

**MAY
2016**

**FINAL SCOPING REPORT
Anniedale Quarry on Portion 405 of Vaalkop
and Dadelfontein 885
Msunduzi Local Municipality
Tillite Tech (Pty) Ltd
KZN 30/5/1/3/2/10462MP**



Prepared by



Cell: 082 568 3687
E-mail: josette@enviropro.co.za
Cell: 082 887 4362
E-mail: iain@enviropro.co.za
Phone: 031 765 2942
Fax: 086 549 0342

**This report was prepared by EnviroPro Environmental Consulting in terms of
Appendix 1 to GNR 982**

2 (1) (a) details of (i) the EAP who prepared the report; and (ii) the expertise of the EAP. Please see Appendix A for EAP Declaration and full Curriculum Vitae;

Josette Oberholzer BSc (Hons) MSc EAPSA certified

Tertiary Education:	BSc (Hons) MSc	Zoology By thesis in estuarine fish ecology.
Work Experience:	2001 – 2002 2003 – 2010 2010 – Present	MSc formed part of EIA for National Ports Authority Senior Manager for KSEMS cc. Managing Member of EnviroPro Environmental Consulting

Iain Jourdan Bsc (Hons)

Tertiary Education:	BSc (Hons)	Geographical Science
Work Experience:	2006 – 2007 2007 – 2010 2010 – Present	Environmental Manager service for Inhlanhla Civils (Pty) Ltd Senior Manager for KSEMS cc Managing Member of EnviroPro Environmental Consulting

Stephanie Williams Bsc (Hons) MPhil

Tertiary Education:	BSc (Hons) MPhil	Botany & Ecophysiology Marine & Environmental Law
Work Experience:	2012 2012 – 2014 2014 – Present	Environmental Control Officer for EIMS on the Transnet NMPP Consultant at KSEMS cc Consultants at EnviroPro Environmental Consulting

Executive Summary

Tillite Tech (Pty) Ltd have applied for a Mining Permit to mine stone from a private property along the P338, Msunduzi Municipality, Umgungundlovu District. The mine area is 4.99 hectares in extent and includes all stockpile areas, offices, parking etc. Weekly / bi-monthly controlled blasts will loosen material to create benches in the quarry with the material being screened and crushed on site. The material will be stored in stockpiles, collected by top-loaders and distributed to consumers. The preferred site has been positioned more than 500m away from any infrastructure and servitudes. An alternative site, on the opposite side of the hill was also originally considered and is discussed in the Scoping Report.

The operation of the mine requires a Mining Permit in terms of section 27 of the Mineral and Petroleum Resources Development Act (No. 28 of 2002) and will result in the cumulative clearance of more than 1 hectare of indigenous vegetation. A Scoping Report and Environmental Impact Assessment are therefore in process in terms of section 28 of the National Environmental Management Act (107 of 1998 as amended).

A Final Scoping Report will be submitted to the Department of Mineral Resources (DMR) for approval prior to the release of a Draft Environmental Impact Report (EIR), which will be available to registered Interested and Affected Parties for further comment. The EIR will contain all specialist reports that have been commissioned with more detailed mitigation measures provided for the impacts identified.

The following key impacts and mitigation measures have been identified in the Scoping Report and will be expanded on in the EIR. Areas where specialist input will be required are identified in blue italics:

- **Risk of collapse of the mining face:** A *Mine Works Programme* is currently being prepared which will detail the mining operation, including details on the height and width of the proposed benches to ensure there is no collapse of the mine face. The *Geotechnical Investigation* will also provide recommendations to prevent a collapse.
- **Loss of agricultural land in the Msunduzi Municipality:** This portion of the site has not been used for agriculture and a screening report for the entire site suggests that its potential is low.
- **Increase in heavy truck traffic in the area:** The nature of the activity will result in a localised increase in haulage truck traffic. The site will have direct access onto the P338, which joins the N3 less than 2km east of the site, thereby preventing the need for any trucks to travel on private / residential roads.
- **Generation of flyrock, noise and dust as a result of blasting:** Mitigation is generally applied when mining comes to within 100m of any structure and whenever the ground vibration is likely to cause damage to the structure. There are no structures within 500m of the preferred mine area. The *Blasting Plan* will determine Peak Particle Velocities (PPV) at varying distance intervals from the quarry so that potential impacts on nearby structures can be determined, this will also provide necessary information to adjust timing and size of blasts to minimise potential impacts. Perimeter monitoring of dust will be conducted to monitor dust levels to ensure they remain within legislated limits and dust control mitigation measures will be put in place. The operation of the quarry will generate noise although the topography and increased distance to the nearest residential household are expected to assist in reducing this impact. Where necessary, noise mitigation measures can be implemented.
- **Cumulative impact on the biodiversity due to the loss of vegetation and the impact on fauna:** The *Vegetation Assessment* and *Fauna Assessment* will provide further insight into this cumulative impact on biodiversity. From the desktop study, the site does not fall within a critically endangered or endangered ecosystem and a portion of the area selected lies adjacent to a busy road and a previously mined area.
- **Visual impact:** The preferred mine site is located on the south facing side of the hill, away from the residential households associated with the neighbouring farms. The visual impact on these areas will therefore be reduced, compared to the alternative mine site.
- **Loss of vegetation within the Ngongoni ecosystem:** This impact cannot be avoided as the entire permitted mine area, will ultimately be cleared of vegetation. A *Vegetation Assessment* will confirm the quality of the vegetation associated with the mining area and identify the presence of any threatened, protected or valuable flora species.
- **Poor stormwater management increasing the risk of erosion and risk to water quality in nearby watercourses:** A *Drainage Analysis* will be provided in the *Stormwater Management Programme* to be attached to the EIR. Stormwater Management during operation of the mine will also be discussed in detail in the EIR. The *Wetland and Aquatic Assessment* will determine any potential impacts on nearby watercourses and the catchment at large, however appropriate stormwater management should prevent such impacts from occurring. Clean run off from surrounding slopes will be prevented from entering the quarry by strategically placing berms around the perimeter of the site. Any run off from the quarry areas itself and especially areas where blasting takes place will be directed into a sump at the lowest point of

the site and will not be permitted to leave the site. A desktop *Geohydrological Assessment* will be used to determine risk to groundwater.

Initial mitigation measures for these impacts have been included in the Impacts Table in section 7.0 of the Scoping Report but will be addressed further and in more detail by the relevant specialists in various reports to be submitted with the Draft EIR (indicated in section 8.1 of the Scoping Report).

Contents

Executive Summary.....	2
Section 1: Scope of Work and Location of Activity.....	6
1.1 Project Title	6
1.2 Aim of the Scoping Report.....	6
1.3 Applicant and Independent Consultant Details	6
1.4 A Description of the Activities to Be Undertaken Including Associated Structure and Infrastructure As per Section 2 (d) (ii).....	7
1.5 All Listed and Specific Activities to Be Triggered and Being Applied For as Per Section 2 (d) (i).....	8
1.6 Location Of Activity As Per Section 2 (b)(i)-(iii)	9
Section 2: Alternatives as Per Section 2 (h) (i) and 2 (i) (i).....	12
2.1 Description of Process Followed to Reach Proposed Preferred Activity, Site and Location within the Site as Per Section 2 (h) (i)	12
Section 3: Site Description and Surrounding Land Use as per section 2 (h) (iv).....	16
3.1 Geographical, Physical Characteristics of the Site and Surrounding Land Uses	16
3.2 Surface Water.....	17
3.3 Fauna and Flora	18
3.4 Heritage and Cultural Aspects	20
3.5 Socio-Economic Environment.....	20
Section 4: Policy and Legislative Context.....	21
4.1 Identification of all Legislation, Policies, Plans, Guidelines, Spatial Tools, Municipal Development Planning Frameworks and Instruments As Per Section 3(e)(i) and Compliance of Proposed Activity with Legislation and Policy 2 (e)	21
Section 5: Motivation, Need and Desirability	23
5.1 Need and Desirability as Per Section 2 (f).....	23
5.2 Motivation for Preferred Site, Activity and Technology Alternative as Per Section 2 (h) (x) and (xi).....	23
Section 6: Public Participation as per Section 2 (h) (ii) & (iii) and 2 (i) (vi) & (vii)	24
6.1. Notification of Interested and Affected Parties	24
6.2. Registered Interested and Affected Parties	25
6.3. Comments.....	25
Section 7: Preliminary Impact Assessment as Per Section 2 (h) (v) - (ix)	26
7.1 Methodology to Determine and Rank Nature, Significance and Consequences of Impacts Associated With all Alternative as Per Section 2 (h) (vi) and 2 (i) (v).....	26
7.2 Preferred Site and Layout Alternative.....	27
7.3 Preferred Site and Layout Alternative.....	37
Section 8: Plan of Study for Undertaking the EIA	41
8.1 Description of Aspects to be Assessed in the EIA, including Specialist Input, and Proposed Tasks to be Undertaken as Part of the EIA as Per Section 2 (i) (ii), (iii) and (viii).....	41
8.1.1 Specialist Assessments	41
8.1.1.1 <i>Blasting Plan</i>	41
8.1.1.2 <i>Fauna Assessment</i>	41
8.1.1.3 <i>Geotechnical And Desktop Geohydrological Investigation</i>	41
8.1.1.4 <i>Heritage Impact Assessment</i>	41
8.1.1.5 <i>Mine Works Programme</i>	41
8.1.1.6 <i>Stormwater Management Programme including a Drainage Analysis</i>	41
8.1.1.7 <i>Vegetation Assessment</i>	42
8.1.1.8 Wetland and Aquatic Assessment	42
8.1.2 Other Proposed Tasks	43
8.2 Methodology for Assessment of Environmental Aspects as Per Section 2 (i) (iv), (v) and (ix)	44
8.1 Financial Provisions	44
8.2 Conclusion.....	46

Appendices

Appendix A: EAP Declaration and Curriculum Vitae	47
Appendix B: Proof of Placement of Notice Board	48
Appendix C: Adverts	49
Appendix D: Proof of Notification	50
Appendix E: Registered I &Aps	51
Appendix F: Comments and Response Table and Comments Received	52
Appendix G: Impacts Scoring Matrix.....	53

Section 1: Scope of Work and Location of Activity

1.1 Project Title

Anniedale Quarry located within the Msunduzi Local Municipality.

1.2 Aim of the Scoping Report

As per Appendix 2 of the Environmental Impact Assessment Regulations¹, the objective of the scoping process is to, "through a consultative process-

- 1) Identify the relevant policies and legislation relevant to the activity;
- 2) Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;
- 3) Identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking process;
- 4) 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;
- 5) Identify the key issues to be addressed in the assessment phase;
- 6) 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
- 7) 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."

The Scoping Report therefore aims to provide registered Interested and Affected Parties (I & APs) with sufficient information to gain an understanding of the project and the preferred site alternative so that they can provide meaningful input for further investigation in the Environmental Impact Report (EIR). Opportunity to provide comments on the scoping report will be provided and meetings held on request if needed to clarify or discuss aspects of the application. The EIR will be produced after the final Scoping Report has been accepted by the DMR, and will provide more detail on the mining process, addresses concerns raised during the "Scoping Phase" and will include specialist input on impacts identified by the independent Environmental Assessment Practitioner (EAP; see section 7.0 of the Scoping Report for the impacts section).

All registered I & APs will be given a legislated 30 day comment period to comment on the Draft Scoping Report and then later on the Draft EIR, before these reports are submitted to the Department of Mineral Resources (DMR)². Comments are to be submitted to the EnviroPro Consultant whose details are provided below.

1.3 Applicant and Independent Consultant Details

ITEM	APPLICANT CONTACT DETAILS
Name	Tillite Tech (Pty) Ltd
Tel no	031 700 2099
E-mail address	peter@tillitetechnology.co.za
Postal address	39 Alexander Road, Seasons Park, Westmead, Durban, 3610

ITEM	CONSULTANT CONTACT DETAILS
Name	EnviroPro / Stephanie Williams and Josette Oberholzer
Tel no	031 765 2942
Fax no:	086 549 0342
Cellular no	083 929 4662

¹ Environmental Impact Assessment Regulations published on the 04th December 2014 in Government Gazette No. 38282 notice R982.

² "Timeframes" are outlined in Chapter 2 of the 2014 EIA Regulations.

E-mail address	steph@enviropro.co.za
Postal address	P.O Box 1391 Kloof 3640

1.4 A Description of the Activities to Be Undertaken Including Associated Structure and Infrastructure As per Section 2 (d) (ii)

Tillite Tech (Pty) Ltd have applied for a Mining Permit in terms of section 27 of the Mineral and Petroleum Resources Development Act (No. 28 of 2002), to mine stone on a privately owned portion of land in Ward 37 of the Msunduzi Local Municipality, Umgungundlovu District. Nikkel Trading 535 (Pty) Ltd own Portion 405 of Farm Vaalkop and Dadelfontein 885, where the mining will take place (proof of landowner is provided in Appendix D).

The entire property is 178.16 hectares in extent. The mining area, including all stockpile areas, offices, parking etc. will ultimately measure a total area of 4.99 hectares.

Construction

There will be very little activity associated with the construction phase apart from establishing a site office and setting up the screener and crusher in the demarcated areas. The site has existing dirt access off the P338 and is located approximately 1.8km west of the N3 highway (shown in white in Figure 2). Access to the mine area will be restricted and controlled during operation. The applicant will commence with removing material using excavators on approval of this application.

Operation

Mining will be carried out in phases so that only portions of the 4.99 hectare site will be cleared at any one time. In the long term, the activity will result in the clearance of more than 1 hectare of indigenous vegetation from the property, triggering an Environmental Impact Assessment (EIA).

Blasting will be required either weekly or bi monthly to soften material so that it can be removed by excavator. A stone crusher and screening plant will also be used on the site. The crusher will be used to reduce the size of larger stones to a finer grade. This will increase the range of consumers depending on the size of stone provided by the quarry (i.e. larger stones required for French drains or landscaping compared to the crushed smaller stones used for the construction of roads). The blasting, crushing and screening of material on site will qualify as primary processing of the mined material and therefore a Scoping/EIA process applies (see section below).

A Mine Works Plans is currently being prepared which will describe the mining methodology in detail, however the mining operation can be summarised as follows:

- The permitted area to be mined will be demarcated.
- The engineer will establish access for the plant and plan out the excavation approach.
- A topsoil storage site will be established for storage of topsoil removed during the initial clearing. This will be retained for use in rehabilitation at a later stage.
- Overburden will be cleared using an excavator and soft material cut back.
- Controlled blasts will loosen material to create benches (minimum of 30m wide and ideal bench height of 10-12m, to be confirmed in the Mine Works Plan).
- Blasting to be conducted during day light hours only, while trucks may operate 18 hours a day, depending on demand, Monday to Saturdays.
- A Blasting Plan will be submitted as part of the EIR, which will provide more detail on the frequency and intensity of the blasting required.
- Material will be transported to the crushing and screening plant on site for processing.
- Material collected by top-loaders and distributed to consumers.
- All activity will be monitored and managed by a site foreman and flag men will be placed to ensure safe operation of the earth moving equipment in and out of the quarry.

This process will be confirmed and described in more detail in the Mine Works Plan, to be attached to the EIR. The location of the various activities in the mine area will be included in the EIR.

Rehabilitation/ Decommissioning

On decommissioning, the processing equipment and offices will need to be removed, the roads ripped and rehabilitated. The quarry will need to be rehabilitated by shaping slopes and ensuring that there is no loose material or areas where slippage could occur. Topsoil will be re-laid over exposed areas and indigenous grassland species re-introduced.

Before the quarry is legally abandoned, the DMR requirements of long-term drainage, environmental and public access issues will be adequately considered and controlled. Adequate geotechnical data is normally available at the time of a quarry closure to address all long-term geotechnical concerns regarding the abandonment of the mine. By making geotechnical engineering input to the quarry planning and design process an integral part of the mining operation, improvements can be made to quarry safety, productivity, economic efficiency as well as closing concerns when abandoning the mine.

A number of environmental impacts may remain after a site has been mined as the area may be vulnerable to erosion. Stormwater flow must be managed by placing diversion berms and ditches at the top of the slope which will act to divert and slow water flow down the slope. The ditch and berms will be vegetated. Even with rehabilitation, an excavated area will remain on the hillside. The visual aspect of this will be mitigated as far as possible through shaping, re-vegetation and screening with vegetation. Rehabilitation measures will be further guided by specialist findings in the EIR.

On closure, the aim of the rehabilitation will be to reduce visual and safety impacts and to control risk of erosion and slippage. The following key points must be followed to ensure appropriate closure. These will be included in the Environmental Management Programme attached to the EIR.

- Rehabilitation will occur as soon as practically possible on completion of mining, following the cessation of the work in a specific section.
- No more than one month will pass between cessation of mining and rehabilitation.
- Any infrastructure erected for mining will be demolished and removed.
- All equipment, concrete footings, fencing, etc. will be removed from site.
- All waste will be removed from site and disposed of at an approved landfill.
- Soil contaminated with oil, grease, fuel may not be disposed of in the excavation but will be disposed at a permitted landfill.
- The floor of the quarry will be left level and ripped to allow re growth of vegetation. Topsoil removed at the beginning of the process can be used to cover this area.
- Before placing topsoil, all visible weeds will be removed.
- The topsoil will be spread evenly over the prepared surface to a depth of 75 to 150mm on slopes of 1:3 or steeper.
- Topsoil placement will occur in a phased manner, concurrent with the phased operation of the quarry. Topsoil will be placed in the same area from which it was stripped.
- Where amounts are inadequate to cover the entire area, slopes will receive priority treatment.
- Site access will be blocked to ensure that other operators or opportunists do not re-visit closed areas and continue to remove material.
- Re-vegetated areas will be protected until vegetation has become established. No vehicles or equipment will be allowed access to areas that have been vegetated.
- Any erosion channels that develop after re-vegetation will be backfilled and consolidated and the areas restored to a proper stable condition. The erosion will not be allowed to develop on a large scale before effecting repairs and all erosion damage should be repaired as soon as possible.
- Any large rocks uncovered by the mining activity must be placed in the pit and covered with overburden material and topsoil.
- The site will not be used further once it has been closed. The area will be shaped and re vegetated to ensure that it does not pose a safety or erosion and environmental hazard.

1.5 All Listed and Specific Activities to Be Triggered and Being Applied For as Per Section 2 (d) (i)

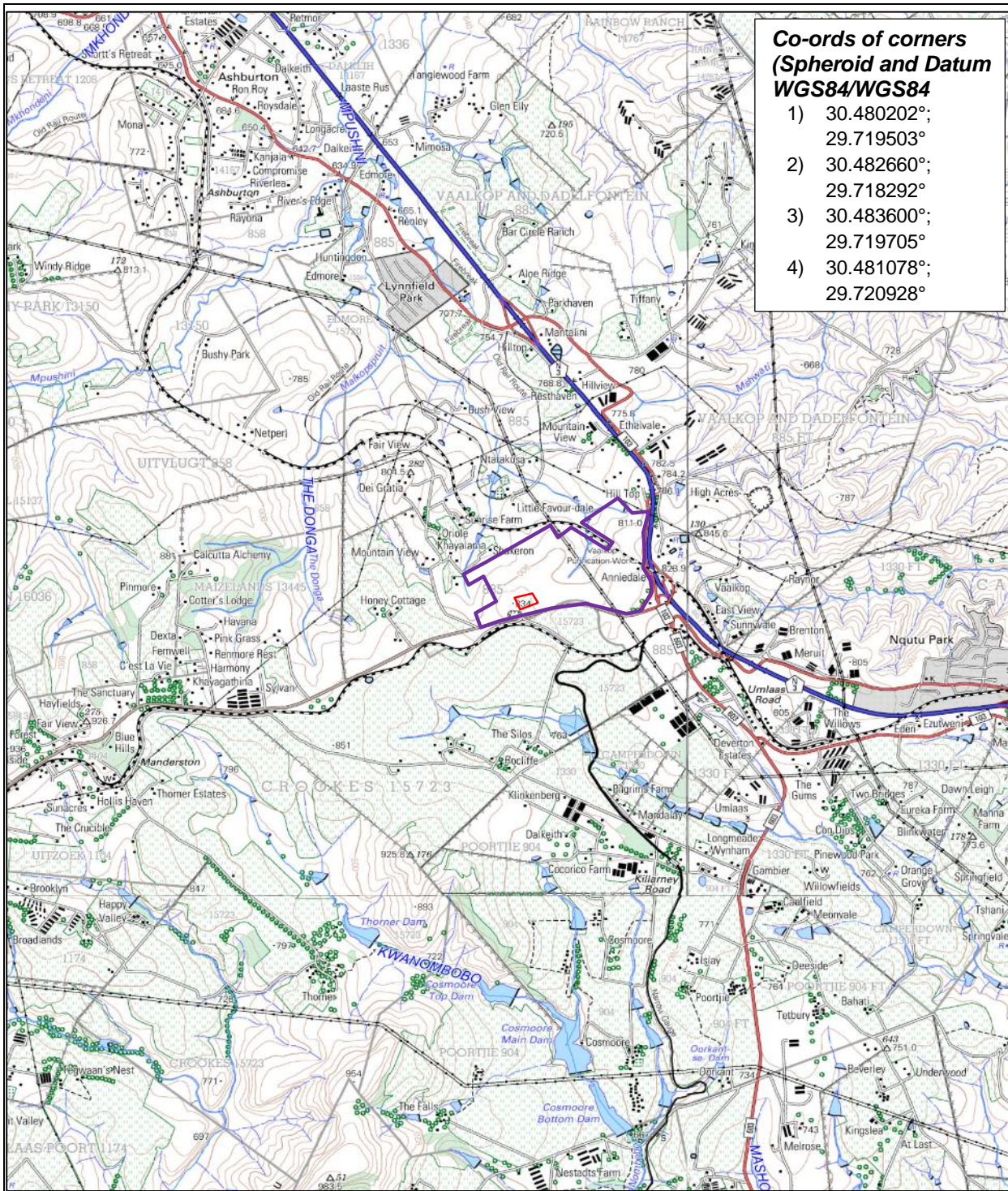
GNR	Activity Number	Activity as per the legislation	Activity as it applies to the proposal
GNR 983 Listing Notice 1; 04 th December 2014	21	<i>Any activity including the operation of that activity which requires a mining permit in terms of s27 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including associated infrastructure, structures and earthworks directly related to the extraction of a mineral resource, including activities for which an exemption has been issued in terms of section 106 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).</i>	A Mining Permit application was submitted to the Department of Mineral Resources and accepted on the 17 th March 2016.

GNR 983 Listing Notice 1; 04 th December 2014	27	<i>The clearance of an area of 1 hectares or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for-</i> <i>(i) the undertaking of a linear activity; or</i> <i>(ii) maintenance purposes undertaken in accordance with a maintenance management plan.</i>	The mining activities will require the clearance of more than 1 hectare of indigenous vegetation. The entire quarry area, including parking, stockpiling and crushing plant, is 4.99 hectares.
GNR 984 Listing Notice 2; 04 th December 2014	21	<i>Any activity including the operation of that activity associated with the primary processing of a mineral resource including winning, reduction, extraction, classifying, concentrating, crushing, screening and washing but excluding the smelting, beneficiation, refining, calcining or gasification of the mineral resource in which case activity 6 in this Notice applies.</i>	Blasting, crushing and screening of rock material will take place on site. These activities are considered "primary processing of the raw material".

1.6 Location Of Activity As Per Section 2 (b)(i)-(iii)

District Municipality	Umgungundlovu District Municipality.	
Local Municipality	Msunduzi Local Municipality.	
Ward	37	
Area / Town / Village	Camperdown	
Co-ordinates:	Latitude	Longitude
Quarry Corner 1	29°43'10.21"S	30°28'48.73"E
Quarry Corner 2	29°43'05.85"S	30°28'57.58"E
Quarry Corner 3	29°43'10.94"S	30°29'0.96"E
Quarry Corner 4	29°43'15.34"S	30°28'51.88"E
Property Description:	Parent Farm:	Farm Portion:
	Vaalkop and Dadelfontein 885	Portion 405
21 Digit Surveyor General's numbers:	NOFT0000000088500405	

Figure 1: 1 in 50 000 Locality Map Showing Proposed Quarry on Portion 405 of Vaalkop and Dadelfontein 885, Msunduzi Local Municipality, Umgungundlovu District Municipality, KwaZulu Natal. Applicant: Tillite Tech (Pty) Ltd. Property boundary in purple; Proposed Mining Area Shown in Red Measuring 4.99ha.



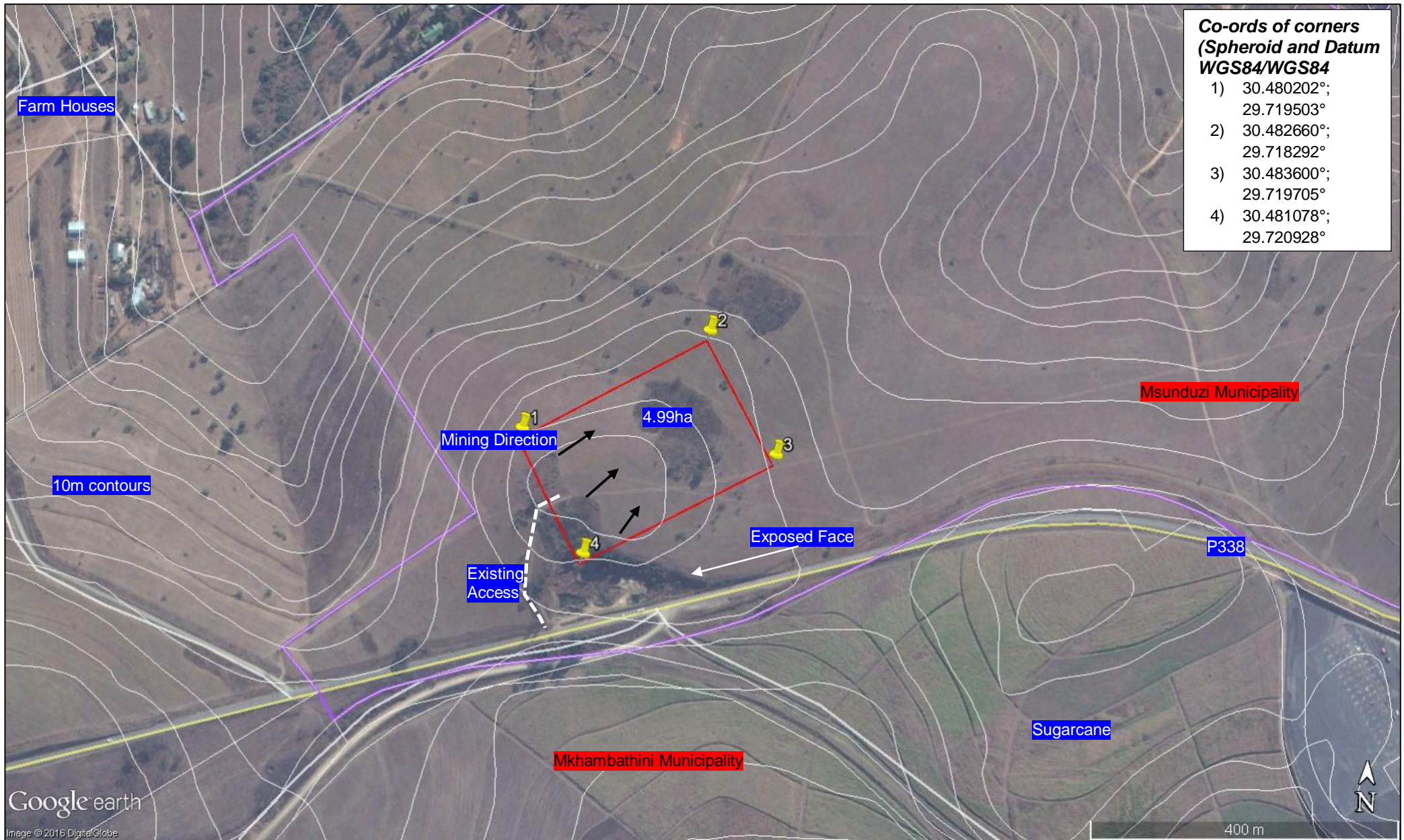
Title	Anniedale Quarry	Legend	
Co-ordinates	29°43'10.21"S; 30°28'48.73"E		Watercourses
Scale	1:50 000		Property
Topographical Sheet No.	2930CB		Quarry site
Drawing No.	Anniedale Quarry #01		20m Contour
Date Prepared	22 nd March 2016		Eskom Powerlines
Prepared By	Stephanie Williams		Urban Areas



Cell: 082 568 3687
 E-mail: josette@enviropro.co.za
 Cell: 082 887 4362
 E-mail: jain@enviropro.co.za
 Phone: 031 765 2942
 Fax: 086 549 0342



Figure 2: Aerial Photograph Showing Permitted Area (4.99ha) in the Msunduzi Municipality; KZN; Portion 405 of of Vaalkop and Dadelfontein 885, Msunduzi Local Municipality, Umgungundlovu District Municipality, KwaZulu Natal. Applicant: Tillite Tech (Pty) Ltd. Property boundary in purple; Proposed Mining Area Shown in Red Measuring 4.99ha. The 10m contour lines are shown in white.



Section 2: Alternatives as Per Section 2 (h) (i) and 2 (i) (i)

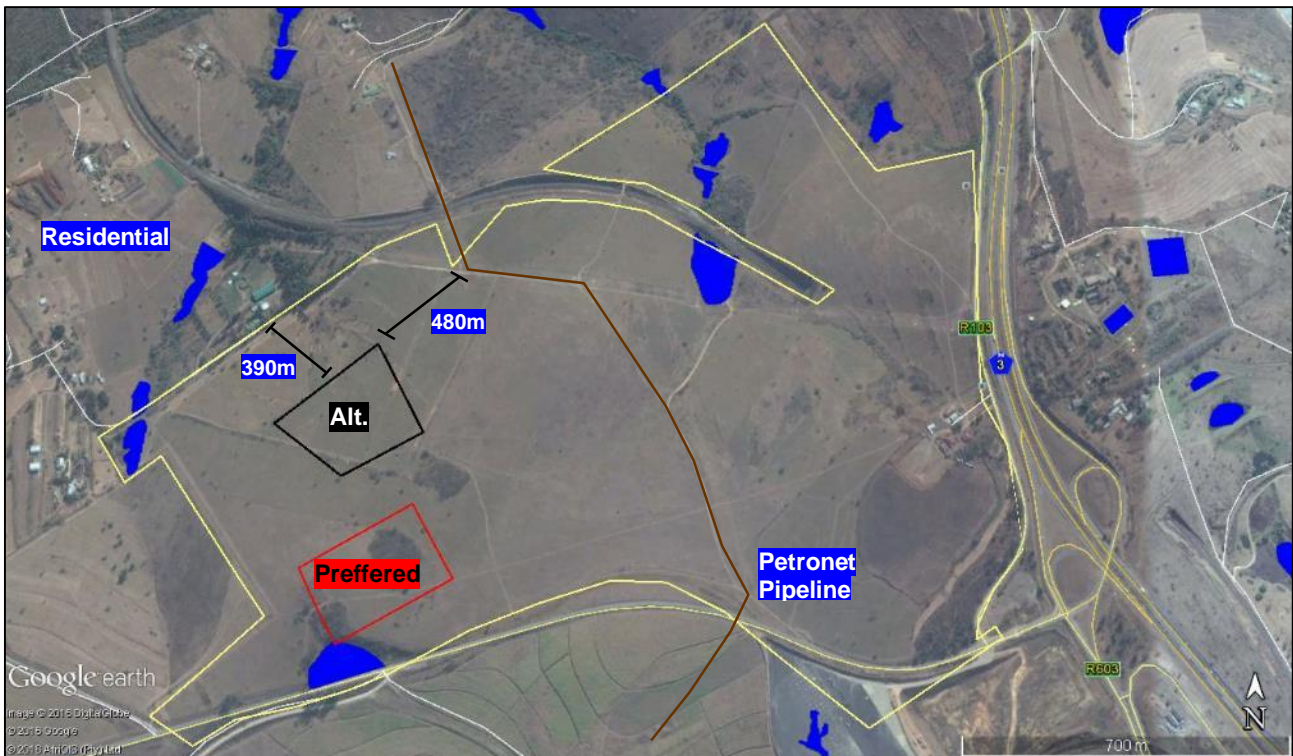
2.1 Description of Process Followed to Reach Proposed Preferred Activity, Site and Location within the Site as Per Section 2 (h) (i)

Site Alternatives

Nikkel Trading 535 (Pty) Ltd purchased this property after determining that it had development and mining potential. Initial investigations indicated that a number of factors including availability of material made it feasible to commence a mining operation on site. The proposal is therefore ultimately to clear and mine a 4.99 hectare portion of land to operate a commercial quarry. An application for a mining permit at the coordinates provided in section 1.5 has been submitted, acknowledged and accepted by the Department of Mineral Resources (DMR). Based on the findings of the Geotechnical Investigation, which confirmed the location of the desired stone, as well as restrictions imposed by infrastructure and sensitive environmental areas across and adjacent to the property, a preferred layout alternative on the site was formulated.

The initial layout alternative presented to the Environmental Assessment Practitioner (EAP) by the applicant, was located on the northern side of the hill (outlined in black in Figure 3). Layout Alternative 1 was purely based on a desktop assessment by the applicant and did not take into account any social or environmental aspects. This side of the hill was anticipated to contain good quality material for mining. Once various servitudes and restrictions were identified on the property, the proposed 5 hectare mine area was relocated to the southern side of the hill (outlined in red in Figure 3). The layout alternatives are described in more detail below.

Figure 3: Proposed Layout Alternatives for the Anniedale Quarry on Portion 405 of Vaalkop and Dadelfontein 885. Layout Alternative 1 is outlined in black with the preferred Layout Alternative 2 outlined in red. National Freshwater Ecosystem Priority Areas are shaded in blue (source: Google Earth Pro with SANBI GIS overlay).



Layout Alternatives

Alternative 1

The original mine area was located on the northern side of the hill, approximately 130m north of the preferred mine area. As stated above, the desktop assessment showed good quality material in this portion of the property however various other restrictions were not considered. A map showing the servitudes traversing the site is shown in Figure 4. The mine site needs to take into account the various buffers associated with the infrastructure as well as the relevant health distance is to be maintained from Transnet's New Multi-Product Pipeline (NMPP; illustrated in brown in Figure 4). The South African National Road Agency Limited (SANRAL) has been included as an Interested & Affected Party to provide comment on the location of the quarry. As part of best practice guidelines, the applicant intends to blast no less than 500m away from any residential dwellings. The distance from the NMPP and nearest residential households is shown in Figure 3

above. Both fall closer than 500m and therefore the quarry location was not considered ideal due to the health and safety risks associated with the blasts.

From a social perspective, a number of residential households and farms located to the north of the site look onto this side of the hill. In order to retain the aesthetic value associated with the view, it is preferable for the quarry to be located on the southern slope (i.e. Layout Alternative 2). Photographs of the alternative site location, as seen from the residential properties to the north have been included in Figure 5. Access to the alternative layout is available however will require vehicles travelling on smaller dirt farm roads for a greater distance compared to Layout Alternative 2.

The vegetation does not differ greatly between the two alternatives as the entire property is comprised of Ngongoni Veld, which has been regularly baled for silage. Vegetation is discussed further in section 3 of the Scoping Report. Similar to the vegetation, potential fauna species associated with the mine area is unlikely to differ significantly between the two layout alternatives due to their close proximity (see section 3 below).

Figure 4: Portion 405 of Vaalkop & Dadelfontein 885 outlined in yellow with the various servitudes associated with the site (source: Terratest Site Assessment, 2014).

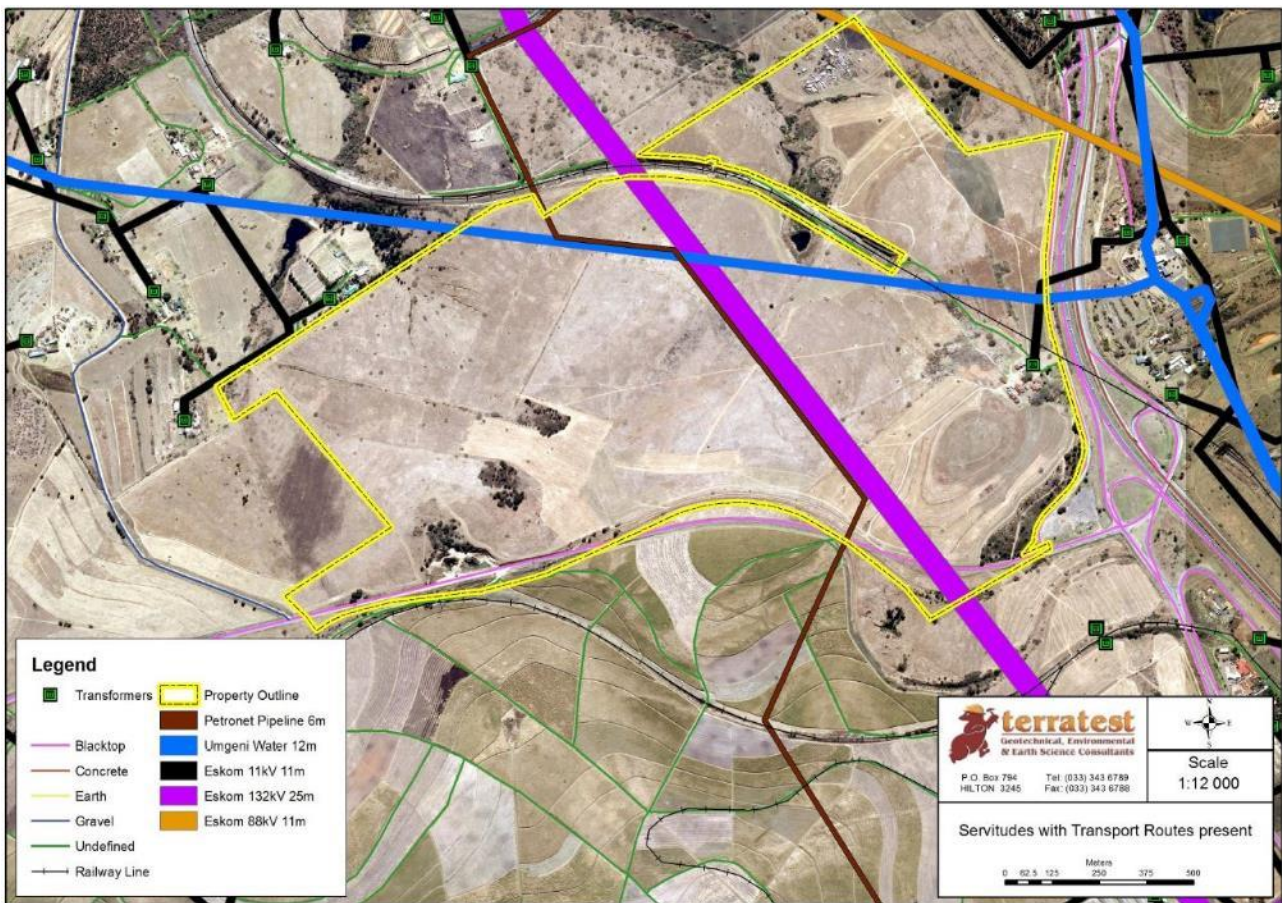
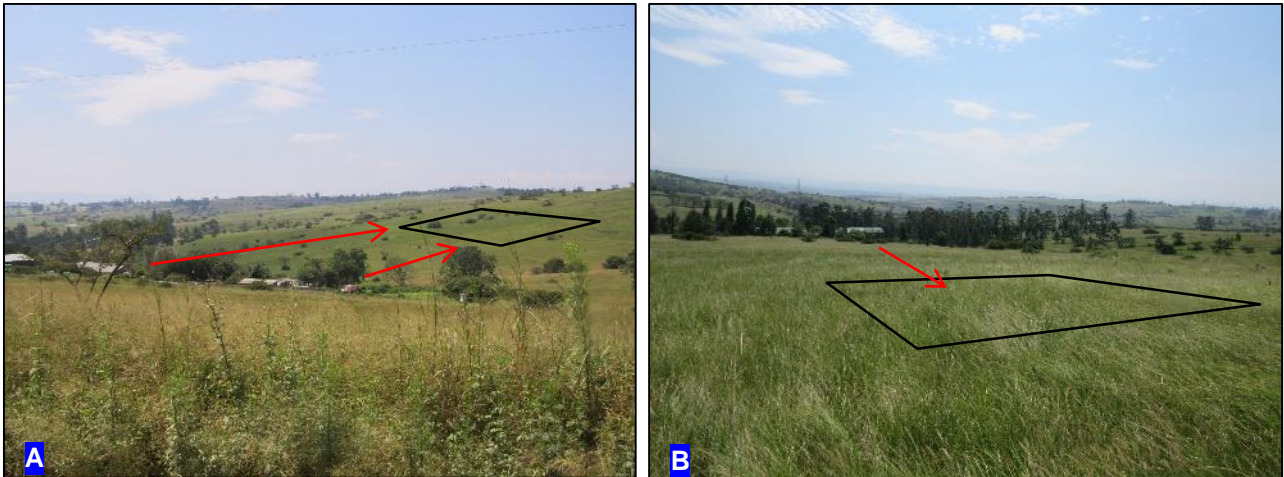


Figure 5: Photographs of mine Layout Alternative 1, outlined in black (a) Photograph taken in a southerly direction showing the view from the farm houses looking onto the proposed mine area; and (b) Photograph taken in a northerly direction looking down the hill towards the households.



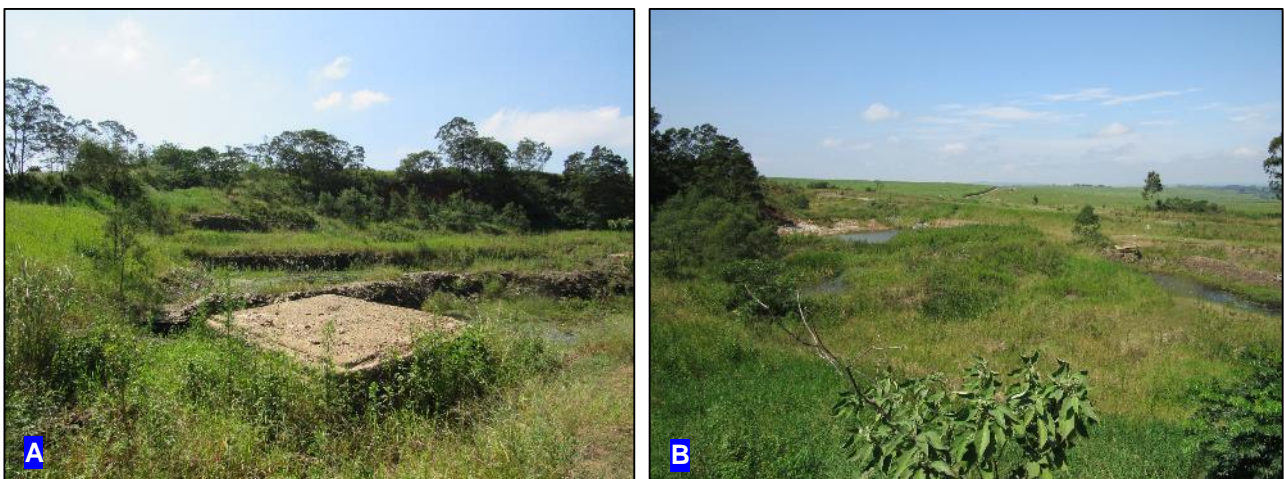
Alternative 2 (Preferred Alternative)

The preferred mine area has been relocated further south where access is available directly off the main road (P336) reducing the amount of time mining vehicles are required to spend on dirt roads. This will also reduce the amount of dust created and associated disturbance to the surrounding farms. The preferred mine area will also be less visible to surrounding residential / farm properties (north of the site). The mine area is located well away (i.e. >500m) from the various servitudes ensuring that there will be no impact on the infrastructure during blasting operations.

The southern corner of the mine area has been previously mined and it is likely that the material was used to upgrade / maintain roads (Figure 6a). It is anticipated that the existing exposed surface will be used to start the new mining excavations (to be confirmed in the Mine Works Plan submitted with the EIR). The vegetation associated with this previously disturbed area will likely be of a poorer quality compared to the remaining grassland in the interior of the property (further discussed in section 3.0 below).

The more remote nature of Layout Alternative 2 makes it the preferable mine area. Specialist studies will therefore concentrate on assessing this area in the next phase of the EIA.

Figure 6: Photographs of the preferred mine Layout Alternative showing the previously mined area associated with the southern corner of the mine area (a) Photographer facing north, towards the proposed mine area, and (b) Photograph taken in a southerly direction towards the P338.



Technology Alternatives

In terms of the mining method proposed, overburden will be cleared using an excavator and soft material will be cut back. Work benches (minimum of 30m wide and ideal bench height of 10-12m, to be confirmed in the Mine Works Plan) will be cut into the mining area and material will be removed using controlled blasts. The loosened material will be removed using excavators and transported to the crushing and screening plant

area. This is the standard methodology used to mine hard stone material and is therefore the only feasible technology alternative considered throughout the EIA process.

An alternative method would be to crush and screen the material at an offsite location. The applicant would need to provide and retain proof at the mine that the site processing the material further is permitted to do so. It therefore does not make logistical sense to transport truckloads of material before it is screened and then crushed at an alternative site. The Works Manager will have more control over the processing process, which will be discussed further in the EIR, if it is carried out at the site. There is an opportunity to ensure that best practice measures are carried out during the processing (as per the Environmental Management Programme, to be attached to the EIR).

The No Go Alternative

No mine will be established on the property and the land will remain as it is. No impacts associated with mining will occur but neither will any of the positive economic benefits associated with employment or a locally available source of material.

Section 3: Site Description and Surrounding Land Use as per section 2 (h) (iv)

The information provided below is based on a desktop assessment of the site. A number of specialist reports have been commissioned to further investigate potentially environmental sensitive areas associated with the site. The findings of these reports will be discussed in the EIR.

3.1 Geographical, Physical Characteristics of the Site and Surrounding Land Uses

The property is located at an elevation of approximately 880m above mean sea level. An elevation profile of the hill, which is to be mined, is provided in Figure 7. The south facing side of the hill will be mined. There is a man-made depression in the southern corner of the study site where mining activities have previously been carried out (prior to 2005). Rainwater has collected in the depressions left by mining and riparian vegetation has also grown around these depressions. Photographs taken of the proposed Anniedale Quarry showing the surrounding topography are included in Figure 8. The N3 Highway is located to the east of the property (1.3km from the mine area) with farming activities taking place to the north, south and west. Surrounding land uses have been illustrated in Figure 9. Existing services and servitudes associated with the property are shown in Figure 4.

A Geotechnical Investigation is underway and will be submitted with the Draft EIR. The Geotechnical Investigation will provide more information on the underlying geology as well as relevant surrounding land uses.

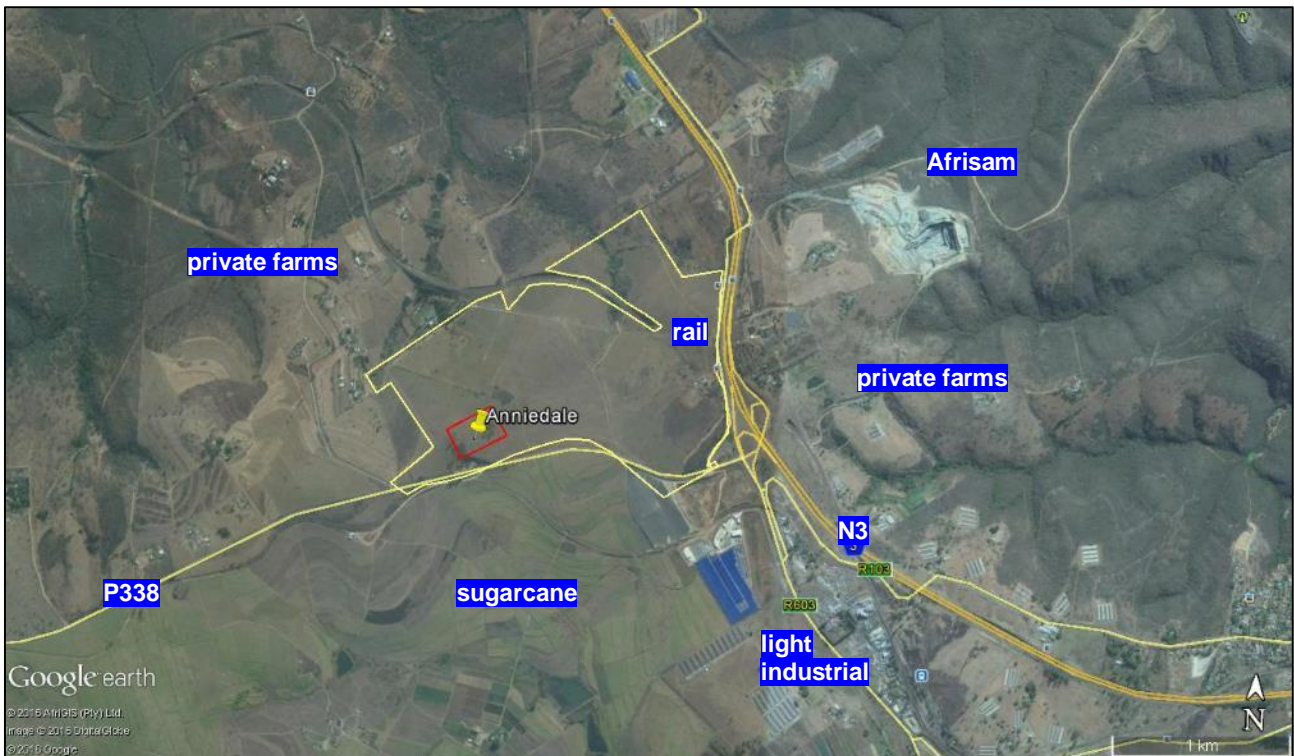
Figure 7: Elevation profile of the hill where the Anniedale Quarry is to be located (source: Google Earth Pro, 2016).



Figure 8: Photographs showing the topography and characteristics of the Anniedale Quarry site (a) Photograph taken facing east with the proposed cut into the hill shown in red, and (b) Photograph taken from the centre of the site facing west showing the crest of the hill as it drops down towards the previously mined face.



Figure 9: Aerial photograph showing the location of the Anniedale Quarry in the surrounding landscape (source: Google Earth Pro, 2016).



3.2 Surface Water

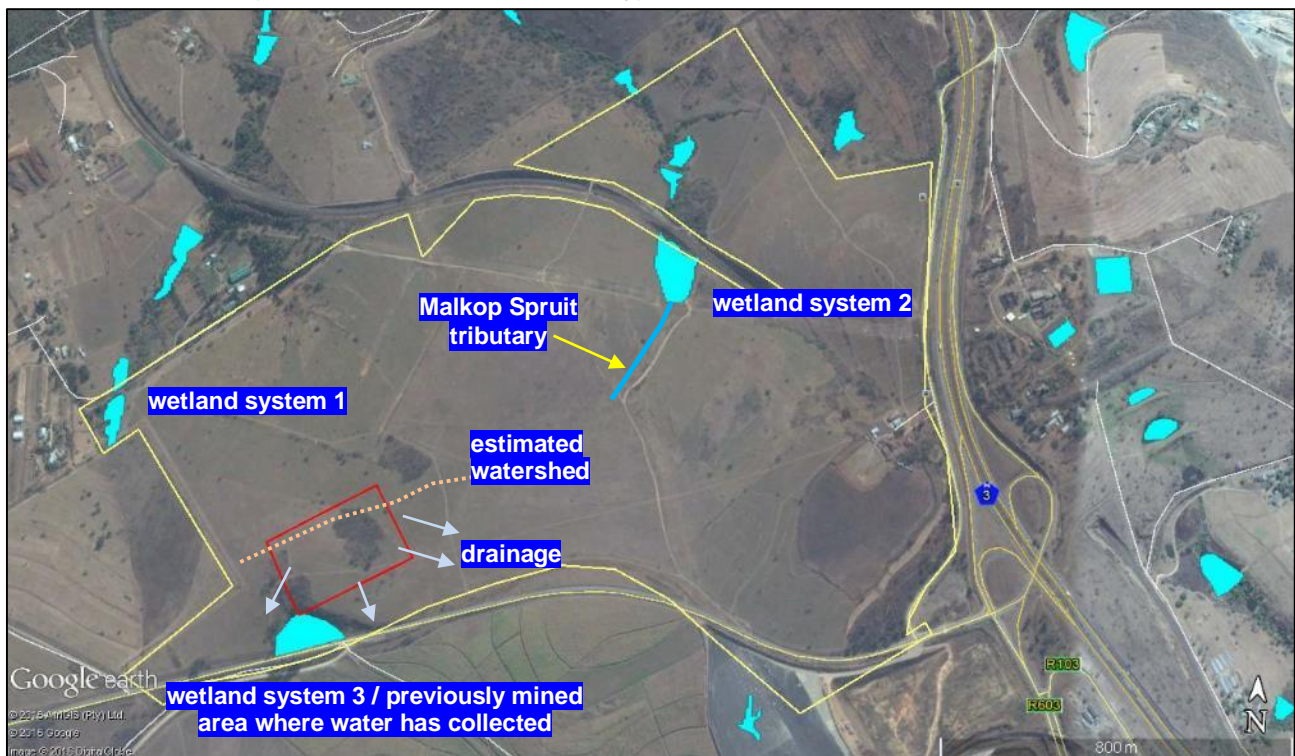
The quarry falls on the boundary of the U20J and U60C Quaternary Drainage Regions. There are no major rivers in the immediate area however a tributary of the Malkop Spruit originates in the north-east portion of the property ($\pm 450\text{m}$ east of the preferred mine area, shown in dark blue in the Figure below). The Malkop Spruit flows in a northern direction away from the site into the Mpushini River.

The National Freshwater Ecosystem Priority Areas (NFEPA) database shows three wetland systems associated with the property (shaded in blue in the Figure below). Since the mine will take place on the south facing slope of the hill, the wetland systems in the northern portion of the property (wetland systems 1 and 2), are unlikely to be impacted by the proposed activities. A wetland specialist has been appointed to determine the extent, health, functionality and if there are any potential impacts on these wetland systems. The final wetland system recognised in the desktop assessment (wetland system 3) is the result of an un-rehabilitated borrow pit where excavated pits have collected water over time (Figure 6a). The wetland specialist is to provide further comment on this area.

All clean surface water runoff from surrounding slopes will be diverted away from the mining area. Potentially contaminated run off from the mine area itself will be diverted into the onsite sump and will not be permitted to discharge to the surrounding environment or any watercourses. The extent and dimensions of the sump will be determined and included in the EIR and Water Use Authorisation. Water collected in the sump will be treated as potentially contaminated and will only be used for dust suppression within the mine area that is protected by the berms and drains back to the sump.

A wetland and aquatic assessment has been commissioned to delineate all watercourses and wetlands within 500m of the mine area and to assess risk to the catchment as a result of mining in this location. A Water Use Authorisation from DWS will also be applied for. The specialist is to recommend mitigation measures to prevent any impacts from occurring during the operation of the mine. A Flood Analysis and Drainage Map are to be provided in the Stormwater Management Programme to be attached to the EIR.

Figure 10: Desktop study showing the National Freshwater Priority Areas associated with Portion 405 of Vaalkop and Dadelfontein 885 (source: NFEPA database overlay)



3.3 Fauna and Flora

Although the site is currently zoned for agriculture, there is no form of agricultural activity taking place apart from seasonal hay baling. In terms of agricultural potential, Terratest stated that the property is classified as “Secondary Agricultural Land”, meaning that it is not considered prime agricultural land, most likely due to the soils evident on site (Terratest Site Assessment, 2015). According to the South African Biodiversity Institute’s (SANBI) Geographical Information System (GIS) overlay, the site falls within the Nongongi Veld Ecosystem (Figure 11). The ecosystem is described as “vulnerable”. Photographs showing the current condition of the vegetation on the property are provided in Figure 12.

The ecosystem characteristics are as follows:

- Distributed on the coastal escarpment (400 – 900m asl).
- Dense, tall grassland overwhelmingly dominated by unpalatable, wiry Ngongoni grass (*Aristida junciformis*).
- A small number of shrubs and herbs are recorded as important, however all are common species and do not create much impression of floristic distinctness.
- The climate is typically summer rainfall with some rain in the winter with MAP about 700 -1100mm.
- 1% of the unit is statutorily conserved in the Opathe and Vernon Crookes Nature Reserves.
- 39% has been transformed for cultivation, plantations and urban developments³.

³ Mucina & Rutherford (eds.) “The Vegetation of South Africa, Lesotho and Swaziland” 2006 *Strelitzia* 19.

The operation of the proposed Anniedale Quarry will result in the clearance of 4.99 hectares of indigenous vegetation from within this ecosystem. The vegetation specialist will assess the property with specific attention to the preferred mine area. Should any important / red data species be identified, measures to relocate, re-plant or rehabilitate will be provided by the specialist.

Figure 11: Aerial image with the SANBI threatened ecosystems GIS overlay. The Ngongoni Veld Ecosystem (vulnerable) is shaded in green (source: Google Earth Pro with SANBI overlay, 2016).



According to the Ezemvelo KZN Wildlife Minset Map, almost the entire property is considered “transformed land cover”. Only a few small areas on the property (dam, associated drainage line and a small portion on the eastern side), are considered to be in their natural state. A portion of the proposed quarry site falls in Biodiversity Priority Area 1. Based on the Minset map, there is the potential for 8 threatened species of Millipede and 2 threatened Molluscs species to be found in the study area.

- *Spinotarsus maritzburgensis* (Millipede)
- *Spinotarsus destructus* (Millipede)
- *Gnomeskelus tuberosus urbanus* (Millipede)
- *Spinotarsus glomeratus* (Millipede)
- *Doratongonus cristulatus* (Millipede)
- *Patinatius bidentatus simulator* (Millipede)
- *Camaricoproctus planidens* (Millipede)
- *Gnomeskelus spectabilis* (Millipede)
- *Gulella euthymia* (Mollusca)
- *Gulella separata* (Mollusca)

A Vegetation Assessment will provide input on the species found within the proposed mine area to determine what species will be removed. A species list will be included (indigenous and alien species). Recommendations and mitigation measures are to be provided by the specialist with particular reference to the rehabilitation and landscaping of the mine on decommissioning / closure. An additional study will provide further input on the fauna and agricultural potential aspects of the site.

Figure 12: Photographs showing the general condition of the vegetation on the proposed Anniedale Quarry site (a) Photograph of the centre of the proposed preferred mining area facing south-east; (b) Photo of the crest of the hill facing south towards the P338; (c) Photograph taken of the south corner of the mine area near the exposed face; (d) Existing access road off the P338; and (e) Waste accumulating in the previously mined area where pits have been left open.



3.4 Heritage and Cultural Aspects

During the initial site visit, no archaeologically/ cultural significant resources were identified in the proposed mine area however this is to be confirmed by a heritage specialist.

A Heritage Impact Assessment is currently underway to determine the impact of the mine on the site and surrounding outlook. The heritage specialist will also identify any graves or other features of cultural/architectural significance.

3.5 Socio-Economic Environment

The area is rural in nature. It is located adjacent to the N3 / R603 interchange and is surrounded by agricultural activities such as grazing and sugarcane. There are scattered farm houses located to the north ($\pm 35\text{m}$) and west ($\pm 1.8\text{km}$) of the property. Light industry developments are located to the south-east of the proposed quarry site, directly adjacent to the N3 highway. It is anticipated that light industry / mixed-use developments will expand further north in the future, in anticipation of the N3 development corridor. Please refer to Figure 9 above showing surrounding land-uses.

Section 4: Policy and Legislative Context

4.1 Identification of all Legislation, Policies, Plans, Guidelines, Spatial Tools, Municipal Development Planning Frameworks and Instruments As Per Section 3(e)(i) and Compliance of Proposed Activity with Legislation and Policy 2 (e)

Legislation	Compliance of Activity
National Environmental Management Act 1998	<p>The National Environmental Management Act (Act 107 of 1998) (NEMA) is South Africa's overarching environmental legislation. It includes a set of principles that govern environmental management and against which all Environmental Management Programmes (EMPrs) and actions are measured. These principles include and relate to sustainable development, protection of the natural environment, waste minimisation, public consultation, the right to an environment that is not harmful to one's health or wellbeing, and a general duty of care.</p> <p>The Environmental Impact Assessment (EIA) Regulations, 2014: GN R.982, R.983, and R.985 under Section 24 of the NEMA define the activities that require Environmental Authorisation and the processes to be followed to assess environmental impacts and obtain Environmental Authorisation.</p> <p>Environmental authorisation is required for the proposed mining activity including the processing of the raw material on site. Therefore this application is in line with the requirements of NEMA.</p>
National Water Act 1998	<p>Provides for fundamental reform of the law relating to water resources in a water scarce country. Section 21 of the National Water Act (NWA) lists certain water uses requiring a Water Use License from the Department of Water and Sanitation (DWS).</p> <p>A Water Use Authorisation (WUA) will be required for the mining activities. The WUA application is running concurrently with the EIA process. The following water uses have been identified:</p> <p>s21(a) – abstraction of water from the sump for dust suppression; s21(g) – stockpile areas, sump and dust suppression s21(c) & (i) - wetland specialist to confirm the presence and proximity of wetlands within 500m of the site.</p>
National Waste Management Act 2008	<p>Reforms the law regulating waste management to prevent pollution and ecological degradation.</p> <p>Section 19 allows the Minister to publish a list of activities, which require a Waste Management License. The most recent list is published in Government Gazette 37083 Notice No. 921 dated 29 November 2013. The proposal will not trigger a Waste Management Activity.</p>
Environmental Conservation Act 1996	<p>Makes provisions for the application of general environmental principles for the protection of ecological processes, promotion of sustainable development and the protection of the environment. This Act has mostly been repealed by NEMA.</p>
National Environmental Management Biodiversity Act 2004	<p>To provide the framework, norms, and standards for the conservation, sustainable use and equitable benefit-sharing of South Africa's biological resources. Section 52 allows for the publication of a list of threatened ecosystems in need of protection. The list was published in Government Gazette No. 34809 Notice No. 1002 dated 9 December 2011.</p> <p>This site is not located within an endangered ecosystem type and therefore does not require environmental authorisation for this aspect.</p>
National Heritage Resources Act 25 of 1999	<p>For the protection of South African Heritage to nurture and conserve communities legacy. A Heritage Impact Assessment has been commissioned to comment on and identify any features of cultural or architectural significance.</p>
Municipal Planning Framework	
Umgungundlovu Municipality Integrated Development Framework 2015/2016	<p>The intention of the Anniedale Quarry is to supply material for future developments and service delivery within the uMgungundlovu Municipality fulfilling one of the municipal goals discussed in the framework.</p>
Msunduzi Environmental Management Framework	<p>The Msunduzi Municipality, in partnership with the national Department of Environmental Affairs (DEA) and EDTEA, recognised the need for an</p>

(EMF)	appropriate policy to inform development planning that supports sustainable development within the Municipality. The framework identifies areas both suitable and unsuitable for development; provides information to assist decision making on matters such as development applications and thereby streamline the process; identifies sensitive areas that require protection to ensure ecosystem service delivery; provides environmental goals and mechanisms to achieve such goals.
Msunduzi Integrated Environmental Management Policy (IEMP)	Msunduzi's IEMP, approved by Msunduzi's Executive Committee on 07 May 2007, included an environmental vision for the municipality. One of the points in the vision is to "have environmentally responsible citizens that are well informed in regard to the environmental issues and who will be part of an innovative team that contributes to a sustainable living environment".
Msunduzi Ecosystem Services Plan (ESP)	During the development of the Municipal Open Space System (MOSS), it was recognised that the MOSS should focus on identifying areas to be set aside to maintain ecosystem goods and services. It was however recognised that protection of areas of biodiversity importance achieves both biophysical and social objectives.
Msunduzi Conservation Plan (C-Plan)	Areas of high biodiversity value occurring within the municipality were identified and mapped in the Conservation Plan also referred to as C-Plan to ensure their protection and continuity.
Msunduzi Integrated Development Plan (IDP) for 2014 – 2017	The IDP and SDF is the Municipality's response to planning for future growth and change. It is intended to enable the Council, communities, development industry, service providers, and government agencies to plan, budget and develop with confidence to meet the expectations of the Municipality's development.
Msunduzi Spatial Development Framework (SDF)	The SDF is an integral part of a Municipality's IDP. It represents the spatial expression of the Council's development vision, and should therefore be reviewed regularly to take into account changing circumstances. As above, the SDP takes into cognizance of the foresight of those past and presently involved in building the city as well as the challenges faced with integrating the activities of the population cores of the greater municipality within a sustainable social, economic, and bio-physical context.
Msunduzi Climate Change Policy (2014)	The Climate Change Policy seeks to unpack core issues such as impacts on biodiversity, water resources and human health) and suggests adaptation and mitigation measures in greater detail, to be implemented (i.e. each adaptation and mitigation option would be case / site specific) which would contribute to the reduction of climate change related impacts on each of the sectors mentioned above.

Section 5: Motivation, Need and Desirability

5.1 Need and Desirability as Per Section 2 (f)

Following the World Summit on Sustainable Development in 2002, the Department of Minerals Resources initiated a programme to guide the mining and minerals sector to achieve “sustainable development”⁴. The Sustainable Development through Mining Programme (SDM) was therefore developed by the DMR. This EIA process aims to implement this Programme by ensuring that the planning and operational phases of the Anniedale Quarry fall in line with sustainable development principles listed in Chapter 1 of NEMA. The EIA process guides the applicant in contributing to sustainable development thereby achieving one of the goals of the SDM Programme.

The Msunduzi Municipality Spatial Development Framework (SDF) prepared by IYER Urban Design Studio states that there is limited land available for development throughout the municipality with development constraints specifically in the western parts of the municipality. The area where the proposed Anniedale Quarry will be located has been earmarked as a significantly underdeveloped area which has strategic importance to the long term development of Msunduzi. The Anniedale Quarry therefore has the potential to supply construction material to the immediate area increasing this development potential. The close proximity of the N3 highway provides an ideal access network to surrounding areas and the anticipated “development corridor” associated with this busy route should further see an increase in the construction of light industry / mixed-use developments in the immediate area.

The material mined will be used in the construction industry, which is an important contributor to municipal and provincial development and growth. Apart from supplying good quality material to the construction market, the mine will create job opportunities (skilled and unskilled) benefiting the local economy.

5.2 Motivation for Preferred Site, Activity and Technology Alternative as Per Section 2 (h) (x) and (xi)

The site was selected for a mining permit on inspection of the underlying geology of the property and therefore there are no site alternatives. Layout Alternative 2, described in section 2, will be assessed in more detail in the EIR as the preferred alternative due to the close proximity to the access roads, decreased visual impact on surrounding farmers as well as certain restrictions associated with the property.

Due to the nature of the material available at the Anniedale Quarry, there are no feasible technology alternatives. The technology / mining methodology is considered preferable as there is no excessive water use associated with the process. The only water used for the mining process will be that needed for dust suppression and water used by staff for drinking etc. Run off from the mined area will be collected in the sump and will be re-used in the mine for dust suppression. Additional water may be needed for dust suppression and this will either be obtained from a municipal source or trucked in. The water source will be confirmed in the EIR and assessed under the water use authorisation process.

⁴ Sustainable development can be defined as “development that meets the needs of the present generation without compromising the ability of future generations to meet their needs”.

Section 6: Public Participation as per Section 2 (h) (ii) & (iii) and 2 (i) (vi) & (vii)

As per Section 2 (h) (ii) and (iii), below is the details of the public participation process followed to date and a summary of the issues raised by interested and affected parties. Copies of supporting documents and inputs have been included in Appendices B - F.

6.1. Notification of Interested and Affected Parties

- 1) *fixing a noticeboard at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of-*
 - i. *the site where the activity to which the application or proposed application relates is or is to be undertaken; and*
 - ii. *any alternative site;*

A noticeboard was placed on the proposed Anniedale Quarry mine site, near the existing exposed rock (English noticeboard) adjacent to and facing the road. An additional noticeboard was placed opposite the old quarry site (isiZulu noticeboard) also adjacent to and facing the road. Noticeboards were erected on the 24th March 2016. The noticeboard detailed the applicant's proposed plan to mine 4.99 hectare of the site, subject to a Scoping/EIA process. See Appendix B for proof of placement of the noticeboards.

- 2) *giving written notice, in any of the manners provided for in section 47D of the Act, to-*
 - 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 or to any alternative site where the activity is to be undertaken;*
 - ii. *the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;*
 - iii. *the municipality which has jurisdiction in the area;*
 - iv. *any organ of state having jurisdiction in respect of any aspect of the activity, and;*
 - v. *any other party as required by the competent authority;*

The landowner, Nikkel Trading 535 (Pty) Ltd, is currently using a small portion of the eastern corner of the property for truck parking. The landowner is aware of the mining permit application and is supportive of the application (see Appendix D). The municipal councilor for Ward 37, Ms Sandra Lyne, was contacted via telephone on the 22nd March 2016 to discuss the project. An official email of notification was sent to the ward councilor shortly after (see Appendix D for proof of notification). The ward councilor confirmed that she would assist in distributing the information to the relevant personal in the area who will register as an Interested and Affected Party should they wish. Representatives from the Msunduzi Municipality and Umgungundlovu District Municipality were notified by email. A number of stakeholders and authorities were also tracked down electronically and information has been provided to them via email on the 22nd March 2016 (see Appendix D for proof).

All relevant authorities have therefore been notified of the application and have been provided with copies of the Draft Scoping Report (SR). The Draft SR was circulated for a legislated 30 day comment period (04th April 2016 – 09th May 2016). All comments received within the comment period have been included in Appendix F of the Final SR. The Draft EIR will be circulated for comment, once DMR approves the Final SR.

- i. *owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;*

A map showing the properties directly adjacent to Portion 405 of Vaalkop and Dadelfontein 885 has been provided in Appendix D. Where email addresses were available, notification emails were sent on the 22nd, 24th and 29th March 2016. Please see Appendix D for proof of notification.

- 3) *placing an advertisement in-*
 - i. *one local newspaper; or*
 - ii. *any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;*
- 4) *placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in paragraph (c)(ii);and*

After discussions with the ward councillor it was agreed that the project be advertised in the Pietermaritzburg Fever (English) and Eyethu (isiZulu). The adverts were published on the 30th and 31st March 2016 respectively. The adverts detail the proposed Anniedale Quarry, Scoping/EIA process and provide contact details for EnviroPro should anyone wish to register as I & AP. Proof of adverts is provided in Appendix C.

6.2. Registered Interested and Affected Parties

42. *A proponent or applicant must ensure the opening and maintenance of a register of interested and affected parties and submit such a register to the competent authority, which register must contain the names, contact details and addresses of-*
- (a) all persons who, as a consequence of the public participation process conducted in respect of that application, have submitted written comments or attended meetings with the proponent, applicant or EAP;*
 - (b) all persons who have requested the proponent or applicant, in writing, for their names to be placed on the register; and*
 - (c) all organs of state which have jurisdiction in respect of the activity to which the application relates.*

The contact details of all I&APs that have registered have been provided in the Registered I&AP list in Appendix E.

6.3. Comments

Comments of interested and affected parties to be recorded in reports and plans.

- 1) The applicant must ensure that the comments of interested and affected parties are recorded in reports and plans and that such written comments, including responses to such comments and records of meetings, are attached to the reports and plans that are submitted to the competent authority in terms of these Regulations.*
- 2) Where a person desires but is unable to access written comments as contemplated in subregulation (1) due to-*
 - i. a lack of skills to read or write;*
 - ii. disability; or*
 - iii. any other disadvantage;*
 - iv. reasonable alternative methods of recording comments must be provided for.*

All comments received from I&APs to date have been recorded in the comments and response table. A Trust which is run by a group of residents in the immediate area has objected to the Mining Permit application. The Trust is the "Preservation of the Mkondeni Mpushini Biodiversity Trust" (PMMBT). The objection is included in the Comments and Response Table and refers to the quarry site being in close proximity to the headlands of a sensitive catchment (Malkopspruit / Mpushini River Catchment). PMMBT notes that the catchment is seriously impacted by land-use activities, impoundments and alien invasive species. A more detailed response to objection will be detailed in the EIR once the results of the independent aquatic specialist have been made available. The original comments provided have been provided together with the comments and response table. See Appendix F for the Comments and Response Table and all comments received to date.

Section 7: Preliminary Impact Assessment as Per Section 2 (h) (v) - (ix)

7.1 Methodology to Determine and Rank Nature, Significance and Consequences of Impacts Associated With all Alternative as Per Section 2 (h) (vi) and 2 (i) (v)

Impacts are assessed qualitatively and quantitatively, looking at the duration / frequency of the activity and likely impacts associated with that activity during construction, operation and closure. If the activity happens frequently, the risk of the associated impact occurring is much higher than if the activity happens less frequently. The geographical extent of the impact is assessed i.e. will the impact be restricted to the point of occurrence or will have it have a local or regional effect. Impacts are also reviewed looking at severity levels and consequences should the impact occur i.e. will the severity be low, medium or high and then probability of the impact occurring is taken into account.

Whether or not the impact can be mitigated and the extent to which it can be avoided, managed, mitigated or reversed is assessed i.e. the probability of occurrence after mitigation has been applied. This also takes into account likelihood of human error based on construction and operational auditing experience i.e. even though spills can be completely mitigated against and prevented, there is always a small chance that spills will still occur (residual risk). Based on all of these factors, the impact is then rated to determine its significance. For example an impact can have a regional affect with severe environmental implications, however the probability of it occurring is very low and the implementation of the proposed mitigation measures means that the ultimate rating is medium or low.

Please see below a description of the scoring. The full impact scoring tables detailing how the significance rating was calculated can be found in Appendix G, as per section 2 (h) (ix).

Table 1: Explanation of the scoring of the impacts identified in EIA

Scoring of Impacts	
Duration / Frequency of activity likely to cause impact	0 = No impact 1 = short term / once off 2 = medium term / during operation 3 = long term / permanent
Geographical Extent	0 = No impact 1 = point of impact / restricted to site 2 = local / surrounding area 3 = regional
Severity (level of damage caused) if impact were to occur	0 = No impact 1 = minor 3 = medium 5 = major
Probability of impact without mitigation	1 - 5 = low. 6 -10 = medium. 11 -14 = high.
Significance before application of Mitigation Measures	A score of between 1and 5 is rated as low. A score of between 6 and 10 is rated as medium. A score of between 11 and 14 is rated as high.
Will activity cause irreplaceable loss of resources?	10 = Yes 0 = No
Mitigation measures	0 = No impact - 5 = can be fully mitigated - 3 = can be partially mitigated -1 = unable to be mitigated
Probability of impact after mitigation	0 = No impact 1 = Low 2 = Medium 3 = High
Significance after application of Mitigation Measures	A score of between 1and 5 is rated as low. A score of between 6 and 10 is rated as medium. A score of between 11 and 14 is rated as high.

Some of the impacts in the table below will be expanded on in the EIR once more information is available from the various specialist studies. Impacts scoring a higher significance in the Scoping Report, will receive more attention in the EIR. The impacts identified below are therefore not the complete list, as there may be more impacts identified in the specialist reports and through the public participation process. Please note

that scoring and assessment of impacts as well as discussion of mitigations below are **preliminary** and that a more detailed assessment will be provided in the EIR.

7.2 Preferred Site and Layout Alternative

See Appendix G for the full impacts scoring matrix, which assesses the impacts based on the above scoring system. The below impacts relates to the site location and preferred layout (i.e. Layout Alternative 2 on the south-facing slope).

Table 2: Impacts and mitigation measures associated with the preferred layout

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
Construction			
Since construction will result in the very little activity occurring on the site (establishment of site office, setting up screening and crushing plants in demarcated areas), no construction related impacts have been identified. There is also existing access to the mine site.			
Operation			
1. There is a risk of collapse of the mining face if the angle of removal is not correctly planned and managed. This could lead to slippage and collapse of the slope causing damage to the adjacent road as well as posing a risk to onsite workers.	10 (med)	<p>If the appropriate mining technique is not used and slippage occurs, it could potentially have a significant impact in terms of risk to the workers on site, on-going instability issues and on-going erosion. The risk of this impact occurring is relatively low, provided proper mining techniques are used and the angle of removal is appropriately planned, implemented and monitored. A <i>Mine Works Programme</i> is currently being prepared which will detail the height and width of the proposed benches to ensure there is no collapse of the mine face. The <i>Geotechnical Investigation</i> will also provide recommendations to prevent a collapse.</p> <p>Factors to be taken into consideration during the planning phase:</p> <ul style="list-style-type: none"> • The slope face must not be heavily undercut as this could lead to collapse of the slope. • The employment of bench mining so restricting possible failures to bench level events. • The use of core drilling results in modelling the rock body is a key consideration in planning and development of the quarry. • Mining activity needs to take into account the final shape of the excavated area so as to reduce the risk of potential collapse and shifting. • Undercutting of the slope and creation of over-steep slopes must not be permitted. After a blast these soft areas, which are prone to back break, are excavated to a point where competent material is reached. No 	5 (low)

⁵ See Appendix H for more details.

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		<p>loose material is left in the face.</p> <ul style="list-style-type: none"> The slope angle and stability must be regularly evaluated by the resident engineer and adjustments made to the area and angle of excavation as needed. The maintenance of proper drainage away from the workings. 	
2. Loss of agricultural land in the Msunduzi Municipality.	8 (med)	There is currently no agriculture taking place on the site.	0 (no impact)
3. Generation of emissions from vehicles.	8 (med)	<p>As stated above, all construction vehicles will be fitted with the appropriate silencers and exhausts. Emissions generated from these vehicles is not expected to significantly affect the workers on site or neighbouring farmers.</p> <p>This impact can be managed and mitigated.</p>	4 (low)
4. Increase in heavy truck traffic as trucks enter and leave the site which could impact on existing traffic.	10 (med)	<p>The nature of the activity will result in a localised increase in haulage truck traffic. Having direct access onto the P338, which joins the N3 less than 2km east of the site, prevents trucks from travelling on any private / residential roads. The traffic increase should therefore not significantly affect neighbouring farms.</p>	8 (med)
5. Generation of flyrock as a result of blasting.	9 (med)	<p>Mitigation is generally applied when mining comes to within 100m of any structure and whenever the ground vibration is likely to cause damage to the structure. There are no structures within 500m of the preferred mine area The <i>Blasting Plan</i> will however confirm the location of any nearby structures that may require further protection.</p> <p>The <i>Blasting Plan</i> will determine Peak Particle Velocities (PPV) at varying distance intervals from the quarry so that potential impacts on nearby structures can be determined, this will also provide necessary information to adjust timing and size of blasts to minimise potential impacts.</p> <p>Blasting generates short duration events that are noticeable only by communities and individuals living in the immediate environment. A number of mitigation measures will be recommended in the <i>Blasting Plan</i> to be included in the EIR.</p> <p>The blasting is however to be carried out by a suitably qualified Contractor. Typically this will comprise 115mm diameter blast holes in a 3.5 x 4.0 m staggered drill hole pattern, drilled vertically, with a 1m sub-drill and 2.5m stemming. Blasting is by means of Nonel initiation and Anfo explosives. Blast sizes vary dependent on requirements, but can be up to 40 000</p>	5 (low)

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		<p>tonnes.</p> <p>An assessment of ground conditions and desired fragmentation is to be done on each blast and blasting strategies and techniques are tailored to deliver the desired outcomes. For example:</p> <ul style="list-style-type: none"> • The use of “shake up” blasts in the soft areas. The blasts have a wider drill pattern and are undercharged. • The use of bottom and mid hole boosters on high benches >15m. • The weathered zones and solution channels often have to be blasted using packaged explosive emulsion due to the clay and sometimes wet conditions. <p>Ground vibration from blasting operations will be monitored after each blast by means of a PPV (Peak Particle Velocity) meter. Recordings will be kept of each blast in the Blast Analysis Sheet and filed in the Site Supervisor’s office. This information, including further mitigation measures will be provided in the <i>Blasting Plan</i> however due to the isolated nature of the quarry, flyrock is not anticipated to impact any neighbouring properties.</p>	
<p>6. Leaving the Anniedale Quarry un-rehabilitated.</p>	<p>11 (high)</p>	<p>If the quarry is not rehabilitated upon completion of the operation, the currently proposed activity in combination with previous activities on the immediately adjacent quarried area will create an on-going safety risk (especially children and animals who may fall off the cliff edges or be hurt by unstable collapsing rock faces). It will also continue to have a visual impact on the landscape and there may be further slippage of unshaped slopes and erosion of soil above unstable slopes. A Rehabilitation plan will be submitted as part of the EIR, which will be submitted to the Msunduzi Municipality Environmental Management Unit for comment. Appropriate rehabilitation measures to be taken include:</p> <ul style="list-style-type: none"> • The quarry must be rehabilitated after closure to prevent these impacts from occurring. • Rehabilitation should occur as soon as practically possible on completion of work, following the cessation of the work in a specific section. • Infrastructure erected for mining must be demolished and removed. • All equipment, concrete footings, fencing, etc. must be removed from site. • All waste must be removed from site 	<p>6 (med)</p>

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		<p>and disposed of at an approved landfill.</p> <ul style="list-style-type: none"> • Soil contaminated with oil, grease, fuel may not be disposed of in the excavation and must be disposed at a permitted landfill. • The floor of the quarry must be ripped (if possible) to allow re-growth of vegetation and topsoil removed at the beginning of the process can be used to cover this area. • The requisite permanent drainage works and erosion protection measures should be set in place⁶. • Before placing topsoil, all visible weeds must be removed. • The stockpiled topsoil to be spread evenly over the prepared surface on slopes of 1:3 or steeper. • Topsoil placement shall occur in a phased manner, concurrent with the phased operation of the quarry. Topsoil should be placed in the same area from which it was stripped. • Where amounts are inadequate to cover the entire area, more gentle slopes are to receive priority treatment. As the mining activity will deepen the cliffs on the hillside, the applicant is to consider visual screening (planting of vegetation, such as trees, shrubs or tall grasses) to lessen the visual impact. Since there are no residential households in the immediate vicinity, this may not be requested. • Ensure that other operators or opportunists do not re-visit closed areas and continue to remove material. • Re-vegetated areas should be protected until vegetation has become established. • No vehicles or equipment should access areas that have been vegetated. • Any erosion channels that develop after re-vegetation should be backfilled and consolidated and the areas restored to a proper stable condition. The erosion should not be allowed to develop on a large scale before effecting repairs and all erosion damage should be repaired as soon as possible. <p>Provided these measures are implemented the quarried area can be</p>	

⁶ Aggregates And Sand Produces Of South Africa; The Issue Of Borrow Pits Being Used In The Aggregate And Sand Industry.

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		rehabilitated and long-term impacts avoided. The <i>Vegetation Assessment</i> is to provide further input on any recommendations to be included in the rehabilitation of the quarry. Please refer to section 8.1 of the Scoping Report detailing the financial provisions which are to be set aside for the rehabilitation phase.	
7. Petrochemical spills from mining operational machinery.	7 (med)	All mining equipment and vehicles are to be retained in the permitted mine area, which will be rehabilitated on closure. All spills must however be contained, placed in the hazardous waste removal containment area and removed off site to be disposed of at a licensed hazardous waste landfill site. Adequate spill kits and containers for spilled and contaminated material to be on standby on site. If a spill occurs, stop the source, contain it, clean up in accordance with MSDSs and notify relevant authorities.	3 (low)
8. Inadequate waste management on site.	6 (med)	<p>The project will see an increase in workers on site and therefore an increase in waste in the area.</p> <ul style="list-style-type: none"> • Littering will not be permitted in the study area; • Designated waste storage areas with appropriate waste receptacles must be set up in the site camp; • Waste will be removed from site and disposed of at a registered waste disposal site. • No dumping is permitted. 	4 (low)
9. Encroachment of alien vegetation into disturbed areas and surrounding grassland during operation of the mine.	8 (med)	The <i>Vegetation Assessment</i> will confirm the extent of alien invasion on the property however there is likely to be limited alien vegetation in the surrounding grassland. Alien vegetation establishment is to be tightly controlled to ensure that there is no encroachment into the surrounding areas. This impact can be managed and mitigated.	4 (low)
10. Insufficient number of toilet facilities on site resulting in the contamination of the environment.	7 (med)	<p>Workers on site will require an appropriate number of toilet facilities on site.</p> <ul style="list-style-type: none"> • Appropriate and sufficient toilet facilities (1 toilet per 15 employees) must be provided by the applicant; • All toilet facilities must be checked on a daily basis; • All toilet facilities must be emptied and cleaned on a weekly basis. • A registered waste removal contractor must remove effluent waste from site or effluent waste must be disposed of at a permitted Waste Water Treatment Site. <p>As per the Msunduzi Municipality's</p>	3 (low)

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		comment on the Draft Scoping Report, the establishment and use of long-drop toilets is strictly prohibited.	
11. Cumulative impact on air quality in combination with other light industrial activities associated with the N3 highway.	6 (med)	Air emissions from the quarry will be dust related and to some extent will add to the cumulative impact on air quality in the area. The nearest other dust generating activity is the AfriSam plant (2.2km east). Although dust cannot be completely prevented due to the nature of the activity, it will be mitigated to a large extent through a dust watering program as well as management and screening of certain equipment. Perimeter dust monitoring will be carried out as per the requirements of the legislation to ensure that levels remain within legislated limits. There may be a cumulative increase in dust in the atmosphere.	4 (low)
12. Cumulative impact on biodiversity due to further loss of vegetation and the impact on fauna.	11 (high)	From the desktop study, the site does not fall within a critically endangered or endangered ecosystem. Impacts on fauna in the area will be assessed. The <i>Vegetation Assessment</i> and <i>Fauna Assessment</i> will provide further insight into this cumulative impact on biodiversity. The <i>Msunduzi Municipality's C-Plan and Environmental Management Framework</i> are also to be consulted to identify any areas of potentially high biodiversity. Once mining operations are complete, topsoil must be used to cover the floor of the quarry and indigenous grassland vegetation re-planted in the disturbed area.	To be determined in specialist study.
13. Suitability of operation with respect to surrounding land use i.e. visual impact, and impact on sense of place.	11 (high)	The portion of land ear marked for mining is currently not being utilised for anything other than seasonal hay baling. The preferred mine site is located on the south facing side of the hill, away from the residential households associated with the neighbouring farms. The visual impact has therefore been reduced, compared to Layout Alternative 1. No infrastructure or services running through this property will be impacted by the mining operations. The mine is ideally located in close proximity to the N3 highway where it is anticipated that development, in particular light industry / logistics, will be increasing in the future. Once the site is closed, rehabilitation in the form of topsoil and hydro-seeding must take place to allow for the re-growth of vegetation on this site.	10 (med)
14. Positive impacts for the community include potential for local employment.	0 (no impact)	This is a positive impact however it is to be noted that local labour must be sought, where possible, for the mining of this site.	0 (no impact)

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
<p>15. Loss of vegetation within the Ngongoni ecosystem. There will be clearing of up to 4.99 hectares of indigenous vegetation as the mining area is expanded.</p>	<p>10 (med)</p>	<p>This impact cannot be avoided as the entire permitted mine area, will be cleared of vegetation. A <i>Vegetation Assessment</i> will confirm the quality of the vegetation associated with the mining area and identify the presence of any threatened, protected or valuable flora species. Recommendations are to be provided accordingly. The significance of the vegetation clearing can only then be determined.</p> <p>Vegetation is only to be cleared from within the authorised Anniedale Quarry footprint. There are scattered indigenous and exotic tree species (<i>Acacia</i> spp, Wattle etc.) as well as alien vegetation (Lantana, Blackjacks etc.) amongst the grassland (see photographs in Figure 12). The western portion of the site has been previously disturbed by mining activities and therefore contains a higher number of alien species amongst the indigenous plants. The alien vegetation thickets make up approximately one hectare of the mine area decreasing the amount of indigenous vegetation cleared, in comparison to the alternative layout (discussed in the following table).</p> <p>It is to be noted that the vegetation type is represented in the surrounding area and will not cause the isolation of any important vegetation or wetland areas. Once mining is completed, the site will be rehabilitated back to its former state and the vegetation type will be re-introduced. Further recommendations from the vegetation specialist will be provided.</p> <p>When vegetation clearing takes place, the contractor is to stockpile the topsoil separately in a designated area, where it can be used again during rehabilitation. In this regard, it is to be kept fertile and protected from erosion using various measures that are to be included in the EMPr.</p>	<p>To be determined in specialist study.</p>
<p>16. Noise generation during operation of plant equipment (crushing, screening and blasting) and trucks which may impact on staff and neighbours.</p>	<p>10 (med)</p>	<p>The nearest household is located approximately 520m north of the quarry. Due to the distance from the site, and the topography, the noise from machinery (front end loaders, excavators, screener and crusher) and trucks will be significantly reduced compared to the alternative site location (discussed in the table below). Regardless, all vehicles will be fitted with standard silencers and will be maintained regularly to prevent undue noise. The noise from machinery, trucks and loading of stone will be on-going during operation</p>	<p>8 (med)</p>

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		<p>and can't be completely mitigated against but can be minimised.</p> <p>Noise from blasting will however be further addressed in the <i>Mine Works Plan</i> and <i>Blasting Plan</i>. Typically, blasting is intermittent and at maximum capacity will only occur once a week. The smaller scale once off blasts will likely register in the vicinity of 140 dBA at source. As a point of comparison, traffic noise generates about 80-90dBA, the sound of breaking glass is 151dBA. The volume of noise will dissipate as one moves away from the blast area. In terms of topography, the site is cut into a hill and the work face will continue into the hill so sound will tend to be directed into the hillside. Although some noise will be directed back away from the mining area, in a southerly direction. Blasting will only occur during daylight hours.</p> <p>The primary type of sounds expected will be fairly sharp, percussive sounds which are more likely to travel longer distances. The surrounding vegetated hillsides will partially absorb this sound as it will be less likely to ricochet off these softened surfaces. As previously mentioned, the mining activity will be into the side of the hill such that some of the noise will be absorbed into the hillside though some will also ricochet back.</p> <p>The table below provides noise levels experienced by operators of front end loaders and excavators⁷.</p>	

Table 3: Noise levels, L_{eq} , experienced in construction jobs in the UK⁴.

Plant/equipment	Operator, L_{EX} , dBA		Trades/Tools	L_{eq} dBA
	Ave.	Range		
Dozers, Dumpers	96	89-103	Plumber	90
Front end loaders	88	85-91	Elevator installer	96
Excavators	87	86-90	Rebar worker	95
Backhoes	86.5	79-89	Carpenter	90
Scrapers	96	84-102	Concrete form finisher	93
Mobile Cranes	100	97-102	Dry wall installer	90
Compressors	79	62-92	Steel stud installer	96
Pavers	101	100-102	Labourer – road construction	86
Rollers (compactors)	90	79-93	Labourers – formwork	88
Bar Benders	95	94-96	Labourers – shovel hardcore	94
Pneumatic breakers	106	94-111	Labourers – concrete pour	97
Hydraulic breakers	95.5	90-100	Hoist operator	100
Graders, trucks, concrete pumps & mixers, generators	< 85		Labourers— drains & roughing concrete	100
Concrete batch plant operator	< 85		Tile setter	92
Poker vibrators	94.5	87-98	Pneumatic chipper/chisel	109
Saws	88.5	78-95	Compactor	108
Piledrivers (diesel & pneum.)	98	82-105	Electric drill	102
Pile drivers (gravity, bored)	82.5	62-91	Air track drill	113

⁷ Workers Compensation <http://hearingconservatio>

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
<p>17. Dust generation during preparation of site and roads as well as during operation impacting on air quality.</p>	<p>9 (med)</p>	<p>The area of impact is expected to be relatively low. The existing dirt road to the site measures 180m and therefore trucks will only be travelling on the dirt road for a short period of time. Dust will however require management and the applicant must comply with the National Dust Regulations (Government Notice R827, 2013) with regards to dust levels produced on site. Perimeter monitoring of dust will be conducted to monitor dust levels to ensure they remain within legislated limits. Vehicle speeds must be reduced to 40kms within the quarry area and a water cart and water truck must be in operation to ensure dust is controlled. Machines to be fitted with dust suppression equipment and localised water spraying with the addition of wetting agents will also reduce dust from specific activities and equipment. If legislated dust levels are exceeded, shielding of this equipment (use of hoods or enclosing within shade cloth barriers) as well as placement of equipment so that it is sheltered from prevailing winds will be implemented to assist in managing dust. The material being transported off site in the back of the trucks must be covered. Dust generation will be primarily managed through application of water but is an impact associated with on-going operation of a quarry and even with mitigation, some dust will still be released.</p>	<p>5 (low)</p>
<p>18. Poor stormwater management during operation and after closure leading to erosion of the site and adjacent road.</p>	<p>9 (med)</p>	<p>Provision must be made to control stormwater runoff, especially down the slope of the mine face. Stormwater Management during operation of the mine will be discussed in detail in the Water Use Authorisation however the following measures will be taken to management runoff in and around the mine area:</p> <ul style="list-style-type: none"> • Strategic placement of diversion berms and ditches around the mine area to divert clean water away from the mine and prevent potentially contaminated run off from leaving the mine area. • The ditches and berm area must be vegetated. • Temporary stormwater protection measures must be established before operational activities commence. • Install appropriate erosion barriers (berms or diversion ditches, sandbags) and other sediment control structures 	<p>5 (low)</p>

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		<p>(grates or grids, geofabric) in order to prevent substances from entering exposed drains or channels.</p> <ul style="list-style-type: none"> Identify steeper areas where erosion is more likely to occur and ensure adequate protection of these slopes through planting of vegetation, placement of berms or use of hessian material. Regularly check and clean material from behind erosion barriers. A sump is to be created at the lowpoint of the quarry to capture runoff from within the mine area. This water will be abstracted for dust suppression but only within the mine area. The sump may need to move as the mining area changes and moves. <p>The aim of the stormwater management is to ensure that clean water running off surrounding slopes does not enter the mine area and “dirty” water from within the mine area does not leave the mine area. This will also be assessed as part of the WULA submitted to DWS. A <i>Drainage Analysis</i> will be provided in the <i>Stormwater Management Programme</i> to be attached to the EIR. A <i>desktop Geohydrological Assessment</i> will provide input on any potential impacts to groundwater.</p>	
<p>19. Risk to water quality on nearby watercourses and wetlands.</p>	<p>7 (med)</p>	<p>During the notification phase of the EIA, the EAPs attention was drawn to the proximity of the Mpushini Protected Environment and the Lower Mpushini Valley Conservancy, which protects the Mpushini River (see Comments and Response Table in Appendix F). The preferred mine alternative is located on the south facing side of the hill, opposite to the Malkop Spruit and Mpushini River. Drainage off the mine area would therefore flow in a southerly direction towards the P338. The <i>Wetland and Aquatic Assessment</i> will assess the risk to nearby watercourses and the catchment, however the primary aim of the stormwater management plan will be to prevent run off from leaving the quarry at all.</p> <p>The wetland specialist will comment on the previously mined area directly adjacent to the proposed mining area which has been identified as a NFEPA wetland. Pits that were originally excavated and not rehabilitated have been collecting rain water over time and have become vegetated with riparian vegetation (see Figure 6a for a photograph of the area)..</p> <p>In terms of mitigation, slopes that fall towards the quarry workings will be</p>	<p>3 (low)</p>

Nature and Consequences of impact	Significance rating of impacts ⁵ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		identified and berms provided to deflect run off from entering quarry operations, thereby reducing the risk of contamination. Drainage from the quarry area and especially areas where blasting takes place will be directed into a sump. This water will then either be re used on site i.e. for dust suppression which means it will drain back into the sump. Only clean water will be used for dust suppression outside the mine area i.e. on the access roads. Sediment and potentially contaminated run off is not permitted to enter the natural watercourses in the area. A Desktop Geohydrological Assessment will provide input on potential impacts to groundwater.	
20. Impact on existing services i.e. power lines, water pipes, Transnet NMPP, etc.	10 (med)	All existing services and infrastructure on the property have been identified (see Figure 4 above). The mine area has been located as far away from these services as feasible (>500m) providing a sufficient buffer. Any infrastructure that is removed must be replaced and any damage caused from the mining operations must be repaired. This impact can be avoided.	5 (low)

7.3 Preferred Site and Layout Alternative

See Appendix G for the full impacts scoring matrix, which assesses the impacts based on the scoring system described in section 7.1. The below impacts relates to the site location and alternative layout (i.e. Layout Alternative 1 on the north-facing slope).

Table 4: Impacts and mitigation measures associated with the *alternative* layout

Nature and Consequences of impact	Significance rating of impacts ⁸ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
Construction			
As per Layout Alternative 2, construction will result in the very little activity occurring on the site and therefore no construction related impacts have been identified.			
Operation			
Operational impacts 1 – 14 remain the same as the preferred layout alternative.		Mitigation measures for operational impacts 1 – 14 remain the same as the preferred layout alternative.	
1. Loss of vegetation within the Ngononi ecosystem. There will be clearing of up to 4.99 hectares of indigenous vegetation as the mining area is expanded.	10 (med)	This impact cannot be avoided as the entire permitted mine area, although phased, will be cleared of vegetation. A Vegetation Assessment will confirm the quality of the vegetation associated with the mining area and identify the presence of any threatened, protected or valuable flora species. Recommendations are to be	11 (high)

⁸ See Appendix H for more details.

Nature and Consequences of impact	Significance rating of impacts ⁸ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		<p>provided accordingly. The significance of the vegetation clearing can only then be determined.</p> <p>The vegetation is likely to be similar to that on the preferred site however there has been no previous disturbance to this side of the hill and is therefore more likely to be considered "less disturbed" with fewer alien invasive species.</p> <p>It is to be noted that the vegetation type is represented in the surrounding area and will not cause the isolation of any important vegetation or wetland areas. Once mining is completed, the site will be rehabilitated back to its former state and the vegetation type will be re-introduced. Further recommendations from the vegetation specialist will be provided.</p> <p>When vegetation clearing takes place, the contractor is to stockpile the topsoil separately in a designated area, where it can be used again during rehabilitation.</p>	
<p>2. Noise generation during operation of plant equipment (crushing, screening and blasting) and trucks which may impact on staff and neighbours.</p>	<p>10 (med)</p>	<p>The nearest household is located approximately 200m north of the alternative quarry site. The quarry will be on the same side of the hill as the households and therefore noise from machinery and trucks will be clearly heard on the neighbouring farms.</p> <p>All vehicles will be fitted with standard silencers and will be maintained regularly to prevent undue noise however this impact is more significant for the preferred site alternative.</p> <p>Noise from blasting will also be heard by the neighbouring farms. Although sound will tend to be directed into the hillside, some noise will be directed back away from the mining area, in a northerly direction towards the households and farms, increasing the significance of the impact.</p>	<p>9 (med)</p>
<p>3. Dust generation during preparation of site and roads as well as during operation impacting on air quality.</p>	<p>9 (med)</p>	<p>In order to access the alternative quarry site, haulage vehicles will be required to travel on small dirt roads for approximately 1.8km (shown in red in Figure 13). Dust will need to be more tightly monitored along the access road with water carts travelling along the roads frequently to ensure dust does not become a nuisance to surrounding farms. Dust suppression will also require a greater volume of water to be used compared to the short access road used for the preferred mine site.</p> <p>Screening (natural or shade cloth) may be required to shield dust blowing from the quarry onto adjacent farm houses.</p> <p>Other mitigation measures similar to the</p>	<p>8 (med)</p>

Nature and Consequences of impact	Significance rating of impacts ⁸ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		<p>preferred site are:</p> <ul style="list-style-type: none"> • Perimeter monitoring of dust will be conducted to monitor dust levels to ensure they remain within legislated limits. • Vehicle speeds must be reduced to 40kms within the quarry area and a water cart and water truck must be in operation to ensure dust is controlled. • Machines to be fitted with dust suppression equipment and localised water spraying with the addition of wetting agents will also reduce dust from specific activities and equipment. • If legislated dust levels are exceeded, shielding of this equipment (use of hoods or enclosing within shade cloth barriers) as well as placement of equipment so that it is sheltered from prevailing winds will be implemented to assist in managing dust. • The material being transported off site in the back of the trucks must be covered. 	

Figure 13: Aerial photograph showing the proposed access route to the alternative mine area in red (source: Google Earth Pro, 2016).



<p>4. Poor stormwater management during operation and after closure leading to erosion on and adjacent to the site.</p>	<p>9 (med)</p>	<p>There are already existing erosion gullies forming in the northern boundary of the property (indicated with a yellow arrow in the figure above) and therefore stormwater will need to be carefully managed on site during the operation and rehabilitation of the mine. The alternative mine area is</p>	<p>6 (med)</p>
---	----------------	---	----------------

Nature and Consequences of impact	Significance rating of impacts ⁸ :	Proposed mitigation and Extent to which impact can be reversed / avoided, managed or mitigated:	Significance rating of impacts after mitigation:
		<p>located on the north facing side of the hill and therefore drainage off the site will naturally flow in a northerly direction towards the Malkop Spruit. The alternative site is approximately 590m from the nearest drainage line and will therefore be unlikely to impact the watercourses further downstream.</p> <p>Provision must be made to control stormwater runoff, especially down the slope of the mine face. Similar mitigation measures described in the table above for the preferred layout alternative will be followed to ensure clean water running off surrounding slopes is kept separate from the “dirty” water running off the mine area.</p>	
<p>5. Risk to water quality on nearby watercourses and wetlands.</p>	<p>8 (med)</p>	<p>There are no watercourses in the immediate vicinity of the alternative mine area however the quarry will be located on the northern sloping side of the hill with drainage flowing towards the Mpushini River.</p> <p>The <i>Wetland and Aquatic Assessment</i> will however determine any potential impacts on nearby watercourses.</p> <p>In terms of mitigation, slopes that fall towards the quarry workings will be identified and berms provided to deflect run off from entering quarry operations, thereby reducing the risk of contamination. Drainage from the quarry area and especially areas where blasting takes place will be directed into a sump where it can be tested and if necessary treated. This water will then either be re used on site i.e. for dust suppression which means it will drain back into the sump. Only clean water will be used for dust suppression outside the mine area i.e. on the access roads. Sediment and potentially contaminated run off is not permitted to enter the natural watercourses in the area.</p>	<p>6 (med)</p>
<p>6. Impact on existing services i.e. power lines, water pipes, Transnet NMPP, etc.</p>	<p>11 (high)</p>	<p>A map showing the servitudes traversing the site is provided in Figure 4. The mine site needs to take into account the various buffers associated with the infrastructure as well as the relevant health distance is to be maintained from Transnet’s New Multi-Product Pipeline (NMPP; illustrated in brown in Figure 4). As part of best practice guidelines, the applicant intends to blast no less than 500m away from any residential dwellings. The NMPP and nearest residential households both fall closer than 500m and therefore the quarry location was not considered ideal due to the health and safety risks associated with the blasts.</p>	<p>7 (med)</p>

Section 8: Plan of Study for Undertaking the EIA

8.1 Description of Aspects to be Assessed in the EIA, including Specialist Input, and Proposed Tasks to be Undertaken as Part of the EIA as Per Section 2 (i) (ii), (iii) and (viii)

No fatal flaws or red flags have been identified in the Scoping Report however all identified impacts will be further investigation and assessed in the EIA phase of the project. Additional impacts may be added to the Impacts Table on receipt of the various specialist reports.

8.1.1 Specialist Assessments

The following specialist reports are underway and will be included in the EIR:

8.1.1.1 Blasting Plan

Tillite Tech (Pty) Ltd will provide the blasting methodology and detail management measures to be undertaken during the operation of the Anniedale quarry. The Blasting Plan will determine Peak Particle Velocities (PPV) at varying distance intervals from the quarry so that potential impacts on nearby structures can be determined, this will also provide necessary information to adjust timing and size of blasts to minimise potential impacts. The Blasting Plan will ensure that the blasting is managed to minimise adverse impacts on the surrounding farmers and environment. It will also provide clear definitions of the roles and responsibilities for employees and contractors working at the Anniedale Quarry.

8.1.1.2 Fauna Assessment

The Biodiversity Company have been commissioned to carry out a fauna assessment on the property to provide input on any significant impacts that the mining may have on sensitive species. The specialist will carry out a site inspection and provide a list of species noted on site as well as species which are expected to occur in the area (according to Ezemvelo KZN Wildlife's database) and impacts associated with loss of this section of the site.

8.1.1.3 Geotechnical and Desktop Geohydrological Investigation

Drennan Maud (Pty) Ltd are the independent geotechnical engineers which will be preparing a detailed Geotechnical Investigation for the property showing the underlying Geology. On site tests have been carried out and the results of the laboratory tests will be presented. Material suitability will be discussed and possible quarry constraints. Recommendations to prevent collapse of the mine face as well as other general recommendations for mine safety will be provided by the engineer. Terratest will prepare the desktop geohydrological report wherein they will collect and review available information and carry out a qualitative preliminary risk assessment and review. The report will include a hydrocensus, indicating boreholes within 5km of the site and an indication of risk to groundwater as a result of the operation.

8.1.1.4 Heritage Impact Assessment

Active Heritage will undertake a Heritage Impact Assessment for the proposed development in terms of the KwaZulu Heritage Act No. 10 of 1997. The specialist will review existing databases and literature relevant to the site and document coordinates of any heritage features. The Heritage Impact Assessment is not limited to archaeological artefacts, historical buildings and graves but includes intangible and invisible resources such as places, oral traditions and rituals. In the KwaZulu-Natal Heritage Act 1997 a heritage resource is defined any place or object of cultural significance i.e. of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

8.1.1.5 Mine Works Programme

Tillite Tech (Pty) Ltd will prepare the proposed mine works programme identifying the methodology / technique for mining the mineral at the Anniedale Quarry. Maps showing the mine design and schematic mining schedule will be provide. The Mine Works Programme includes details of infrastructure required on the site (office, access road, water source etc.).

8.1.1.6 Stormwater Management Programme including a Drainage Analysis

Tillite Tech (Pty) Ltd will include a detailed, site specific Stormwater Management Programme in the Mine Works Programme. The Stormwater Management Programme will include a map showing the general drainage aspects of the site to ensure that only clean water enters the surrounding environment. A flood analysis is to be included to ensure that stormwater runoff from the site can be sufficiently managed during a flood event. Dimensions of the proposed sump which is to be created in the centre to capture runoff from within the mine area (to be used for onsite dust suppression) will be included.

8.1.1.7 Vegetation Assessment

David Styles will undertake a detailed study of the property to ascertain the composition and importance of the vegetation associated with the mine area. The assessment will include a full reconnaissance of the site followed by plot based fieldwork. He will then produce a report including a species list and relevant GIS work and mapping. The report is to fulfil the DMR and Ezemvelo KZN Wildlife standards. Comment is to be provided on the local biodiversity.

8.1.1.8 Wetland and Aquatic Assessment

The Biodiversity Company are carrying out a study which will include a wetland assessment (where applicable) and an aquatic assessment of local rivers and streams affected by the project, in order to ensure that all legislative requirements are fulfilled. In accordance with DWS, a buffer area of 500m around the project area will also be assessed for the presence of wetland systems. As per the Specialists proposal, the following will be carried out:

Aquatic assessment

1. Description of site
2. Show Extent of riparian habitat
3. PES with regards
 - a. flow and sediment regime,
 - b. water quality,
 - c. riparian and instream habitat,
 - d. morphology,
 - e. vegetation,
 - f. biota
4. Ecological importance (EI) and sensitivity (EIS)
5. Assess impact of proposal on water course / biota etc
6. Provide mitigation measures to reduce / prevent impact
7. Provide rehabilitation plan
8. Provide monitoring program

Wetlands

1. Confirm and show on map a 500m radius around the site and indicate if there are any wetlands within 500m of the site
2. If there are no wetlands – state that there are no wetlands
3. If there are wetlands within 500m of the site provide the following for each and every wetland
 - a. Delineate boundary
 - b. PES
 - c. EIS
 - d. EI
4. Assess impact of proposal on the 4 wetland drivers
5. Complete wetland risk matrix as required by DWS
6. Provide mitigation measures to reduce / prevent impact
7. Provide rehabilitation plan
8. Provide monitoring program

Scope of Work Wetland Assessment

Wetland delineation

The wetland areas will be delineated in accordance with the DWAF (2005) guidelines. The outer edge of the wetland areas will be identified by considering the following four specific indicators:

- The Terrain Unit Indicator helps to identify those parts of the landscape where wetlands are more likely to occur.
- The Soil Form Indicator identifies the soil forms, as defined by the Soil Classification Working Group (1991), which are associated with prolonged and frequent saturation.
- The Soil Wetness Indicator identifies the morphological "signatures" developed in the soil profile as a result of prolonged and frequent saturation.
- The Vegetation Indicator identifies hydrophilic vegetation associated with frequently saturated soils.

Riparian delineation

The riparian areas will be delineated in accordance with the DWAF (2005) guidelines. The riparian areas will be identified by considering the following specific indicators:

- Are associated with a watercourse.

- Contain distinctively different plant species than adjacent areas; and contain species similar to adjacent areas but exhibiting more vigorous or robust growth forms.
- May have alluvial soils.

WET-EcoServices

WET-EcoServices will be implemented to assess the goods and services that the individual wetlands provide. The identified wetland areas will be characterised into hydro-geomorphic wetland types based primarily on interpretation of aerial photographs. Individual wetlands will then be assessed at a desktop assessment level (Level 1) and ground-truthed (Level 2).

WET-Health

WET-Health will be implemented to assess the health or integrity of the wetlands in order to measure the deviation of wetland structure and function from the wetland's natural reference condition. This technique will assess hydrological, geomorphological and vegetation health in three separate modules.

Scope of Work Aquatic Assessment

The ecological classification (EcoClassification) of the systems will require the determination and categorisation of the Present Ecological State (PES; health or integrity) of individual biophysical attributes, and then comparing these findings to the natural or close to natural reference conditions, as well as previous biomonitoring projects (where possible). These biophysical attributes refer to the drivers and biological responses of an aquatic ecosystem. The acquired data can be used to establish spatial and temporal trends of the biotic integrity of the aquatic systems. As per the requirements of the WULs, the biophysical attributes that will be included for the study are the following:

The abiotic driver assessment:

- *In situ* water quality (DWAf standards for aquatic ecology).
- The Invertebrate Habitat Assessment System (IHAS).
- The Intermediate Habitat Integrity Assessment (IHIA).
- The biotic response indicator assessment:
- South African Scoring System ver 5 (SASS 5).
- The Average Score Per Taxon (ASPT).
- Macroinvertebrate Response Assessment Index (MIRAI).
- Fish Response Assessment Index (FRAI).

Impact Assessment

The assessment of the impacts will be conducted over the full life cycle of the planned development. A cumulative impact assessment will also be conducted for the project area, taking into consideration existing land uses and other developments within the respective study area. The impact assessment will include the application of the DWS risk matrix as required for the WULA.

Management Measures

Environmental management measures to avoid and/or minimise environmental impact for the full life cycle of the project will be developed. Mitigation measures and recommendations will be prescribed for any potential impacts associated with the development.

8.1.2 Other Proposed Tasks

Mitigation measures and recommendations made by the specialists will be contained in a site specific Environmental Management Programme (EMPr), to be complied during the next phase of the EIA. The EIA phase aims to adequately assess and address all the environmental impacts which have been identified throughout the EIA, to provide DMR with sufficient information to make an informed decision regarding the proposed mining application.

Consultation will continue with the municipalities (uMsunduzi and Umgungundlovu), Ward Councillor, DWS, KZN Wildlife and other authorities listed in the I & AP Register (Appendix E). Any other I & APs identified during the EIA phase will be included in the I & AP register and sufficient time provided to the I & APs to comment on the EIA reports. Consultation with authorities and I & APs is therefore a continuous process that takes place until completion of the environmental investigations.

Table 5 below provides the plan of study for the remainder of the EIA according to legislated timelines provided in the Environmental Impact Assessment Regulations, 2014 published on the 04th December 2014 in Government Gazette No. 38282 Notice No. R.982.

Table 5: Plan of Study for the EIA process for the Anniedale Quarry

Date	Description
17 th March 2016	DMR Acceptance of Mining Application received
01 st April 2016	Release of Draft Scoping Report to I & APs for comment
09 th May 2016	End 30 day comment period
~09 th May 2016	Submission of Final Scoping Report to DMR (within 44 days of receipt of acceptance). Final Scoping Report to include any comments received from I & APs.
22 nd June 2016	Deadline for DMR to accept or reject Scoping Report (within 43 days of receipt of Scoping Report).
~ August 2016	Provided that the Scoping Report is accepted, the EIR will be released for I & AP comment (106 days from receipt of acceptance of Scoping Report). EIR to include all specialist studies listed above and updated impacts table.
~ September 2016	End 30 day comment period
~ October 2016	Submission of Final EIR to DMR (within 106 days of acceptance of Scoping Report).
~ February 2017	Deadline for DMR to accept or reject EIR (within 107 days of receipt of the EIR).

8.2 Methodology for Assessment of Environmental Aspects as Per Section 2 (i) (iv), (v) and (ix)

The impacts identified in the Impacts Table (section 7.0 above) as well as additional impacts raised in the specialist reports will be discussed in further detail in the EIR. The same methodology described in section 7.1 above for rating impacts identified in the Scoping Report, will be used to assess the environmental aspects in the EIR however the ratings will be more accurate with input from the specialists.

The duration / frequency of the activity and likely impacts associated with that activity during construction, operation and closure will be rated. The geographical extent of the impact will be assessed as well as the severity levels and consequences should the impact occur. Probability of the impact occurring will be taken into account. Whether or not the impact can be mitigated and the extent to which it can be avoided, managed, mitigated or reversed is assessed i.e. the probability of occurrence after mitigation has been applied. Based on all of these factors, the impact is then rated to determine its significance. Table 1 above explains the scoring system that will be used in the EIR to rate the significance of the impacts before and after mitigation.

8.1 Financial Provisions

Financial provision is required for rehabilitation of the site once mining is complete. The applicant is responsible for and must ensure that the site has been rehabilitated in full before leaving the site. This financial provision depends on the size and state of the cleared area requiring rehabilitation. The following tables, extracted from the DMR standard rehabilitation guideline⁹, provide guidance on rehabilitation fees applicable for mines based on sensitivity and area affected. The tables below are based on a desktop assessment and may change in the EIR depending on input from the Mine Works Programme. The highlighted items are applicable to the site in question.

Table 6: DMR sensitivity ratings for mines

Sensitivity	Sensitivity criteria		
	Biophysical	Social	Economic
Low	<ul style="list-style-type: none"> Largely disturbed from natural state. Limited natural fauna and flora remains. Exotic plant species evident. Unplanned development. 	<ul style="list-style-type: none"> The local communities are not within sighting distance of the mining operation. Lightly inhabited area (rural). 	<ul style="list-style-type: none"> The area is insensitive to development. The area is not a major source of income to the local communities.

⁹ DMR Financial Provision Guideline, 2005.

	<ul style="list-style-type: none"> Water resources disturbed and impaired. 		
Medium	<ul style="list-style-type: none"> Mix of natural and exotic fauna and flora. Development is a mix of disturbed and undisturbed areas, within an overall planned framework. Water resources are well controlled. 	<ul style="list-style-type: none"> The local communities are in the proximity of the mining operation (within sighting distance). Peri-urban area with density aligned with a development framework. Area developed with an established infrastructure. 	<ul style="list-style-type: none"> The area has a balanced economic development where a degree of income for the local communities is derived from the area. The economic activity could be influenced by indiscriminate development.
High	<ul style="list-style-type: none"> Largely in natural state. Vibrant fauna and flora, with species diversity and abundance matching the nature of the area. Well planned development. Area forms part of an overall ecological regime of conservation value. Water resources emulate their original state. 	<ul style="list-style-type: none"> The local communities are in close proximity of the mining operation (on the boundary of the mine). Densely inhabited area (urban/dense settlements). Developed and well-established communities 	<ul style="list-style-type: none"> The local communities derive the bulk of their income directly from the area. The area is sensitive to development that could compromise the existing economic activity.

Table 7: Rates (per Ha) to determine financial provision.

	Environmental Sensitivity of mine area		
	Low	Medium	High
Rate per hectare to determine the quantum (rands)	20 000.00	50 000.00	60 000.00
Minimum amount	R10 000.00		

As per Tables 6 and 7 above, the sensitivity of the site is medium. Therefore:

- the standard DMR guideline for determining financial provision for a site of 4.99 ha in a 'medium sensitivity' area would amount to R249 500.

The DMR standard rehabilitation guideline¹⁰ has been used in conjunction with the costing spreadsheet below. As per Table 6 below, the rehabilitation cost for rehabilitating this site measuring 4.99 ha is R202 600.00

Table 8: Anticipated rehabilitation costs for the Anniedale Quarry

Rehabilitation cost estimate				
Description	UNIT	QTY	RATE	Amount R
LANDSCAPING AND PLANTING				
Trimming	m ²	2500	4	R20 000
Preparing areas for grassing				
Topsoiling within the quarry area	m ³	5000	15	R75 000
GRASSING				
Hydroseeding	ha	3	15000	R75 000
LABOUR				
Unskilled labour	Hour	80	20	R2 400
Semi-Skilled	Hour	80	30	R3 600

¹⁰ DMR Financial Provision Guideline, 2005.

Skilled	Hour	100	60	R6 000
PLANT WORK				
Tracked excavator (Bell HD 820 or similar)	Hour	20	300	R6 000
Tracked Loader Backhoe (CAT 428 or similar)	Hour	20	220	R4 400
Tip Truck (10m ³)	Hour	20	225	R4 500
Water Tanker (10 000 litre)	Hour	30	190	R5 700
Total				R202 600

8.2 Conclusion

The intent of this Scoping Report has been to provide a background to the proposal and a description of the site and activities so that I & APs and authorities can provide preliminary feedback on the proposal for further investigation in the EIR. All information provided should be considered preliminary subject to further investigation and confirmation as per the plan of study for EIA. The public participation process should be seen as ongoing and I & APs will continue to be given opportunities to review and comment on all information pertaining to the proposal. At this stage, no fatal flaws have been identified however concerns have been raised by I & APS regarding risk to the catchment and watercourses downstream of the site. This will be further investigated by the relevant specialists and detailed in the EIR.

Appendix A: EAP Declaration and Curriculum Vitae

Appendix B: Proof of Placement of Notice Board

Appendix C: Adverts

Appendix D: Proof of Notification

- LO
- Adjacent LO
- Authorities and I & APs

Appendix E: Registered I &Aps

Appendix F: Comments and Response Table and Comments Received

Appendix G: Impacts Scoring Matrix