

**PALAEONTOLOGICAL EXEMPTION LETTER FOR THE PROPOSED RESIDENTIAL DEVELOPMENT ON THE
REMAINDER OF PORTION 1 OF THE FARM STRATHEARN 2154 IN THE MAGISTERIAL DISTRICT OF
BLOEMFONTEIN, FREE STATE**

Prepared by
BANZAI ENVIRONMENTAL (PTY) LTD

18 August 2019

Declaration of Independence

I, Elize Butler, declare that –

General declaration:

- I act as the independent palaeontological specialist in this application
- 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 palaeontological impact assessments, 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 will take into account, to the extent possible, the matters listed in section 38 of the NHRA when preparing the application and any report relating to the application;
- 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;
- I will ensure that information containing all relevant facts in respect of the application is distributed or made available to interested and affected parties and the public and that participation by interested and affected parties is facilitated in such a manner that all interested and affected parties will be provided with a reasonable opportunity to participate and to provide comments on documents that are produced to support the application;
- I will provide the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not
- All the particulars furnished by me in this form are true and correct;
- I will perform all other obligations as expected a palaeontological specialist in terms of the Act and the constitutions of my affiliated professional bodies; and
- I realise that a false declaration is an offence in terms of regulation 71 of the Regulations and is punishable in terms of section 24F of the NEMA.

Disclosure of Vested Interest

I do not have and will not have any vested interest (either business, financial, personal or other) in the proposed activity proceeding other than remuneration for work performed in terms of the Regulations;

PALAEONTOLOGICAL CONSULTANT:

Banzai Environmental (Pty) Ltd

CONTACT PERSON:

Elize Butler

Tel: +27 844478759

Email: elizebutler002@gmail.com

SIGNATURE:

A handwritten signature in black ink, appearing to read 'Elize Butler', is positioned to the right of the 'SIGNATURE:' label.

EXECUTIVE SUMMARY

Banzai Environmental was appointed by Lefatse Environmental Planning Services (Pty) Ltd to conduct the Palaeontological Assessment for the proposed housing development (and associated infrastructure) of 28 erven on the remainder of Portion 1 of Strathearn 2154 situated in the Magisterial District of Bloemfontein, Free State Province.

According to the PalaeoMap of South African Heritage Resources Information System the Palaeontological Sensitivity of the Karoo Dolerite is zero. **This is a recommended exemption from further Palaeontological studies as the proposed development is located in Karoo Dolerite which comprise of igneous rocks which is unfossiliferous.**

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1 INTRODUCTION

Nunes Properties (Pty) Ltd proposes the housing development (and associated infrastructure) of 28 erven on the remainder of Portion 1 of Strathearn 2154 situated in the Magisterial District of Bloemfontein, Free State Province. Lefatse Environmental Planning Services (Pty) Ltd has been employed, to undertake the NEMA [National Environmental Management Act, 1998 (Act no 107 of 1998 as amended in 2014)] for the Application for the Environmental Authorization Process as well as a Water Use Authorisation in terms of the National Water Act (NWA), Act 36 of 1998) for the proposed Strathearn housing development (Figure 1-3).

According to the PalaeoMap of South African Heritage Resources Information System the Palaeontological Sensitivity of the Karoo Dolerite is ZERO. **This letter is a recommended exemption from further Palaeontological studies as the proposed development is located in Karoo Dolerite which comprise of igneous rocks which is unfossiliferous.**

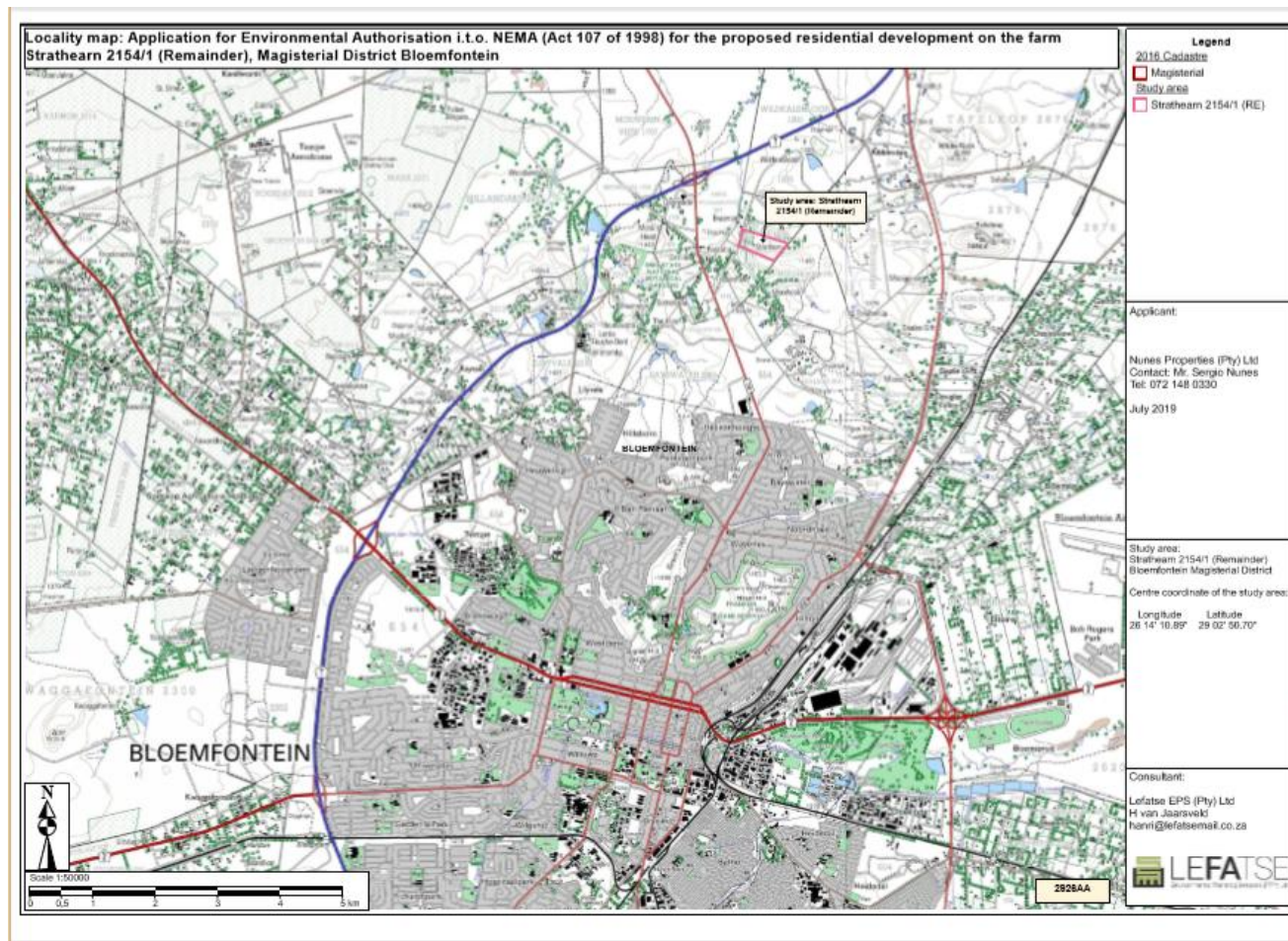


Figure 1: Locality map of the proposed housing development on the remainder of Portion 1 of Strathearn 2154 situated in the Magisterial District of Bloemfontein, Free State Province. Map provided by Lefatse Environmental Planning Services (Pty) Ltd.



Figure 2: Google Earth Image of the proposed housing development on the remainder of Portion 1 of Strathearn 2154 situated in the Magisterial District of Bloemfontein, Free State Province.

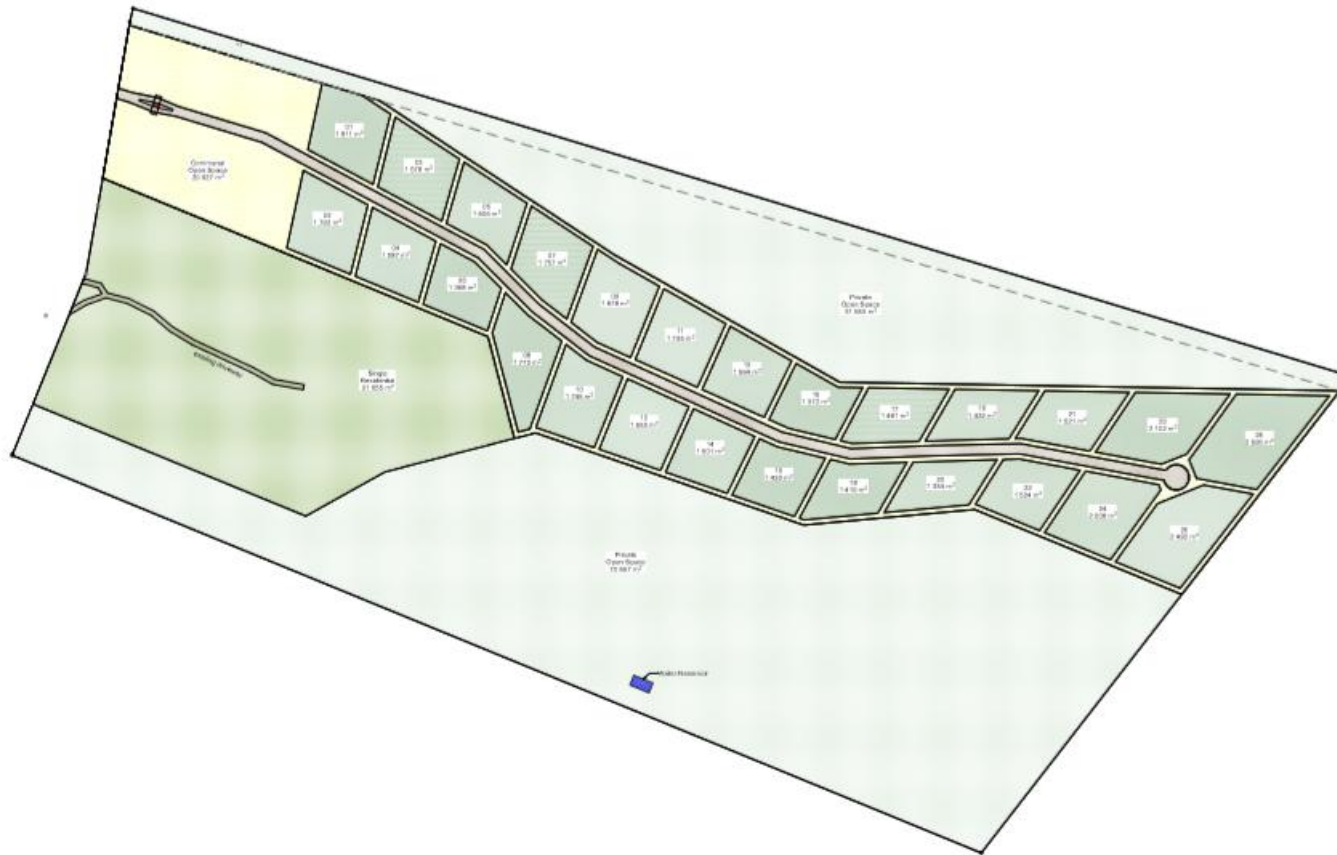


Figure 3: Layout of the proposed housing development on the remainder of Portion 1 of Strathearn 2154 situated in the Magisterial District of Bloemfontein, Free State Province. Map provided by Lefatse Environmental Planning Services (Pty) Ltd.

2 QUALIFICATIONS AND EXPERIENCE OF THE AUTHOR

The author (Elize Butler) has an MSc in Palaeontology from the University of the Free State, Bloemfontein, South Africa. She has been working in Palaeontology for more than twenty-four years. She has extensive experience in locating, collecting and curating fossils, including exploration field trips in search of new localities in the Karoo Basin. She has been a member of the Palaeontological Society of South Africa for 12 years. She has been conducting PIAs since 2014.

3 LEGISLATION

3.1 National Heritage Resources Act (25 of 1999)

Cultural Heritage in South Africa, includes all heritage resources, is protected by the National Heritage Resources Act (Act 25 of 1999) (NHRA). Heritage resources as defined in Section 3 of the Act include **“all objects recovered from the soil or waters of South Africa, including archaeological and palaeontological objects and material, meteorites and rare geological specimens”**.

Palaeontological heritage is unique and non-renewable and is protected by the NHRA. Palaeontological resources may not be unearthed, moved, broken or destroyed by any development without prior assessment and without a permit from the relevant heritage resources authority as per section 35 of the NHRA.

This Palaeontological Desktop Assessment forms part of the Heritage Impact Assessment (HIA) and adhere to the conditions of the Act. According to **Section 38 (1)**, an HIA is required to assess any potential impacts to palaeontological heritage within the development footprint where:

- the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300 m in length;
- the construction of a bridge or similar structure exceeding 50 m in length;
- **any development or other activity which will change the character of a site— (exceeding 5 000 m² in extent; or**
- involving three or more existing erven or subdivisions thereof; or
- involving three or more erven or divisions thereof which have been consolidated within the past five years; or
- the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority
- the re-zoning of a site exceeding 10 000 m² in extent;

- or any other category of development provided for in regulations by SAHRA or a Provincial heritage resources authority.

4 GEOLOGICAL AND PALAEOONTOLOGICAL HERITAGE

The proposed housing development on the remainder of Portion 1 of Strathearn 2154 situated in the Magisterial District of Bloemfontein, Free State Province is entirely underlain by Karoo Dolerite.

Karoo Dolerite Suite

The Karoo Igneous Province in southern Africa is a classic continental flood basalt province that was formed during the Early Jurassic Period. This province occurs over a comprehensive area in southern Africa and comprises a widespread system well developed igneous bodies (dykes, sills) that invaded the sediments of the Main Karoo Basin. Flood basalts do not typically form any visible volcanic structures, but with a series of outbursts form a suite of fissures of sub-horizontal lava flows that may vary in thickness. The Karoo is considered to be an old flood basalt province and is preserved today as erosional remnants of a more extensive lava cap that covered much of southern Africa in the geological past.

According to the PalaeoMap of South African Heritage Resources Information System the Palaeontological Sensitivity of the Karoo Dolerite is zero. This Suite consist of highly metamorphized igneous rock and is thus unfossiliferous.

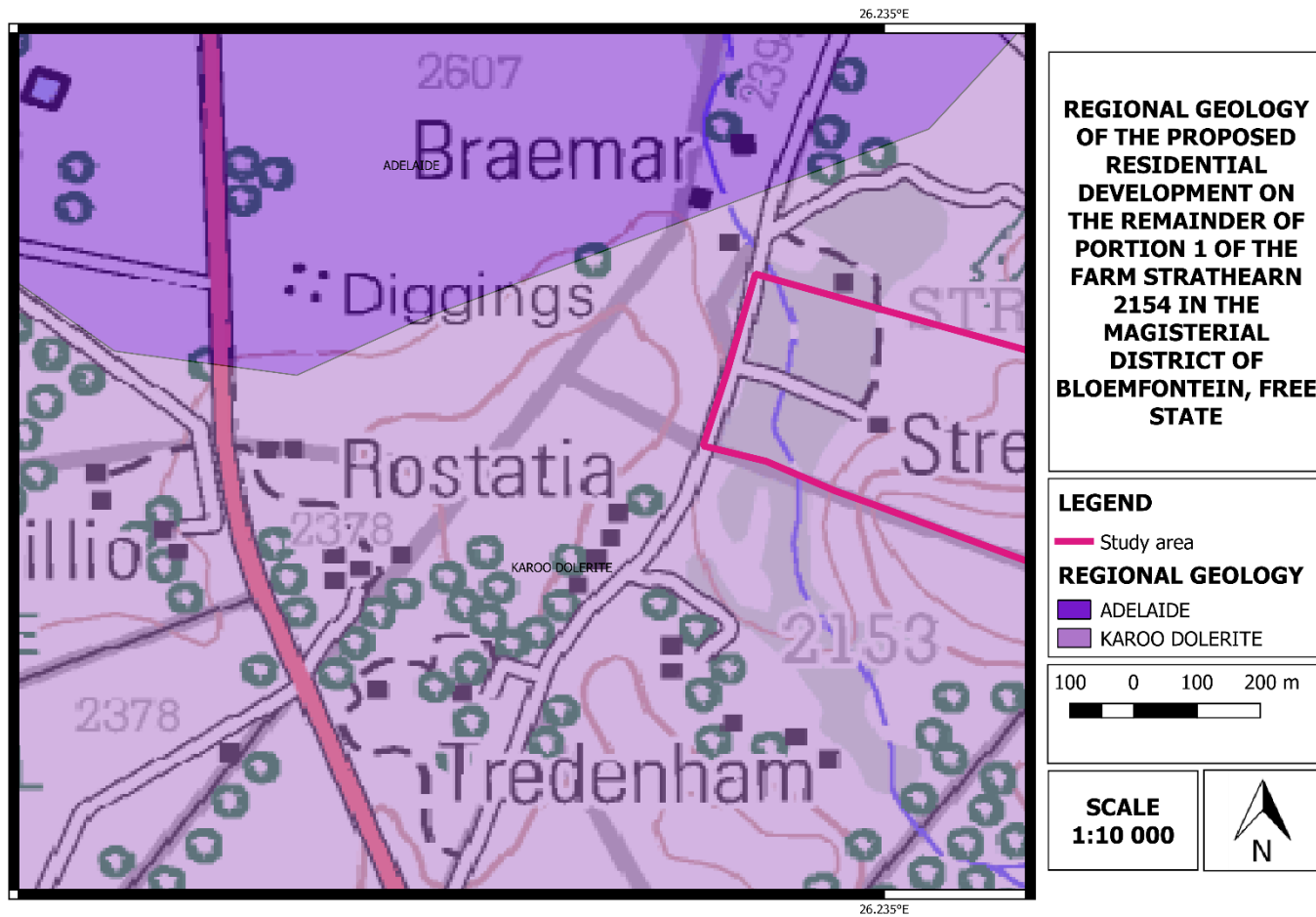


Figure 4: The surface geology of proposed housing development on the remainder of Portion 1 of Strathearn 2154 situated in the Magisterial District of Bloemfontein, Free State Province. The study area is entirely underlain by Karoo Dolerite. The map was drawn by QGIS Desktop 2.18.28.

5 GEOGRAPHICAL LOCATION OF THE SITE

The proposed development is located approximately 10 km north of Bloemfontein on Remainder of Portion 1 of the farm Strathearn 2154 situated in the Magisterial District of Bloemfontein, Free State (Figure 1-2).

6 FINDINGS AND RECOMMENDATIONS

The proposed housing development on the remainder of Portion 1 of Strathearn 2154 is entirely underlain by Karoo Dolerite. According to the PalaeoMap of South African Heritage Resources Information System the Palaeontological Sensitivity of the Karoo Dolerite is zero. **This is a recommended exemption from further Palaeontological studies as the proposed development is located in Karoo Dolerite which comprise of igneous rocks which is unfossiliferous.**

It is therefore recommended that exemption from further specialist palaeontological studies and mitigation be granted for this development.

5. REFERENCES

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