

PALAEONTOLOGICAL SPECIALIST STUDY

In terms of Section 38(8) of the NHRA

Proposed Industrial Development Zone (IDZ) on Portion 123 of the Farm No. 335 (Estate Klein Zeekoei River), Jeffreys Bay

Prepared by



Dewald Wilken

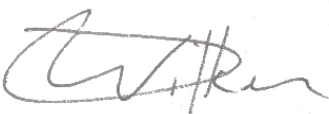
May 2023

THE INDEPENDENT PERSON WHO COMPILED A SPECIALIST REPORT OR UNDERTOOK A SPECIALIST PROCESS

I, **Dewald Wilken**, as the appointed independent specialist hereby declare that I:

- act/ed as the independent specialist in this application;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- have and will not have no vested interest in the proposed activity proceeding;
- have disclosed, to the applicant, EAP and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2014 (as amended) and any specific environmental management Act;
- am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations, 2014 (specifically in terms of regulation 13 of GN No. R. 326) and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- have ensured that the names of all interested and affected parties that participated in terms of the specialist input/study were recorded in the register of interested and affected parties who participated in the public participation process;
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favorable to the applicant or not; and
- am aware that a false declaration is an offence in terms of regulation 14 of GN No. R. 326.

Signed



Name

Dewald Wilken

Date

14 May 2023

EXECUTIVE SUMMARY

A palaeontological Impact assessment was requested for the proposed development of an Industrial Development Zone (IDZ) on Portion 123 of the Farm No. 335 (Estate Klein Zeekoei River), Jeffreys Bay. A palaeontological Impact assessment was conducted to comply with the South African Heritage Resources Agency (SAHRA) in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA).

The site of the proposed development of an IDZ is entirely underlain by the Devonian Baviaanskloof formation of the Table Mountain Group, and the Ceres Subgroup of the Bokkeveld Group. The Table Mountain Group and the Bokkeveld Group, make up part of the larger Cape Supergroup. The Bokkeveld Formation and the Ceres Subgroup are of Medium and Very high palaeontological sensitivity respectively. Tectonic action in this area often decreased the viability of fossil material. Therefore, the possibility of a significant fossil find is low. The development of the IDZ may continue. It is recommended that a palaeontologist is available to monitor any excavation on the Ceres Subgroup.

If any fossil material is found during excavation on this site the chance fossil find procedure at the end of this document should be followed.

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1. Introduction

1.1 Background Information on Project

A palaeontological Impact assessment was requested for the proposed development of an Industrial Development Zone (IDZ) on Portion 123 of the Farm No. 335 (Estate Klein Zeekoei River), Jeffreys Bay. A palaeontological Impact assessment was conducted to comply with the South African Heritage Resources Agency (SAHRA) in terms of Section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA).

The Klein Zeekoei Estate lies just West of the Fountains Mall in Jeffreys Bay, Eastern Cape, as seen in Figure 1. The site of the proposed development of an IDZ is entirely underlain by the Devonian Bavianskloof Formation of the Table Mountain Group, and the undifferentiated Ceres Subgroup of the Bokkeveld Group. The Table Mountain Group and the Bokkeveld Group, make up part of the larger Cape Supergroup.

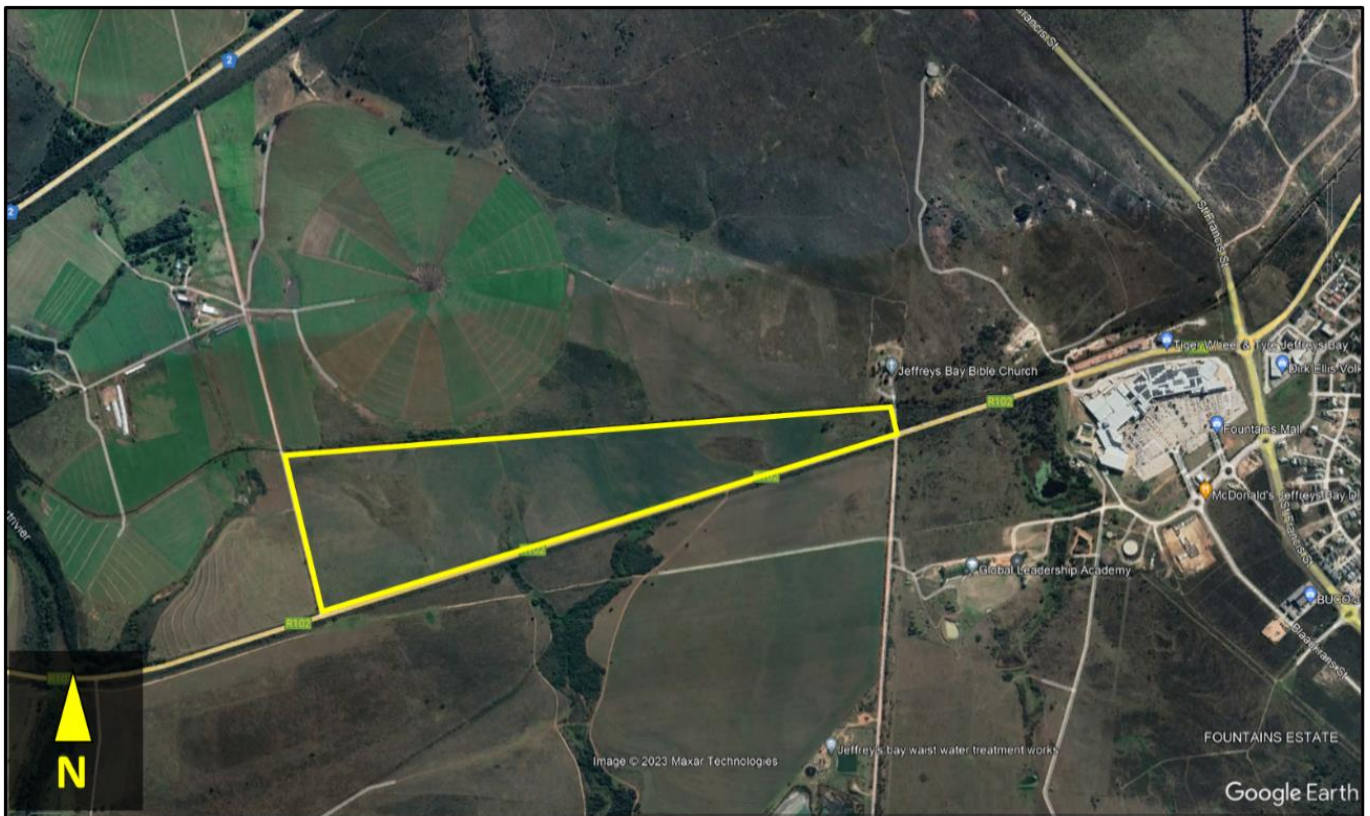


Figure 1 Google Earth© satellite image of the site (marked in yellow) proposed for the development of an Industrial Development Zone (IDZ) on Portion 123 of the Farm No. 335 (Estate Klein Zeekoei River), Jeffreys Bay.

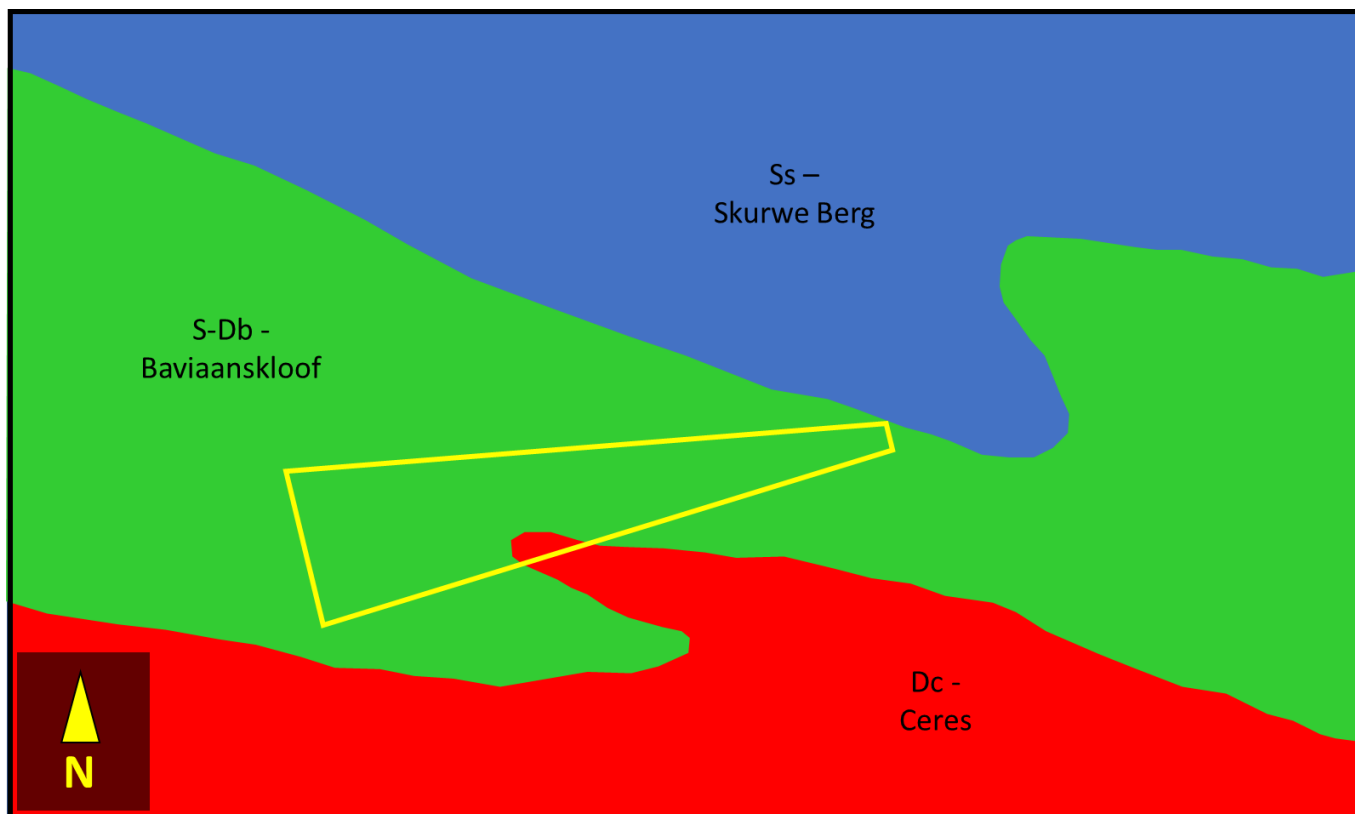


Figure 2 Palaeo-sensitivity Map of the site proposed for the development of an Industrial Development Zone (IDZ) on Portion 123 of the Farm No. 335 (Estate Klein Zeekoei River), Jeffreys Bay. Colours indicate sensitivity, Red - Very high, Green - Moderate, Blue - low.

2 Study approach

This PIA report provides a record of the inferred palaeontological heritage resources within the study area. The identified resources have been assessed to evaluate their heritage significance in terms of the grading system outlined in Section 3 of the NHRA (Act 25 of 1999). Recommendations for specialist palaeontological mitigation are made where this is considered necessary. The report is based on (1) a review of the relevant scientific literature in the broader study region, (2) published geological maps and accompanying sheet explanations (e.g., Toerien, D.K. (1984)).

3. Geological and Paleontological context of the study area

The following section will provide a basic review of the general geology and palaeontology in the study area. As summarised in Table 1 and Table 2.

The Cape Supergroup rocks, divided into the Table Mountain, Bokkeveld and Witteberg Groups, were deposited on a passive continental margin (Tankard et al., 1982) in a wide range of subaerial and subaqueous depositional environments (Johnson, 1991). This took place during the Late Cambrian to early Carboniferous time (520-340 million years). The deformation of the Cape Supergroup rocks took place during the Permian and Triassic time as a single phase, multiple event orogeny (278-215 million years) (Hälbich et al., 1983). This deformation is characterised by numerous folds (often verging to the North) and numerous thrust and reverse faults, the most significant one being the Baviaanskloof Thrust (Theron, 1969) that occurs to the north of the area of interest. Therefore, the Table Mountain group rocks in the area have been deformed significantly by faulting and folding which often makes the stratigraphic interpretation of these rocks rather difficult (Booth & Shone, 2002).

The site is underlain by the Table Mountain Group and the Bokkeveld Group. The formation within these groups can be seen in Table 1, Table 2, Figure 3, Figure 4 and Figure 5.

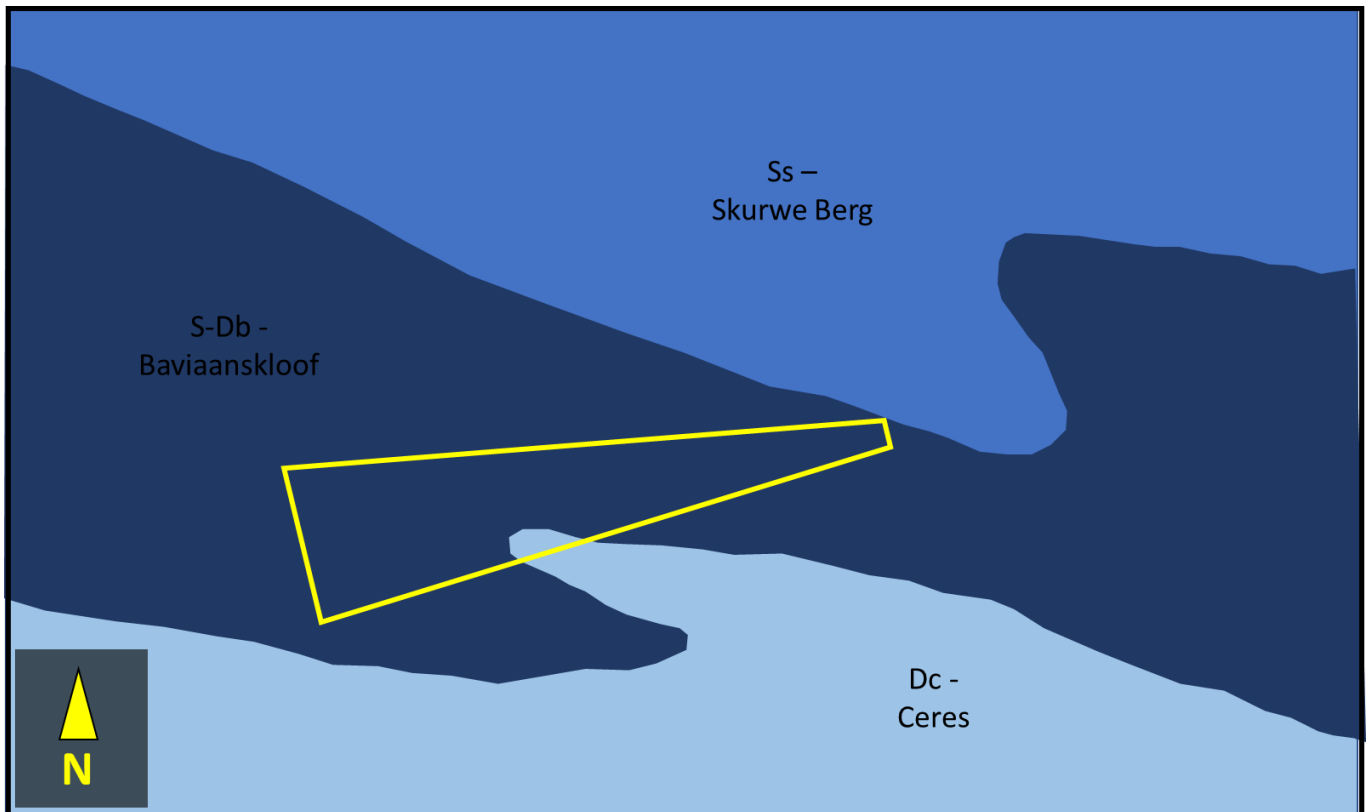


Figure 3 Geologic map of Portion 123 of the Farm No. 335 where the development is proposed. (Ss) Skurweberg, (S-Db) Baviaanskloof, (Dc) Ceres – undifferentiated.

Table 1 Stratigraphy, lithology and palaeoenvironments of the Table Mountain Group. Figures in brackets are approximate maximum thickness in metres. "Sallow Marine" denotes high-energy coastal environments (beach, shoreface, barriers, etc.). Relevant information marked in blue. (Thomas & Johnson 2006)

Age	East of ~21°E		Lithology	Palaeoenvironment
		Formation		
Dev.	Nardouw Subgroup	S-Db Baviaanskloof (200)	Sandstone (+ shale in the East)	Shallow Marine (+ offshore shelf in the East)
Silurian		(Ss) Skurweberg (400)	Sandstone (thick bedded)	Fluvial braid-plain, shallow marine
		(Sg) Goudini (300)	Sandstone (red-brown)	Shallow marine, fluvial braid-plain
Ordovician		(Oc) Cederberg (50)	Shale, Siltstone	Offshore shelf
		~	Diamictite, Sandstone	Glacial
		(Op) Peninsula (2700)	Sandstone	Fluvial braid-plain, shallow marine
		(Os) Sardinia Bay (900?)	Sandstone, Siltstone, Shale	Distal fluvial, tidal flat, shallow marine
			Sandstone, Conglomerate	Fluvial braid-plain

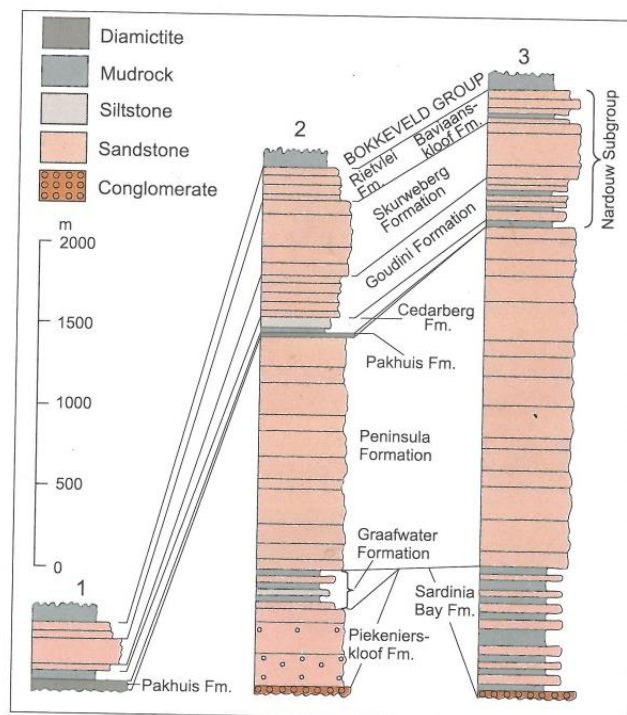


Figure 4 Representative sections of the Table Mountain Group. (Thomas & Johnson 2006)

Table 2 stratigraphy, lithology, and palaeoenvironments of the Bokkeveld Group. Figures in brackets are approximate maximum thickness in metres. "Sallow Marine" denotes high-energy coastal environments (beach, shoreface, barriers, etc.). (Thomas & Johnson 2006)

Age	Subgroup	Formation	Lithology	Palaeoenvironment
Devonian	Ceres	Boplaas (100)	Sandstone	Delta front, shallow Marine
		Tra-Tra (350)	Mudrock, siltstone	Offshore shelf, prodelta slope
		Hex River (60)	Sandstone	Delta front, shallow Marine
		Voorstehoek (300)	Mudrock, siltstone	Offshore shelf, prodelta slope
		Gamka (200)	Sandstone	Delta front, shallow Marine
		Gydo (600)	Mudrock, siltstone	Offshore shelf, prodelta slope

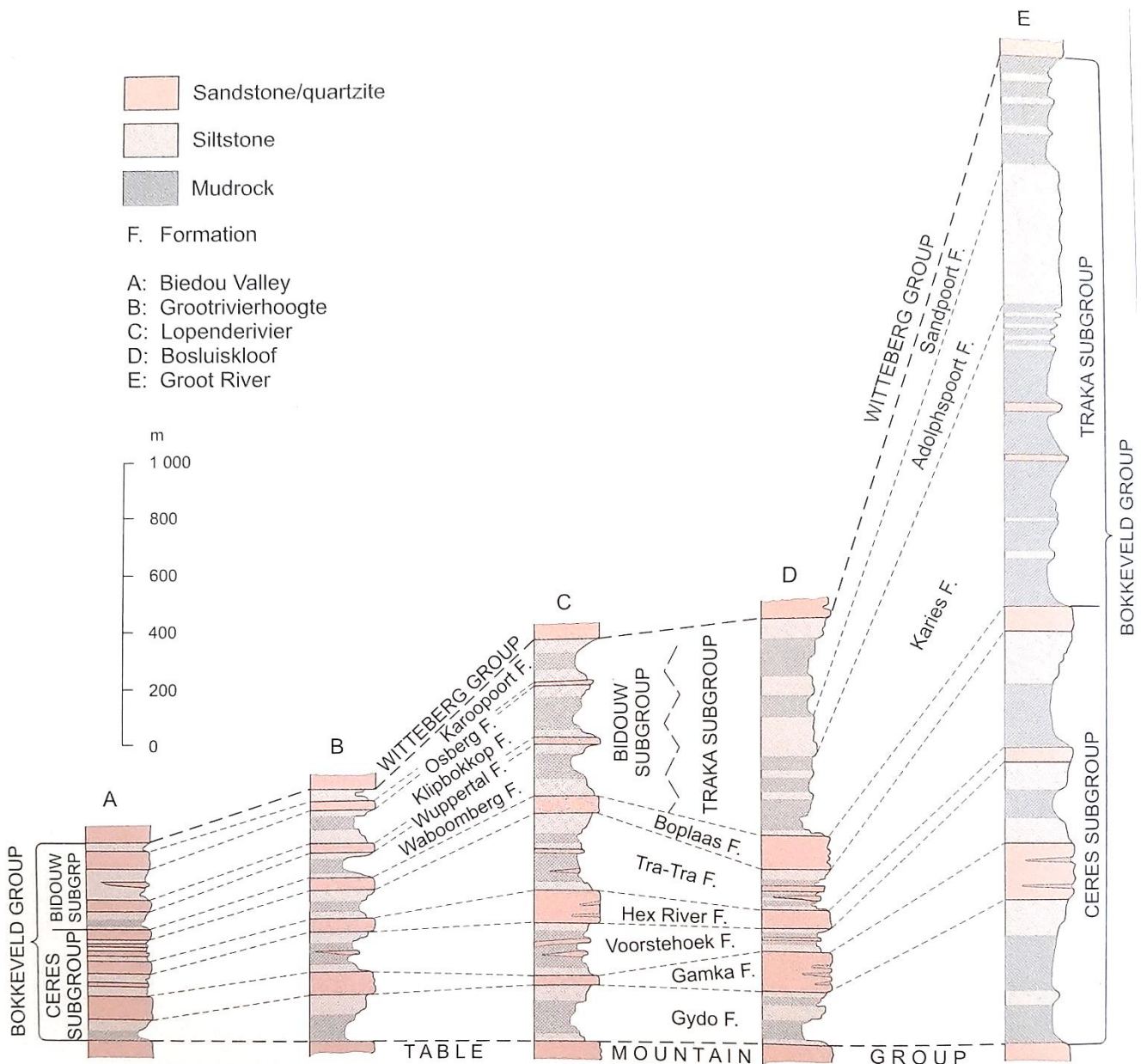


Figure 5 Representative section (A-E) of the Bokkeveld Group, modified after Theron and Johnson 1991 (Thomas & Johnson 2006)

Only two of these formations and one Subgroup are important for this study, these are the Skurweberg Formation, Baviaanskloof Formation and the Ceres Subgroup. These will be briefly discussed.

3.1 Skurweberg Formation

Thick-bedded, profusely cross-bedded, white-weathering, quartzitic sandstone and minor conglomerates are characteristic of the Skurweberg Formation. It reaches thicknesses of 200-400m to the West. A braided stream system has been proposed for the origin of this formation. This Formation is not known for its fossil content.

3.2 Baviaanskloof Formation

The Baviaans Kloof formation is up to 200m thick. It consists of light-coloured, feldspathic, quartzitic, sandstone which is underlain, and overlain by dark, fine-grained sandstone and mudstone. Brachiopod fossils are common to the top of the formation in some places. The mudrock, rhythmites, and dark sandstones represent a low energy marine shelf condition, while the light clean sandstone in the middle shows low angled inclined bedding, indication of a shoreface and foreshore environment.

3.3 Ceres Subgroup

The Ceres Subgroup varies in thickness from 625m in the east, to 1700, in the west. This Subgroup contains three upward coarsening cycles. These cycles can be recognised throughout the Bokkeveld Basin. These are defined as the Gydo and Gamka Formation (lower Cycle), Voorstehoek and Hex River Formation (Middle cycle), and the Tra-Tra and Boplaas Formation (Upper cycle).

The Gydo, Voorstehoek, and Tra-Tra Formations are made up of mudrock, siltstone, and minor sandstones. The Gamka, Hex River, and Boplaas Formation consist of fine to medium grained Feldspathic wacke, arenites and subordinate mudrock and siltstone.

The group is characterised by abundant marine benthic invertebrate fossils. These include brachiopods, bivalves, trilobites, crinoids, ophiuroids, crinoids, corals, and gastropods. Although these are mostly found in the mudrock units, some brachiopods are commonly found in the sandstone units.

The Gydo, Gamka, Voorstehoek formations make up the "brachiopod assemblage zone", while the Hex River Formation contains the *Mutationella* Range Zone

Extensive bioturbation is represented by *Planolites*, *Skolithos*, *Arenicolites* and other trace fossils. Tectonic deformation limits fossil collection especially within the softer mudrock horizons.

4. Field Assessment

A field assessment was conducted on 18 April 2023. The area is mostly covered with sediment, and relatively dense vegetation cover, as seen in Figure 6. Some minor outcrops were found in the Baviaanskloof formation. Photos of these can be seen in Figure 7 and Figure 8. These outcrops are typical quartzite with no features of interest.



Figure 6. a Panoramic photo of the site showing the dense vegetation cover.



Figure 7. Minor outcrop of the Baviaanskloof Formation.

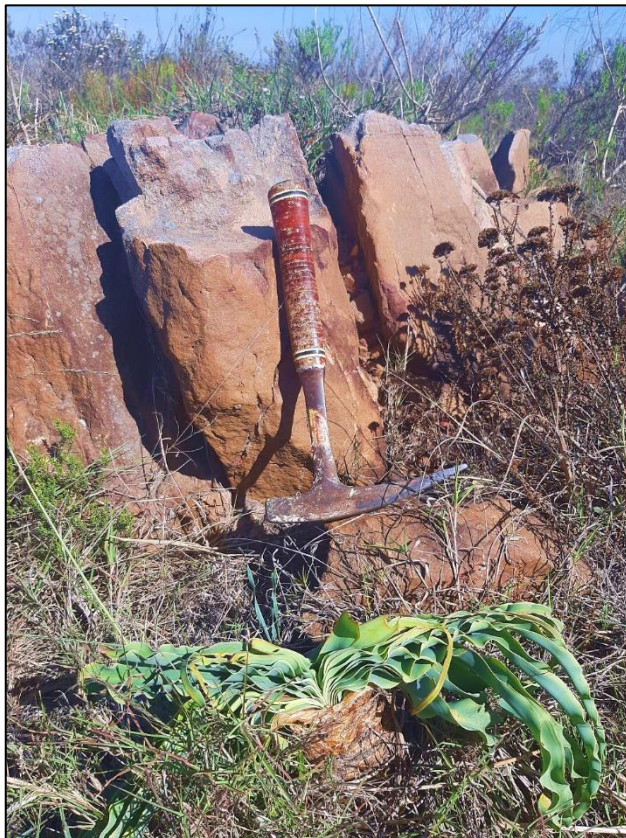


Figure 8. Minor outcrop of the Baviaanskloof Formation.

The Ceres Formation was revealed at the tributary of the Swarttrivier. It is represented by an outcrop with boulders, of which most are not *in situ*. These are highly weathered and rounded. No evidence of fossil material was seen in this area.



Figure 9. Minor outcrop of the Ceres formation, highly weathered. No fossil material was found.

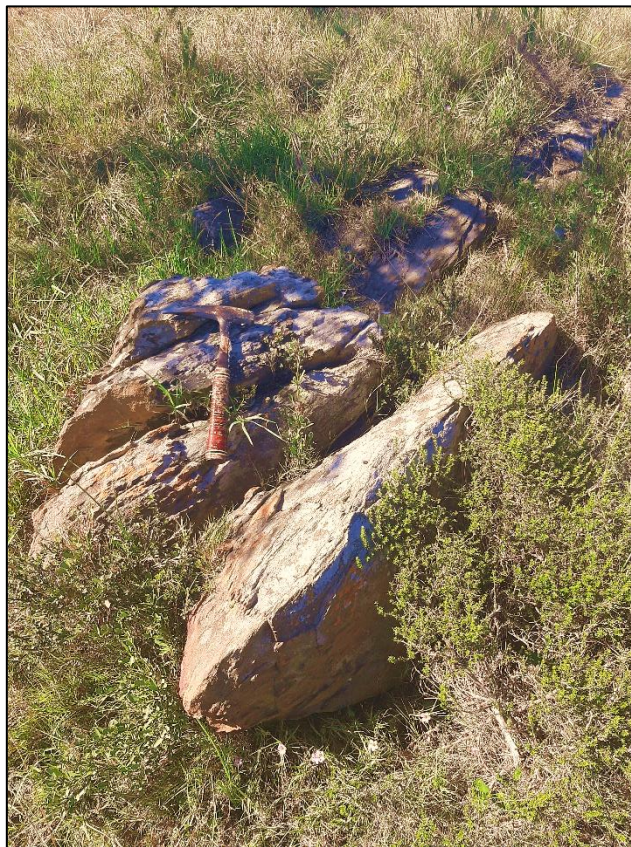


Figure 10. Minor outcrop of the Ceres formation, highly weathered. No fossil material was found.

5. Assessment of the Impact of the Development

The site of the proposed development of an IDZ is entirely underlain by the Devonian Baviaanskloof formation of the Table Mountain Group, and the undifferentiated Ceres Subgroup of the Bokkeveld Group. The Table Mountain Group and the Bokkeveld Group, make up part of the larger Cape Supergroup.

The Baviaanskloof formation is of medium sensitivity and could contain brachiopod fossils. The Ceres Subgroup is of Very High sensitivity and is host to brachiopods, bivalves, trilobites, crinoids, ophiuroids, crinoid stems, corals, gastropods and trace fossils. Fossil collection is hampered in this area due to tectonic deformation, especially in the softer mudrock. The area is unlikely to yield significant fossil material, due to the destructive impact of tectonic action.

Table 3. Impact Assessment Criteria

	Pre-Mitigation		Post-Mitigation	
Criteria	Category	Explanation	Category	Explanation
Overall Nature	Positive	Excavation might lead to the discovery of fossil material	Positive	If Fossil material is found it could expand our knowledge and National Heritage.
Type	Direct	The development will directly impact these resources	Direct	The development will directly impact these resources
Extent	Site	Impact is limited to the areas where excavation is done on site.	Site	Impact is limited to the areas where excavation is done on site.
Duration	Very short term	The Palaeontology will only be impacted during excavation	Very short term	The Palaeontology will only be impacted during excavation
Severity	Low	Fossil finds are unlikely due to the destructive effect of tectonic action	Low	Fossil finds are unlikely due to the destructive effect of tectonic action
Reversibility	Partly reversable	If fossil find procedures are followed.	Completely reversable	If fossil find procedures are followed.
Irreplaceable Loss	Resources will not be lost.	If fossil find procedures are followed.	Resources will not be lost.	If fossil find procedures are followed.
Probability	Unlikely	Fossil find is highly unlikely	Unlikely	Fossil find is highly unlikely
Mitigation Potential	High	If fossil find procedures are followed.	High	If fossil find procedures are followed.
Impact Significance	Negligible	Fossil find is unlikely	Negligible	Fossil find is unlikely

Table 4. Assessment criteria on the NO GO option.

	No Go	
Criteria	Category	Explanation
Overall Nature	<i>Negative</i>	Any fossil material will remain undiscovered.
Type	<i>Direct</i>	No excavation would lead to zero fossil material found
Extent	<i>Site</i>	No fossil material will be discovered on site.
Duration	<i>Very long term</i>	With time any fossils material not removed and curated will weathered and be lost to time.
Severity	<i>Low</i>	Fossils on this site is unlikely.
Reversibility	<i>Completely reversable</i>	If fossils are uncovered and curated.
Irreplaceable Loss	<i>Resources cannot be replaced.</i>	If fossil material is not removed they will be permanently lost to time
Probability	<i>Unlikely</i>	Fossil find is highly unlikely
Mitigation Potential	<i>High</i>	If Fossil material is removed and curated
Impact Significance	<i>High</i>	No development negates the possibility of finding Fossils.

6. Assumptions and Uncertainties

Based on the palaeontological record and the geology of the area, it is assumed that both Baviaanskloof Formation and the Ceres Subgroup, in the area have been exposed to tectonic forces. This would reduce the chance of uncovering fossils, and hamper successful collection.

The key assumption for this scoping study is that the existing geological maps and datasets used to assess site sensitivity are correct and reliable. However, the geological maps used were not intended for fine scale planning work and are largely based on aerial photographs alone, without ground-truthing. Even with ground truthing the geology could still be obscured by thick sediment cover. There is also an inadequate database for fossil heritage for much of the RSA, due to the small number of professional palaeontologists carrying out fieldwork in RSA. Most development study areas have never been surveyed by a palaeontologist.

7. Conclusion and Recommendations

The site of the proposed development of an IDZ is entirely underlain by the Devonian Baviaanskloof formation of the Table Mountain Group, and the undifferentiated Ceres Subgroup of the Bokkeveld Group. The Table Mountain Group and the Bokkeveld Group, make up Part of the larger Cape Supergroup. The Bokkeveld Formation and the Ceres Subgroup are of Medium and Very high palaeontological sensitivity respectively. Tectonic action in this area often decreased the viability of fossil material. Therefore, the possibility of a significant fossil find is low.

The proposed development of the IDZ may proceed under the condition that a palaeontologist is present to monitor any excavation in the area underlain by the Ceres formation (which also coincides with the tributary of the Swartrivier). In the case of any fossil finds the chance fossil find procedure at the end of this document must be followed.

Should important new fossil remains be found, the finder should alert ECPHRA (*i.e.* The Eastern Cape Provincial Heritage Resources Authority. Contact details: Ms. Ayanda MaMncwabe Mama 74 Alexander Road, King Williams Town 5600; ayanda.mncwabe-mama@ecsrac.gov.za) as soon as possible. This is so that appropriate action can be taken in good time by a professional palaeontologist at the developer's expense. Palaeontological mitigation would normally involve the scientific recording and judicious sampling or collection of fossil material as well as of associated geological data (*e.g.* stratigraphy, sedimentology, taphonomy). The palaeontologist concerned with mitigation work will need a valid fossil collection permit from ECPHRA and any material collected would have to be curated in an approved depository (*e.g.* museum or university collection). All palaeontological specialist work should conform to international best practice for palaeontological fieldwork and the study (*e.g.* data recording fossil collection and curation, final report) should adhere as far as possible to the minimum standards for Phase 2 palaeontological studies recently developed by SAHRA (2013). These recommendations are summarized in tabular form in Appendix 1 (Chance Fossil Finds Procedure) and should be incorporated into the Environmental Management Programme (EMPr) for the proposed development.

8. References

- Gabbott, S.E., Browning, C., Theron, J.N., & Whittle, R.J., The late Ordovician Soom Shale Lagerstätte: an extraordinary post-glacial fossil sedimentary record. 2017. *Journal of the Geological Society* 174 pp. 1-9
- MacRae, C. *Life etched in stone: Fossils of South Africa*, 1999. United Kingdom/Geological Society of South Africa. 305pp.
- Thomas, A. G., Johnson, M.R. (2006). The Cape Supergroup. In: Johnson, M.R., Anhaeusser, C.R. and Thomas, R.J., (Eds.), *The Geology of South Africa*, Johannesburg/Council for Geoscience, Pretoria, 443-460 pp.
- Viljoen, W.P. (1979) *Geological Map of the Oudtshoorn Area, Sheet 3322 Geological Survey of South Africa, 1:250000 Series*
- Booth, P.W.K & Shone, R.W. (2002) A review of thrust faulting in the eastern Cape Fold Belt, South Africa, and the implications for current lithostratigraphic interpretations of the Cape Supergroup. *J. Afr. Earth Sci.*, 34, 179--190
- Hälbich, I.W., Fitch, F.J. & Miller, J.A. (1983) Dating the Cape Orogeny. In: Söhnge, A.P.G. & Hälbich, I.W. (Eds.), *Geodynamics of the Cape Fold Belt. Spec. Publ. Geol. Soc. S. Afr.*, 12. 75-101.
- Johnson, M.R. (1991). Sandstone petrography, provenance and plate tectonic setting in Gondwana context of the southeastern Cape- Karoo Basin. *S. Afr. J. Geol.*, 94(2/3), 137-154.
- Tankard, A.J., Jackson, M.P.A., Eriksson, K.A., Hobday, D.K., Hunter, D.R. & Minter, W.E.L. (1982). *3.5 Billion Years of Crustal Evolution in Southern Africa*. Springer Verlag, New York, 523pp.
- Theron, J.N. (1969). The Baviaanskloof Range – a South African nappe. *Trans. Geol. Soc. S. Afr.*, 72, 29-30.
- Rust, I.C. 1967. On the sedimentation of the Table Mountain Group in the Western Cape province. Unpublished PhD thesis, University of Stellenbosch, South Africa, 110 pp.
- Braddy, S.J., Almond J.E. 1999 Eurypterid trackways from the Table Mountain Group (Ordovician) of South Africa, *Journal of African Earth Science* vol 29(1),165-177
- Almond, J.E., de Klerk, B., Gess, R *Palaeontological heritage of the Eastern Cape*. 2009
- Wilken, D. Colchester, 2022 *Vetmaakvlakte bank stabilisation PIA Habitat Link*

Appendix 1

Chance Fossil Finds Procedure

(Adopted from the HWC Chance Fossils Finds Procedure: June 2016)

Introduction

This document is aimed to inform workmen and foremen working on a construction and/or mining site. It describes the procedure to follow in instances of accidental discovery of palaeontological material (please see attached poster with descriptions of palaeontological material) during construction/mining activities. This protocol does not apply to resources already identified under an assessment undertaken under s. 38 of the National Heritage Resources Act (no 25 of 1999).

Fossils are rare and irreplaceable. Fossils tell us about the environmental conditions that existed in a specific geographical area millions of years ago. As heritage resources that inform us of the history of a place, fossils are public property that the State is required to manage and conserve on behalf of all the citizens of South Africa. Fossils are therefore protected by the National Heritage Resources Act and are the property of the State. Ideally, a qualified person should be responsible for the recovery of fossils noticed during construction/mining to ensure that all relevant contextual information is recorded.

Heritage Authorities often rely on workmen and foremen to report finds, and thereby contribute to our knowledge of South Africa's past and contribute to its conservation for future generations.

Training

Workmen and foremen need to be trained in the procedure to follow in instances of accidental discovery of fossil material, in a similar way to the Health and Safety protocol. A brief introduction to the process to follow in the event of possible accidental discovery of fossils should be conducted by the designated Environmental Control Officer (ECO) for the project, or the foreman or site agent in the absence of the ECO. It is recommended that copies of the attached poster and procedure are printed out and displayed at the site office so that workmen may familiarise themselves with them and are thereby prepared in the event that accidental discovery of fossil material takes place.

Actions to be taken

One person in the staff must be identified and appointed as responsible for the implementation of the attached protocol in instances of accidental fossil discovery and must report to the ECO or site agent. If the ECO or site agent is not present on site, then the responsible person on site should follow the protocol correctly in order to not jeopardize the conservation and well-being of the fossil material. Once a workman notices possible fossil material, he/she should report this to the ECO or site agent.

Procedure to follow if it is likely that the material identified is a fossil:

- The ECO or site agent must ensure that all work ceases immediately in the vicinity of the area where the fossil or fossils have been found;
- The ECO or site agent must inform SAHRA of the find immediately. This information must include photographs of the findings and GPS co-ordinates;
- The ECO or site agent must compile a Preliminary Report and fill in the attached Fossil Discoveries: Preliminary Record Form within 24 hours without removing the fossil from its original position. The Preliminary Report records basic information about the find including:
 - The date
 - A description of the discovery
 - A description of the fossil and its context (e.g. position and depth of find)
 - Where and how the find has been stored
 - Photographs to accompany the preliminary report (the more the better):
 - A scale must be used
 - Photos of location from several angles
 - Photos of vertical section should be provided
 - Digital images of hole showing vertical section (side);
 - Digital images of fossil or fossils.

Upon receipt of this Preliminary Report, SAHRA will inform the ECO or site agent whether or not a rescue excavation or rescue collection by a palaeontologist is necessary.

- Exposed finds must be stabilised where they are unstable and the site capped, e.g. with a plastic sheet or sandbags. This protection should allow for the later excavation of the finds with due scientific care and diligence. SAHRA can advise on the most appropriate method for stabilisation.
- If the find cannot be stabilised, the fossil may be collected with extreme care by the ECO or the site agent and put aside and protected until SAHRA advises on further action. Finds collected in this way must be safely and securely stored in tissue paper and an appropriate box. Care must be taken to remove all the fossil material and any breakage of fossil material must be avoided at all costs.

No work may continue in the vicinity of the find until SAHRA has indicated, in writing, that it is appropriate to proceed.

FOSSIL DISCOVERIES: PRELIMINARY RECORDING FORM		
Name of project:		
Name of fossil location:		
Date of discovery:		
Description of situation in which the fossil was found:		
Description of context in which the fossil was found:		
Description and condition of fossil identified:		
GPS coordinates:	Lat:	Long:
If no co-ordinates available then please describe the location:		
Time of discovery:		
Depth of find in hole		
Photographs (tick as appropriate and indicate number of the photograph)	Digital image of vertical section (side)	
	Fossil from different angles	
	Wider context of the find	
Wider context of the find. Temporary storage (where it is located and how it is conserved)		
Person identifying the fossil Name:		
Contact:		
Recorder Name:		
Contact:		
Photographer Name:		
Contact:		