

# **BACKGROUND DOCUMENT**

## **OVERVIEW OF THE EXTENSION OF PROSPECTING OPERATIONS BY NDOWANA EXPLORATION IN THE HAENERTSBURG AREA.**

Ndowana Exploration Two (Pty) Ltd, a joint venture between Mvelaphanda Resources (Pty) Ltd. and De Beers Consolidated Mines Limited has been carrying out prospecting in the Haenertsburg area based on an authorisation (a Prospecting Right and an Environmental Management Plan, EMPLan) issued by the Department: Minerals and Energy (DME) in terms of the Mineral and Petroleum Resources Development Act and related regulations on 25 January 2007 (Figure 1). This work is ongoing.

Prospecting follows a phased approach and is driven by the results of each preceding phase. The initial prospecting results have indicated that it is necessary to go into the next phase on a much smaller area. This area includes parts of the farms Paeroa 1083 LS, Paardevlei 201 KS (portion 1) and Colberg 1169 LS as indicated on the attached map (Figure 2).

One of the conditions of the original EMPLan was that if further prospecting activities were necessary in the areas identified as “sensitive areas” then detailed environmental impact assessments (EIAs) would be carried out for these areas. It is this assessment that is now being conducted. Where the manual pitting or narrow diameter drilling are necessary in areas not identified as “sensitive areas”, they will proceed.

The majority of stakeholders are familiar with the EIA regulations, promulgated in terms of Section 5(54) of the National Environmental Management (NEMA) Act No. 107 of 1998 and it therefore seems best practice to use this process, whilst still meeting the requirements of DME. (There is currently a Memorandum of Agreement between DME and the Department of Environmental Affairs and Tourism (DEAT) on this issue.) In terms of the “Listed Activities” in the regulations, a Basic Assessment EIA is necessary for the activities envisaged and the Limpopo Department of Economic Development, Environment and Tourism have been consulted in this regard (Ref. 12/1/9/N-C224).

In the initial phase of prospecting the aim was to identify if there was any of the targeted material (kimberlite) of interest in the area.

The second phase of prospecting aims firstly to define the extent of the kimberlite(s) and then establish whether the size and grade warrant going on to the final phase of prospecting. If the size and grade specifications are not met, the prospecting project will probably stop at this point. If they do meet requirements, the final phase, which is bulk sampling, will commence following a scoping and full EIA and only then, if the deposit(s) warrants mining, there will be an EIA conducted to convert the prospecting right to a mining right. Both these steps will involve the required public participation. The proposed prospecting outlined here will offer limited part-time employment to a small number of persons living nearby.

As the three properties mentioned fall into the Lepelle-Nkumpi Local Municipality but the access is via Haenertsburg which falls in the Greater Tzaneen Local Municipality, it has been decided that both local municipalities will be kept informed of the process and have the opportunity to raise any concerns.

**Ndowana proposes to continue with the prospecting as follows:**

- Shallow manual pitting – 1m x 1m , up to 2m deep; will not exceed 4% disturbance on the site over certain areas to be determined. The area of disturbance is estimated at 360 m<sup>2</sup> in total, access will be on foot.
- Narrow diameter drilling – access for drill rig from nearest road or track; water storage facility not usually necessary but for core drilling a small storage facility might be necessary for recirculation of water; water will be brought in by water tanker if needed. Up to 14,800 sq. m may be disturbed in total (excluding the access tracks).
- Mini bulk sampling - done in one of two ways, or a combination of both:
  - (a) Large diameter drilling – access tracks for drill rig and trucks; temporary facilities for storage of water for recirculation and for collection of drill tailings whilst drilling. Up to 10,000 sq. m may be disturbed in total;
  - (b) Mechanised pitting – pits up to 15m x 15m x 3m deep = 225 sq. m per pit – 1 per kimberlite or a few smaller pits to equal this total size; minor earth moving equipment will be used to excavate the pits, access tracks for this equipment and trucks will be required. Up to 2,080 sq. m may be disturbed (excluding the access tracks).

**Thus far some of the identified impacts have included:**

- The potential impact on the grassland and possibly some threatened species created by tracks for the drill rig and trucks, the pits and the drilling.

- Potential impact on certain fauna species such as butterflies.
- Tracks will need to be carefully constructed to minimise the possibility of erosion.
- The prospecting is not a high pollution process as the drilling is closely monitored and is carried out according to strict procedures. A small amount of dust and a low volume of waste will be generated. This will include some general waste from the workers going onto the site each day, a small number of oil / grease cans which will be disposed of as hazardous waste and drill tailings which is water containing sand/mud/clay in facilities from which water is recycled in the drilling. Portable chemical toilets using an environmentally friendly chemical will be used on site.
- There will be an impact on the surrounding roads used to access the site.
- The activities on Paeroa and Colberg will be visible from certain properties but those on Paardevlei will probably only be visible from the upper reaches of the mountain.
- There will be noise from the drilling but it is not anticipated that it will be exceed that from the nearby timber harvesting operations.

The aim of the Basic Environmental Assessment, a component of the EIA, is to identify the potential positive and negative issues associated with these further prospecting activities.

The assessment will include an investigation of:

- ❖ Social Environment – issues relating to local people and households, economic opportunities, surrounding land owners, etc.
- ❖ Natural environment – issues associated with streams, plants, grasslands, fauna, pollution and waste management, etc.

### **The Basic Environmental Assessment includes a stakeholder consultation process**

This is the opportunity for **you** to raise any issues that are of interest or concern to you regarding the proposed prospecting by Ndowana or issues that you think need to be investigated during the Assessment.

De Beers, on behalf of Ndowana Exploration, has appointed Jan Phelan of “Plan-It with enviro care” as the Environmental Assessment Practitioner (EAP) to undertake the Basic Environmental Assessment as part of the application to DME.

Any comments or issues that you wish to raise about the proposed development must be submitted to Mrs Jan Phelan by 30<sup>th</sup> May 2008. A form which may be used for this purpose is attached as the last page of this document.

Contact Details:

P.O. Box 25

Howick

3290

Cell: 082 876 0003

Email [mwplanit@mweb.co.za](mailto:mwplanit@mweb.co.za)

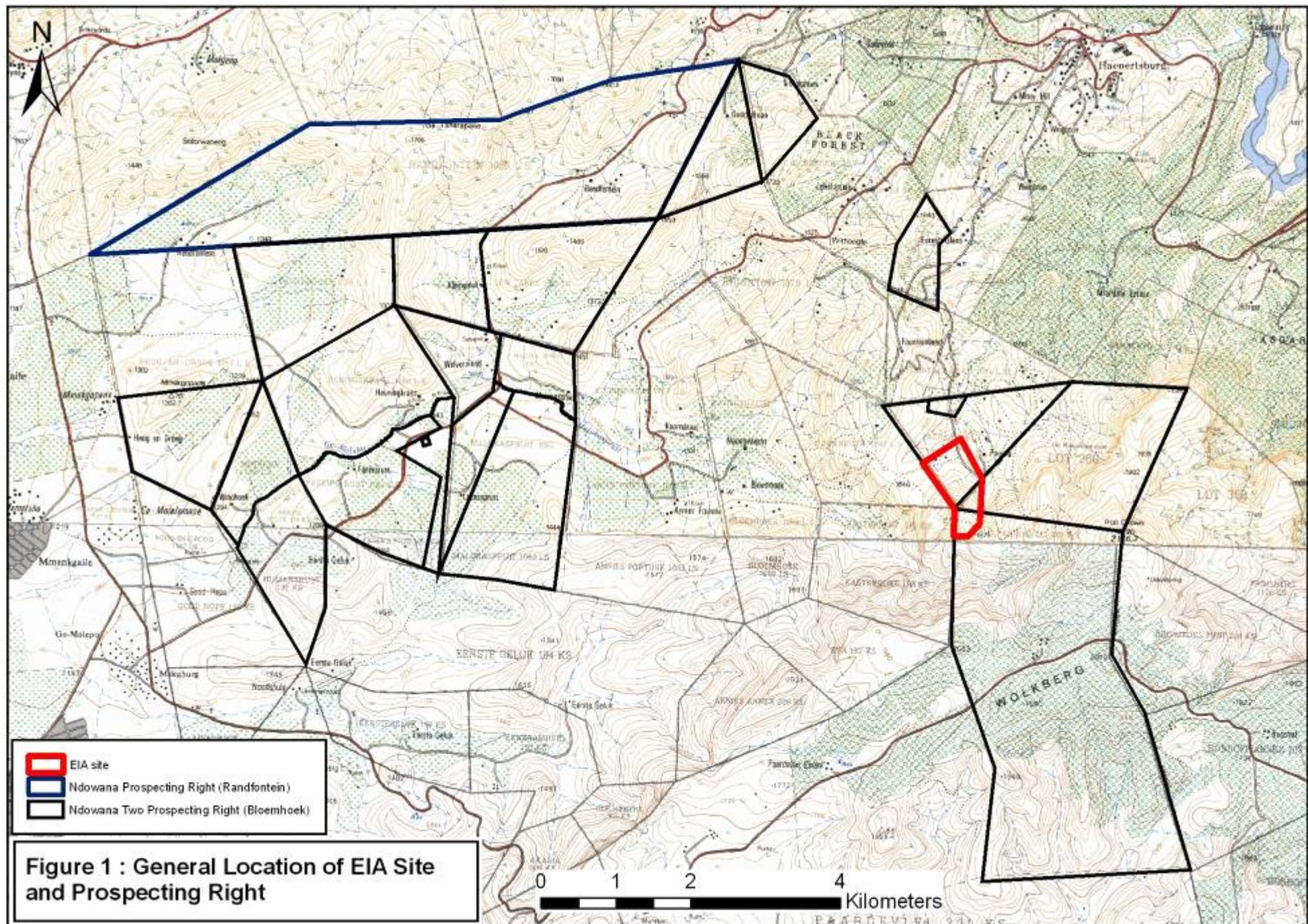
Your comments will be included in a Basic Environmental Assessment Report. The report will be submitted to the Department of Water Affairs and Forestry, the Department of Agriculture, the South African Heritage Resources Agency and the Department of Economic Development, Environment and Tourism who will review your comments when considering the application. The amended EM Plan will then be submitted to the Department of Minerals and Energy for authorisation

A Table summarizing the prospecting process is provided below.

Table 1: Summary of prospecting activities

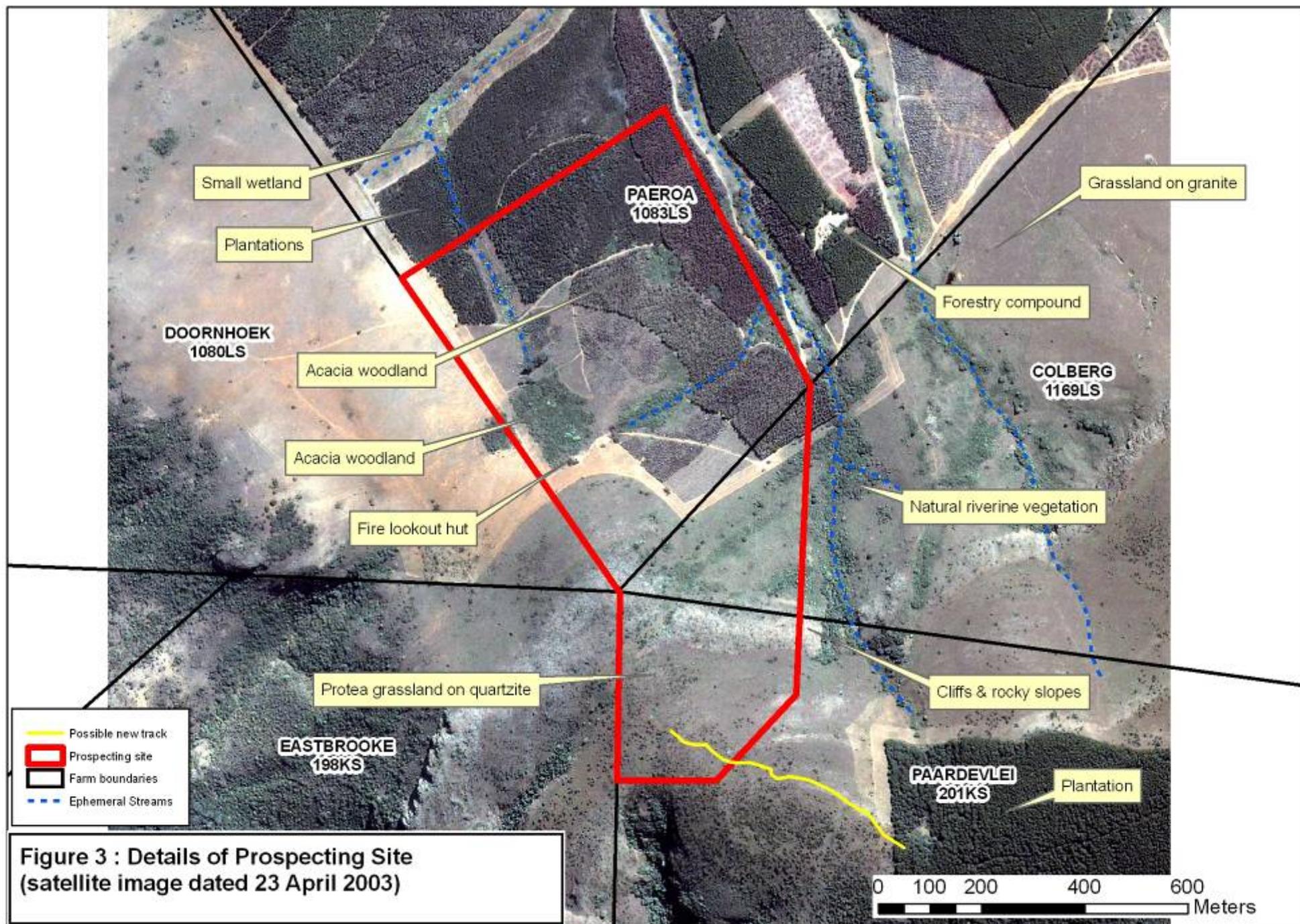
| Activity   | Detailed Actions   | Relevant Legislation  |
|--|--|---|
| <p><b>1. Soil and Stream Sampling</b></p>                              | <p>* Sampling of all major streams and tributaries. Holes created are back-filled to minimize impact on ecology. Existing tracks used or sampling team walks.</p> <p>* Soil samples at selected sites over entire area, at an approximate spacing of 1 km. Top 1-30cm soil collected over an area not greater than 1m<sup>2</sup>. Area leveled and vegetation spread over. Existing tracks used or sampling team walks.</p> | <p><b>BASIC ASSESSMENT NOT TRIGGERED</b></p> <p>These activities do not trigger any of the Listed Activities for a Basic Assessment in terms of Section 5 (54) of NEMA, but still require the DME EIA and EMPlan.</p>   |
| <p><b>2. Closer spaced sampling and / or Geophysical Surveying</b></p> | <p>*Soil and stream sampling at intervals down to 50m over specific, limited areas.</p> <p>*Ground magnetics, gravity or electro magnetic surveys - latter may require line cutting. If in one of the identified sensitive areas, then the botanist for the project needs to be consulted on this.</p>   | <p><b>BASIC ASSESSMENT NOT TRIGGERED</b></p> <p>These activities do not trigger any of the Listed Activities for a Basic Assessment in terms of Section 5(54) of NEMA, but still require the DME EIA and EMPlan.</p>  |
| <p><b>3a. Narrow diameter drilling (Not in sensitive area)</b></p>     | <p>Will need a track for drill rig if no suitable existing one. For core drilling a small storage facility like a tank, depression in the ground or temporary porta-pool might be necessary for recirculation of water; water will be brought in by tanker if needed unless arrangements are made with the land owner.</p>   | <p><b>BASIC ASSESSMENT NOT TRIGGERED IF NOT IN SENSITIVE AREA</b></p> <p>This activity does not trigger any of the Listed Activities for a Basic Assessment in terms of Section 5(54) of NEMA, but still requires the DME EIA and EM Plan.</p>  |
| <p><b>3b. Narrow diameter drilling (In sensitive area)</b></p>         | <p>Will need a track for drill rig if no suitable existing one. For core drilling a small storage facility like a tank, depression in the ground or temporary porta-pool might be necessary for recirculation of water; water will be brought in by tanker if needed unless arrangements are made with the land owner</p>  | <p><b>BASIC ASSESSMENT NECESSARY</b></p> <p>This activity will need to be included in a Basic Assessment (BA) EIA followed by an EM Plan. If this is a follow-up on an authorized Prospecting Right, then the BA will be followed by an amendment to the existing EMPlan, and not a whole new EMPlan.</p> |
| <p><b>4. Shallow Manual Pitting (Not in sensitive area)</b></p>        | <p>This is a cheaper, quicker and lower impact alternative to narrow diameter drilling where soil cover is thin.</p> <p>Pits of 1m x 1m, up to 2m deep; will not exceed 4% disturbance on the site; the area of</p>  | <p><b>BASIC ASSESSMENT NOT TRIGGERED IF NOT IN SENSITIVE AREA</b></p> <p>This activity does not trigger any of the Listed Activities for a Basic Assessment in terms of</p>   |

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|  | disturbance is estimated at 360 sq. m in total.  | Section 5(54) of NEMA, but still requires the DME EIA and EM Plan.   |
| <b>4. Shallow Manual Pitting (In sensitive area)</b>   | This is a cheaper, quicker and lower impact alternative to narrow diameter drilling where soil cover is thin.<br>Pits of 1m x 1m, up to 2m deep; will not exceed 4% disturbance on the site; the area of disturbance is estimated at 360 sq. m in total. | <b>BASIC ASSESSMENT NECESSARY</b><br><br>This activity will need to be included in a Basic Assessment (BA) EIA followed by an EM Plan. If this is a follow-up on an authorized Prospecting Right, then the BA will be followed by an amendment to the existing EM Plan, and not a whole new EM Plan. |
| <b>5a. Mini Bulk Sampling. Large diameter drilling</b> | Access tracks for drill rig and trucks; temporary facilities for storage of water for recirculation and for collection of drill tailings whilst drilling;  | <b>BASIC ASSESSMENT NECESSARY</b><br><br>This will need to be included in a Basic Assessment (BA) EIA followed by an EM Plan. If this is a follow-up on an authorized Prospecting Right, then the BA will be followed by an amendment to the existing EM Plan, and not a whole new EM Plan.          |
| <b>5b. Mini Bulk Sampling. Mechanised pitting</b>      | Access tracks for equipment and trucks;<br>Pits up to 15m x 15m x 3m deep = 225 sq. m per pit with one per kimberlite or a few smaller pits to equal this total size; minor earth moving equipment will be used to excavate the pits.                    | <b>BASIC ASSESSMENT NECESSARY</b><br><br>This will need to be included in a Basic Assessment (BA) EIA followed by an EM Plan. If this is a follow-up on an authorized Prospecting Right, then the BA will be followed by an amendment to the existing EM Plan, and not a whole new EM Plan.          |
| <b>6. Bulk Sampling</b>                                | Combination of large diameter drilling and mechanized pitting to obtain sample of a between 1,000 and 10,000 tonnes (to be determined based on estimated grade). Treatment plant required on site or in near vicinity.                                   | <b>SCOPING AND FULL EIA NECESSARY</b><br><br>This triggers the Listed Activities requiring Scoping and a full EIA in terms of Section 5 (54) of NEMA.  |

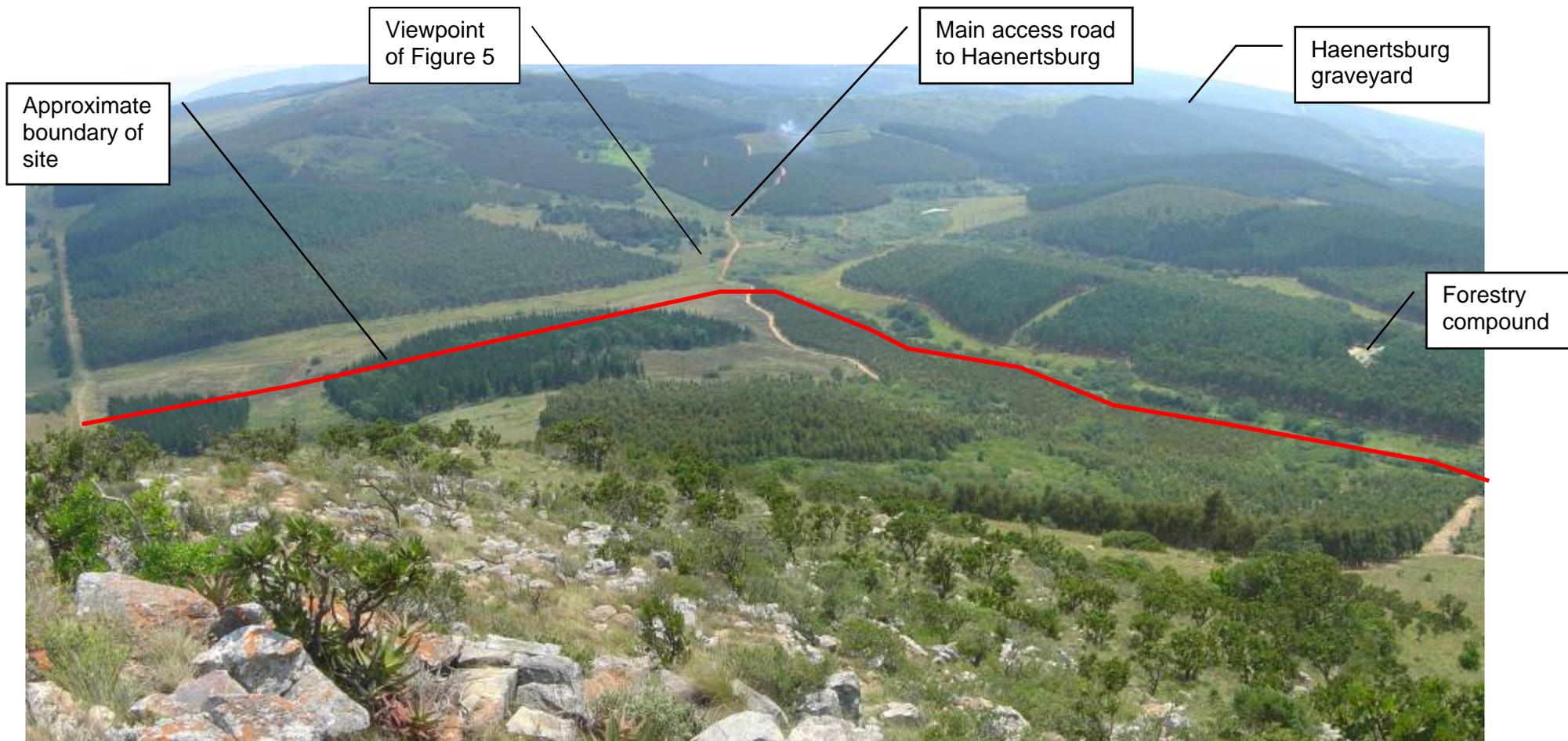


**Figure 1 : General Location of EIA Site and Prospecting Right**

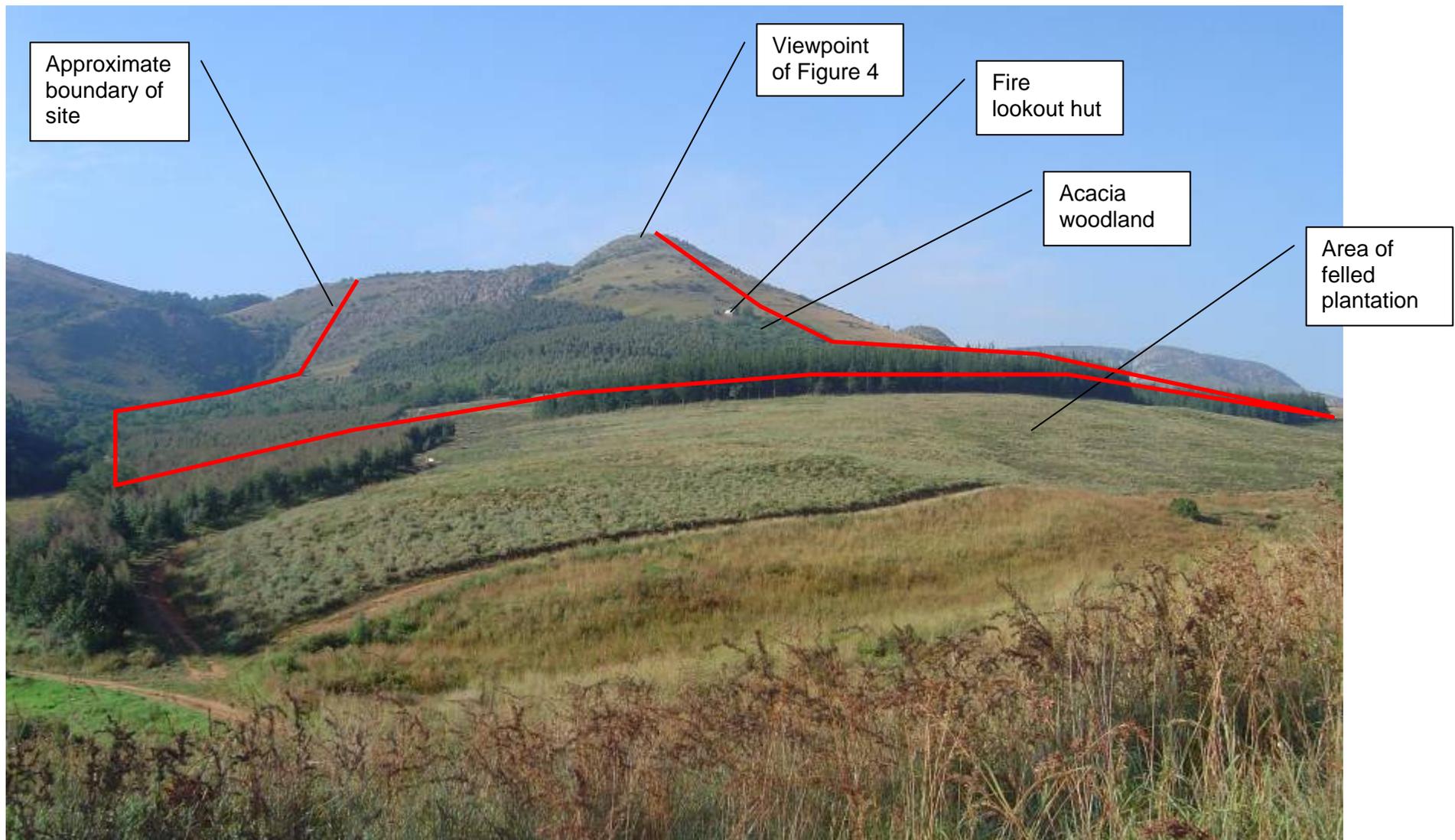




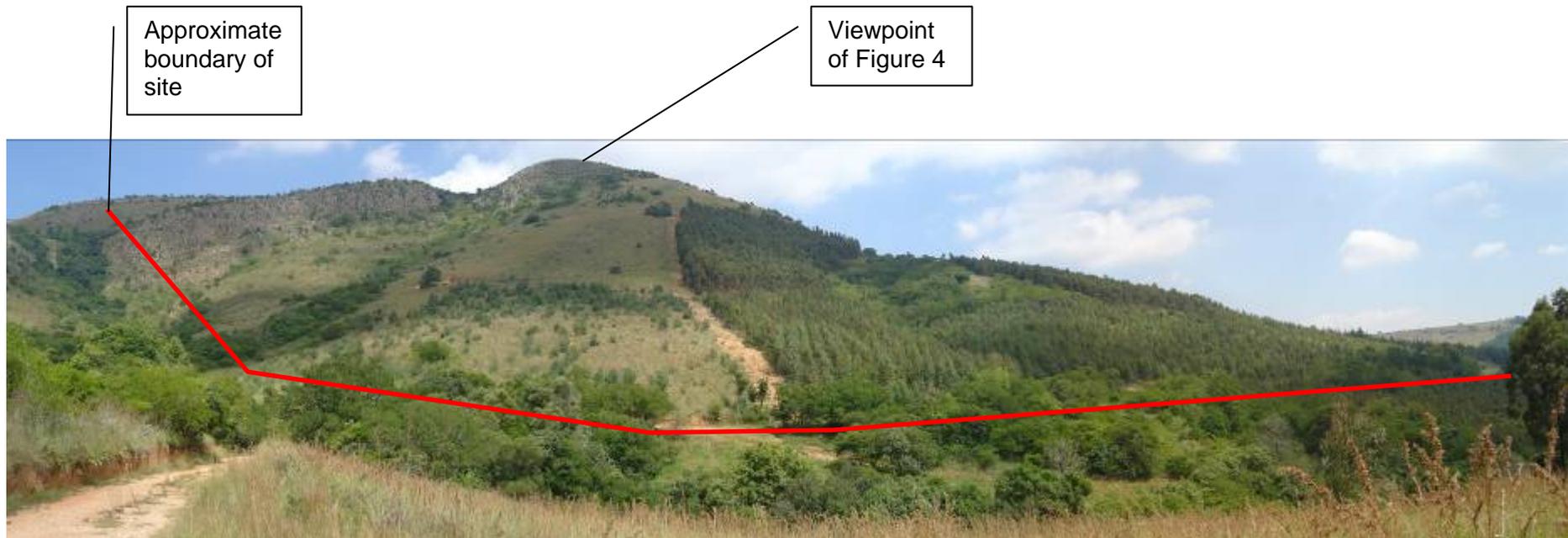
**Figure 3 : Details of Prospecting Site (satellite image dated 23 April 2003)**



**Figure 4 : View to north (north-west to north-east) over Paeroa and beyond, from peak at boundary of Paeroa, Colberg and Paardevlei (portion 1). Protea grassland on quartzite in foreground, plantations in background. Photo taken 12 March 2008.**



**Figure 5 : View to south (south-east to south-west) over site from northern boundary of Paeroa.  
Photo taken 4 April 2008.**



Approximate  
boundary of  
site

Viewpoint  
of Figure 4

**Figure 6 : View to south-west (south to west) over site from boundary of Paeroa and Colberg, close to forestry compound.  
Photo taken 4 April 2008.**

FORM FOR COMMENTS:

|  |              |           |
|--|--------------|-----------|
| Title:   |              |           |
| First Name:  | Surname:     | Initials: |
| Organisation / Property Name:  |              |           |
| Interest in project (e.g. authority, neighbour, competitor, supplier, local resident): |              |           |
|  |              |           |
| Postal Address:  |              |           |
| Post Code:   |              |           |
| Tel Number:  | Cell Number: |           |
| Fax Number:  | Email:       |           |
|  |              |           |

1. The following issues must be noted / concerns are expressed regarding the proposed extension of prospecting by Ndowana Exploration Two near Haenertsburg:

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2. The following potentially interested and affected parties should also be contacted: ( IF RELEVANT )

|             |               |
|-------------|---------------|
| Name:       | Organisation: |
| Tel Number: |               |
| Address:    |               |

|             |               |
|-------------|---------------|
| Name:       | Organisation: |
| Tel Number: |               |
| Address:    |               |

3. Any additional comments?

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