Annexure A:

Copy of Background Information Document distributed to all I&AP's

BACKGROUND INFORMATION DOCUMENT (BID):

MINING RIGHT APPLICATION

on
Farm Klein Rivier 713 Ptn 32 and
Farm Buffelsbosch 742 Ptn 14
situated in the District of Humansdorp
(Eastern Cape Province)

September 2011

1 Purpose of document:

The aim of this document is to serve as background to allow informed public participation / comment in a recently lodged mining right application. This document is the first step in a public participation process which will continue for the next 8-12 months.

The Mining Right application has been made in terms of Section 22 of the Mineral and Petroleum Resources Development Act 28 of 2002 (MPRDA). A mining right is restricted to a lifespan of 30 years.

Figure 1: Locality Plan

2 Structure of this document:

The remainder of this document consists of the following sections:

- General information regarding the application process with specific reference to where public participation takes place in the process.
- Brief project description
- Brief description of existing environment, anticipated impacts and impact attenuation (reduction) measures.
- Specific requests of I&AP's
- Way forward and Request to register as I&AP

3 Mining Right Application Process:

The process to be followed by an applicant for a Mining Right is legislated in terms of the MPRDA.

1. The first step in the process is the lodging of the application by the applicant. The actual lodging is conducted without consultation so that the applicants rights as first applicant are protected.
2. Within 14 days[1] the DMR either accepts the application and instruct the applicant to continue with the process, or rejects the application. This application has been accepted and the process continues as follows:
    a. The applicant prepares a (BID) Background Information Documentation (this document) which accompanies all written and personal communication. This document is initially sent to all identified I&AP's which include the landowner, surrounding landowners, Land Claims Commissioner, Municipality and Provincial department responsible for environment.
    b. Broader public participation will also take place and this takes the form of at the very least a newspaper advert in the local publication. A notice can also be placed at the entrance to the affected farm or application area.
    c. The initial contact with the Interested and Affected Parties (I&APs) serves to notify & consult with the landowner/legal occupier and other affected parties. Furthermore the applicant is to identify any additional I&AP's and to request I&APs to register as such (through newspaper advert for instance). This registration is important in that it ensures that those who register are kept informed of the status of the application and are provided with relevant documentation).
    d. The Mineral & Petroleum Resources Development Act, Act 28 of 2002 (MPRDA) requires a separate scoping report for Mining right. This Information must reach the DMR within 30 days of the applicant being notified that the application has been accepted. As a result the timeframes are very tight initially and respondents are given 2 weeks to respond to this BID so that the responses can be included in the scoping report to be lodged at the DMR.
    e. The scoping report is also circulated for comment and this includes circulation to all parties who registered as I&AP's as well as leaving a copy at the local public library. Calls are again made for persons / groups to register as I&AP's. At this stage respondents are given a longer period to provide comment (i.e. longer than the initial 2 weeks), given that the applicant has 5 months to compile the Environmental Management Programme (EMP).
    f. All comments are included in EMP.
    g. The DMR are responsible for distribution of the EMP to State Departments whom have 60 days to provide comment on the report to the DMR

[1] Note that all applications are now conducted electronically and the applicant is advised immediately whether the application has been accepted.

h. The standard practice is to provide all registered I&AP's with further opportunity to comment on the EMP during the State Department commenting period.
i. The DMR assesses all comments and provides the applicant with their considered decision 60 days after receipt of all comments. (i.e. 120 days after EMP is lodged).

4 Brief Project Description

The application for mining right over 2 non-contiguous portions of land to develop hard rock drill and blast surface mine and processing (crushing & screening) plant.

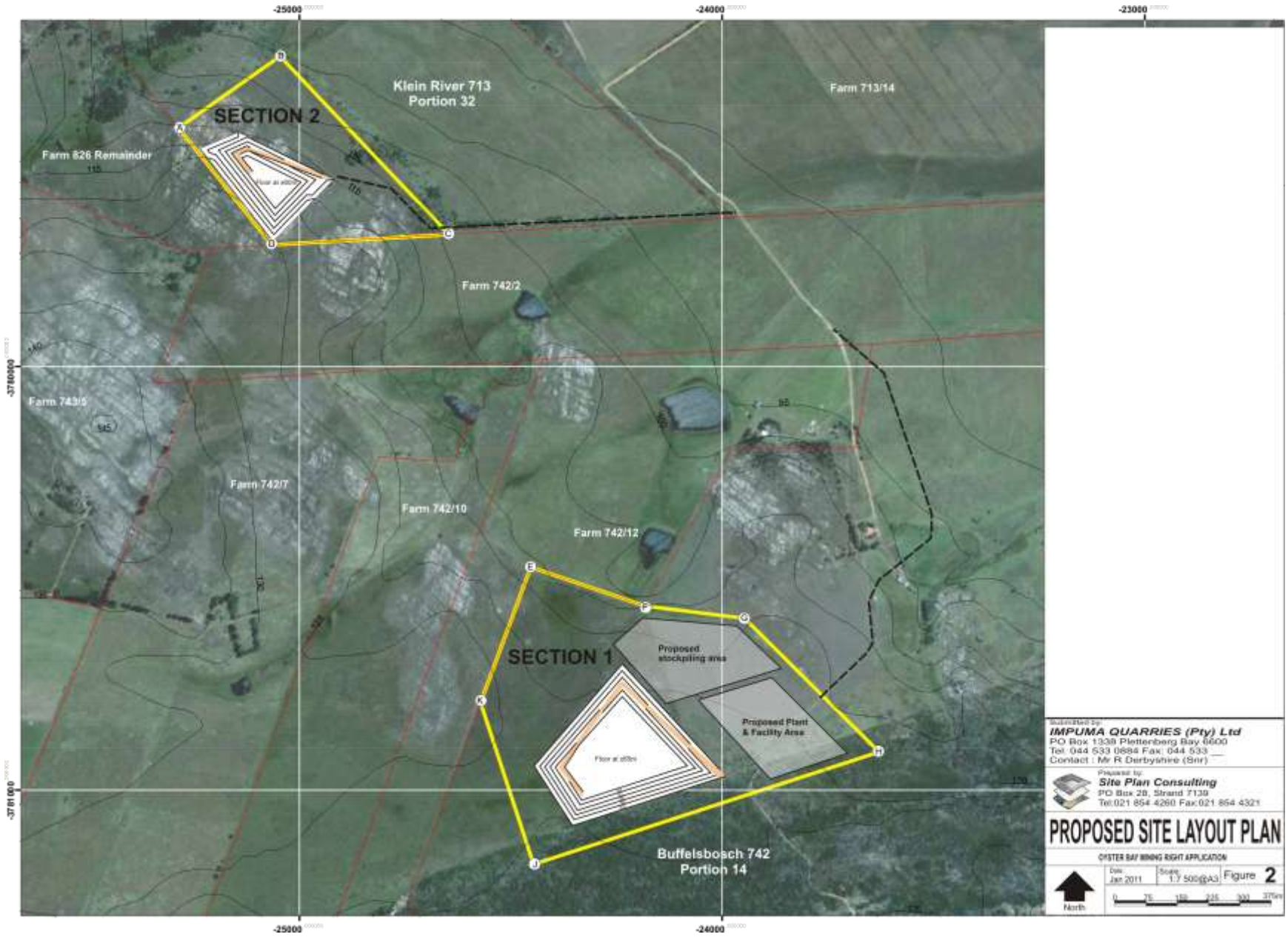
4.1 General Mining Method and Site Layout Plan

(Refer Figure 2 overleaf)
The application has two sections in which mining is proposed. Section 1 is the southern larger area which will house the "aggregate" quarry (i.e. finer material) and the processing plant and stockpiling area. Section 2 is the smaller northern area which will contain only the excavation for the armouring (i.e. coarser material).

In *Section 1*, the aggregate section, mining (quarrying) occurs as a drill and blast operation with faces of 9-11m high and a blast size of 20 000 – 30 000 tons/blast, approximately once per month. Note that drilling and blasting will be conducted by contractor. The drilling of holes by hydraulic track rig and the computer controlled blast detonation system represents the latest quarrying technology. Ahead of the face blasting, topsoil (where available outside of exposed bedrock) is removed to topsoil stockpile berms for later use in rehabilitation.

Shot rock is loaded by excavator into articulated dump trucks for hauling to the mobile plant (rented). Note that the mobile plant will be replaced with a static full plant at a later stage.

In *Section 2*, mining is conducted as a drill and blast operation using pre-split blasting (i.e. one row of closely spaced holes) to maximise the percentage of large boulders or oversize. All boulders more than 1 ton will be stockpiled or transported directly to be used as armouring. A small percentage of the non-oversize rock will either require picking (i.e. secondary breaking) and then all suitably sized material (i.e. not oversize) will be transported to the crushing plant for processing as aggregate. At this stage it cannot be determined what percentage of material in Section 2 will be transported to the crushing plant in Section 1.


-25000
-24000
-23000
-3780000
-3781000
SECTION 2
SECTION 1
Klein River 713
Portion 32
Farm 713/14
Farm 826 Remainder
Farm 742/2
Farm 743/5
Farm 742/7
Farm 742/10
Farm 742/12
Proposed stockpiling area
Proposed Plant & Facility Area
Buffelsbosch 742
Portion 14
A
B
C
D
E
F
G
H
J
K
IMPUMA QUARRIES (Pty) Ltd
PO Box 1338 Plettenberg Bay 6600
Tel: 044 533 0884 Fax: 044 533
Contact : Mr R Derbyshire (Snr)
Site Plan Consulting
PO Box 28, Strand 7139
Tel:021 854 4260 Fax:021 854 4321
PROPOSED SITE LAYOUT PLAN
OYSTER BAY MINING RIGHT APPLICATION
Date: Jan 2011
Scale: 1:7 500@A3
Figure 2
North

5 Brief description of existing environment, anticipated impacts and impact attenuation (reduction) measures

5.1 Defining the impact

The impact on each of the aspects is measured according to the following table of significance.

a) Significance (level)

Significance		***Criteria***
Negative	**S**ignificant	• Recommended level always exceeded with associated widespread community action • Disturbance to areas that are pristine, have conservation value, are important resource to humans and will be lost forever • Complete loss of land capability • Destruction of rare or endangered specimens • May affect the viability of the project
	Moderate	• Moderate measurable deterioration and discomfort • Recommended level occasionally violated – still widespread complaints • Partial loss of land capability • Complete change in species variety or prevalence • May be managed • Is Insignificant if managed according to EMP provisions
	Insignificant/ Minor	• Minor deterioration. Change not measurable • Recommended level will rarely if ever be violated • Sporadic community complaints • Minor deterioration in land capability • Minor changes in species variety or prevalence
Positive	Minor	• Improvements in local socio-economics
	Significant	• Major improvements in local socio-economics with some regional benefits

b) Duration

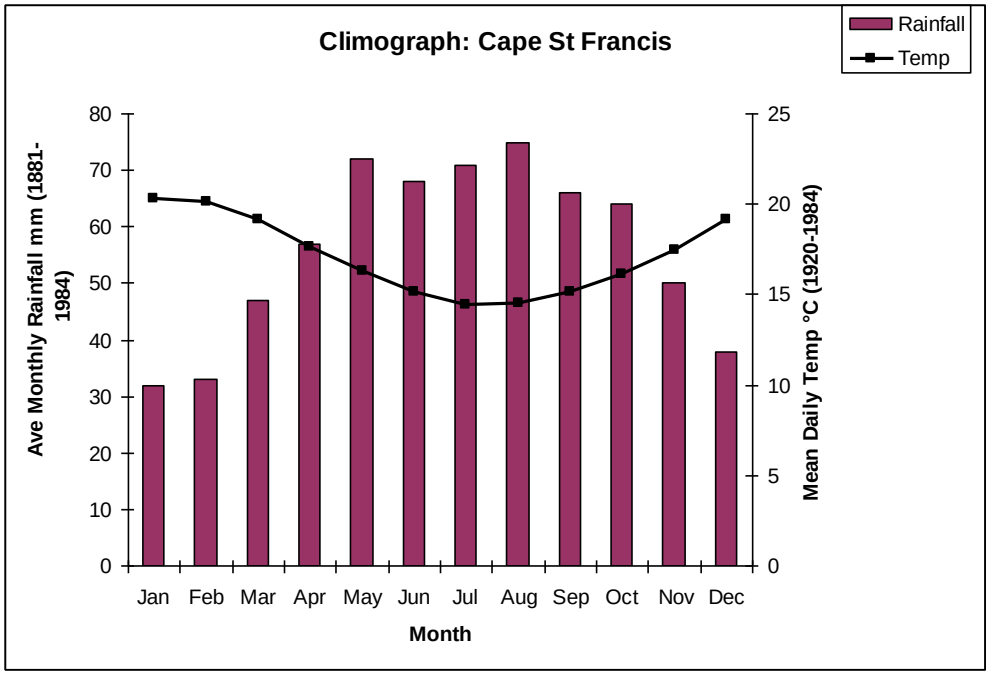
- **R**esidual (post mining)
- **L**ife of Mine
- **T**emporary

c) Probability

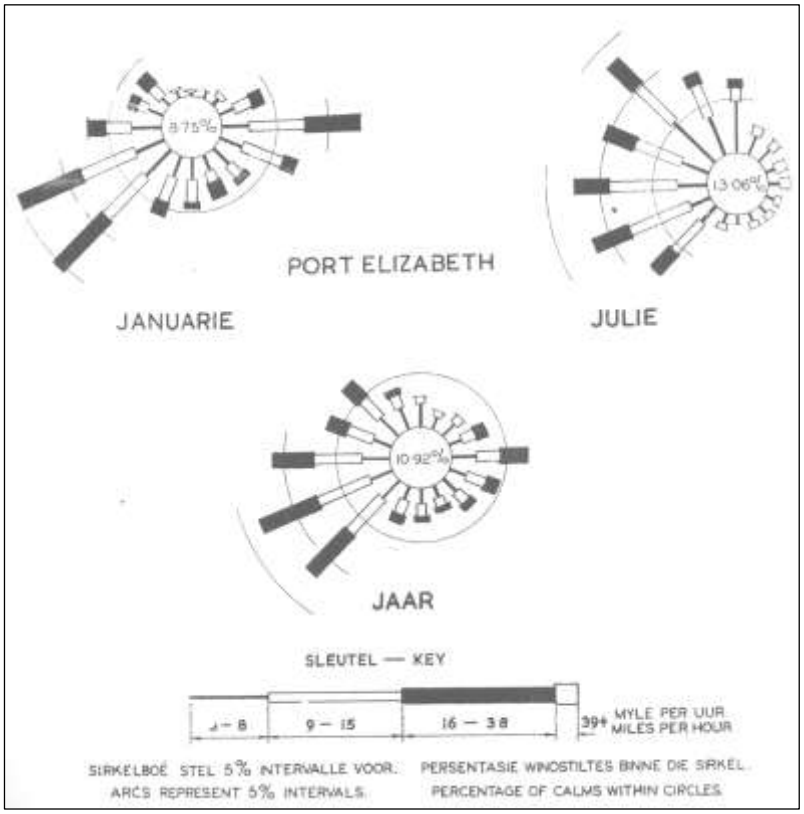
- **D**efinite
- **P**ossible
- **U**nlikely

5.2 Climate

The climatic data for the area is shown in the climograph and wind-rose below :



Source: WB40



Source: WB8

Other climatic indicators are as follows:

- Max monthly average temperature……. 23.1°C (Jan)
- Min monthly average temperature…….. 10.48°C (July)
- Highest temperature extreme…….. 42.8°C (1963, Jan)
- Average annual rainfall…….673mm
- Max rainfall in 24hrs……..130mm (1944)

- Max monthly rainfall…… 366mm (1932, Sep)
- No of days with measurable precipitation……. 106.4 days/yr
- No of days with more than 10mm precipitation…… 19.6 days/yr
- Days with mist…… 24.3 days/yr
- Hail and thunder occur very infrequently

The above statistics and patterns reflect very favourable climatic conditions for rehabilitation/revegetation especially of paddock fodder mixes and consequently no special measures are anticipated for revegetation, provided topsoil replacement takes place.

Generally high incidence of high wind speeds and low percentage of calms require that special attention be placed on dust suppression.

5.3 Surrounding Land Uses

The following land uses surround the proposed site/s:

- The holiday town of Oyster Bay is located 8km west of the site
- The town of St Francis Bay is located 7.6km east at the towns most westerly extremity.
- The closest farmstead is the landowners farmstead located 750m NE of Section 1 excavation and 1.5km SE of Section 2.
- The next closest farmstead belongs to a surrounding owner and is located 1.6km SW of Section 2 excavation and 1.8km W of Section 1 excavation.
- The closest public roads are the Humansdorp - Oyster Bay unsurfaced road and the link road between that road and St Francis Bay. Both roads are located 1.8km from the Section 2 excavation at the closest point and approximately 3.4km and 2.3km from Section 1 excavation respectively
- The sites are located on fallow land and the area is largely agricultural / rural in nature.

5.4 Topography

5.4.1 Existing Environment

Both excavation sites are located at the same altitude above means sea level (i.e. approximately 120m amsl) in a NE facing slope. The general topography of the area is that of gently undulating rounded hills. Note that Section 1 excavation is planned in the top of the hill whilst Section 2 excavation is proposed on a NNE slope below the ridgeline - refer figure 2: Mine Plan

5.4.2 Impact of the operation

Impact on topography will arise through the following activities:

- The excavations will result in a permanent and moderate impact on topography through the development of 2 excavations as shown in figure 2. The excavations will have the following approximate dimensions:

Excavation	Surface Area	Depth (Average)
Section 1	8.7ha	±40m
Section 2	3.8ha	±40m

- Other impact on topography will result from the stockpiling of material. Such impact is insignificant and temporary

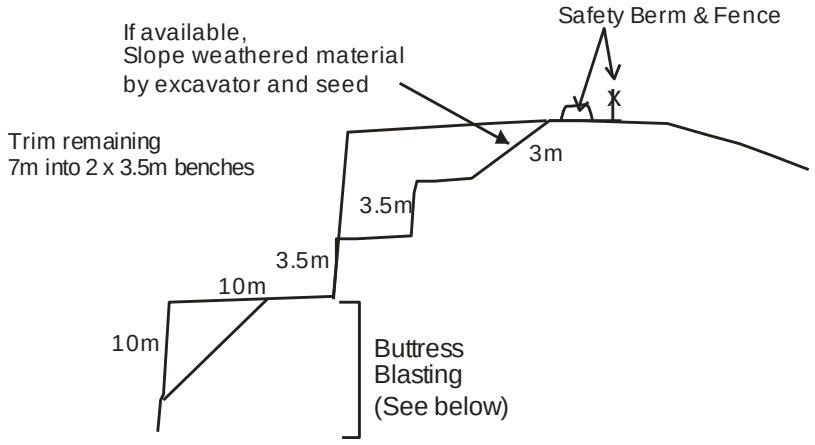
	Spatial extent	***Significance***	***Duration***	***Probability***	***Post-closure impact***
Excavation	12.5ha to 40m deep in 2 sections	Moderate to significant	Permanent	Definite	Permanent, Moderate / Significant.
Stockpiles	Up to 5m high	Insignificant	Temporary / Life of mine	Definite	None

5.4.3 Proposed attenuation measures

The excavation will remain as a permanent feature. The following measures will be put in place to enhance the "natural appearance" and improve safety of the excavation:

- The upper perimeter face will be blasted so that the excavation perimeter will have a 2-3m high sloped safety face (if weathering permits) and a 1m high safety berm surrounding the excavation as shown in the diagram below.

Provisional Upper Face Profile



- Ensuring that the excavation faces do not exceed 12m in height. The plans in this document show a face height of 10m. Final pit slope is designed to an overall slope of 1:1 (i.e. 10m faces on 10m benches)

5.5 Visual Impact

5.5.1 Existing Environment

This site is at present a grazing area and does not present any visual impact given its natural appearance.

5.5.2 Impact of the operation

This visual impact assessment is subject to full visual impact analysis to be included in the scoping report. Provisionally, the impact is defined as follows:

- Section 1 excavation will not be visible from any surrounding road or residence given its location in / near to the tops of the ridge

- The Plant and stockpiling area will be visible from sections of each of the roads.
- Section 2 excavation will be visible from NE views from the "seldom used" road to St Francis Bay

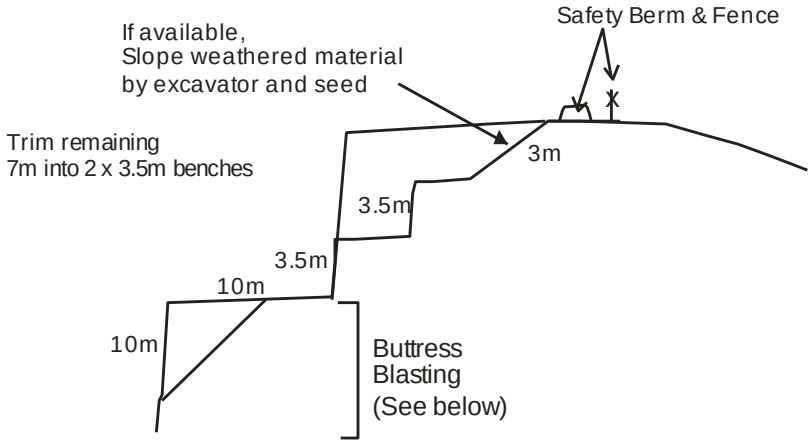
	Spatial extent[2]	***Significance***	***Duration***	***Probability***	***Post-closure impact***
Section 1 excavation	None	None	Permanent	Likely[2]	None
Section 2 excavation	Sections of road to the NE	Moderate/ significant. Impact reduced by distance to road and proximity to surrounding outcrops but could be increased through location in natural area	Permanent	Definite	Moderate
Plant and stockpiling area	Sections of road to the east and NE	Moderate	Life of mine	Most likely	None

5.5.3 Proposed attenuation measures

The impact attenuation measures which will be implemented include (but are not restricted to) the following:

- In order to reduce the permanent impact as a result of the upper faces of Section 2 excavation these faces will be rehabilitated as soon as feasible during the lifespan of the mine. The rehabilitation will consist of 2 methods of rehabilitation:
    - The upper faces will be trimmed so that the upper highwall is broken into a series of smaller faces on benches. The benches are topsoiled and vegetated thus screening the vertical faces beyond them.

Provisional Upper Face Profile



[2] To be fully ascertained during visual impact study to be conducted before lodging of scoping report. The purpose of including this chapter even though no final impact has yet been assessed is to alert the reader that this aspect of the environment will not be overlooked (although at this stage insufficient information is available to fully determine the impact).

- The second method is for the higher faces (up to 10m in height) below the upper trimmed face. A blasting method known as buttress blasting implemented successfully in England which consist of a series of blasts along the length of the face which are left to lie as they slump. This has the advantage of breaking the horizontal unnatural appearance and gives the effect of natural cliffed faces as per the photo below:

PLATE 9.6 Tunstead Limestone Quarry, Peak District: Restoration blasting following re-vegetation.

- In order to limit the temporary and insignificant impact of plant and stockpile areas the following screen planting initiatives could be investigated:
  - Screen planting along portions of the road/s that are exposed to views of the plant
  - Screen planting along the edges of the plant and stockpiling area (although this option will have limited success).

5.6 Soil

5.6.1 Existing Environment

The soils are not generally suited to arable dry-land or irrigated cultivation of crops. The Mispah soil form is the soil from that would be in dominance where available. Most of the excavation takes place on rocky outcrop where no topsoil is available for harvesting.

Topsoil will be available for removal and stockpiling for later re-use in the plant and stockpiling area. Topsoil depths are unknown at this stage but assumed to be in the order of 15-20cm (which is typical for these Mispah soil types).

5.6.2 Impact of the operation

Topsoil preservation is critical to successful rehabilitation of the site. Without topsoil removal and replacement, the site is subject to denudation and will result in impact on other environmental aspect such as windblown dust generation, visual impact through scarring of the lands, vegetation will not or will struggle to take root and animal life, land capability, agricultural potential will all be negatively impacted.

The plant and stockpile area will disturb up to 10ha of in situ topsoil. Given that topsoil preservation is of utmost importance, all usable topsoil must be removed and conserved for later use in rehabilitation of the site (particularly in light of the absence of topsoil on the rest of the site given rocky outcrops).

Activity	***Spatial extent***	***Significance***	***Duration***	***Probability***	***Post-closure impact***
Excavation advance	None, given rocky outcrops	None on soil	Permanent	Definite	None
Plant & Stockpiling area	±10ha	Moderate	Life of mine	Definite	None, if replaced

5.6.3 Proposed attenuation measures

Removal of all soils to perimeter berms for storage for later re-use as growing medium on the upper safety bench and in the plant/stockpile area.

5.7 Land Capability

5.7.1 Existing Environment

The land capability of the entire farm portions has been classified as wilderness area with subordinate grazing. This classification is more restrictive than pure grazing classification.

	Section 1		***Section 2***	
Land capability	***Area***			***%***
Wilderness area (Outcrop)	5.1ha	13.2%	6.1ha	42.1%
Wilderness Area (Non-outcrop)	33.4ha	86.8%	8.4ha	57.9%
Arable Land	0ha	0%	0ha	0%
Grazing	0ha	0%	0ha	0%
Wetland Area	0ha	0%	0ha	0%
Total	*38.5ha*	*100%*	*14.5ha*	*100%*

The carrying capacity of the undisturbed veld (i.e. only in the plant and stockpiling area is approximately 11-13ha / large stock unit *(http://www.agis.agric.za/agismap_atlas/))*, but the aim of the rehabilitation programme is to restore the veld to its wilderness rating.

5.7.2 Impact of the operation

The excavation extension will result in a impact in this regard as follows:

- Loss of all grazing areas within the mining right area over the life of mine (i.e. 41.8ha)
- Excavations will result in permanent loss of 3.8ha of grazing potential land (which has in any event been given wilderness rating in this report)
- In addition the excavations will result in temporary loss of 8.8ha of outcrop wilderness area. This land will be returned as wilderness area (albeit with altered habitat type) post mining.

Activity	*Spatial extent*	*Significance*	*Duration*	*Probability*	*Post-closure impact*
Loss of grazing /wilderness area in mining right area	41.8ha (total mining right application area)	Insignificant	Life of mine	Definite	Partial (see below)
Loss of grazing land to excavations (i.e. non-outcrop)	3.8ha	Insignificant (at 11-13ha per large stock unit)	Permanent	Definite	Insignificant
Loss of wilderness area to excavations (i.e. outcrops)	8.8ha	Insignificant	Life of Mine	Definite	None (albeit altered habitat type - could be +ve impact)

5.7.3 Proposed attenuation measures

No amount of rehabilitation will lead to the re-use of the excavation area for grazing.

The following actions will result in reduction of impact on land capability;

1. Wherever possible topsoil will be removed to full depth and utilised as cover material / growth medium in the rehabilitation of the site after mining (in the case of the plant and stockpile area) or during mining (in the case of the upper benches which are completed and ready for rehabilitation)
2. Buttress blasting and rehabilitation of all benches will increase the use of the excavation as wilderness area.

5.8 Natural Vegetation

5.8.1 Existing Environment

Both the mining sections chosen occur entirely within livestock grazing paddocks where natural vegetation is either totally eradicated by years of paddock farming. Small isolated pockets in wetter drainage areas occur well outside the mining sections.

It is noted that these areas (i.e. wetter drainage areas) are highly invaded by alien vegetation in the form of Port Jackson and Black Wattle. This may have an impact on post mining revegetation method given the obvious presence of alien seed stock. It must be also be noted that a large area of Port Jackson thicket is located south of Section 1 - refer figure 2.

For academic background the area in pre-cultivation years consisted of Tsitsikamma Sandstone Fynbos.

All mining is therefore located in cultivated livestock pastures or completely altered vegetation remnants in the rocky areas where though not ploughed the pasture species have completely invaded the earlier fynbos.

5.8.2 Impact of the operation

Strictly speaking, the project will not result in any impact on natural vegetation.
however for the sake of throuroughness a specialist botanist will be called upon to

survey the area and comment on the impact of mining and recommend mitigation measures to improve the revegetation process post mining.

This table will be re-tabulated after specialist botanist input and is included here at low confidence level.

Activity	***Spatial extent***	***Significance***	***Duration***	***Probability***	***Post-closure impact***
Loss of habitat	41.8ha (total mining right application area)	Insignificant	Life of mine	Definite	None
Loss of natural species	41.8ha (total mining right application area)	None / Insignificant	Permanent	Possible over small areas in outcrop only	Insignificant, if any
Loss of red data species	41.8ha (total mining right application area)	Moderate (if it did occur)	Permanent	Unlikely	Moderate

5.8.3 Proposed attenuation measures

The main method of ensuring revegetation of the site (albeit with pasture species) is to replace topsoil as soon as feasible. In this case topsoil will be stockpiled for excessive lengths of time and as such will require rejuvenation of sorts.

Alien vegetation management system must also be put in place to perhaps be specified by specialist botanist.

The following general principals apply:

1. No unnecessary access to the surrounding veld must be permitted.
2. No fires are permitted and no firewood is to be collected from the site or surrounds.
3. No ad hoc campsites in the veld.

5.9 Animal Life

5.9.1 Existing Environment and impact of the operation

Vast expanses of the same vegetation surrounding the site provide a habitat suitable for species typical of the area. These include buck, rodents (meerkat, mice, shrews etc), reptiles (snakes and tortoises) birds and insects. The large scale of the habitat type when compared to the extent of the proposed activities negate any significance of any impact in this regard.

5.9.2 Proposed attenuation measures

The animal life around the affected area will be temporarily chased away by the presence of such activities. There is a vast expanse of similar habitat type around

every proposed activity area and it is unlikely that any impact on animal life will occur from the proposed activities.

Prior to dozing of soil and site work preparation an animal rescue programme must be conducted.

5.10 Surface Water

5.10.1 Existing Environment

Sections 1 and 2 will not disturb any surface drainage channels within their extent. Section 1 does include the upper edge of a very minor valley which leads into a small dam to the NE. That drainage channel will not be impacted by proposed activities.

The site is located on the southern edge of quaternary drainage basin K90E and drains northwards into the Krom River (some 2.9km to the NE).

5.10.2 Impact of the operation

No direct impact through disturbance of water course will occur as a result of the proposed mining (i.e. no stream diversions will be required). However the following impacts will / may occur as a result of mining:

1. Loss of surface drainage area: The permanent and insignificant loss of 12.6ha contribution to drainage as a direct result of the excavations as well as the equally insignificant but permanent loss of <3ha drainage contribution "behind" section 2 excavation
2. Potential for siltation of water courses: Such impact is possible but unlikely and will require stormwater control around the plant and stockpiling area leading to silt retention ponds with clear water overflow.
3. Potential for hydrocarbon pollution of water courses: This impact will be negated by full hydrocarbon (cradle to grave) management policy including design guidelines for any diesel tanks, emergency plans and environmental awareness training.

As with all these tables, the impact level is with implementation of management measures.

Activity	***Spatial extent***	***Significance***	***Duration***	***Probability***	***Post-closure impact***
Loss of drainage area contribution	Sect 1: 8.8ha Sect 2: 3.8ha	Insignificant	Permanent	Definite	Insignificant
Potential for siltation of water courses	Local context	Insignificant	Life of mine	Unlikely	None
Potential for hydrocarbon pollution of water courses	Local context	Insignificant	Life of mine	Unlikely	None

5.10.3 Proposed attenuation measures

As alluded to above, the only effective silt management system entails a series of cut-off trenches and drains leading to silt retention ponds with clear water overflow facility. Details of the design of such system will be included in the scoping report.

5.11 Ground Water

5.11.1 Existing Environment

The site is located in quaternary basin K90E which allows for 150m³ groundwater to be withdrawn per hectare per year (over the entire farm). Note that during the drilling of holes for prospecting to depths of 20m, no groundwater was encountered. Mining will be to average 40m depths in terms of this plan.

5.11.2 Anticipated Impact

Impact on groundwater could arise from:

1. Exposure of groundwater to atmosphere through mining through the groundwater table may lead to excess evaporation of the groundwater.
2. Possible (but highly unlikely) pollution of groundwater through poor hydrocarbon management.

5.11.3 Attenuation Measures

Borehole census before mining takes place to measure ambient levels and yields.

5.12 Air Quality (Dust)

5.12.1 Current Status

At present, the ambient dust levels are very low and any existing dust impact is the result of:

- Occasional vehicles on gravel roads in the area
- Very occasional ploughing of lands

5.12.2 Anticipated Impact

Dust generation as a result of the proposed project will be through the following:

Activity	**Extent**	**Significance**	**Probability**	**Timing**	**Duration / Status**
Traffic generated dust along portions of access /delivery road	Along unsurfaced sections of access road. Specifically impact on Buffelsbos farmstead	Potentially Significant (under certain winds)	Likely	During construction phase prior to surfacing of respective length of access road	Until tarring of access road / negative
Topsoil removal (occurs rarely)	Local / site only	Insignificant	Definitely	On occurrence	Intervals for short periods / Negative
Drilling operation	Local / site only	Insignificant (with dust extraction equipment)	Definitely	On occurrence (Often)	Two weekly intervals for up to 4 days / Negative
Blasting (1 x per month)	Local / Farm and surrounds	Moderate	Definite	On occurrence	Life of mine / episodic/ negative
Loading and hauling of shot rock	Local / Excavation only	Insignificant	Definite	On occurrence	Life of mine / periodic/ negative

Activity	Extent	Significance	Probability	Timing	Duration / Status
Crushing and screening	Local / Farm and surrounds	Insignificant / possibly significant impact on farmstead located 470m NE of crushing plant position	Definite impact without dust suppression. None with dust suppression	During plant operation	Life of mine / Negative
Dust off denuded areas	Local / Farm and surrounds	Insignificant	Likely	Under high winds	Life of mine / Negative

The wind roses as reflected for Port Elizabeth in para 5.2 show strong and frequent winds from the W and SW. This will require that stringent control of dust suppression measures be put in place to avoid any potential dust impact on the landowner's residence. The placement of the plant should be in such a manner as to be as south as possible from the landowners residence given the lack of southerly winds on the windrose.

5.12.3 Attenuation Measures

The following attenuation measures must be put in place to limit dust generation and impact:

Activity	Extent	Proposed Attenuation Measures
Traffic generated dust along portions of access /delivery road.	Along unsurfaced sections of access road. Specifically impact on Buffelsbos farmstead	The road section to be constructed around the landowner's residence must be surfaced.
Traffic generated dust off main haul roads and movement areas on site	Local / Farm and surrounds	Wetting of unsurfaced roadways by water cart spray (and permanent sprinklers if required) and limit speeds on the affected roads.
Topsoil removal (occurs rarely)	Local / site only	Pre-wet soil if dust generation requires such intervention (unlikely)
Drilling operation	Local / site only	Supply drills with dust extraction equipment (this is now standard).
Blasting (1 x per month)	Local / Farm and surrounds	Blast under low wind conditions, monitoring of blast fallout dust at other quarries shows that the level of fallout at 1,2km (i.e. powerline distance) is low under most wind condition, as dust which has travelled so far tends to remain in suspension
Loading and hauling of shot rock	Local / Excavation only	No feasible method of dust control. Remember that impact is over a very local area and action usually occurs inside the pit, therefore no impact beyond confines of pit
Crushing and screening	Local / Farm and surrounds	The following attenuation measures are to be implemented: 1. Locate the plant to be as south as possible of the farmstead (refer wind-rose which shows limited wind speeds and frequency from this direction) 2. Screens to be housed 3. Transfer points to be housed 4. Mist sprays to be fitted
Dust off denuded areas	Local / Farm and surrounds	Wetting by water cart when required.

5.13 Noise

5.13.1 Current Status

Current noise generating activities in the area are related to:

- Traffic (not much) on unsurfaced roads in the area
- General minimal farm related noise

5.13.2 Anticipated Noise Impact

The following noise sources have been identified to occur during the proposed project:

Activity	**Extent**	**Significance**		**Probability**	**Timing / Duration**
		Internally	Externally		
Earthmoving equipment	Local area	Moderate	Insignificant	Definite	Life of mine
Access road use by delivery vehicles	Local area/ Gerber Farmstead	Insignificant	Moderate (given that trucks will pass within 80m of residence)	Definite	Day-time
Drilling[3]	Local area	Insignificant	Insignificant	Possible	On occurrence
Blasting	Local / outside mining right area	Moderate	Startling effect only. Moderate to Significant (only on 2 residences)	Definite	On occurrence. ± Once per month.
Loading and hauling of ore	Local	Insignificant	Insignificant	Definite	On occurrence
Crushing and screening	Local	Moderate	Insignificant (Residence located downhill from plant).	Definite	When in operation

5.13.3 Attenuation Measures

The following attenuation measures must be put in place to limit noise generation and impact:

Activity	**Extent**	**Attenuation measures**
Earthmoving equipment	Local area	Ensure silencers are operational
Access road use by delivery vehicles	Local area/ Gerber Farmstead	Maintain low speeds specifically whilst passing the residence section of road
Drilling	Local area	None feasible but will not generate any impact on surrounding land users
Blasting	Local / outside mining right area	1. Never blast under temperature inversion 2. Avoid blasting under low cloud conditions 3. Always try to blast at the same time of day so that it becomes expected 4. Warn, by way of telephone / SMS, those who are most affected (i.e. those persons who register complaints (if any)). 5. Apply best blasting practice to limit noise by correct stemming, electric detonation and bottom hole initiation
Loading and hauling of ore	Local	Ensure silencers are operational and maintain low speeds
Crushing and screening	Local	1. Enclose screens and crushers 2. Avoid crushing after hours

In addition, mining and crushing will be restricted to take place between hours of 07h00 to 19h00.

[3] Drilling is mostly conducted below natural ground level and as such the excavation acts a topographical barrier to noise impact

5.14 Blast Vibration and Fly Rock

5.14.1 Blast Vibration

Assessment of Impact

The closest structure to the proposed blasting area is the landowner farmstead which is located 600m from the closest point of the Section 2 excavation.

While the transmissivity i.e. the capacity of the country rock to transmit blast vibration is probably similar to that of the transmissivity of Table Mountain Sandstone in which we have our most reliable blast vibration monitoring results, the table below shows that even at 700m where underlain by sandstone, structures would be at no risk.

Distance from blast	**Expected recorded vibration level at respective distances PPV in mm/s (peak particle velocity)**	**USBM (United States Bureau of Mines) recommended limit**
350m	3-6 mm/s	10 mm/s
700m	2 mm/s	10 mm/s

It is further noted that the South African Standard recommended maximum PPV is 12.5 mm/s.

Impact Level and EIA Requirement

There will be no impact as a result of blast vibration, however be that as it may, it is suggested that all blasts be monitored by placement of monitoring equipment at the landowner farmstead.

5.15 Fly Rock

Assessment against accepted distance norm

As fly rock is legally acknowledged as being a potential impact within a radius of up to 500m, this operation will not impact on any surrounding land use or land user other than the landowner, his farm labour and livestock who may be in close proximity to the quarry at the time of blasting.

5.15.1 Attenuation Measures

In order to ensure that no persons or livestock are in proximity to the quarry at the time of blasting (i.e. within a safe distance of 400m radius), the landowner and his stock management personnel shall be instructed to respond to the procedure of a blast warning siren and shall further be notified on the previous day of a pending blast and time in order to move stock away from the quarry.

5.16 Impact on Cultural / Heritage Aspects

The process for determining the impact on cultural / heritage impacts will be as follows (as directed by South African Heritage Association (SAHRA)).

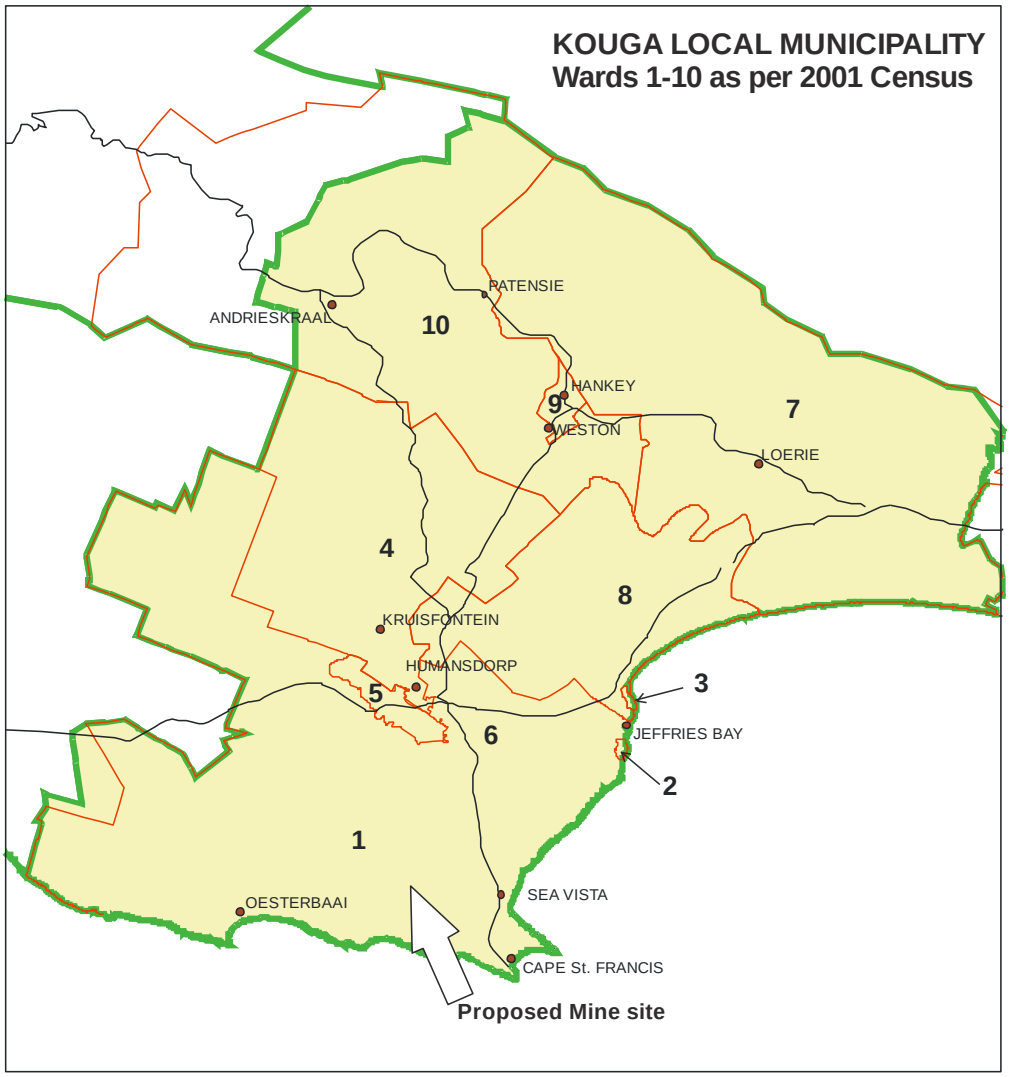
- Notification of Intent to Develop (NID) form will be filled in by specialist archaeologist.

- Such form and this BID will be sent to SAHRA and they will decide on whether a Phase 1 Archaeological Impact Assessment (AIA) will be required. This requirement the most likely course of action.
- Such decision or AIA (if required) will be circulated to registered Interested and Affected Parties

5.17 Socio-economic Situation

5.17.1 Existing

The following socio-economic indicators have been sourced from the Community Profiles database of StatsSA as well as from the IDP for the wards within the Kouga Local Municipality (LM). Note that the data contained below is based on 2001 data and it is entirely possible that the stats may have changed since then, but in the absence of such stats, the 2001 census data has to form the basis for the Socio-Economic description.



i. Gender Profile

WARD	SIZE KM²	TOTAL POP	GENDER DISTRIBUTION		HOUSEHOLDS		SETTLEMENTS
			Female	Male	Male headed	Female headed	
Ward 1	579.6	4 967	2525	2442	1320	458	St Francis Bay, Sea Vista, Cape St Francis, Oyster Bay, Umzamowethu, Paradise, Aston Bay, Farms
Ward 2	1.2	7 871	3918	3953	1360	885	Pellsrus, Tokyo Sexwale
Ward 3	6.6	4 861	2554	2307	1577	385	Wave Crest, Kabeljouws,
Ward 4	625.3	11 094	5425	5669	1877	618	Kruisfontein, Die Berg, Maak n Las , Andrieskraal
Ward 5	2.9	6 784	3552	3232	836	634	H"dorp CBD & Old town, Arcadia, Part of Kruisfontein,
Ward 6	3.2	6 895	3593	3302	1277	705	Kwanomzamo, Boskloof-Safery St
Ward 7	606.9	8 900	4525	4375	1799	566	Weston, Rooidraai, Loerie, Thornhill, Sunnyside,
Ward 8	332.2	4 651	2446	2205	1177	465	C – Place, Ocean View, Gamtoos farms, part of Golf course in H"dorp, Panorama
Ward 9	20.13	8 280	4441	3839	1190	797	Phillipsville, Centerton, Hankey
Ward 10	241.3	6 392	3376	3016	1137	449	Patensie, Ramaphosa
TOTAL	**2 419.4**	**70 695**	**36 355**	**34 340**	**13 550**	**5 962**	

ii. Population Profile

The table below reflects the expected growth rates for selected towns based on 2006 data (i.e. the year 5 figures are the expected populations in 2010). These figures are used in the determination of future service delivery.

Growth rate extrapolations

	GROWTH RATE	NO. OF HOUSE-HOLDS	CURRENT POP (2006)	EFFECTIVE POPULATION GROWTH				
				Year 1	Year 2	Year 3	Year 4	Year 5
Cape St Francis	1,5%	3031	2800	2842	2885	2928	2972	3016
Hankey	1%	3 039	11 721	11 838	11 957	12 076	12 197	12 319
Humansdorp	2%	5 617	23 991	24 471	24 960	25 459	25 968	26 488
Jeffreys Bay	2.50%	11 356	40 203	41 208	42 238	43 294	44 377	45 486
Loerie	0.50%	573	2 428	2 440	2 452	2 465	2 477	2 489
Oyster Bay	1.00%	533	1 016	1 026	1 036	1 047	1 057	1 068
Patensie	1.00%	928	3 845	3 883	3 922	3 962	4 001	4 041
Thornhill	0.50%	660	2 250	2 257	2 264	2 270	2 277	2 284

iii. Economic Profile

The following excerpt from the IDP document clearly describes the key economic activities (as well as status) of the municipality:

> Kouga has a low proportion of people aged under 20 years (34.99%) and a fair proportion of people aged over 64 years (6.10%). The Municipality is a top performer in the Eastern Cape with low rates of dependency (1.29), unemployment (24.67%) and poverty (31.36%). Municipal ***productivity*** is higher than the District and Provincial averages, principally due to high growth in value creation relative to employment and labour remuneration. Growth in GDP and

employment, from 1996 to 2004, and skills available to the local economy, are higher than the Provincial average, while GDP per worker (formal and informal) is the lowest in Cacadu and second lowest in the Eastern Cape. Kouga has among the highest ***Formal Economy Performance*** scores, with positive factors including the positive trade balance, a fairly diversified economy, low financial grant dependence, and strong GDP and employment growth performance. The local economy has experienced a positive shift in share for employment and GDP from 1996 to 2004, and is one of only two municipalities in the Province to emerge as a leading economy in respect of both GDP and formal employment, provincially and nationally. The Municipality fares well on ***Economic Absorption Capacity,*** considering high total disposable income, employment multiplier and informal sector capacity to generate economic opportunities relative to formal employment. The Municipality has modest buying power and a somewhat negative income-expenditure balance. The local economy claims a ***comparative advantage***, for both employment and GDP contribution, in agriculture (centred on agriculture and hunting at 9.87% GVA and 27.99% employment) and construction (6.18% GVA and 10.42% employment). Kouga also claims GVA advantages in utilities (electricity supply, 1.82%, and water, 1.45%), trade (centred on retail trade at 9.03%) and community services (dominated by public administration at 6.69%). Leading products of the local economy include game and tourism, deciduous fruit and dairy. The Municipality is home to a string of popular coastal tourist destinations from Jeffreys Bay to Cape St Francis, and offers a wide range of activities and products including historical and heritage sites, the Kouga Cultural Centre, surfing, fishing, hiking, biking and sandboarding, birding and game viewing, and various other outdoor and adventure activities"

IDP Kouga Municipality 2007-2012

iv. Education Levels

Statistics for highest education level achieved are as follows:

Highest education level

CATEGORY	NUMBER	PERCENTAGE (%)
No schooling	6952	10%
Grade 1-12	54894	78%
Certificate	551	1%
Diploma	1380	2%
Bachelors and higher	1126	2%
Not applicable	5790	8%
TOTAL	**70693**	**100**

The IDP states the following in respect of the current status of education in the Municipality:

"The unemployment is perpetuated by the limited educational levels in the Municipality. The literacy rate for Kouga is 64.4% (2002), and was 60.5% in 1996. The statistics show an increase in the number of illiterate persons. That means almost a full third of the population is not literate, a significant factor for economic development and job creation. Almost 11% have no schooling and a further 40% only have primary school education i.e. 51% of the population has no or very little education"….

Social problems such as alcohol abuse, drug abuse, unemployment and the disintegration of families are important factors contributing to the dismal educational scenario. The foundation for future education starts at the availability and utilisation of pre-school facilities in order to create prepared

minds. 894 children are enrolled in pre-school facilities. This needs to be compared with the total amount of 5 788 children aged between 0–4 years. The available statistics do not display children aged 5–6 as a category, but these children should still be added to the 0–4 year category. It is clear that only a small percentage of young children are currently benefiting from pre-school facilities. The table below [not reproduced here] does not list any pre-school facilities in Wards 4, 5 and 8. This could be problematic, with particular reference to Ward 4, which shows the highest number of children aged 0-4 years in the Municipality. Support should also be forthcoming to facilitate the registration and access to subsidies for all facilities"

The facts show a significant percentage of persons with low levels of formal education and this aspect is an area that should thus form one of the targets of the Social and Labour Plan. Also of importance is the very low pass rate in this Municipality:

National	66,6%
Provincial	59,3%
District	74,5%
Kouga	56.9%

v. Employment, Unemployment & Income Profile

The table below shows that any employment opportunities which do arise will be easily catered for in this situation.

Employment status

	Eligible Work Force (19-65yrs)	Unemployed #	Unemployed %
Cape St Francis	1 523	305	20
Hankey	6 388	2 078	32.5
Humansdorp	13 051	2 662	20.4
Jeffreys Bay	21 870	4 462	20.4
Loerie	1 320	429	32.5
Oyster Bay	553	114	20.6
Patensie	2 092	830	39.7
Thornhill	1 224	398	32.5

"The unemployment rate varies between 20% – 39%, depending on the area. The rural areas, namely Wards 7, 9 and 10, are most affected by unemployment. This is significantly higher than indicated in the Cacadu Study of 2005, which estimated the unemployment rate to be between 13 – 15%". – IDP Kouga Municipality 2007-2012.

Household monthly income is shown in the table below. It is noteworthy that the statistics are based on 2001 figures and that they are higher than the average for the province and at a national level:

Household Monthly Income

WARDS	NO INCOME		INCOME R 1 – R800		TOTAL	
	Households	% of total Households	Households	% of total Households	Households	% of total Households
Kouga	2257	11.5	4 151	21.3	6408	32.8
1	131	5.8	230	5.5	361	5.6
2	347	15.4	570	13.7	917	14.3
3	76	3.4	114	2.7	190	3
4	164	7.3	585	14.1	749	11.7
5	123	5.4	204	4.9	363	5.7
6	298	13.2	486	11.7	784	12.2

WARDS	NO INCOME		INCOME R 1 – R800		TOTAL	
	Households	% of total Households	Households	% of total Households	Households	% of total Households
7	375	16.6	662	15.9	1037	16.2
8	97	4.3	287	6.9	384	6
9	519	23	491	11.8	1010	15.8
10	123	5.4	479	11.5	602	9.4

Affordability based percentage of water/ sanitation bill of monthly household income:

Affordability

	NUMBER OF HOUSEHOLDS WITH MONTHLY INCOME OF:					AFFORDABILITY			
	< R400	R401 TO R800	R801 TO R1600	R1601 TO R3200	> R3200	WATER		SANITATION	
						Typical Monthly Water bill	Avg % of Monthly Income	Typical Monthly Water bill	Avg % of Monthly Income
Cape St Francis	28	75	162	105	2659	R24	2.80%	*R48	5.60%
Hankey	172	457	979	641	789	R24	2.80%	R48	5.60%
Humans-Dorp	1163	1809	590	590	1465	R24	2.80%	R48	5.60%
Jeffreys Bay	2350	3656	1192	1192	2964	R24	2.80%	R48	5.60%
Loerie	98	200	128	106	41	R24	2.80%	R48	5.60%
Oyster Bay	100	48	58	43	284	R24	2.80%	R48	5.60%
Patensie	52	139	300	195	243	R24	2.80%	R48	5.60%
Thornhill	Unknown					Unknown			

vi. Infrastructure: Housing

The table below shows the housing backlog to be serious cause for concern:

	HOUSING BACKLOG (SHORT TERM)	CURRENT HOUSING PROJECTS (NUMBER OF UNITS)	APPROVED HOUSING PROJECTS FOR 2007 - 2009
Kouga	10776	1037	633
Ward 1	840	Nil	Nil
Ward 2	2710	Nil	Nil
Ward 3	Nil	Nil	Nil
Ward 4	2000	607	Nil
Ward 5	860	Nil	Nil
Ward 6	860	Nil	Nil
Ward 7	910	40	273
Ward 8	680	Nil	360
Ward 9	1840	310	Nil
Ward 10	740	80	Nil

vii. Infrastructure: Water and Sanitation

Approximately 30% of the Municipal population have no access (in 2001) or very rudimentary access to toilets. This is far higher than the provincial percentage.

Access to toilets

	BUCKET LATRINES HOUSEHOLDS & %		NO SANITATION HOUSEHOLDS & %	
Kouga	2671	13.6	2129	10.9
Ward 1	63	2.4	68	3.2
Ward 2	2	0.1	33	1.6
Ward 3	2	0.1	2	0.1

Ward 4	882	33	314	14.7
Ward 5	453	17	7	0.3
Ward 6	301	11.3	190	8.9
Ward 7	151	5.7	786	36.9
Ward 8	296	11.1	86	4
Ward 9	508	19	328	15.4
Ward 10	8	0.3	309	14.5

Water: 76% of households have access to water within their own properties whilst the remainder must use a community stand with a fairly significant 12% over 200m away or no access.

Access to Water

	NO PIPED WATER		**STAND PIPES > 200 M**		**STAND PIPES <200M**		**PIPE WATER IN THE YARD**		**WATER IN DWELLING**	
Kouga	476	2.40%	2218	11.30%	2113	10.80%	7134	36.50%	7603	38,9%
Ward 1	11	2.3	27	1.2	55	2.6	619	8.7	1066	14
Ward 2	3	0.6	332	15	468	22.1	1080	15.1	366	4.8
Ward 3	7	1.5	18	0.8	15	0.7	40	0.6	1883	24.8
Ward 4	116	24.4	308	13.9	552	26.1	725	10.2	794	10.4
Ward 5	4	0.8	15	0.7	1	0	647	9.1	806	10.6
Ward 6	6	1.3	287	12.9	197	9.3	749	10.5	744	9.6
Ward 7	223	46.8	423	19.1	199	9.4	986	13.8	531	7
Ward 8	9	1.9	344	15.5	21	1	329	4.6	940	12.4
Ward 9	34	7.1	350	15.8	183	8.7	1178	16.5	242	3.2
Ward 10	58	12.2	110	5	418	19	776	10	224	2.9

viii. Infrastructure: Electricity

Only 32% of households have electrical connection for lighting while the remainder use mostly candles. This indicates a lower than average number of electrical connections than for the Local and District Municipality when compared with Provincial statistics, but the table below does show that electrification has increased at a faster rate than the number of new households thereby showing State commitment to the cause of electrification.

Electricity

	HOUSEHOLDS WITH ELECTRICITY (2001)	**%**	**HOUSEHOLDS WITH ELECTRICITY (2006)**	**CURRENT HOUSING PROJECTS: WILL INCREASE NUMBER OF H/HOLDS**
Kouga	4 663	**24%**	8237 **(32%)**	
Ward 1	192	10.70%	840	Nil
Ward 2	870	38.80%	2450	Nil
Ward 3	2	0.10%	0	Nil
Ward 4	592	23.70%	1900	607
Ward 5	64	4%	760	Nil
Ward 6	606	30.60%	537	354
Ward 7	928	39.20%	210	40
Ward 8	457	27.80%	0	Nil
Ward 9	612	30.80%	1490	310
Ward 10	320	20.20%	50	80

5.17.2 *Impacts*

Potential impacts arise as follows through the proposed activities:

Negative

- Potential impacts on farm integrity: Poaching, stock theft, stock loss (through roadkill or gates being left open), security, and road condition deterioration.
- Potential impacts on rural settlements: Raise false levels of expectancy, economic concerns if mine / prospect labour are paid more than farm labour, immigration of workers, drugs etc. Fortunately there is no nearby rural settlement which can be negatively affected and job recruitment will all be via the office in Plettenberg Bay.

Positive

- Potential for infrastructure development
- Potential for employment opportunity.

5.17.3 *Attenuation measures*

The following measures will be implemented to limit the negative impacts:

- Only security personnel will be housed on site after hours
- All staff will be warned of the consequences (police referral and dismissal) for poaching and stock theft and conditions will be inserted into their employment contracts in this regard
- Stock security in terms of closure of gates, maintenance of water supply to watering troughs etc., will be discussed at weekly production/safety meetings

Within the major employment wave associated with the possible power station, the quarry will not have the otherwise disrupted employment effect on adjacent farm labour suddenly exposed to industrial employment options.

It must be noted that the potential for socio-economic upliftment as a result of this mining authorisation is large, given the minimum 30 year time frame of the proposed activities and the fact that social and labour plan requirements will ensure:

1. Corporate social responsibility is enforced through implementation of LED project.
2. Skills development is enforced through ABET, tertiary level bursaries for staff and community members, school support, Learnerships and apprenticeship training fro staff and community members, mentoring programme, special attention placed to increasing numbers of women in mining, and more
3. Procurement progression plan to ensure continuous supply of goods and services from local and BEE companies
4. Plan to manage the effects of downscaling or retrenchments (if applicable).

6 Specific requests of I&AP's

It is incumbent on the applicant to provide a report to the DMR in respect of the results of consultation. The DMR have prepared a template which must be filled in by the applicant. The template contains a standard level of reporting and in order to ensure full transparency and meet the requirements of the DMR, the following questions are specifically asked of you as Interested and Affected Party to consider:

1. Do you agree with the provided description of the status of existing biophysical environment (as described in para 5.2 to 5.15)?

2. Do you agree with the potential impacts on biophysical environment identified as a result of the proposed mining (as described in para 5.3 to 5.15)?

3. Do you agree with the provided description of the status of existing heritage /cultural environment (as described in para 5.16)?

4. Do you agree with the potential impacts on heritage / cultural aspects identified as a result of the proposed mining (as described in para 5.16)?

5. Do you agree with the provided description of the status of existing socio economic environment (as described in para 5.17)?

6. Do you agree with the potential impacts on socio-economic aspects identified as a result of the proposed mining (as described in para 5.17)?

7. Do you know of any land developments which may be impacted upon by the proposed project?

8. Do you know of any other parties which should specifically be consulted in respect of this project?

7 Way Forward & Registration as Interested and Affected Party

The application was lodged on 6 September 2011 however; given issues with Department of Mineral Resource' (DMR) new electronic application lodging system the application was only accepted by the DMR on the 18/02/2012.[4]:

1. Lodging of Scoping report including results of this preliminary consultation to the DMR on 18 March 2012
2. Lodging of EIA and EMPlan to the DMR by 16 August 2012
3. Lodging of final comments on EMPlan to DMR by end September 2012

In order for your comments to be included in the Scoping Report, you are hereby required to provide comments in writing by 15 March 2012 to the person at contact details below.

Site Plan Consulting
PO Box 28
Strand
7139

Email: craig@siteplan.co.za
Fax: 021 854 4321
Tel: 021 854 4260

[4] Should the dates change for any reason, then every person on the mailing list will be informed thereof.