22/07/2015

Zotec Developments (Pty) Ltd

A portion of the Farm Carlsruhe 336-JR, Cullinan district

BACKGROUND INFORMATION DOCUMENT

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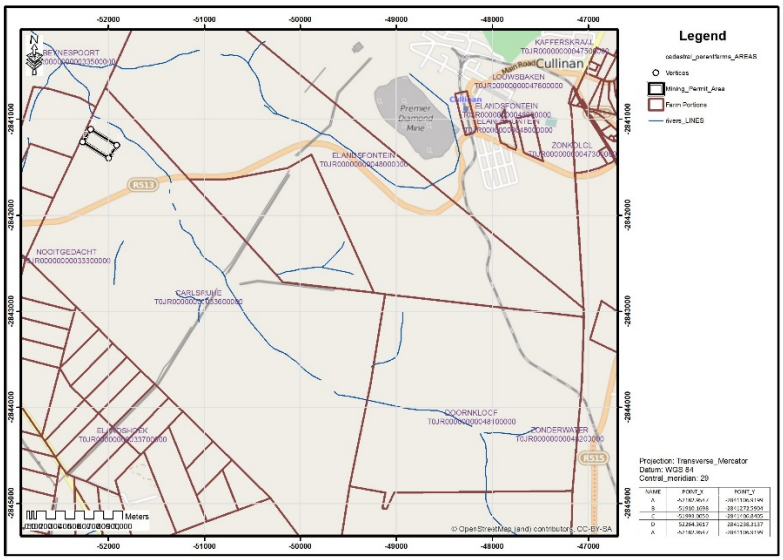
INTERESTED AND AFFECTED PARTY CONSULTATION REPORT

1 Preamble

The Carlsruhe mining site was previously mined. Not all sand resources have been removed. The works area is 5 ha in extent and is situated within the farm Carlsruhe 336-JR in the Cullinan district. The land uses of surrounding properties include mining, agriculture and residential, both formal and informal. There are some areas that were planted to pastures in the past.

This Background Information Document (BID) serves the purpose of providing I&AP's with the information that will allow them to participate in the Environmental Impact Assessment (EIA) and meaningful provide comments and concerns that will be incorporated into the EIA and Environmental Management Plan (EMP).

FIGURE 1: LOCALITY PLAN



2 Applicant

2.1 Name and address

Zotec Developments (Pty) Ltd
Postnet Suite 122, Private Bag X504, Sinoville 0129

Tel: 012 548 4114
Fax: 012 548 0772
E-mail: hannes@centraldev.co.za

2.2 Life of the mine

Two years, renewable for a further period, the total period not exceeding 5 years.

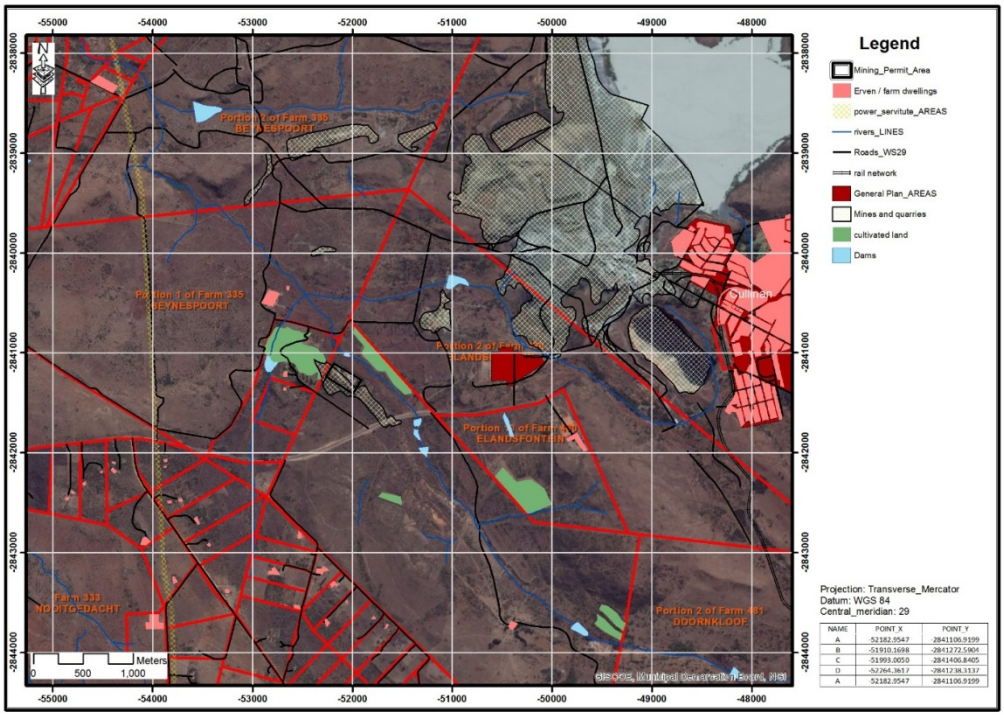
3 Existing Status of the environment prior to mining

3.1 Current land use

The Carlsruhe mining site was previously mined. Not all sand resources have been removed. The works area is 5 ha in extent.

The land uses of surrounding properties include mining, agriculture and residential, both formal and informal. There are some areas that were planted to pastures in the past.

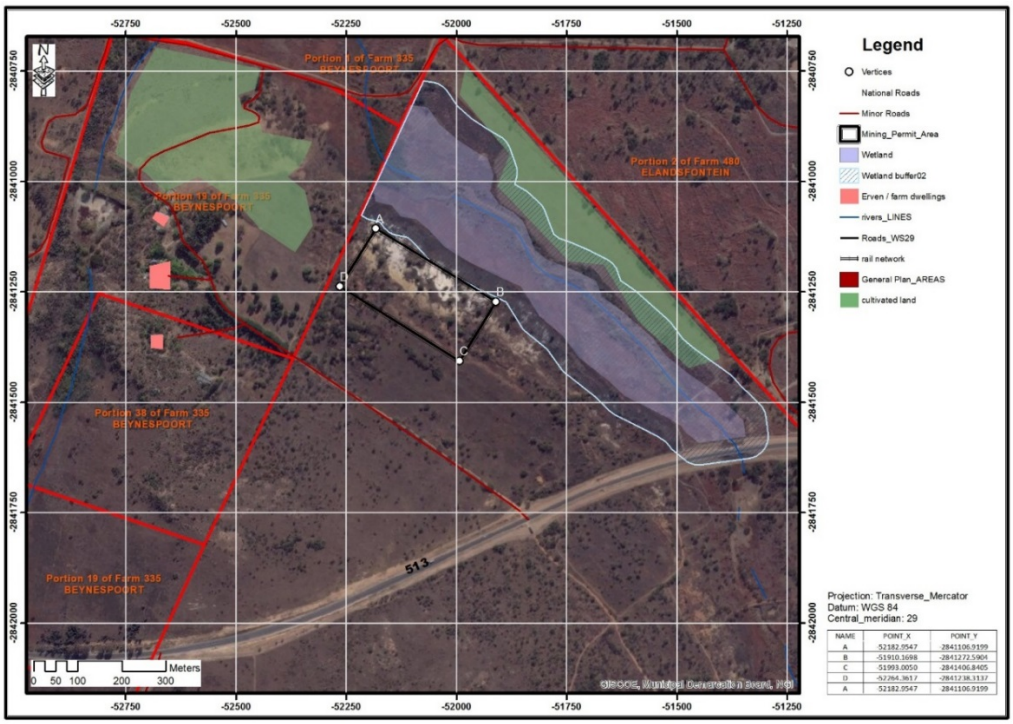
FIGURE 1. SURROUNDING LAND USES



3.2 The specific environmental features on the site applied for which may require protection, remediation, management or avoidance

The property consists of open veld sloping towards the water course on the eastern boundary of the property. A wetland has developed next to the stream. There are no other natural environmental features that require protection, remediation, management or avoidance.

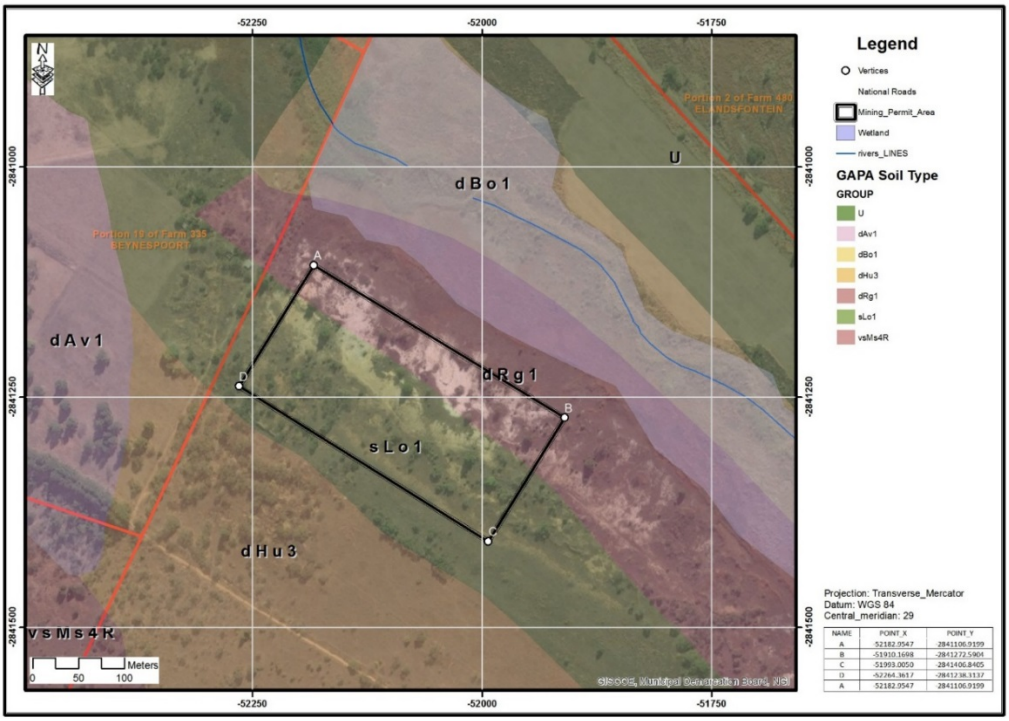
FIGURE 2. RESOURCES



3.3 Soil conditions

The soil described in GAPA[1] is Longlands (sLo1) and deep alluvial sand (dRg1) land units. The limiting factor as far as agricultural use is concerned, is the low clay content that prevents adsorption of nutrients and rainwater. The topsoil layer is 300 to 600mm thick and the subsoil up to 2,7 metres, below which a ferricrete layer occurs. See the figure below:

FIGURE 3. SOIL CONDITIONS



3.4 Prevailing habitat description

- The site was previously mined and is overgrazed with many areas without any vegetation.
- The site is dominated by degraded bushveld/grassland and is currently utilised for cattle grazing and agricultural activities. Majority of habitat surrounding the site has already been transformed into small scale agricultural fields or grazing lands, previous mining activities and residential plots.
- Remaining open grassland are poorly managed and mostly degraded with little or no vegetative cover.
- The frequent burning of surrounding grassland limits the amount of refuge areas and prey items (decrease in insect, reptile, amphibian and small mammal populations).
- Previous mined areas disrupt the natural flow of surface runoff to the stream and result in high levels of siltation and sedimentation which has a deleterious effect on aquatic organisms.
- Poor soil conservation and areas of heavy erosion occur in the previous mined areas and on the banks of the stream.
- A heavily disturbed seasonal drainage line has been artificially dammed which disrupts the natural hydrological flow regime. Erosion channels are formed from the surrounding surface runoff.
- Previous mining on the site has resulted in massive habitat destruction and deterioration. The areas have not been appropriately rehabilitated or re-vegetated.
- Alien vegetation in and around open grassland/bushveld areas and especially in the riparian zone of the spruit, which forms the eastern boundary of the site.

The seasonal drainage line comprises the most suitable habitat (extremely marginal habitat) within the proposed mining area, for certain threatened species, e.g. African Grass Owl. The entire seasonal seepage zone/ drainage line with its associated vegetation is extremely sensitive to further negative impacts and must be considered a sensitive habitat. The entire area should be conserved and appropriately rehabilitated. Adequate natural grassland

[1] Gauteng Agricultural Potential Atlas

buffer areas must be implemented between the seasonal drainage area and proposed mining activities. No further channelling or embanking of the drainage areas must occur.

3.5 Flora

The regional vegetation is described by Mucina and Rutherford as Marikana Thornveld. Locally, very little has remained of the original vegetation. The majority of the area has been modified by previous mining activities with more than 60% of the area denuded of any vegetation. The existing vegetation is a rather open savanna dominated by Common hook-thorn; *Acacia caffra*. The dominant grass is *Cymbopogan plurinodis* and *Themeda triandra*. There are scattered clumps often associated with termitaria and is dominated by deurmekaarbos and soetdoring.

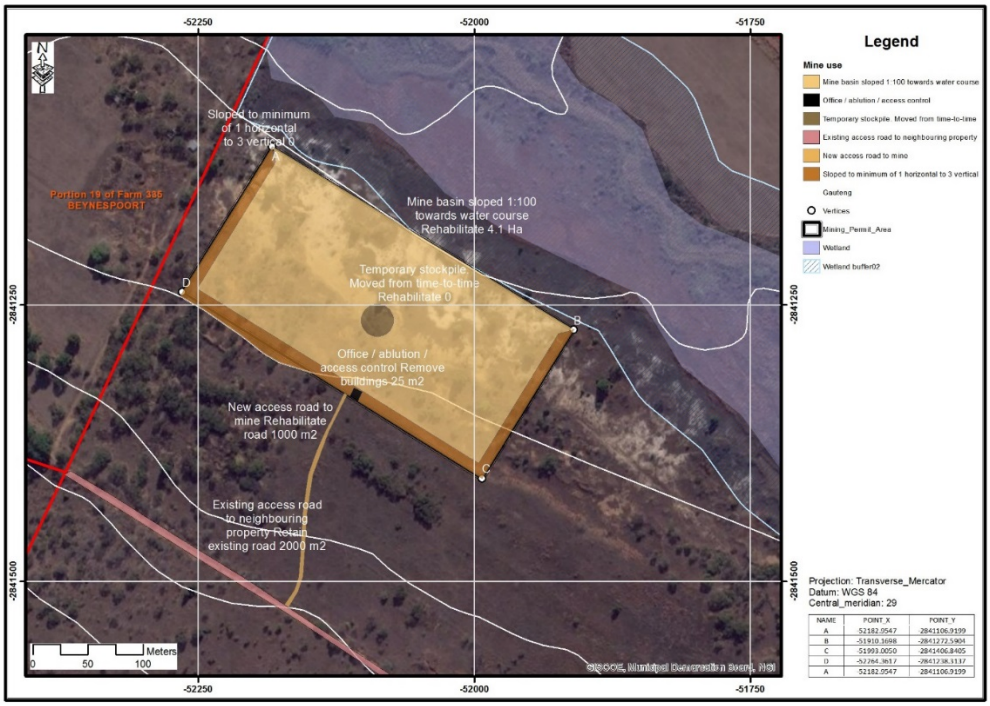
3.6 Fauna

Only small mammals in limited numbers were encountered due to the farming and mining activities in the area.

4 The mining activities

Mining will consist of the removal and storing of the topsoil; the removal of the sand; screening of the sand, transporting the sand to the market, levelling the mining area post mining, the sloping of the side walls; the return of the topsoil and the levelling thereof and the seeding and maintenance of the rehabilitated area. The infrastructure that will be required is a mobile screen and a shed that is used for the storage of reports and for shelter of staff; and toilet facilities. The exiting access road and tracks used by the property owner will remain in use. One excavator/wheel loader for removing and stockpiling of sand and loading thereof onto trucks will be used in the mining operation.

FIGURE 4. MINE INFRASTRUCTURE



4.1 Construction

No construction work is required for the mine. The infrastructure will consists of a temporary shed that is used for admin, the storage of reports and for shelter of staff; and toilet facilities.

4.2 Operational phase

Mining will consist of:

- the removal and storing of the topsoil, where this has remained (the previous owner has already removed and stored most of the topsoil);
- the removal of the sand;
- the sloping of the side walls;
- the return of the topsoil and the levelling thereof.
- Concurrent rehabilitation will take place. This will consist of seeding and maintenance of the rehabilitated area.

It is the intention of the land owner to mine and rehabilitate the area so that it is suitable for grazing by cattle and game once the mining has been completed.

4.3 Decommissioning

Decommissioning will occur when mining has been completed. This will include:

- the ripping of the compacted areas and the re-seeding thereof
- general rehabilitation of the excavation;
- removal of the temporary shed and toilet facilities, and

Application be made for closure once the area has rehabilitated.

5 Listed activities (in terms of the NEMA EIA Regulations)

The only activity that is applicable is Activity 21.

TABLE 1. ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS: LISTING NOTICE 1 OF 2014

21	Any activity including the operation of that activity which requires a mining permit in terms of section 27 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).

The competent authority, for the moment, is the **Department of Minerals Resources.**

6 An assessment of the environment likely to be affected by mining as land use

Mining is normally done in phases. The first is the construction phase to establish the infrastructure (no construction will take place) and is used to identify impacts/aspects; the second phase, i.e. the operational phase refers to implementation; which includes the extension of the mining area, creating a working bench and the mining of the sand; and the third is the rehabilitation phase.

6.1 Potential impact of the construction phase

No construction work will take place.

6.2 Potential impact of the operational phase

The table below lists all the possible impacts that may occur in small scale sand mines; and then identifies the impacts that will occur in the proposed mining operation. The activities of the operational phase may have the following impacts:

TABLE 2. POTENTIAL IMPACT OF THE OPERATIONAL PHASE

ENVIRONMENTAL ISSUES. / MINING ACTIVITIES	OPERATIONAL PHASES	* Removal of Topsoil Already occurred	* Mining of sand	* Transport to end user
Land Disturbance.				
Soil Loss through erosion.		√	√	x
Compaction.		x	√	√
Instability of slopes.		x	√	x
Soil contamination.		x	√	√
Air Quality.				
Increased ambient particulates.		x	√	√
Air Pollution-gases (NOX's)		x	√	√
Spill evaporations.		x	x	x
Hydrology.				
Alteration of hydrological regimes.		x	√	x
Surface water contamination.		x	√	x
Ground water contamination.		x	√	x
Increased nutrient concentrations.		x	x	x
Ecology and biodiversity.				
Loss of natural habitats and biodiversity.		x	x	x
Loss of rare and endangered species.		x	x	x
Effects on riverine ecology.		x	x	x
Impacts due to emissions or effluents.		x	x	x
Socio-Economic and Cultural Impacts.				
Restricted areas- game reserves, etc.		x	x	x
Sensitive areas; graves, historical sites, etc.		x	x	x
Infrastructure-pipelines, roads, etc.		x	x	x
Land use- grazing, and forestry areas.		x	x	x
Public health and safety.		x	√	√
Occupational health and safety.		x	√	√
Visual effects.		x	√	x
Noise and vibrations issues.		x	√	√
Resources.				
Agricultural Land Loss.		x	x	x

COMMENT SHEET

DECLARATION PERTAINING TO PROPOSED MINING PERMIT APPLICATION ON A PORTION OF THE FARM CARLSRUHE 336-JR.

I, the undersigned,……..……

ID number ……, hereby acknowledge the receipt of the Stakeholder Consultation documents explaining the process of the proposed mining operation. I acknowledge further that should any concerns be raised, these must be forwarded to the applicant within 30 days.

I wish to raise the following issues at this stage but reserve the right to raise additional issues or concerns within the next 30 days so that these may be included in the Environmental Management Plan (A copy of this form is to be faxed to 012 346-6447 of E-Mailed to index@iafrica.com) Tel number for clarification or additional information: 012 346-5307, or 082-553-3787

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I sign the declaration in my capacity as interested party/ owner of property …….

Yours faithfully,

……..…… .....……..…..

Affected party Date

Contact number:……..

Contact address: ……..

E-Mail ……..