applicant and appointed ECO must ensure in terms of section 38(6) of the Act, the responsible heritage resources authority as well as the South African Police Service (SAPS) are informed; and The ECO must train the Contractor to recognise any heritage features. Should there be a sign of such objects, construction must halt in that area immediately and a suitably qualified heritage specialist must be called to investigate through the ECO. 	Low
Clear and Grub, Mining Activities, Crushing, Civil Work	<ul style="list-style-type: none"> Pollution of surface water resources 	<ul style="list-style-type: none"> Roads should be kept in serviceable condition to minimise erosion by rainfall runoff and vehicle use; A stormwater management plan, must be compiled and implemented by the Contractor to take the increased surface water run-off rates and volumes and their erosion potential into consideration; A surface water pollution prevention plan shall be compiled and implemented by the contractor; Use bund for temporary storing of hazardous waste. 	Low
Blasting, crushing and operation of machinery	<ul style="list-style-type: none"> Noise Pollution 	<ul style="list-style-type: none"> The size of explosive charges used for blasting (if required) should be optimised so as to balance breaking capacity against minimising any vibration impact and fly-rock; Survey potentially affected structures prior to and after blasting; Adjacent landowners and businesses must be notified well in advance about blasting activities and appropriate precautionary measures must be taken; All construction plant and other equipment must be in a good working order to reduce possible noise pollution; The contractor shall implement a blast management plan; and The Contractor shall employ industry standard methods to control the impact of blasting and limit the risk of damage to buildings and structures by reducing blast vibrations induced in the rock mass, eliminating fly rock and limiting air-blast and noise to acceptable levels; and 	Low

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		<ul style="list-style-type: none"> Undertake excavations, blasting and crushing only after 06:00 in the morning and before 18:00 in the evening. No work allowed on Sundays. 	
Blasting, crushing and operation of machinery' Quarry Operation	<ul style="list-style-type: none"> Air Quality 	<ul style="list-style-type: none"> Implement dust suppression measures in all areas that will be affected by construction activities and where dust will be generated. Dust suppression must also be undertaken during windy and dry weather conditions; A continuous dust monitoring process needs to be undertaken during construction/operation; Restrict the project footprint to only what is required; Stockpiles shall be protected from wind erosion; and Heavy vehicles and machinery should be serviced regularly to minimise exhaust fume pollution; 	Low
Haulage of Material and transportation	<ul style="list-style-type: none"> Traffic Impact 	<ul style="list-style-type: none"> A traffic management plan shall be compiled and implemented by the Contractor; and The number of haulage vehicles shall be controlled per day. 	Low
Establishment of the quarry	<ul style="list-style-type: none"> Influx of job seekers 	<ul style="list-style-type: none"> Employment and procurement opportunities provided to identified communities. 	Low
Operation of the Quarry	<ul style="list-style-type: none"> Creation of employment and business opportunities 	<ul style="list-style-type: none"> The Contractor must ensure that the recruitment process is conducted through the community structures established for the contract. 	Low
Material Stockpiles, Quarry operations & Transportation	<ul style="list-style-type: none"> Visual 	<ul style="list-style-type: none"> Develop material stockpiles only in areas designated on the site plan; Ongoing clearing of alien invasive vegetation in the disturbed areas associated with the works; and Reinstatement and rehabilitation of disturbed areas with vegetation as per the rehabilitation plan or as soon as possible. 	Low
Mining activities, operation of the quarry	<ul style="list-style-type: none"> Waste generation 	<ul style="list-style-type: none"> A waste management plan shall be compiled and implemented by the Contractor. Waste hierarchy principals-reduce, re-use, recycle shall be implemented. Recyclable waste must be kept separate from general waste and taken to a waste recovery / recycling facility; Adequate storage facilities for general and hazardous waste; Waste receptacles with lids (i.e. weather and vermin proof) for management of waste on site; Hazardous waste shall be stored in a bund wall. Disposal of all hazardous waste at a hazardous waste landfill; and General waste shall be disposed at a landfill at least weekly, or more frequently if required. 	Low

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(xiii) Other Information required by the competent Authority

1. Compliance with the provisions of sections 24(4) (a) and (b) read with section 24 (3) (a) and (7) of the National Environmental Management Act (Act 107 of 1998). the EIA report must include the:-

- a) **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, attach the investigation report as **Appendix 2.19.1** and confirm that the applicable mitigation is reflected in 2.5.3; 2.11.6.and 2.12.herein).

The proposed Quarry will be utilised for the upgrades of the R573 Moloto Road and associated link roads. The R573 Moloto Road is one of South Africa's busiest and most important economic routes connecting Gauteng, Mpumalanga, and Limpopo provinces with an extremely high number of buses and light motor vehicles. The road links small towns and rural settlements with the City of Tshwane and carries inter-district traffic between these locations, hence the road is an important regional mobility function but has an equally significant accessibility function (KBK Engineers, 2020). Should the R573 Moloto Road not be maintained, there will be negative impact on the people, their safety and their livelihoods, furthermore vehicular wear and tear and maintenance results in higher living costs. The approval/commissioning of the proposed Quarry will allow for the proposed Moloto Road Upgrade that will benefit not only local communities and residents but also all road users. In terms of local community upliftment, SANRAL has procedures in place in accordance with National Treasury regulations and requirements. Community Development Projects (CDPs) will be identified and included within the larger project, which will include works for smaller contractors. Contract Participation Goal (CPG) targets will be applicable to the proposed project, which will require the Contractor to utilize local labour, sub-contractors and suppliers relative to the total Contract value.

The proposed Quarry will result in a temporary increase in noise and dust levels on the adjacent landowners, these potential impacts will be assessed during the EIA phase of the project.

- b) **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)(f)(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).

The site is not known to contain features of Heritage Sensitivity. A Heritage Impact Assessment (HIA) will be undertaken as part of the EIA phase of the project. The HIA will be made available to the DMRE as an Appendix to the draft EIA report.

(xiv) 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. The EAP must attach such motivation as **Appendix 4**).

Not applicable as alternatives have been assessed.

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(xv) UNDERTAKING REGARDING CORRECTNESS OF INFORMATION

I *Kirthi Peramaul* herewith undertake that the information provided in the foregoing report is correct, and that the comments and inputs from stakeholders and Interested and Affected parties has been correctly recorded in the report.

KPeramaul

Signature of the EAP

DATE:

(xvi) UNDERTAKING REGARDING LEVEL OF AGREEMENT

I *Kirthi Peramaul* herewith undertake that the information provided in the foregoing report is correct, and that the level of agreement with interested and Affected Parties and stakeholders has been correctly recorded and reported herein.

KPeramaul

Signature of the EAP

DATE:

-END-