

# **Khanyazwe FlexPower Gas Power Plant - Malelane**

## **Desktop Geotechnical Assessments**

Report Prepared for

**Khanyazwe FlexPower (Pty) Ltd**

Report Number 605739

Report Prepared by

The logo for srk consulting features a stylized orange icon of three horizontal lines with a downward-pointing arrow on the left, followed by the text 'srk consulting' in a grey sans-serif font.

February 2024

# Khanyazwe FlexPower Gas Power Plant, Malelane

## Desktop Geotechnical Assessments

### Khanyazwe FlexPower (Pty) Ltd

#### SRK Consulting (South Africa) (Pty) Ltd

The Administrative Building

Albion Spring

183 Main Rd

Rondebosch 7700

Cape Town

South Africa

Tel: +27 (0) 21 659 3060

e-mail: [Capetown@srk.co.za](mailto:Capetown@srk.co.za)

website: [www.srk.co.za](http://www.srk.co.za)

**SRK Project Number 605739**

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**Compiled by:**

John Brown

Principal Engineering Geologist

Consultant

Email: [jbrown@srk.co.za](mailto:jbrown@srk.co.za)

**Reviewed by:**

Daniell Du Preez

Senior Engineering Geologist

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## Disclaimer

The opinions expressed in this Report have been based on the information supplied to SRK Consulting (South Africa) (Pty) Ltd (“SRK”) by Khanyaze FlexPower (Pty) Ltd (“KFP”). The opinions in this Report are provided in response to a specific request from KFP to do so. SRK has exercised all due care in reviewing the supplied information. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features as they existed at the time of SRK’s investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which SRK had no prior knowledge nor had the opportunity to evaluate.

# 1 Introduction

## 1.1 Project Background and Aims

Khanyazwe FlexPower plan to develop a Gas Power Plant close to Malelane in Mpumalanga. The project involves developing, constructing, and operating a (maximum) 800 MW natural gas-fired power plant using either Gas Engines (or Internal Combustion Engines or Combined Cycle Gas Turbines). Four potential sites for the power plant have been identified.

A desktop geotechnical investigation is required to provide an initial assessment of the likely geotechnical conditions at each site, to highlight geotechnical aspects that may have a bearing on the suitability of each site.

## 1.2 Scope of Works and Limitations

The scope of the work is limited to a desktop review of available information relating to the site geology and inferred soil conditions present in the area. As no intrusive investigations have been carried out there is a degree of uncertainty regarding the specific nature of the soil conditions at each site which have been inferred. However, the likely nature of the ground conditions inferred for each site is considered to be sufficient for the current purposes of a basic assessment and to identify possible geotechnical constraints. The report is not intended to be used to make design decisions.

## 1.3 Reporting Requirements

Appendix 6 of the EIA Regulations for Specialist Reports is reproduced in Table 1-1.

The section of the current report that deals with each requirement is also included In Table 1-1.

**Table 1-1: EIA regulation reporting requirements**

| <b>Appendix 6 – GN R326 EIA Regulations 7 April 2017</b>  | <b>Specialist Report Section</b> |
|---|----------------------------------|
| <p>1. (1) a specialist report prepared in terms of these regulations must contain-</p> <p>(a) details of-</p> <p>I. The specialist who prepared the report; and</p> <p>II. The expertise of that specialist to compile a specialist report including a curriculum vitae</p> | Section 2 and Appendix A         |
| <p>b) a declaration that the specialist is independent in a form as may be specified by the competent authority;</p>  | Appendix B                       |
| <p>c) an indication of the scope of, and the purpose for which, the report was prepared;</p>  | Section 1                        |
| <p>(cA) an indication of the quality and age of base data used for the specialist report;</p>   | N/A                              |
| <p>(cB) a description of existing impacts on the site, cumulative impacts of the proposed development and levels of acceptable change;</p>  | N/A                              |

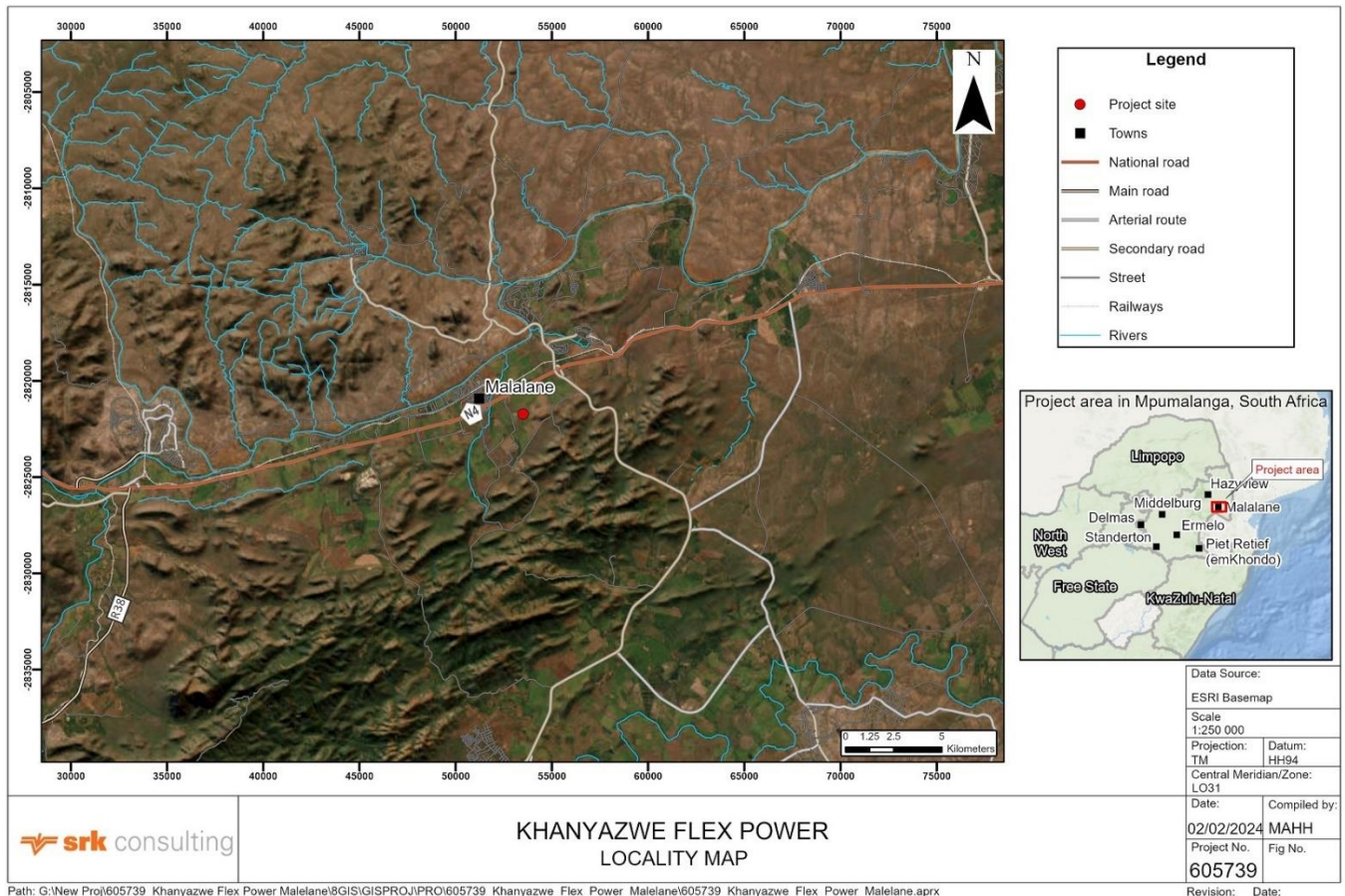
|  |                      |
|--|----------------------|
| d) the duration, date and season of the site investigation and the relevance of the season to the outcome of the assessment;   |                      |
| e) a description of the methodology adopted in preparing the report or carrying out the specialized process inclusive of equipment and modelling used;   | Section 1.2          |
| f) details of an assessment of the specific identified sensitivity of the site related to the proposed activity or activities and its associated structures and infrastructure, inclusive of site plan identifying site alternatives;  | Sections 3 and 9     |
| g) an identification of any areas to be avoided, including buffers;  | Section 9.3          |
| h) a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;  | N/A                  |
| i) a description of any assumptions made and any uncertainties or gaps in knowledge;   | Section 1.2          |
| j) a description of the findings and potential implications of such findings on the impact of the proposed activity or activities;   | Section 9            |
| k) any mitigation measures for inclusion in the EMPr;  | N/A                  |
| l) any conditions for inclusion in the environmental authorisation;  | N/A                  |
| m) any monitoring requirements for inclusion in the EMPr or environmental authorisation;   | N/A                  |
| n) a reasoned opinion-<br>(i) Whether the proposed activity, activities or portions thereof should be authorised;<br>(iA) regarding the acceptability of the proposed activity or activities and<br>(ii) if the opinion is that the proposed activity, activities or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan; | Section 9            |
| o) a description of any consultation process that was undertaken during the course of preparing the specialist report;   | N/A                  |
| p) a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and   | N/A                  |
| q) any other information requested by the competent authority;   | N/A                  |
| 2) Where a government notice gazette by the Minister provides for any protocol or minimum information requirement to be applied to a specialist report, the requirements in such a notice will apply   | N/A for geotechnical |

## 2 Specialist Information

The report was prepared by John Brown, a professionally registered Natural Scientist (Engineering Geologist) with 40 years of experience conducting geotechnical investigations. An abridged curriculum vitae is included in Appendix A.

## 3 Site location

The proposed Khanyaze FlexPower Gas Power Plant project is located approximately 2 km southeast of the town of Malelane, Mpumalanga. The regional location is shown in Figure 3-1.



**Figure 3-1: Regional location of project site southeast of Malelane**

The location of the proposed 4 sites is indicated in Figure 3-2.



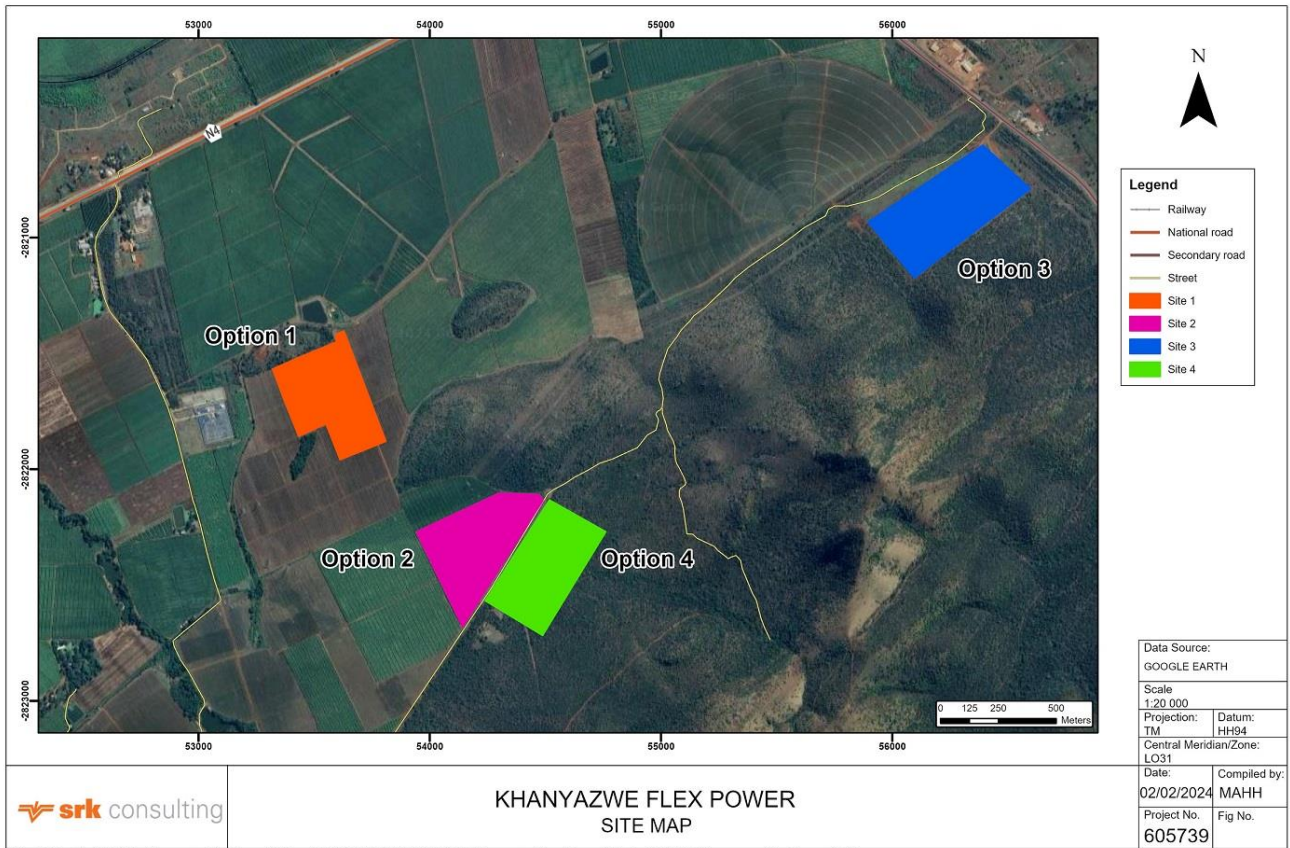


Figure 3-2: Locations of the proposed Power Plant sites (shaded areas)

## 4 Topography and Land Use

Site Options 1 and 2 appear to be fairly level sites located within existing agricultural land (sugar cane fields). Site Options 3 and 4 appear to be located on more steeply sloping ground which is mainly covered in natural virgin vegetation (trees and shrubs) and the presence of shallow outcrop or sub-outcrop is inferred.

# 5 Regional Geological Setting

The published geological map of the Malelane area (2530 Barberton at a scale of 1:250 000) indicates that the underlying geology comprises rocks of the Barberton Supergroup, the extent of which is highlighted in Figure 5-1.

Malelane falls within an Archean Greenstone Belt, these are some of the oldest rocks in South Africa, that is, in the order of 3500 million years old. The Greenstone Belt consists of a complex sequence of volcanic, igneous and sedimentary lithologies. The green colour is variably derived from the presence of fuchsite, green chlorite, serpentine, epidote and amphibole minerals.

Three main stratigraphic groups comprising the Barberton/Swaziland Supergroup, namely, the Fig Tree Group, Moodies Group and the Onverwacht Group. The general description of the rock types are as follows (described from youngest to oldest):

### Fig Tree Group

Sandstone, grit, conglomerate, shale, greywacke, phyllite, basaltic lava

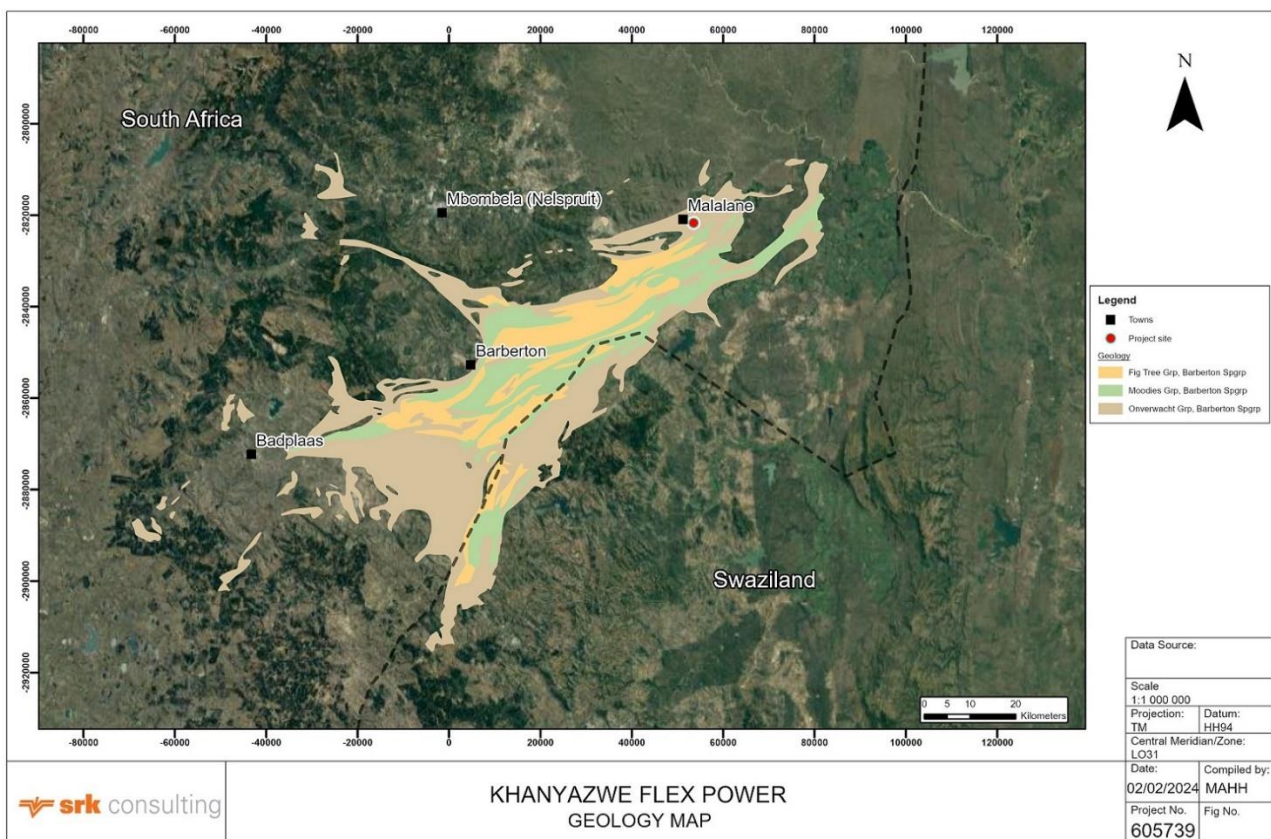
### Moodies Group

Volcanics, tuff, agglomerate, lava, tuffaceous greywacke, conglomerate.

### Onverwacht Group

Various mafic and ultra mafic schists, interlayered with banded iron stone, chert, volcanic rocks, komatiitic basalts.

The proposed Malelane Power Plant site appears to be located within the Onverwacht Group.



**Figure 5-1: Archean Greenstone Belt showing location of project site.**

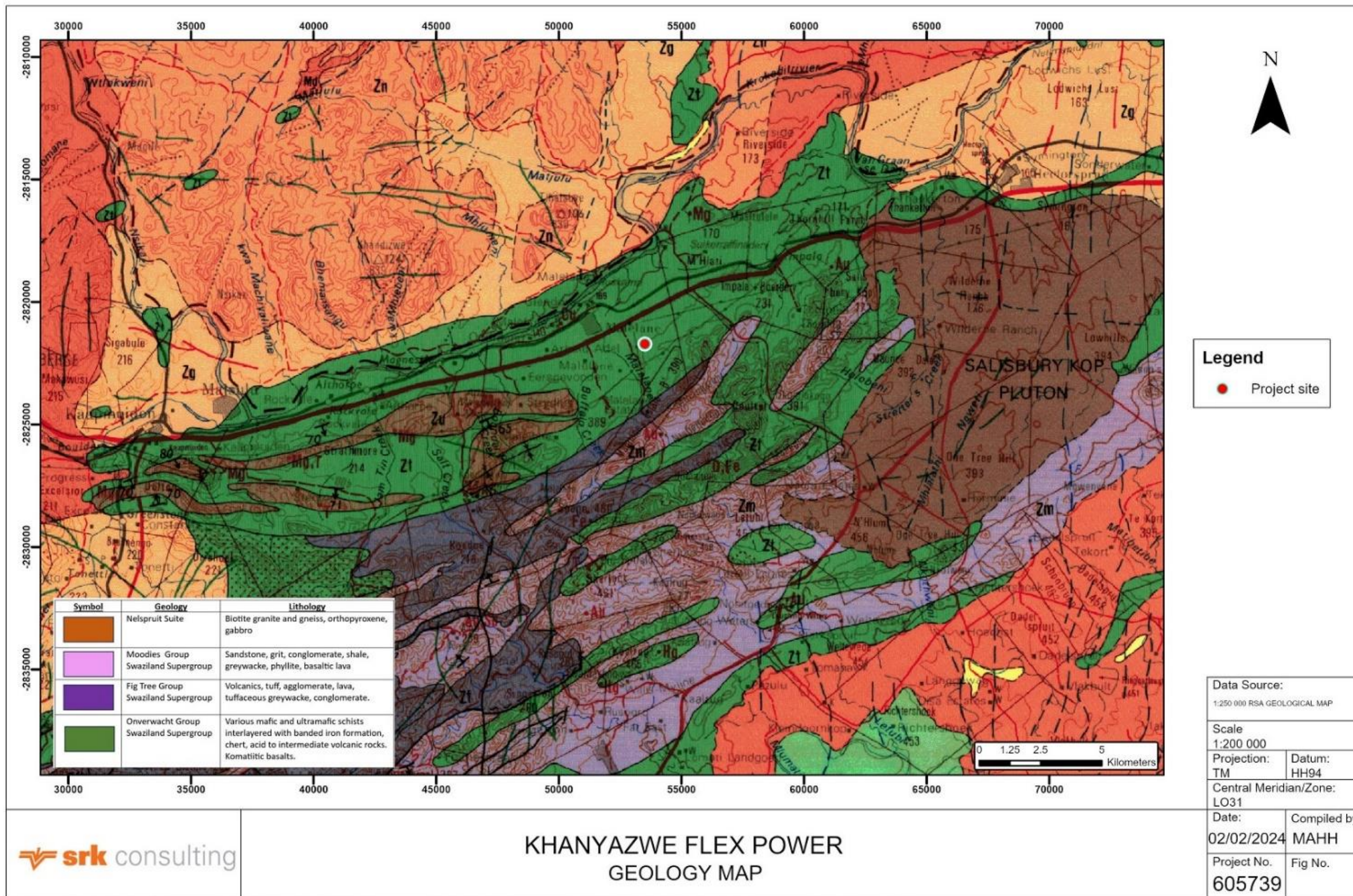
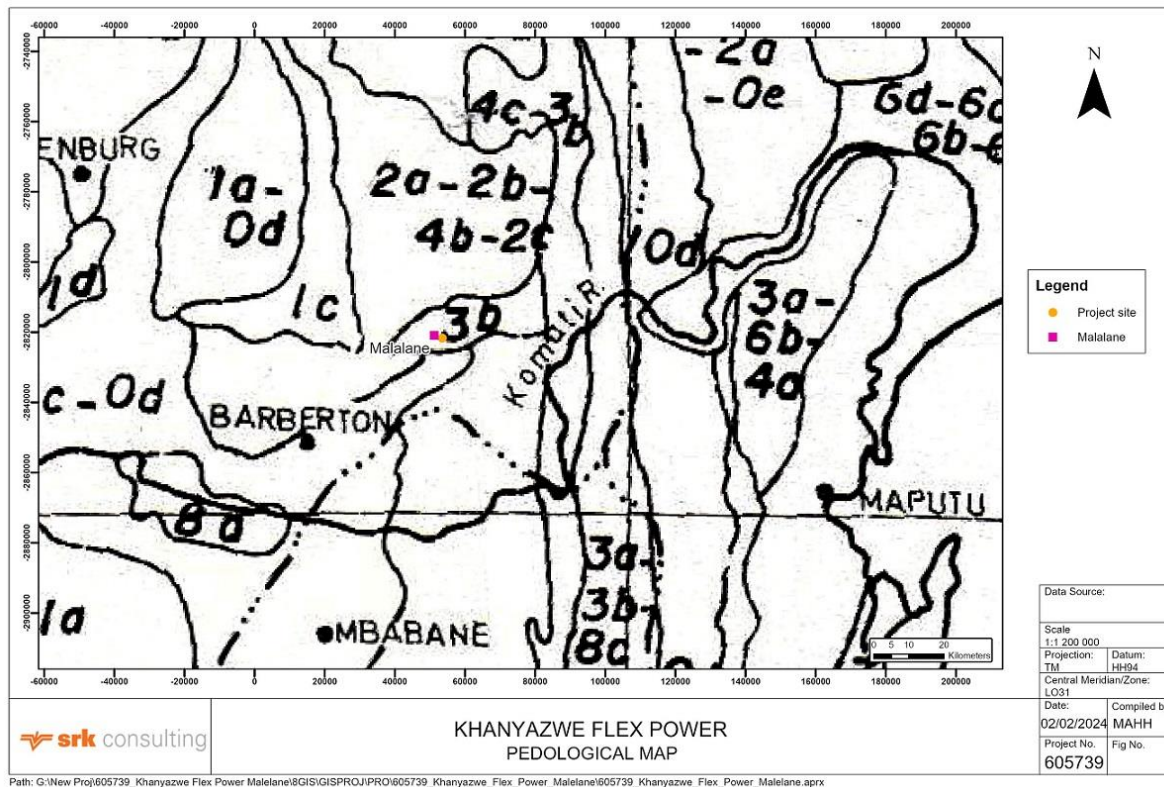


Figure 5-2: Geological map showing site location (2530 Barberton sheet, 1:250 000)

## 6 Soil Types Malelane Area

The general soil type in the Malelane area (refer to Figure 6-1, published by the Agricultural Research Council) is within the mapped soil unit **3b**, these soils are described as “**smectitic clays**” which is mainly red in colour. Smectitic/montmorillic clays are known for their potential expansive properties.

Smectitic clays typically form as a weathering product of ultramafic rocks (Onverwacht Group).



**Figure 6-1: Pedological map of the Malelane area.**

Based on Google Earth images the sites within the sugar cane fields (Options 1 and 2) are therefore likely to have a relatively deep fertile clayey soil profile. The soil profile is likely to consist of a transported soil horizon overlying residual soils (soils derived from the decomposition of the underlying ultra mafic rocks).

However, it is possible that isolated zones of shallow sub-outcrop or outcrop may be locally present at these sites (Options 1 and 2). Such a rock outcrop zone is inferred from the vegetated linear zone which is evident on the Google Earth image at the Option 1 site located towards the southwestern corner of the site.

The Google Earth Images also confirm the red colouring of the soils which is typical of clay soils derived from ultramafic rocks (3b = red coloured smectitic clay).

The Agricultural Research Council indicates that the soils in the area are well drained, dark reddish coloured with a strong blocky structure (typical of active soils) generally with a high clay content.

Soil cover within Option 3 and 4 sites is likely to be thin (except over the lower lying part of the Option 3 site), and extensive outcrop or sub-outcrop is inferred.

# 7 General Description of Sites

## 7.1 Option 1

The extent of Option 1 site is shown in Figure 7.1.



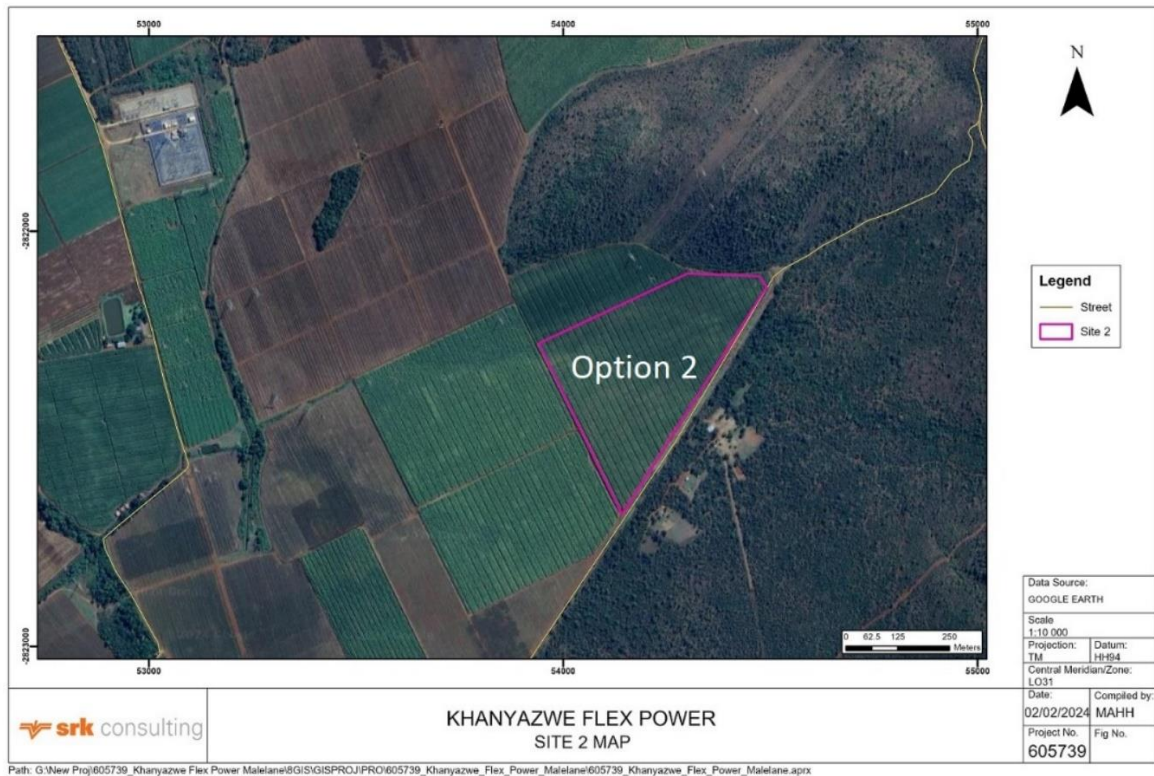
**Figure 7-1: Site Option 1 – General description**

The footprint appears to be entirely within existing agricultural land (sugar cane fields). The site appears to have a shallow relatively even fall with a maximum of about 8 m fall in a north-south direction and practically level in a west-east direction. The site is located very close to an existing electrical substation.

The site is likely to be underlain by a relatively deep soil profile possibly with isolated shallow rock outcrops or sub-outcrops close to the vegetated (outcrop) zone visible towards the western part of the site (this area has been cut out of the proposed PV footprint).

## 7.2 Option 2

The extent of Option 2 site is shown in Figure 7.2.

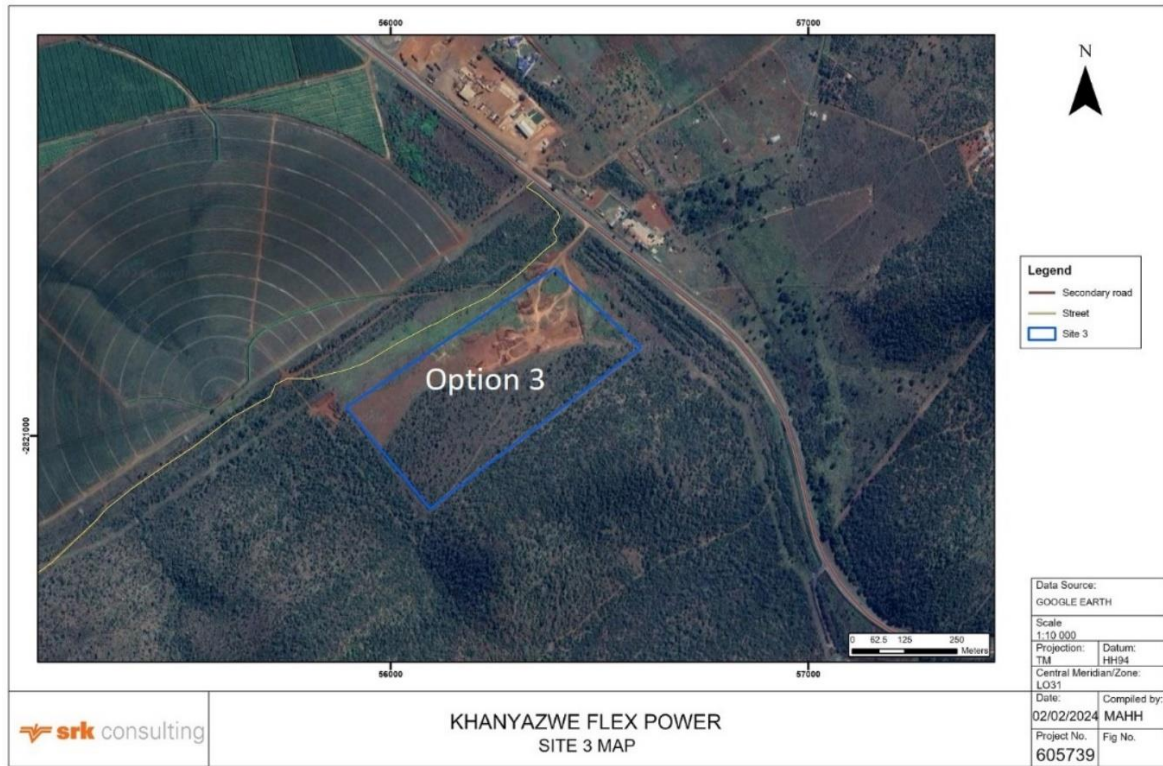


**Figure 7-2: Site Option 2 – General description**

The footprint appears to be entirely within existing agricultural land (sugar cane fields), a powerline servitude appears to define the northern boundary of the site. The site appears to have a shallow relatively even fall of about 12 m in both the north-south and west-east directions.

### 7.3 Option 3

The extent of Option 3 is shown in Figure 7.3.

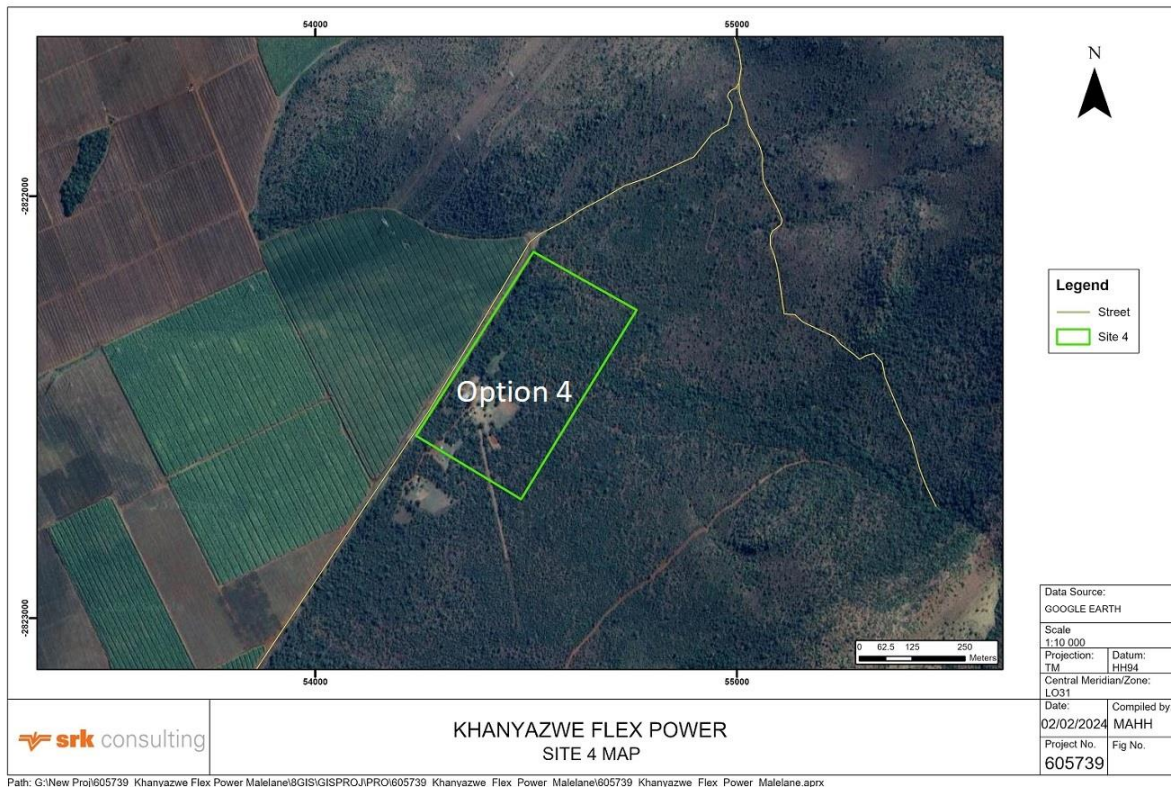


**Figure 7-3: Site Option 3 – General description**

About two thirds of the Option 3 site appears to be on steeply sloping ground with a fall of about 60 m in a north-south direction and about 20 m in a west-east direction. The upper part of the site appears to be undisturbed virgin ground covered with trees and shrubs. The lower part of the site has been substantially disturbed and parts of the site appear to have been used as a borrow pit for construction materials. There are also numerous mounds of unsuitable material, or dump material from elsewhere, evident on the Google Earth Image.

## 7.4 Option 4

The extent of Option 4 is shown in Figure 7-4.



**Figure 7-4: Site Option 4 – General description**

Option 4 site appears to be mainly undeveloped land covered in trees and bushes, with a small section cleared of vegetation. The site has a fall of about 15 m towards the NW with very little fall in the NE-SW direction.

Reddish clayey soil is inferred to be present (evident from the Google Earth image).

Possible shallow drainage course may intersect site.

## 8 Geotechnical Aspects

### 8.1 Dolomitic Ground and Subsidence

Dolomite is not known to be present in the area and the development of sinkholes related to a karst topography is not anticipated. Problems due to subsidence of ground is there not considered to be a risk factor.

### 8.2 Problem Soils

The ultra mafic rocks of the Onverwacht Group are known to decompose to smectitic clay minerals which are one of the most highly expansive clay minerals. The soils close to surface are therefore likely to be desiccated/shattered (when dry) and on wetting will rapidly take up water and expand.

The presence of expansive soils in the area is therefore considered to be a risk factor and the degree to which this may be problematic will depend on the results of laboratory testing which will be carried out as part of the detailed geotechnical investigation at the preferred site.



### 8.3 Seismic Activity

According to the seismic hazard map of South Africa produced by Fernandez and Du Plessis (1992), the maximum horizontal ground acceleration in the Malelane area is between 50 and 100 cm/sec<sup>2</sup> (refer to Figure 7-1). The risk of seismic activity affecting the project is therefore extremely low.

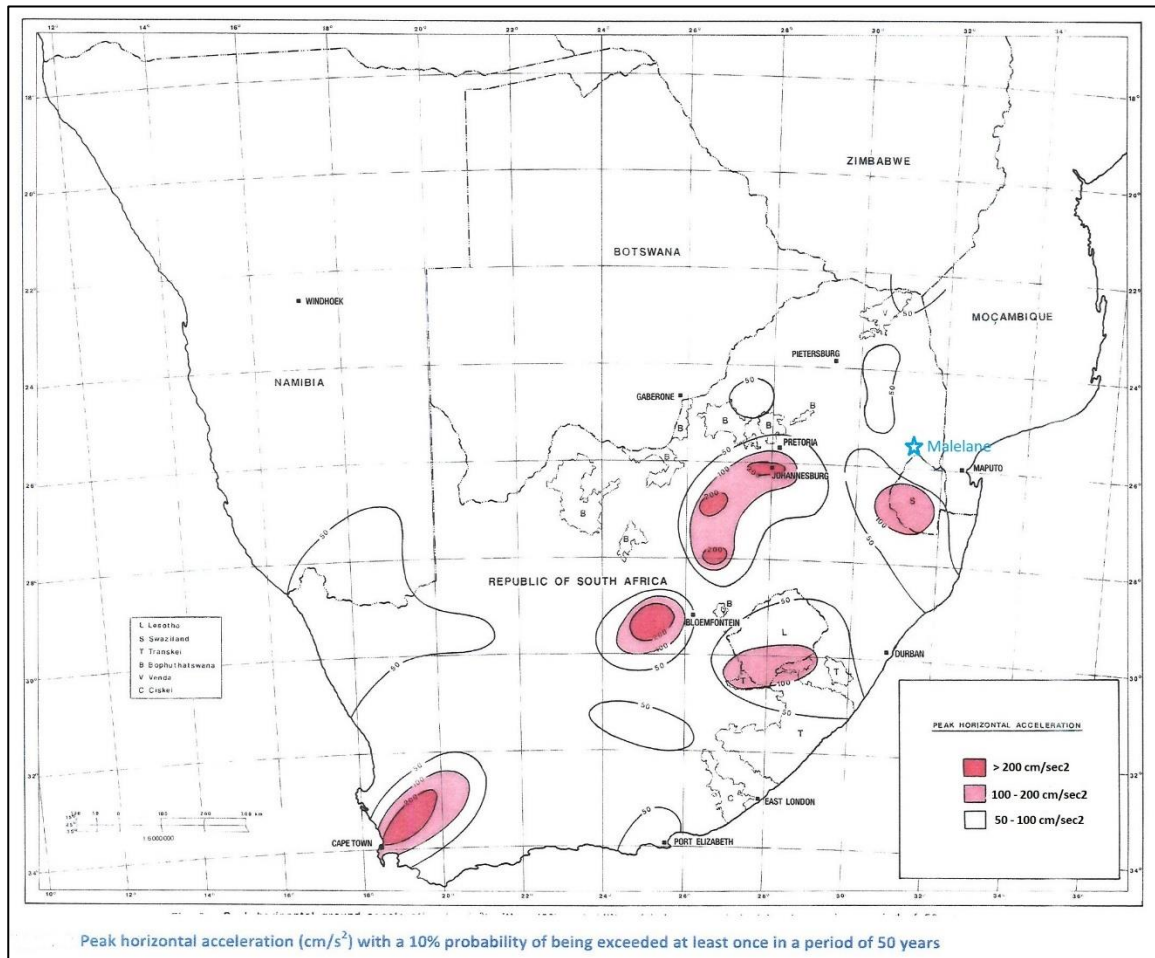


Figure 8-1: Seismic Hazard Map of South Arica (Fernandez & Du Plessis 1998)

## 9 Geotechnical Impact Assessment

A suitability rating (from *very low* - suitability to *high* - suitability) is determined for the various geotechnical aspects/criteria that are likely to have a bearing on the geotechnical suitability of the site for the proposed development as well as construction aspects of the power plant.

Low suitability aspects are shaded in red (this represent high sensitivity aspects) and areas of high suitability are shaded in green (this represent low sensitivity aspects).

### 9.1 Geotechnical Criteria and Rating

The main geotechnical aspects that have a bearing on the suitability of various site options are detailed and rated in the sections below.

## Option 1

**Table 9-1: Option 1 - Geotechnical Criteria and Suitability Ratings.**

| <b>Geotechnical Aspect</b>                     | <b>Suitability</b> | <b>Motivation</b>   |
|--|--------------------|---|
| Slope Angle                                    | High               | The site has a shallow even gradient, although some earthworks may be required depending on the extent of platforms required,   |
| Presence of deep soils                         | Medium             | A relatively deep soil profile is expected which will facilitate the construction of engineered fill platforms if required.   |
| Drainage                                       | High               | While the site has a shallow fall drainage does not appear to be problematic. Some drainage channels are evident, possibly to control drainage after heavy rain events.   |
| Erosion  | High               | No evidence of erosion is evident (but attention will have to be paid to erosion of any fill embankments that may be constructed).  |
| Water Table                                    | Medium             | Main water table expected to be deep but the presence of a perched water table may develop in the rainy season.   |
| Presence of bedrock                            | Low                | While most of the site does not appear to have outcrop present, there is one location where a prominent ridge of rock outcrop appears to extend into the site. There is therefore some risk that other shallow bedrock areas may be present at the site.  |
| Excavatability                                 | High               | Deep soil profile inferred over the bulk of the site, however, there is one small area where rock outcrop may be present.   |
| Suitability of soils as construction materials | Very Low           | The near-surface soils at the site are expected to contain a high clay fraction, high PI and are likely to be potentially expansive. The soils are expected to have low CBR values. The soils may therefore not be well suited as construction materials. |
| Potentially expansive soils                    | Very Low           | Ultra-mafic bedrock formations decompose to form smectitic clays which are known to be potentially highly expansive.  |
| Bearing capacity of soils                      | Medium             | The soils are expected to have moderate bearing capacity and are likely to be suitable founding material for most structures, except for more heavily loaded structures.  |
| Foundations                                    | High               | Suitable for conventional foundations, strip and pad foundations at relatively shallow depth. Good compaction will be required within fill platforms. Heavy structures may require piling.  |
| Road construction                              | Low                | Clayey potentially expansive soils with high PI and low CBR. Roadbed improvement required.  |

## **Option 2**

**Table 9-2: Option 2 - Geotechnical Criteria and Suitability Ratings.**

| <b>Geotechnical Aspect</b>                     | <b>Suitability</b> | <b>Motivation</b>   |
|--|--------------------|---|
| Slope Angle                                    | High               | The site has a relatively shallow even gradient, although some earthworks may be required depending on the extent of platforms required,  |
| Presence of deep soils                         | Medium             | A relatively deep soil profile is expected which will facilitate the construction of engineered fill platforms if required.   |
| Drainage                                       | High               | Drainage does not appear to be problematic. No drainage channels evident.   |
| Erosion  | High               | No evidence of erosion is evident (but attention will have to be paid to erosion of any fill embankments that may be constructed).  |
| Water Table                                    | Medium             | Main water table expected to be deep but the presence of a perched water table may develop in the rainy season.   |
| Presence of bedrock                            | High               | Cultivated land outcrop not evident. Isolated occurrences of shallow bedrock cannot be ruled out.   |
| Excavatability                                 | High               | Deep soil profile inferred over the bulk of the site. Soft excavation inferred to 3m plus.  |
| Suitability of soils as construction materials | Vey Low            | The near-surface soils at the site are expected to contain a high clay fraction, high PI and are likely to be potentially expansive. The soils are expected to have low CBR values. The soils may therefore not be well suited as construction materials. |
| Potentially expansive soils                    | Very Low           | Ultra-mafic bedrock formations decompose to form smectitic clays which are known to be potentially highly expansive.  |
| Bearing capacity of soils                      | Medium             | The soils are expected to have moderate bearing capacity and are likely to be suitable founding material for most structures, except for more heavily loaded structures.  |
| Foundations                                    | High               | Suitable for conventional foundations, strip and pad foundations at relatively shallow depth. Good compaction will be required within fill platforms. Heavy structures may require piling.  |
| Road construction                              | Low                | Relatively poor construction materials due to clayey potentially expansive soils with high PI and low CBR. Roadbed improvement required.  |

### **Option 3**

**Table 9-3: Option 3 - Geotechnical Criteria and Suitability Ratings.**

| <b>Geotechnical Aspect</b>                     | <b>Suitability</b> | <b>Motivation</b>   |
|--|--------------------|---|
| Slope Angle                                    | Very Low           | Steep angles over a large part of the site likely to require site terracing.  |
| Presence of deep soils                         | Very Low           | Possible rock outcrop or shallow sub-outcrop over higher lying part of the site. Disturbed soil on lower part due to material borrowing.  |
| Drainage                                       | High               | Drainage probably good over higher ground due to steep slopes but possibility of some ponding of water within old borrow areas.   |
| Erosion  | Medium             | No evidence of erosion on the higher slopes but disturbed ground lower down slope will be prone to erosion.   |
| Water Table                                    | Medium             | Main water table expected to be deep but the presence of a perched water table may develop in the rainy season and may pond within the borrow area  |
| Presence of bedrock                            | Very Low           | Outcrop or shallow sub-outcrop inferred on higher slopes.   |
| Excavatability                                 | Low                | Difficult excavation on higher ground likely due to possible presence of shallow bedrock  |
| Suitability of soils as construction materials | Low                | There must be some suitable construction materials at the site as the lower part of the site has been exploited as a borrow pit. It is likely that much of the suitable material has been removed from site.  |
| Potentially expansive soils                    | Very Low           | Where present soils are likely to be potentially expansive.   |
| Bearing capacity of soils                      | High               | It is inferred that weathered bedrock will be present close to surface on the steeper slopes, high bearing capacity therefore inferred. However, on lower slopes the material has been disturbed and the bearing capacity will be low (re-compaction will be required). |
| Foundations                                    | High               | Suitable for conventional foundations, strip and pad foundations at relatively shallow depth on the steeper slopes. Poor fiunding on the lower laying area due to material reworking.   |
| Road construction                              | High               | Thin clayey soil cover inferred, the presence of a borrow pit on the site indicates that some good quality construction materials may be present.   |

## Option 4

**Table 9-4: Option 4 - Geotechnical Criteria and Suitability Ratings.**

| Geotechnical Aspect                            | Suitability | Motivation  |
|--|-------------|---|
| Slope Angle                                    | Medium      | The site has a moderate gradient downslope and some earthworks may be required depending on the extent of platforms required,   |
| Presence of deep soils                         | Medium      | A relatively deep soil profile is expected which will facilitate the construction of engineered fill platforms if required.   |
| Drainage                                       | Low         | While the sloping site should be well drained the possible presence of a shallow drainage course may require re-engineering.  |
| Erosion  | High        | No evidence of erosion is evident (but attention will have to be paid to erosion of any fill embankments that may be constructed).  |
| Water Table                                    | High        | Main water table expected to be deep.   |
| Presence of bedrock                            | Medium      | Difficult to infer depth to bedrock but steeper slopes generally indicate the presence of possible shallower bedrock conditions.  |
| Excavatability                                 | Medium      | Probably relatively easily excavatable to a depth of 2 -3 m. Soft to Intermediate excavatability.   |
| Suitability of soils as construction materials | Vey Low     | The near-surface soils at the site are expected to contain a high clay fraction, high PI and are likely to be potentially expansive. The soils are expected to have low CBR values. The soils may therefore not be well suited as construction materials. |
| Potentially expansive soils                    | Very Low    | Ultra-mafic bedrock formations decompose to form smectitic clays which are known to be potentially highly expansive.  |
| Bearing capacity of soils                      | Medium      | The soils are expected to have moderate bearing capacity and are likely to be suitable founding material for most structures.   |
| Foundations                                    | High        | Suitable for conventional foundations, strip and pad foundations at relatively shallow depth. Good compaction will be required within fill platforms.   |
| Road construction                              | Low         | Clayey potentially expansive soils with high PI and low CBR. Roadbed improvement required.  |

## 9.2 Comparative Assessment of Alternatives

Based on geotechnical conditions Option 1 and Option 2 are considered to be the most favourable options, followed by Option 4 (but difficult to infer conditions) and Option 3 the least favourable site.

## 9.3 Assessment of No-Go Alternatives

Steeper slope angles together with the presence of potentially shallow bedrock or rock outcrop would render a site largely unsuitable for the proposed development, for example, the Option 3 site and for this reason SRK would probably rate this site as a no-go option.

# 10 Conclusions and Recommendations

The desktop geotechnical site assessment of the four potential Power Plant site options indicates that there does not appear to be any material geotechnical constraints to the development of Option 1 and Option 2 sites. Option 3 site appears to be the least favourable site with significant geotechnical constraints. Option 4 site could be developed, but at this stage (desktop assessment) it is more difficult to assess as the site is largely undeveloped land cover with trees and bushes.

For the preferred site a detailed topographic survey is required to evaluate slope angles etc. This needs to be followed up with a detailed geotechnical investigation of the preferred site involving test pit excavation and laboratory testing of the soils.

**Prepared by**

SRK Consulting - Certified Electronic Signature  
 **srk consulting**  
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**John Brown** (Pr Sci Nat)  
Principal Engineering Geologist  
Consultant

**Reviewed by**

SRK Consulting - Certified Electronic Signature  
 **srk consulting**  
605739/45329/Report  
274-5055-3277-DHPB-1908/2024  
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**Daniell Du Preez** (Pr Sci Nat)  
Senior Engineering Geologist

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

## **Appendix A – Specialist CV**



|  |   |
|--|---|
| <b>Profession</b>                      | Engineering Geologist   |
| <b>Education</b>                       | MBA (UCT), 1995<br>BSc (Hons) (Engineering Geology) Witwatersrand, 1983<br>BSc (Geol) Witwatersrand, 1982                                       |
| <b>Registrations/<br/>Affiliations</b> | MSAIEG 90/131,<br>SACNASP 400114/89<br>National Home Builders Registration Council (NHBRC)<br>Competent Person Geotechnical Registered No. 1639 |

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## Specialisation

Civil and mining geotechnics; engineering geological studies for civil and mining infrastructure; geotechnical site investigations. Renewable Energy Projects.

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## Expertise

John Brown has been involved in the field of engineering geology and geotechnics for the past 40 years. His expertise includes:

- geotechnical site investigations
- foundation investigations for high rise buildings, shopping malls, industrial sites, bridges, tailings complexes, waste disposal sites, dams, and various settlement sensitive structures
- geotechnical investigations for renewable energy projects (wind farms and solar PV sites)
- township and school geotechnical investigations (NHBRC compliant, including golf estates and low-cost housing)
- geotechnical input for EIAs and EMPs
- geological and geotechnical material investigations for roads, railways, power lines, pipeline, and dam construction
- hard rock and borrow pit identification and evaluation of materials for roads, concrete, and revetment construction
- excavatability assessments
- marine geotechnical investigations for harbours, land reclamation etc.
- rock and soil slope stability assessments, including dewatering aspects
- rock mechanics aspects for underground excavations (tunnels, mine declines)
- geotechnical aspects of mining feasibility studies
- evaluation of the stability of sites underlain by dolomite, undermined and reclaimed / filled land
- core logging and rock mass classification

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## Employment

|                |   |
|----------------|---|
| 2023 – present | <b>SRK Consulting, Cape Town</b> Principal Engineering Geologists, Consultant.        |
| 1990 - 2023    | <b>SRK Consulting, Cape Town</b> Principal Engineering Geologist, Partner.            |
| 1984 - 1990    | <b>SRK Consulting, Johannesburg</b> Engineering Geologist.                            |
| 1983 - 1984    | <b>Post graduate study</b> – Engineering Geology, Witwatersrand University.           |
| 1982 - 1983    | <b>SRK Consulting, Johannesburg</b> , Junior hydrologist / engineering geologist.     |
| 1978 - 1982    | <b>Rand Mines (Pty) Ltd</b> , Geological Field Assistant. Part-time student employee. |

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## Languages

English, Afrikaans – read, write, speak



## **Appendix B – Specialist Declaration of Interest**



# forestry, fisheries & the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

Private Bag X447, Pretoria, 0001, Environment House, 473 Steve Biko Road, Pretoria, 0002 Tel: +27 12 399 9000, Fax: +27 86 625 1042

## SPECIALIST DECLARATION FORM – AUGUST 2023

Specialist Declaration form for assessments undertaken for application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

### REPORT TITLE

Click or tap here to enter text.

### Kindly note the following:

1. This form must always be used for assessment that are in support of applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting, where this Department is the Competent Authority.
2. This form is current as of August 2023. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.dffe.gov.za/documents/forms>.
3. An electronic copy of the signed declaration form must be appended to all Draft and Final Reports submitted to the department for consideration.
4. The specialist must be aware of and comply with 'the Procedures for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the act, when applying for environmental authorisation - GN 320/2020', where applicable.

### 1. SPECIALIST INFORMATION

|  |  |
|--|--|
| Title of Specialist Assessment         | Khayazwe FlexPower Power Plant desktop geotech |
| Specialist Company Name                | SRK Consulting South Africa (Pty) Ltd.         |
| Specialist Name                        | John Macbeth Brown                             |
| Specialist Identity Number             | 5701075007086                                  |
| Specialist Qualifications:             | Bsc Hons Engineering Geology                   |
| Professional affiliation/registration: | Pr Sci Nat, SACNASP 400114/89. SAIEG           |
| Physical address:                      | 183 Main Road Rondebosch.                      |
| Postal address:                        | Postnet Suite 206 PB X18                       |
| Postal address                         | Rondebosch 7701.                               |
| Telephone                              | 021 659 3060.                                  |
| Cell phone                             | 082 600 6541                                   |
| E-mail                                 | jbrown@srk.co.za.                              |

YEO  
AS

## SPECIALIST DECLARATION FORM – AUGUST 2023

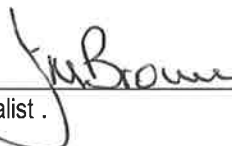
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### 2. DECLARATION BY THE SPECIALIST

I, John Macbeth Brown. declare that –

- I act as the independent specialist in this application;
- I am aware of the procedures and requirements for the assessment and minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of the National Environmental Management Act (NEMA), 1998, as amended, when applying for environmental authorisation which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. "the Protocols") and in Government Notice No. 1150 of 30 October 2020.
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, Regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing –
  - any decision to be taken with respect to the application by the competent authority; and;
  - the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of section 24F of the NEMA Act.

Signature of the Specialist .



Name of Company:

SRK Consulting South Africa (Pty) Ltd Click

Date

22/02/2024



**SPECIALIST DECLARATION FORM – AUGUST 2023**

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**3. UNDERTAKING UNDER OATH/ AFFIRMATION**

I, John Macbeth Brown, swear under oath / affirm that all the information submitted or to be submitted for the purposes of this application is true and correct.

John Brown  
Signature of the Specialist

Name of Company

SRK Consulting South Africa (Pty) Ltd

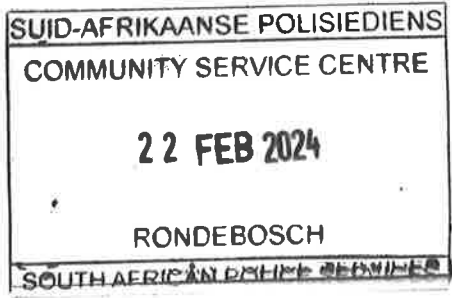
Date

22/02/2024

Signature of the Commissioner of Oath

A. SIKOTI  
A. SIKOTI  
7164032-1

Date



# SRK Report Distribution Record

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Approval Signature:



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