SITE SENSITIVITY VERIFICATION REPORT: PALAEONTOLOGICAL HERITAGE

UMSOBOMVU SUBSTATIONS, CONCRETE TOWER MANUFACTURING FACILITIES AND TEMPORARY LAYDOWN AREAS, SITUATED IN THE UMSOBOMVU LOCAL MUNICIPALITY (NORTHERN CAPE PROVINCE) AND THE INXUBA YETHEMBA LOCAL MUNICIPALITY (EASTERN CAPE PROVINCE).

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EXECUTIVE SUMMARY

Umsobomvu Wind Power (Pty) Ltd is proposing to develop ancillary infrastructure - including a substation, an operations and maintenance building, a short overhead powerline and two concrete tower manufacturing facilities - within the project area of the authorised Umsobomvu 1 Wind Energy Facility near Middelburg. The two small project areas for the ancillary infrastructure overlie Early Triassic fluvial bedrocks of the Katberg Formation (Beaufort Group, Karoo Supergroup) and have been provisionally mapped as being of Very High palaeontological heritage sensitivity by the DFFE Screening Tool.

Site visits to both ancillary infrastructure project areas indicate that bedrock exposure is poor in both cases due to extensive cover by superficial deposits (sandy soils, surface gravels) as well as grassy vegetation. Good exposures of potentially fossilferous overbank mudrocks are rare while the bedrocks in general have been intensely baked by nearby dolerite intrusion as well as affected by geologically recent karstic (solution) weathering, compromising any fossils originally preserved within them. The only undoubted fossil recorded here is an isolated, poorly preserved postcranial bone of a small tetrapod that is of low scientific or conservation value. No fossil material was recorded from the Late Caenozoic superficial sediments covering most of the Katberg Formation outcrop area. It is concluded that both of the project areas are in practice of LOW palaeosensitivity; Very High sensitivities indicated here by the DFFE Screening Tool are therefore *contested*.

It is concluded that potential impacts on palaeontological heritage resources due to the proposed ancillary infrastructure developments are likely to be of LOW to VERY LOW significance. Pending the discovery of significant new fossil finds before or during construction, no further specialist palaeontological studies, monitoring or mitigation are recommended for these developments. Provided that the Chance Fossil Finds Protocol tabulated in Appendix 1 is incorporated into the EMPr and fully implemented during the construction phase of the infrastructure developments, there are no objections on palaeontological heritage grounds to their authorisation.

1. INTRODUCTION

Umsobomvu Wind Power (Pty) Ltd is proposing the development of infrastructure to supplement the development of the authorised Wind Energy Facilities (WEFs) in proximity to the infrastructure site. The proposed infrastructure is situated on Portion 8 of Uitzicht Farm 3, the Remaining Extent (RE) of Winterhoek Farm 118, and the RE of Elands Kloof Farm 135. These properties are situated within the Umsobomvu Local Municipality in the Northern Cape Province and the Inxuba Yethemba Local Municipality in the Eastern Cape Province (Fig. 1). The proposed developments will be situated within two separate, small project areas which are located within the authorised WEF project area:

(A) A 600 m x 900 m area (Fig. 2, orange rectangle) which will include:

- An IPP 132 kV Substation up to 22 500 m^2;

- A 132 kV Distribution Collector Substation up to 22 500 m^2;
- An Operation and Maintenance (O&M) Building up to 22 500 m^2; and
- Two (2) 132 kV Overhead Lines (OHL) up to 500 m in length.

(B) Two 300 m x 300 m areas (Fig. 2, white square, Fig. 3 green square) which will include:

- Area 1: A Concrete Tower Manufacturing Facility (CTMF) and Temporary Laydown Area of up to 60 000 m^2; and
- Area 2: A CTMF and Temporary Laydown area of up to 60 000 m^2.

The project areas for the proposed ancillary infrastructure developments overlie potentially fossiliferous continental sediments of the Beaufort Group (Karoo Supergroup) and according to the DFFE Screening Tool they are provisionally of Very High palaeosensitivity (Fig. 4). In accordance with Appendix 6 of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) Environmental Impact Assessment (EIA) Regulations of 2014, a combined field-based and desktop site sensitivity verification has therefore been undertaken in order to confirm the current land use and environmental sensitivity of the proposed project area as identified by the DFFE National Web-Based Environmental Screening Tool.

The present short PIA Site Sensitivity Verification report has been commissioned by the independent EAP responsible for the relevant environmental assessment processes, CES - Environmental and Social Advisory Services, Gqeberha / Port Elizabeth (Contact details: Ms Rosalie Ann Greeff. CES - Environmental and Social Advisory Services. Tel.: +27 (0)87 549 0239 | Head Office Tel.: +27 (0)46 622 2364. E-mail: r.evans@cesnet.co.za).

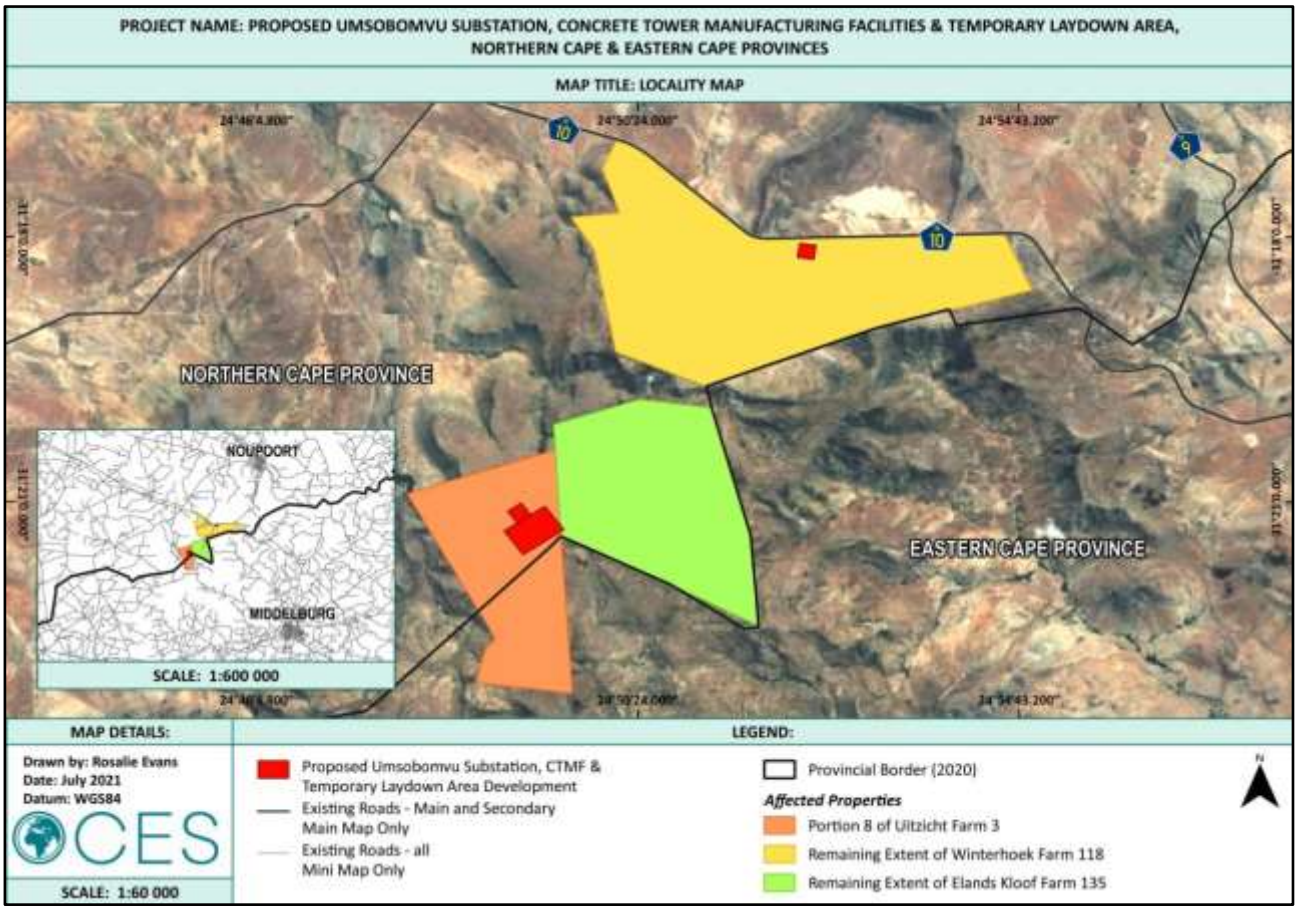

Figure 1: Satellite map showing the location of the proposed ancillary infrastructure developments for the Umsobomvu Wind Energy Facilities near Middelburg. See following two figures for detailed satellite images of the project areas.

Figure 2: Google Earth© satellite image of the adjoining southern project areas situated on Portion 8 of Uitzicht Farm 3 and the RE of Elands Kloof Farm 135 (orange rectangle – substations, O&M buildings, overhead powerline; white square – CTMF).

Figure 3: Google Earth© satellite image of the project area for the CTMF and temporary laydown area situated on Portion 8 of Uitzicht Farm 3 (green square). Access road from N10 shown in orange.

2. DATA SOURCES FOR SITE SENSITIVITY VERIFICATION

The site sensitivity verification of the proposed ancillary infrastructure developments is based on:

- A short project outline, maps, kmz files, DFFE Screening Tool palaeosensitivity map and other pertinent data provided by CES - Environmental and Social Advisory Services;

- A desktop review of (a) the relevant 1:50 000 and 1: 250 000 scale topographic maps, (b) Google Earth© satellite imagery, (c) published geological and palaeontological literature, including the 1:250 000 geological map (3124 Middelburg) for which a short sheet explanation has been published by Cole *et al.* (2004), as well as (d) several previous desktop and field-based fossil heritage (PIA) assessments for the Umsobomvu and Coleskop WEF projects near Middelburg by the author (Almond 2015, 2018a-c, 20219, 2021).

- A one-day field assessment of the relevant project areas by the author and an experienced assistant (Ms Madelon Tusenius) on 12 July 2021. The southern project area was partially covered with light snow during the earlier part of the site visit but this soon melted and, despite limited bedrock exposure, confidence levels for the conclusions reached here are Medium to High.

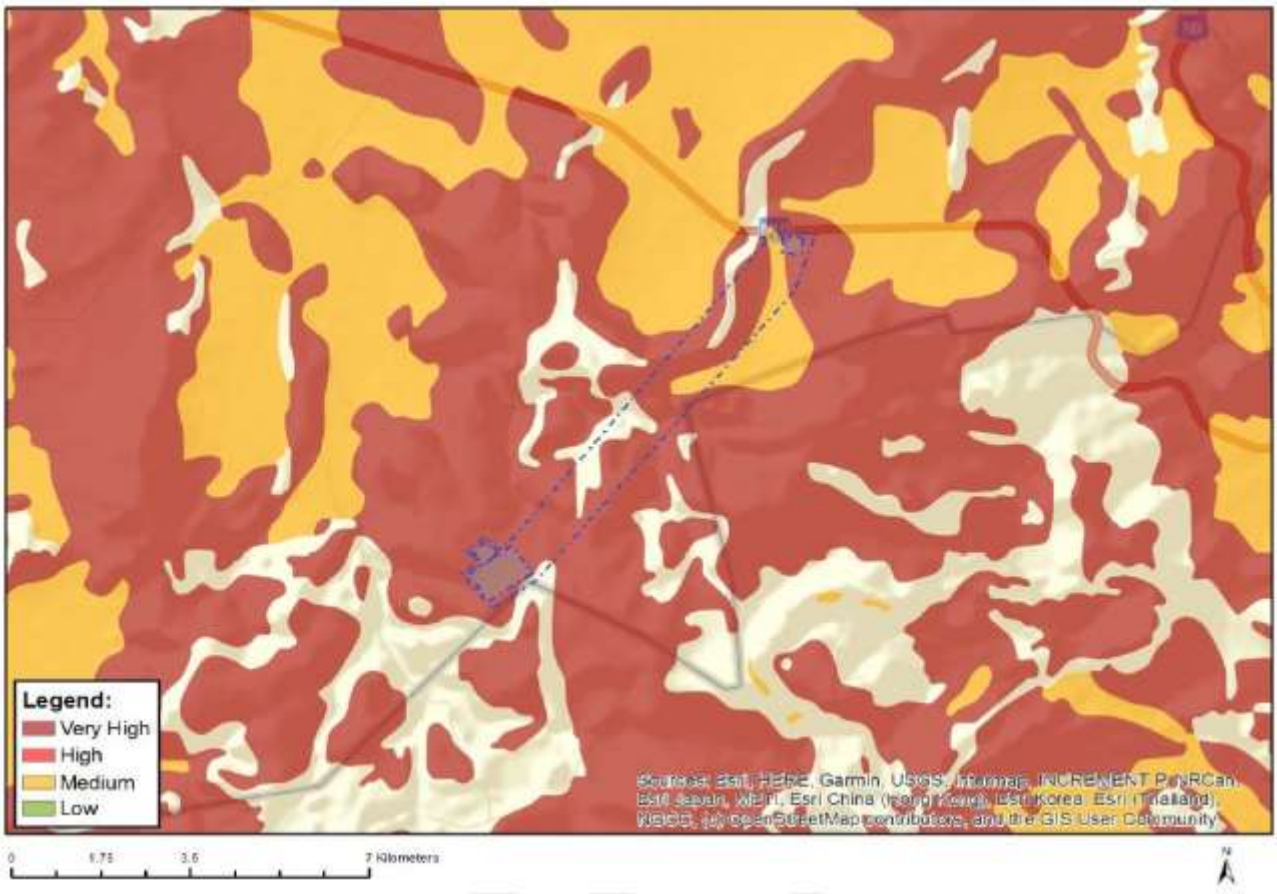

Figure 4: Paleontological sensitivity map for the ancillary infrastructure project areas (blue dotted rectangles) based on the DFFE Screening Tool. The area is provisionally assigned a Very High palaeosensitivity here due to the underlying sedimentary bedrocks of the Beaufort Group (Karoo Supergroup). The DFFE palaeosensitivity mapping is *contested* in this report.

3. GEOLOGICAL & PALAEONTOLOGICAL CONTEXT

The two ancillary infrastructural development sites within the Umsobomvu 1 WEF project area are underlain by continental (fluvial, lacustrine) sediments of the **Beaufort Group** (Karoo Supergroup) (See Almond 2015, 2018a for details) (Fig. 5). The sandstone-dominated succession here comprises Early Triassic fluvial channel sandstones and subordinate overbank mudrocks of the **Katberg Formation** (Tarkastad Subgroup, Karoo Supergroup) that build the Klein-Renosterberg escarpment and large parts of the upland plateau. The Karoo Supergroup sediments in the region have been extensively intruded by Early Jurassic dykes and sills of the **Karoo Dolerite Suite** that have baked the adjacent country rocks and also underlie large areas of the plateau, close to but outside the ancillary infrastructure project areas. The Beaufort Group and Karoo dolerite bedrocks are extensively mantled by a variety of **Late Caenozoic superficial deposits** such as colluvial / eluvial rock rubble (scree, surface gravels), stream alluvium and unconsolidated sandy soils.

The Katberg Formation of the Main Karoo Basin contains important post-extinction fossil biotas of earliest Triassic age that are referred to the *Lystrosaurus declivis* Assemblage Zone (previously known as the *Lystrosaurus* Assemblage Zone). These fossil assemblages – including a wide range of amphibians, therapsids and true reptiles as well as trace fossils and plant material – have been reviewed by Smith *et al.* (2012) as well as Botha and Smith (2020). Fossil sites recorded within the Umsobomvu 1 WEF project area are listed by Almond (2018a). Igneous bedrocks of the **Karoo Dolerite Suite** are entirely unfossiliferous and have almost certainly compromised fossil material originally preserved in the adjacent sedimentary country rocks through thermal metamorphism (baking) and secondary leaching or mineralisation by hot circulating subterranean fluids. Soils (including possible pedocretes such as calcrete ad ferricrete) as well as unconsolidated stream and eluvial surface gravels in the study region are generally of very low palaeosensitivity.

4. SITE SENSITIVITY VERIFICATION – FIELD OBSERVATIONS

4.1. Southern project area

The southern project area (See satellite map Figure 2, orange & white rectangles), located some 3 km NW of Weltevreden homestead, comprises fairly flat-lying upland terrain between *c*. 1745 and 1770 m amsl. (Figs. 6, 7). The area lies towards the edge of a grassy plateau with steep edges and deeply-incised stream gullies to the N, W and S. On the south side the site is overlooked by a low *koppie* of sandstone and dolerite (1832 m amsl) while some 200 m to the east is a shallow drainage line. The project area itself is a patchwork of flat to low rocky areas and soils with sparse eluvial gravels (angular clasts of sandstone, hornfels, dolerite), as well seen on satellite images. Most of the area is mantled in grassy or low shrubby karroid vegetation as well as sandy soils (often burrowed); the most informative bedrock exposures are accordingly seen outside and on the margins of the project area. Grey areas on satellite images might reflect underlying Karoo mudrocks but good exposures of these finer-grained facies were not encountered during the site visit.

The Katberg Formation bedrocks in the project area are typically subhorizontal to gently dipping, pale brown- to yellowish-weathering, medium-grained sandstones with thin- to medium-scale tabular bedding. Low angle tabular foresets are commonly developed, often indicating palaeocurrents to the northwest. Primary current lineation is seen on well-exposed foresets. Good vertical sections through the Katberg bedrocks are not available in such low relief terrain. Along the edges of the plateau the channel sandstones are highly dissected and karstified (*i.e* show evidence for intense solution weathering). Typical karstic weathering features seen here include numerous shallow to deep rock basins or *gnammas*, case hardening of joints and surfaces with crocodile skin-like polygonal cracking or tesselation, mushroom-shaped pedestal rocks, and honeycomb weathering (Figs. 16 to 18). Another interesting surface weathering feature is pronounced lichen-weathering in less consolidated sandstones (Figs. 19 & 20) (*cf* Grab *et al.* 2011). Low exposures of cross-bedded, finely gravely channel breccias occur here and there within the project area. The original gravels were mainly composed of calcrete, which has subsequently been dissolved away - probably by hot circulating fluids

associated with dolerite intrusion – leaving a network of small, angular hollows (Figs. 10 & 11). Mudflake intraclast breccias are thin and much rarer. A complex, major dolerite intrusion is mapped to the south of the project area (Fig. 5) while a steep-sided sheet of dolerite extends from the southern *koppie* northwards outside and shortly to the east of the site (Fig. 12). It is likely that the Katberg sandstones beneath the site have been secondarily metamorphosed by baking and hot fluids during dolerite intrusion. This is supported by the local occurrence of banks of tough, grey-green metaquartzite with abundant vugs (irregular cavities) as well as the abundant sphaeroidal, hollow or infilled siliceous concretions that weather out positively on sandstone bedding planes (Figs. 13, 14 & 16).

No indubitable fossil remains were recorded within the bedrocks or superficial sediments inside the southern project area during the recent site visit. Potentially fossiliferous mudrock units are not well-exposed at surface here. Any reworked bones and teeth originally preserved within the calcrete-rich channel breccias will probably have been dissolved away as a consequence of dolerite intrusion. A sinuous, 2 cm wide subhorizontal structure observed within baked sandstones well outside (350 m SE) of the project area might be a burrow cast but this remains equivocal and the structure is provisionally regarded as a pseudofossil (Fig. 15). Likewise, the silicified concretions seen within many of the baked sandstones might be mistaken for fossil plant stem or root casts but they are actually sphaeroidal in geometry (Figs. 14 & 16). It is concluded that the southern project area is generally of LOW palaeosensitivity; the sensitivity mapping shown on the DFFE Screening Tool Map (Fig. 4) is accordingly *contested* here.

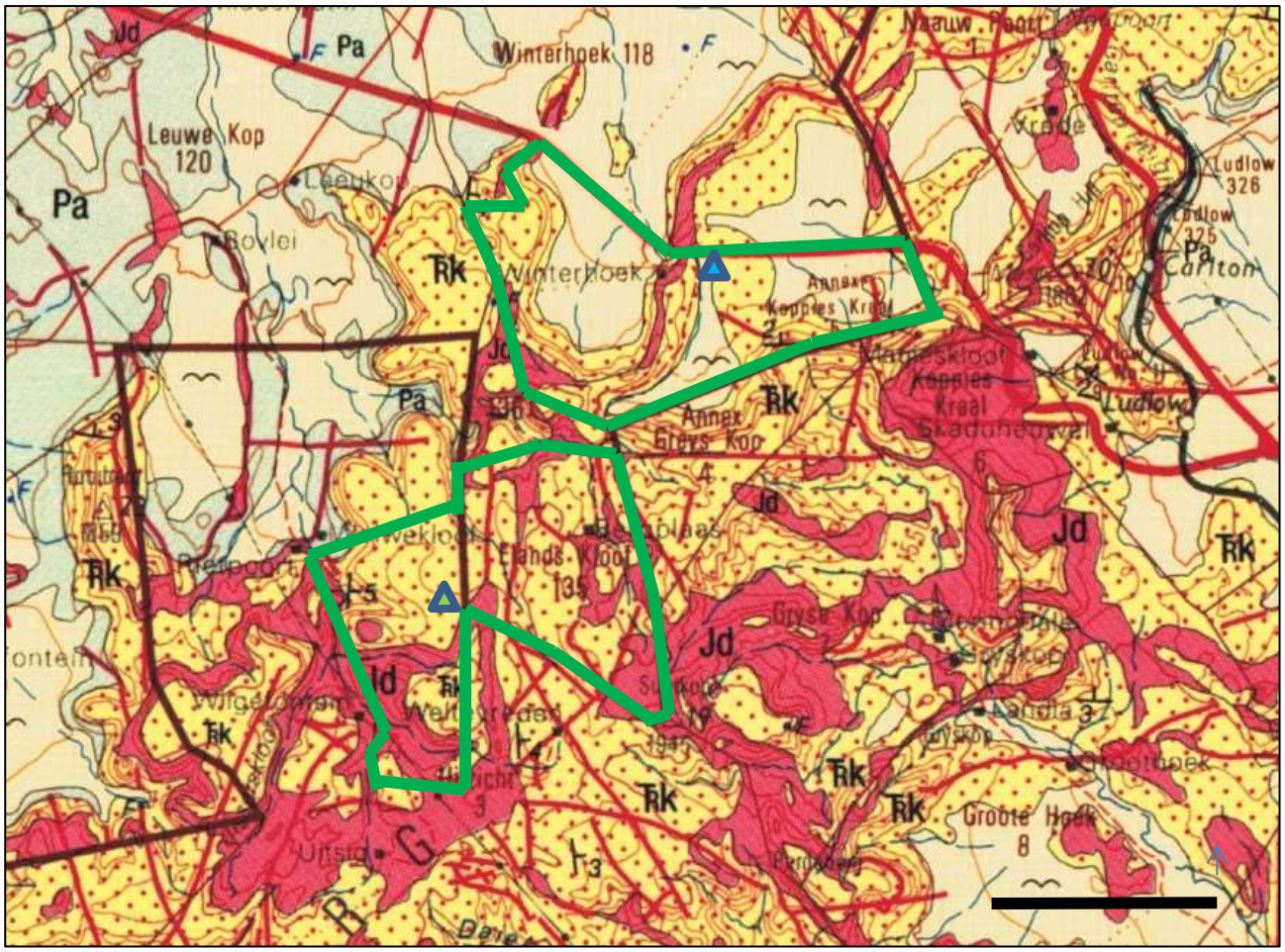

Figure 5: Extract from 1: 250 000 geology sheet 3124 Middelburg (Council for Geoscience, Pretoria) showing the *approximate* outline of the two ancillary infrastructure project areas in the Klein-Renosterberg region to the northwest of Middelburg, Northern and Eastern Cape (green and blue rectangles). Scale bar = 4 km. N towards the top of the map. The main geological units represented here are: Pa (pale blue-green) = Late Permian to Earliest Triassic Adelaide Subgroup (Lower Beaufort Group, Karoo Supergroup); TRk (pale orange with red dots) = Early Triassic Katberg Formation of the

Tarkastad Subgroup (Upper Beaufort Group, Karoo Supergroup); Jd (red) = intrusive sills and dykes of the Early Jurassic Karoo Dolerite Suite. Pale yellow areas with "flying bird" symbol = Quaternary to Recent alluvium. *N.B.* Other Caenozoic superficial deposits such as colluvium (scree *etc*), soils and surface gravels are not mapped at this scale.

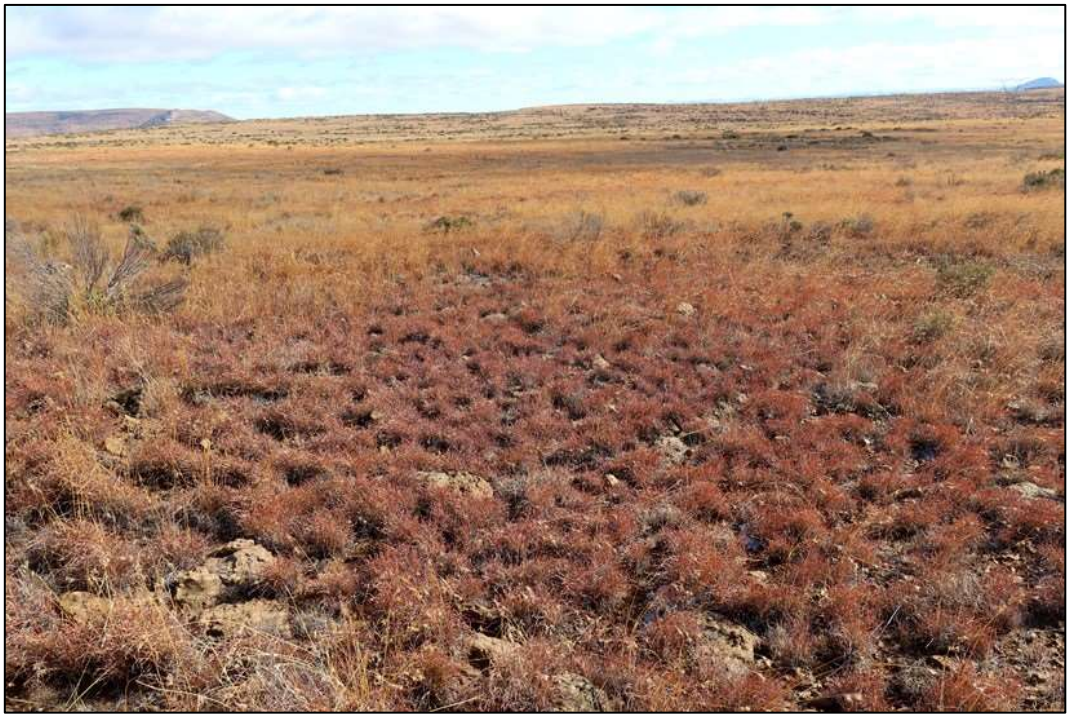

Figure 6: View towards the NW across the southern project area showing flat-lying upland terrain which is extensively covered by grassy and dwarf shrub vegetation with limited bedrock exposure.

Figure 7: View southwards across the southern project area towards the low sandstone and dolerite *koppie* overlooking the area on the skyline. There are low exposures of weathered, jointed Katberg sandstone in the foreground but most of the area is occupied by grassland and sandy to gravelly soils.

Figure 8: Relict outliers of yellowish, gently dipping, karstified Katberg sandstone on the dissected northern margin of the northern project area. Note masonry-like jointing emphasized by karstic solution weathering.

Figure 9: Occasional well-exposed bedding planes and foresets of cross-bedded Katberg sandstone show primary current lineation.

Figure 10: Local low exposures of cross-bedded, finely gravelly channel breccia (Hammer = 30 cm).

Figure 11: Close-up of channel breccia facies illustrated above showing porous fabric due to dissolution of palaeocalcrete gravel clasts by hot circulating groundwater following dolerite intrusion in the region (Scale = 15 cm). Any reworked fossil bones or teeth originally preserved within the breccias will probably have been dissolved-away at the same time.

Figure 12: Low rubbly exposure of intrusive dolerite outside and c. 280 m east of the southern project area. Major dolerite intrusion in the region has clearly had a strong influence on the adjoining Katberg Formation bedrocks.

Figure 13: Low exposure of tough, prominent-weathering, grey-green metaquartzite with numerous irregular cavities (scale = 15 cm). This facies, observed here *c*. 360 m SE of the northern project area, was generated by thermal metamorphism of Katberg channel sandstones following local dolerite intrusion

Figure 14: Numerous prominent-weathering, hollow of infilled sphaeroidal concretions of secondarily silicified sandstone within the Katberg sandstones are a consequence of dolerite intrusion but might be mistaken for fossils (*i.e.* they are *pseudofossils*) (Scale = 15 cm).

Figure 15: Sinuous, prominent-weathering linear feature on the upper face of a thermally metamorphosed bed of Katberg sandstone outside the project area (31 21 26.3 S, 24 49 44.3 E) (Scale in cm and mm). This fossil burrow cast-like feature is provisionally interpreted as a *dubiofossil* but might be a trace fossil.

Figure 16: Karstified surface of Katberg sandstone showing typical polygonal cracking pattern (tessellation) related to karstic case hardening as well as numerous sphaeroidal siliceous concretions (Hammer = 15 cm).

Figure 17: Honeycomb solution weathering in karstified Katberg sandstones (hammer = 30 cm).

Figure 18: Shallow to steep-sided rock basins or *gnammas* produced by karstic solution weathering of Katberg sandstone bedrocks.

Figure 19: Relict, rounded surface of Katberg sandstone showing extensive evidence for the important role of lichen in surface weathering (See also following figure).

Figure 20: Close-up of the weathered sandstone exposure seen above showing the complex pattern of surface etching generated by exudates from colonies of epilithic lichens. Such biogenic weathering processes can strip several mm to cm from the rock surface over the millennia.

Figure 21: Orange-brown sandy soils, probably reworked by sheetwash and aeolian processes, with sparse downwasted eluvial sandstone gravels exposed within scattered bare patches in the southern project area.

4.1. Northern project area

The northern ancillary infrastructure project area lies in flat to gently sloping rocky terrain at elevations between *c*.1560 and 1585m amsl. situated at the foot of a N-facing escarpment on the south side of the N10 tar road and approximately one kilometre east of Winterhoek homestead (Fig. 7). The channel of a N-flowing stream lies just to the west and the bed of a shallow tributary stream of this watercourse runs *c*. 50 m to the north. Most of the area is mantled by rubbly eluvial (downwasted) gravels of sandstone, pale brown sandy soils as well as low grassy to karroid bossieveld vegetation (Figs. 22 & 27). Paler, thicker alluvial soils with ferricrete glaebules occur along the stream banks (Fig. 28).

According to the geological map, the bedrocks here are assigned to the Katberg Formation (although the upper Balfour Formation is also a possibility at these low elevations) which is extensively intruded in the region by dolerites of the Karoo Dolerite Suite (Fig. 5). Satellite images indicate a regional N-S strike of the bedding. Bedrock exposure within the project area is generally poor but there are low ridges of pale brown, well-jointed channel sandstone with occasional thin mudflake breccias (preserved as moulds) as well as some extensive patches of pale grey-green silty mudrock (Figs. 23 & 28). The latter has clearly been baked, as indicated by its hardness as well as the speckled appearance with numerous irregular hollows or vugs. Float blocks with sand-infilled desiccation cracks are also present here. As seen on the geological map (Fig. 5) as well as satellite imagery (Fig. 3), a narrow N-S trending dolerite dyke crops out *c*. 700 m to the west of the project area where it is associated with a prominent topographic ridge and extensive development of very dark, baked hornfels (and stone artefacts made from this material).

The only fossil remains recorded within the northern project area include a single, isolated bone – baked white and largely preserved as a mould – which may be the scapula of a small-bodied tetrapod, probably a therapsid (Fig. 26; 31 18 09.2 S, 24 52 16.2 E). This isolated, poorly-preserved vertebrate fossil is not of high scientific or conservation significance (Proposed Field Rating IIIC. Local Resource) and no mitigation is proposed in regard to this site. No fossils were observed within the Late Caenozoic superficial deposits (alluvium, surface gravels, soils *etc*). It is concluded that the northern project area is generally of LOW palaeosensitivity; the sensitivity mapping shown on the DFFE Screening Tool Map (Fig. 4) is accordingly *contested* here.

Figure 22: View southwards across the northern project area showing the flat terrain covered with gravelly to sandy soils, grassy vegetation and karroid *bossies* and the general paucity of bedrock exposure here.

Figure 23: Low, well-jointed exposures of pale brown channel sandstone assigned to the Katberg Formation on the geological map, but possible slightly older (Hammer = 30 cm).

Figure 24: Patches of well-exposed, baked grey-green Beaufort Group siltstone and / or silty sandstone in the west-central sector of the northern project area.

Figure 25: Close-up of the tough-weathering, jointed, speckled baked siltstones seen in the previous illustration with numerous small, irregular cavities indicative of thermal metamorphosis by dolerite intrusion (Hammer = 30 cm).

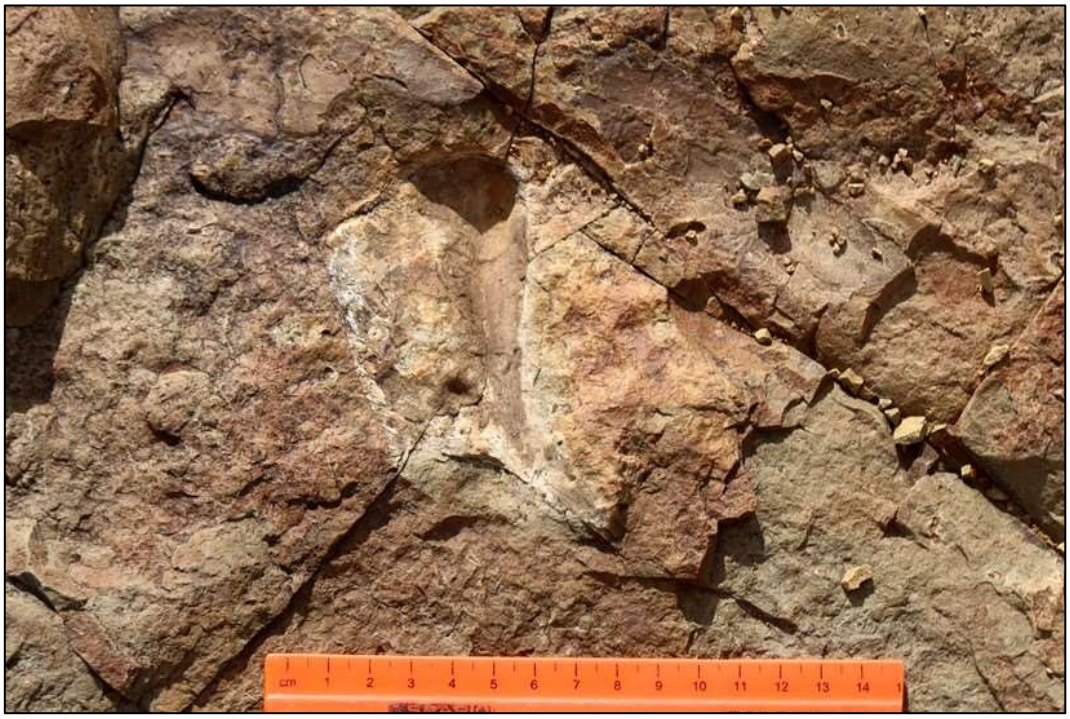

Figure 26: Isolated post-cranial bone (probably a scapula) of a small-bodied tetrapod embedded within the baked siltstone facies (Scale in cm) (31 18 09.2 S, 24 52 16.2 E). The white colour and mouldic preservation are probably a consequence of thermal metamorphism. This isolated, poorly-preserved vertebrate fossil is not of high scientific of conservation significance (Proposed Field Rating IIIC).

Figure 27: Rubbly eluvial gravels of sandstone mantle large portions of the northern project area (Hammer = 30 cm).

Figure 28: Thick, pale grey-brown, sandy alluvial soils with small, rusty-brown ferricrete glaebules are exposed along the banks of the stream *c*. 60m north of the project area. Similar alluvial deposits may underlie parts of the project area itself.

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6. JOHN ALMOND - SHORT CV

Dr John Almond has an Honours Degree in Natural Sciences (Zoology) as well as a PhD in Palaeontology from the University of Cambridge, UK. He has been awarded post-doctoral research fellowships at Cambridge University and the University of Tübingen in Germany, and has carried out palaeontological research in Europe, North America, the Middle East as well as North and South Africa and Madagascar. For eight years he was a scientific officer (palaeontologist) for the Geological Survey / Council for Geoscience in the RSA. His current palaeontological research focuses on fossil record of the Precambrian - Cambrian boundary and the Cape Supergroup of South Africa. He has recently written palaeontological reviews for several 1: 250 000 geological maps published by the Council for Geoscience and has contributed educational material on fossils and evolution for new school textbooks in the RSA.

Since 2002 Dr Almond has also carried out numerous palaeontological impact assessments for developments and conservation areas in the Western, Eastern and Northern Cape, Limpopo, Northwest Province, Mpumalanga, Gauteng, KwaZulu-Natal and the Free State under the aegis of his Cape Town-based company *Natura Viva* cc. He has served as a member of the Archaeology, Palaeontology and Meteorites Committee for Heritage Western Cape (HWC) and an advisor on palaeontological conservation and management issues for the Palaeontological Society of South Africa (PSSA), HWC and SAHRA. He is currently compiling technical reports on the provincial palaeontological heritage of Western, Northern and Eastern Cape for SAHRA and HWC. Dr Almond is an accredited member of PSSA and APHP (Association of Professional Heritage Practitioners – Western Cape).

Declaration of Independence

I, John E. Almond, declare that I am an independent consultant and have no business, financial, personal or other interest in the proposed development project, application or appeal in respect of which I was appointed other than fair remuneration for work performed in connection with the activity, application or appeal. There are no circumstances that compromise the objectivity of my performing such work.

Dr John E. Almond
Palaeontologist
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APPENDIX 1: CHANCE FOSSIL FINDS PROTOCOL

<table>
<tr><td colspan="3">Ancillary infrastructure project areas, Umsobomvu 1 WEF project area near Middleburg</td></tr>
<tr><td>Province & region:</td><td colspan="2">Umsobomvu Local Municipality in the Northern Cape Province, Inxuba Yethemba Local Municipality in the Eastern Cape</td></tr>
<tr><td>Responsible Heritage Resources Agency</td><td colspan="2">SAHRA (Contact details: SAHRA, 111 Harrington Street, Cape Town. PO Box 4637, Cape Town 8000, South Africa. Phone: +27 (0)21 462 4502. Fax: +27 (0)21 462 4509. Web: www.sahra.org.za).</td></tr>
<tr><td>Rock unit(s)</td><td colspan="2">Early Triassic Katberg Formation (Tarkastad Subgroup, Beaufort Group, Karoo Supergroup).
Late Caenozoic alluvium, sandy soils, surface gravels</td></tr>
<tr><td>Potential fossils</td><td colspan="2">Vertebrate skeletal remains and burrows, trace fossils, plant fossil (e.g. petrified wood, plant compressions) within the Beaufort Group.
Mammalian and other vertebrate bones, teeth and horncores, freshwater molluscs, calcretised trace fossils (e.g. termitaria), subfossil plant material within superficial sediments.</td></tr>
<tr><td rowspan="5">ECO protocol</td><td colspan="2">1. Once alerted to fossil occurrence(s): alert site foreman, stop work in area immediately (N.B. safety first!), safeguard site with security tape / fence / sand bags if necessary.</td></tr>
<tr><td colspan="2">2. Record key data while fossil remains are still in situ:
Accurate geographic location – describe and mark on site map / 1: 50 000 map / satellite image / aerial photo
Context – describe position of fossils within stratigraphy (rock layering), depth below surface
Photograph fossil(s) in situ with scale, from different angles, including images showing context (e.g. rock layering)</td></tr>
<tr><td>3. If feasible to leave fossils in situ:
Alert Heritage Resources Agency and project palaeontologist (if any) who will advise on any necessary mitigation
Ensure fossil site remains safeguarded until clearance is given by the Heritage Resources Agency fo work to resume</td><td>3. If not feasible to leave fossils in situ (emergency procedure only):
Carefully remove fossils, as far as possible still enclosed within the original sedimentary matrix (e.g. entire block of fossiliferous rock)
Photograph fossils against a plain, level background, with scale
Carefully wrap fossils in several layers of newspaper / tissue paper / plastic bags
Safeguard fossils together with locality and collection data (including collector and date) in a box in a safe place for examination by a palaeontologist
Alert Heritage Resources Agency and project palaeontologist (if any) who will advise on any necessary mitigation</td></tr>
<tr><td colspan="2">4. If required by Heritage Resources Agency, ensure that a suitably-qualified specialist palaeontologist is appointed as soon as possible by the developer.</td></tr>
<tr><td colspan="2">5. Implement any further mitigation measures proposed by the palaeontologist and Heritage Resources Agency</td></tr>
<tr><td>Specialist palaeontologist</td><td colspan="2">Record, describe and judiciously sample fossil remains together with relevant contextual data (stratigraphy / sedimentology / taphonomy). Ensure that fossils are curated in an approved repository (e.g. museum / university / Council for Geoscience collection) together with full collection data. Submit Palaeontological Mitigation report to Heritage Resources Agency. Adhere to best international practice for palaeontological fieldwork and Heritage Resources Agency minimum standards.</td></tr>
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