Proposed development on the Remainder of Erf 2841 Tergniet, Mossel Bay

Terrestrial Animal Species Specialist Assessment:

Site Sensitivity Verification Report and Compliance Statement

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confluent

DECLARATION OF SPECIALIST INDEPENDENCE

- I consider myself bound to the rules and ethics of the South African Council for Natural Scientific Professions (SACNASP);
- At the time of conducting the study and compiling this report I did not have any interest, hidden or otherwise, in the proposed development that this study has reference to, except for financial compensation for work done in a professional capacity;
- Work performed for this study was done in an objective manner. Even if this study results in views and findings that are not favourable to the client/applicant, I will not be affected in any manner by the outcome of any environmental process of which this report may form a part, other than being members of the general public;
- I declare that there are no circumstances that may compromise my objectivity in performing this specialist investigation. I do not necessarily object to or endorse any proposed developments, but aim to present facts, findings and recommendations based on relevant professional experience and scientific data;
- I do not have any influence over decisions made by the governing authorities;
- I undertake to disclose 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 a competent authority to such a relevant authority and the applicant;
- I have the necessary qualifications and guidance from professional experts in conducting specialist reports relevant to this application, including knowledge of the relevant Act, regulations and any guidelines that have relevance to the proposed activity;
- This document and all information contained herein is and will remain the intellectual property of Confluent Environmental. This document, in its entirety or any portion thereof, may not be altered in any manner or form, for any purpose without the specific and written consent of the specialist investigators.
- All the particulars furnished by me in this document are true and correct.

Kim Daniels (MSc)

June 2024

SUMMARY OF EXPERIENCE AND ABRIDGED CV
KIM DANIELS

Core skills

- MSc. Biodiversity and Conservation Biology (University of Cape Town.) and 3 years of work experience (research assistance and education) for research projects aimed at investigating invertebrate diversity, plant diversity, insect ecology, disease ecology, invasive species, plant systematics, herpetology, and climate change impacts on a variety of taxa.
- Ecological and field work experience before, during, and after postgraduate degrees across a range of environments (mesic savanna, arid savanna, fynbos, succulent karoo, and Nama karoo) and taxa (plants, invertebrates, avifauna, amphibians, and small mammals).
- My postgraduate studies have been focused on vegetation change in the fynbos and parasitic plants as thermal refugia for savanna birds.

Work experience

- Teaching assistant at the Organization of Tropical Studies and Roots & Shoots
- Internships in Entomology, Horticulture, and Plant Conservation
- Research assistant at the Centre for Invasion Biology
- Field assistant at Valuing Orchard and Integrated Crop Ecosystem Services Project

Qualifications

- BSc. Biodiversity and Conservation Biology (2018, University of the Western Cape)
- BSc. Hons. Biodiversity and Conservation Biology (2021, University of the Western Cape)
- MSc. Conservation Biology (2023, University of Cape Town)

References

- Dr Timm Hoffman – Academic supervisor and previous employer

  Former Director of the Plant Conservation Unit; University of Cape Town

  Email: timm.hoffman@uct.ac.za; Tel: 021 650 5551

- Ms. Paula Strauss – Previous employer

  Research co-ordinator; Grootbos Nature Reserve

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ABBREVIATIONS AND ACCRONYMS

CBA	Critical Biodiversity Area
CD:NGI	Chief Directorate: National Geo-spatial Information
DFFE	Department of Forestry, Fisheries, and the Environment
ESA	Ecological Support Area
EWT	Endangered Wildlife Trust
NEMA	National Environmental Management Act
SANBI	South African National Biodiversity Institute
SCC	Species of Conservation Concern
SDP	Site Development Plan
SSVR	Site Sensitivity Verification Report
WCBSP	Western Cape Biodiversity Spatial Plan

1. INTRODUCTION

Confluent Environmental Pty (Ltd) was appointed by Cape EAPrac to provide Terrestrial Animal Specialist inputs for the proposed development on Proposed development on erf 2841 Tergniet, Mossel Bay, Western Cape.

1.1 General Site Location

The erf is ca. 10 hectares in extent and located west of the Groot Brakrivier estuary, bounded on the north with the R102. The property is currently completely undeveloped and situated within an area with minimal development (Figure 1). The erf is accessible via multiple roads and falls within the larger Gouritz Cluster Biosphere Reserve.

Figure 1: Erf 2841 Tergniet, Mossel Bay. The property boundary is illustrated in red

Erf 2841 was subdivided in 2023 and is now known as Erf 5572 in the west and Remainder of Erf 2841 in the east. The proposed development is only focussed on the Remainder of Erf 2841. Erf 5572 is not associated with the current proposal.

1.2 Development Layout

At the time of writing this report the site development plan (SDP) included the zoning of patches of land to residential erven on the remainder erf 2841. The remainder of erf 2841 is bisected by a road. There is no indication of the proposed sewer system and electricity supply in the current SDP as seen in Figure 2.

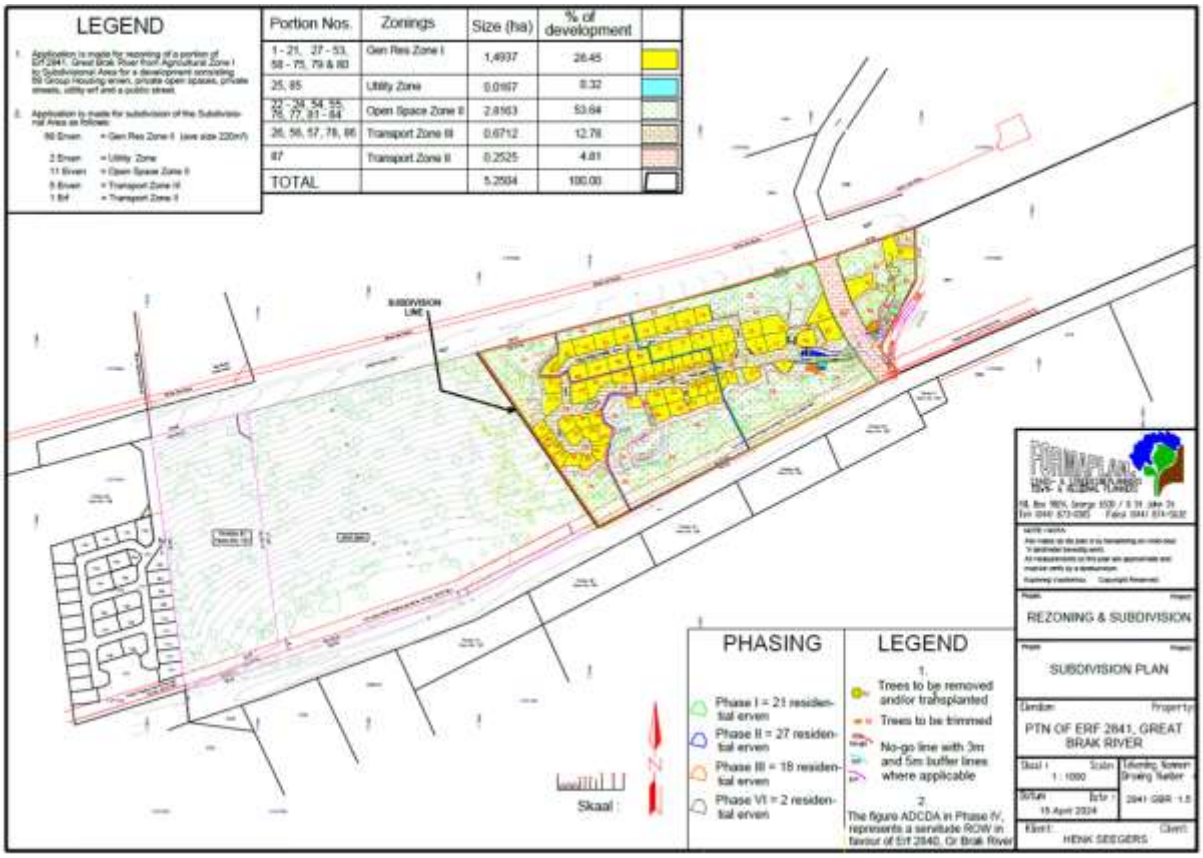

Figure 2: Map of the proposed development for the remainder of erf 2841 outlined in orange (The remainder of erf 2841 is situated east of the subdivision line).

2. TERMS OF REFERENCE

2.1 Online Screening Tool

The scope of work for this report is guided by the legislative requirements of the National Environmental Management Act (NEMA; Act 107 of 1998).

The Department of Forestry, Fisheries and the Environment (DFFE) Screening Tool determined a HIGH sensitivity for the terrestrial animal species theme across erf 2841, Tergniet, Mossel Bay (Figure 3), with several animal Species of Conservation Concern (SCC) potentially present (Table 1).

As per Published Government Notice No. 1150 of the Government Gazette 43855 (30 October 2020):

A **HIGH** sensitivity rating indicates:

1. Confirmed habitat for SCC.

2. SCC, listed on the IUCN Red List of Threatened Species or South Africa's National Red List website as Critically Endangered, Endangered or Vulnerable, according to the IUCN Red List 3.1. Categories and Criteria and under the national category of Rare.

These areas are unsuitable for development due to a very likely impact on SCC.

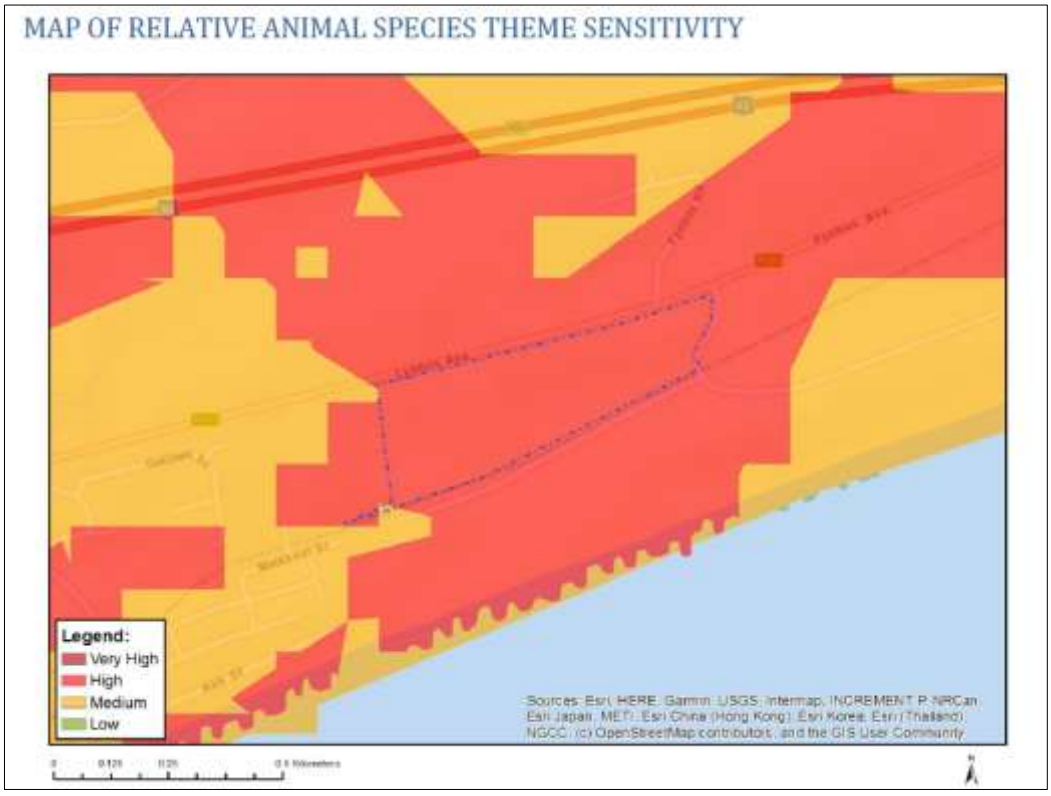

Figure 3: DFFE Online Screening Tool outcome for the terrestrial animal species theme for erf 2841 Tergniet, Mossel Bay. The property boundary is indicated by the blue dashed line.

Table 1. Species of Conservation Concern highlighted by the DFFE Online Screening Tool for erf 2841 Tergniet, Mossel Bay.

Sensitivity	Classification	Scientific name	Common name	Red list status*
High	Avifauna	*Bradypterus sylvaticus*	Knysna warbler	Vulnerable
High	Avifauna	*Circus ranivorus*	African marsh harrier	Endangered
High	Avifauna	*Neotis denhami*	Denham's bustard	Vulnerable

High	Avifauna	*Polemaetus bellicosus*	Martial eagle	Endangered
Medium	Invertebrate	*Aneuryphymus montanus*	Yellow—winged agile grasshopper	Vulnerable

* Red list status as per SANBI's Red List of South African Species http://speciesstatus.sanbi.org.

2.2 Scope of work

The purpose of this report is to verify the site sensitivity of erf 2841 Tergniet, Mossel Bay for the terrestrial animal species theme in accordance with the protocols specified in the Published Government Notice No. 1150, Government Gazette 43855 (30 October 2020).

The site sensitivity verification includes:

- A desktop assessment, to:
    - Characterize the vegetation, climate, general habitat features and topography of the property.
    - Assess the property's location within the context of the Western Cape Biodiversity Spatial Plan (WCBSP).
    - Conduct a historical assessment of the property and immediate surroundings for any disturbances, development and changes in land use or habitat characteristics over time.
    - Provide information on the habitat requirements for Species of Conservation concern highlighted by the DFFE online screening tool, in addition to other SCC indicated through online resources (e.g. Virtual Museum, iNaturalist) for the property and surrounding areas.
- On-site inspection(s) and field assessments to:
    - Verify the current land use and identify current impacts or disturbances on the property.
    - Characterize faunal habitats, determine the habitat suitability and the likelihood of SCC occurring on the property.
    - Conduct taxa-specific sampling for SCC in suitable habitats.
- Any other available and relevant information from
    - Discussions with landowners/neighbours.
    - Previous report findings for the property or surrounding areas.

Should the site sensitivity verification indicate a **LOW** sensitivity, then a Terrestrial Animal Species Compliance Statement will be issued.

Should the site sensitivity verification indicate a **HIGH** sensitivity, then a Terrestrial Animal Species Specialist Assessment will be compiled.

3. DESKTOP ASSESSMENT

3.1 Vegetation, Climate and General Habitat

Erf 2841 Tergniet, Mossel Bay falls within the Fynbos biome (Mucina and Rutherford 2006, Rebelo, *et al.* 2006). The mapped vegetation type at the erf is Hartenbos Dune Thicket (AT40; Endangered vegetation type due to narrow distribution and invasive species (Government gazette No. 47526, Vol. 686, Part 1 (18 November 2020)) - a detailed botanical specialist assessment is available (B. Fouche, Confluent Environmental). Average temperatures range between 23℃ and 12℃, with the hottest days experienced in January and February, peaking around 27℃ and the coldest days experienced from June-August not falling below 6℃. Rain occurs throughout the year in a bimodal pattern with peaks in autumn (April) and spring (October-November) (Figure 4).

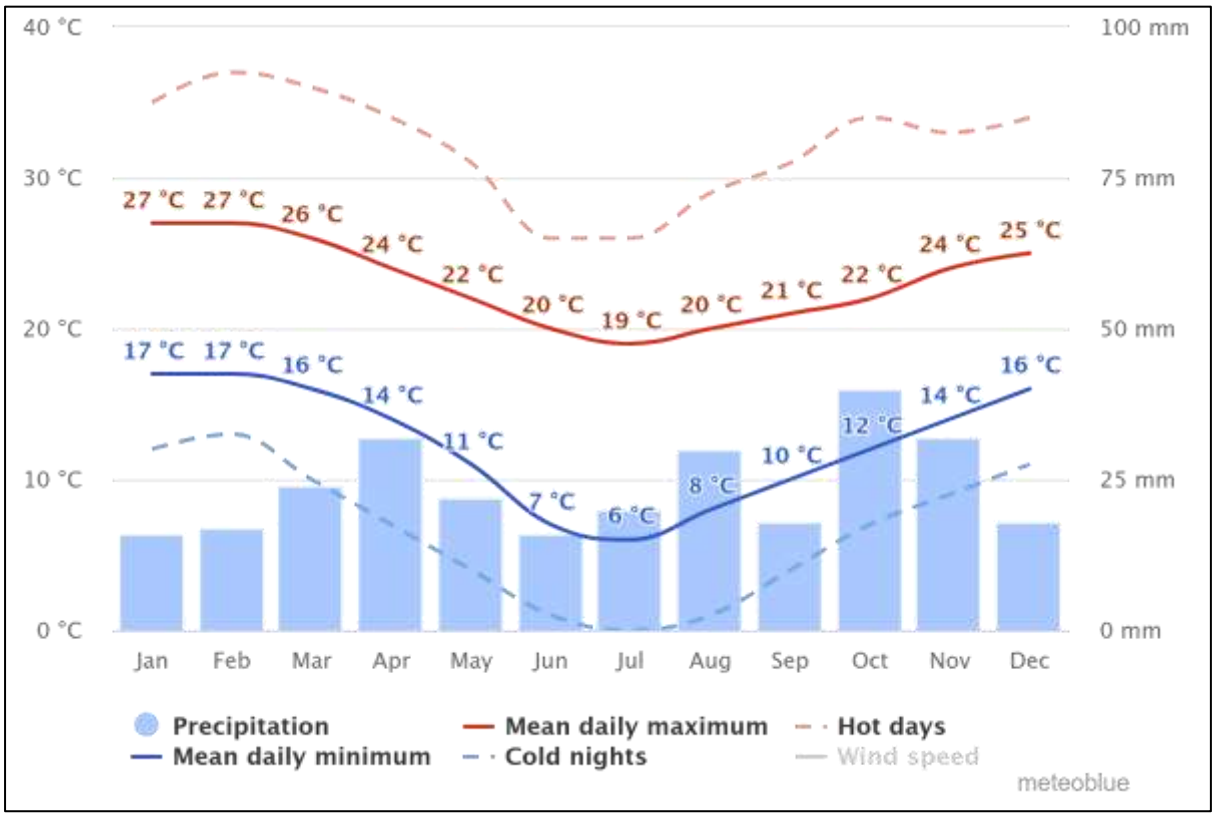

Figure 4: Summary of historical climate (modelled) for Tergniet, Western Cape (www.meteoblue.com).

Satellite imagery from Google Earth and Cape Farm Mapper was used to assess general vegetation structure, elevational gradients and water bodies within the project area (**Error! Reference source not found.**). The erf mainly comprises of thicket vegetation and transformed areas with predominantly grass and small shrubs. Areas of disturbance can be found as can sand patches (See Botanical Specialist report, B. Fouche- Confluent Environmental). Elevation is highest in the north-western area of the erf and the erf slopes in a southernly direction towards a wetland according to the mapping layers, although no wetland was found on the erf (additional information to be found in the Aquatic Specialist report, J Dabrowski- Confluent Environmental) mapped in the south (**Error! Reference source not found.**).

Figure 5: Satellite imagery of erf 2841 outlined in purple showing topography (5m contours), a wetland (NFEPA), and vegetation structure

3.2 Western Cape Biodiversity Spatial Plan

Additional mapping layers were applied to erf 2841 to include the Western Cape Biodiversity Spatial Plan (CapeNature 2017), with Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) assessed in Figure 6 and Table 2. The property contains two categories outlined by the Western Cape Biodiversity Spatial Plan. The north is characterized as “other natural area” whilst the southern area outlined as wetland in **Error! Reference source not**

found. falls within an Aquatic ecological support area. The landscape surrounding the erf is similarly categorized as an ecological support area. All CBA's identified are separated from the property by roads and railways (Figure 6). See also the Botanical Specialist Report by B. Fouche (Confluent Environmental) and Aquatic Specialist Report by J. Dabrowski (Confluent Environmental) for additional information on these mapped layers.

Figure 6: Map of erf 2841 with layers for the Western Cape Biodiversity Spatial Plan's Critical Biodiversity Areas (CBA) and Ecological Support Areas (ESA).

Table 2. Definitions and objectives for conservation categories identified in the Western Cape Biodiversity Spatial Plan (CapeNature 2017) within erf 2841, Mossel bay.

WCBSP Category	Definition	Management Objective
Other Natural Areas	Areas not currently identified as a priority but retain most of their natural character and perform a range of biodiversity and ecological infrastructure functions. Although not prioritised, they are still an important part of the natural ecosystem.	Minimize habitat and species loss and ensure ecosystem functionality through strategic landscape planning. Offers flexibility in permissible land-uses, but some authorisation may still be required for high-impact land-uses.

Ecological Support Area: Aquatic 1 (ESA 1)	Areas that are not essential for meeting biodiversity targets, but that play an important role in supporting the functioning of PAs or CBAs and are often vital for delivering ecosystem services.	Maintain in a functional, near-natural state. Some habitat loss is acceptable, provided the underlying biodiversity objectives and ecological functioning are not compromised.

3.3 Historical Assessment of Project Area

Erf 2841 Tergniet, Mossel Bay has experienced no development over the past 20 years (Figure 7). The most notable change over time is in vegetation structure, with the onset of alien plant invasions and their removal. Changes in roads and other throughfare has also been noted over time.

In 2004, the easternmost road that runs from the R102 southwards is in a different position than it is present day. The road that runs along the southern edge of the property is moved further north than it is today, across the area designated as wetland in the south-east (**Error! Reference source not found.**). Woody elements are observed toward the centre of the property, presumably of alien plants.

By 2011, tracks and walkways appear in the western part of the property. The road from the R102 is moved to where it is in the present day and the old road is replaced by vegetation. The southern boundary of the property is more vegetated than it was in 2004.

In 2017 there appears to be some woody thickening in the plot, especially in the east.

By 2022 a second road appears off the R102 with a dirt road coming off it. There is a clearing with two roads leading to it in the south-eastern corner of the property. The centre of the plot has a path cleared

By 2023 vegetation has been cleared along the western edge and in the region that experienced woody thickening in the 2017. The clearing has been revegetated and the path through the centre of the plot is still there but less distinct. The southern edge remains only sparsely vegetated, especially in the east.

Figure 8: Historical imagery of erf 2841 sourced from Google Earth. The property boundary is indicated by the red line.

3.4 Species of Conservation Concern

In addition to the SCC highlighted by the DFFE screening tool (Table 1), the following public resources were consulted to provide additional SCC for erf 2841 and its immediate surroundings:

iNaturalist (all taxa) within 5 km x 2 km of the project area.

Virtual Museum for herpetofauna, mammals and invertebrate taxa within the Quarter Degree Squares (QDS) 3422AA: DungBeetleMAP, FrogMAP, LacewingMAP, LepiMAP, MammalMAP, OdonataMAP, ReptileMAP, ScorpionMAP, SpiderMAP.

South African Bird Atlas Project (SABAP2) for pentad 3400_2210.

Some SCC reported on the platforms were highly unlikely to occur at the site given either clearly unsuitable habitat or being deemed a vagrant/transient animal. For example, given that the property does not contain any waterbodies, all animals reliant on such habitat features for their existence are highly unlikely to occur on site. For the purposes of this report these animals were excluded from further assessment (see also Section 4.2 and Appendix 1: SCC identified from public platforms for the project area. for additional information).

The combined list of SCC (from DFFE Screening Tool and public resources) possibly occurring on erf 2841, along with their habitat, breeding and feeding requirements are listed in Table 3. The information for each SCC presented in Table 3 stems largely from the online SANBI Red List of South African Species (http://speciesstatus.sanbi.org) in addition to a few key resources for each taxa:

Avifauna: Roberts Birds of Southern Africa VII (Roberts, et al. 2005)

Mammals: The Mammals of the Southern African Subregion (Skinner 2005)

Invertebrates:

Field guide to the insects of South Africa (Picker, Griffiths and Weaving 2019)

Field guide to the butterflies of South Africa (Woodhall 2005)

Any information presented from different sources is cited in the text.

Table 3. Summary of habitat, breeding and feeding requirements for animal SCC potentially occurring on erf 2841 Farm.

Redlist status	Species	Habitat	Breeding	Feeding
AVIFAUNA				
Endangered	*Circus maurus* Black Harrier	In Western Cape, mostly found in Fynbos, especially montane Fynbos and strandveld. Less common in dry restios and renosterveld. Elsewhere, occurs in dry grassland, Karoo scrub, crop fields (wheat) and grasslands (sometime >3000m elevation). Many move from Fynbos to Karoo and grasslands during the winter, likely to follow rodent numbers (e.g. capitalise on late summer litter of Sloggett's ice rats in Free State and Lesotho). Birds move away following fires and don't return for several years.	Mainly monogamous but some polygamy observed. Mate fidelity is low. Usually solitary nester and territorial, but in Western Cape some semi-colonial nesting observed with less territorial behaviour. Nest is a small structure of grass, stems and small twigs. Usually on or just above ground, in rank marsh grasses or near Fynbos bushes and sedges (*Juncus* spp.) Nests most often in marshes or next to small streams, but also on damp soil or dry ground. Nest areas reused in successive years (one observation of nest site used for 26 years).	Specialist predator of mice and birds. Predominantly rodents (vlei rats, mice) eaten by birds in Fynbos areas and small birds (Common Quail) dominate diet of birds in mountain areas. Also takes reptiles, frogs, insects too lesser extent. Sometimes caches prey. Forages most actively on blustery days (windy and rainy), hovers 1-3m above vegetation with buoyant flight. Flashes into vegetation, hits prey hard and eats on ground. Perch hunting rare.

Redlist status	Species	Habitat	Breeding	Feeding
Endangered	*Circus ranivorus* Marsh Harrier	Considered a waterbird. Roosts on taller trees around wetland edges from where it has a good vantage point. Can adapt to novel wetland habitats such as wastewater treatment works.	Breeding occurs between September and December. Egg-laying is from August to November in South Africa. Nests made of grass, reed stems or sticks in reedbeds, short sedge areas or in trees along the water's edge. The same nest is often reused by the same pair in following years.	Dietary assessment (Simmons et al., 1991) of pellets and prey deliveries to nests includes birds, frogs, fish, eggs and micromammals (*Rhabdomys*, *Otomys*, and Shrews). Hunts primarily in wetland habitats using various flight methods including soaring, hovering and low flight over wetlands and along the water's edge. May hunt in open grasslands or pastures near wetland areas.
Endangered	*Polemaetus bellicosus* Martial Eagle	Savanna, Karoo shrubland, semi desert. Can occur in open farmland with clumps of trees. Rare in mountainous and forest areas.	Monogamous, pair bond lasts several seasons. Solitary nester. Nest is a substantial platform of sticks (up to 1.5m long and 3cm thick) on tall trees or pylons. Nest tree usually tallest in vicinity, and nest placed in a large fork below the canopy. Rarely uses rocky outcrops.1 egg	Mainly small mammals like hare, jackal, small antelope, mongoose, small baboons, but also small stock animals, birds (especially gamebirds) and reptiles (especially monitor lizards). Usually hunts on the wing by soaring high and attacking in long slanting stoop. Surprises prey by using available cover. Occasionally hunts from

Redlist status	Species	Habitat	Breeding	Feeding
			laid, incubation 48-53 days predominantly by female bird.	perch, especially at waterholes or along game trails. Prey killed by impact or strangulation and taken to high perch to eat.
Vulnerable	*Bradypterus sylvaticus* Knysna warbler	Inhabits dense understorey vegetation along riverbanks in fynbos forest patches, riverine woodland and afromontane forest and has even adapted to thickets of non-native brambles (e.g. Rubus). (BirdLife International, 2016).	Breeds from August and December coinciding with the greatest abundance of invertebrate species. (BirdLife International, 2016).	Mostly on ground, creeping through dense, matted vegetation and scratches in humus. Eats mostly grasshoppers, insect larvae, spiders, slugs, worms
Vulnerable	*Neotis denhami* Denham's Bustard	Inhabits a mosaic of cultivated pastures, agricultural croplands and natural vegetation, with seasonal variation in their preferences. Cultivated pastures are favoured habitat during winter in the southern Cape. Harvested cereal crop fields (stubble fields) are favoured,	Male courtship displays occur between August and January, but mainly in September and October. Eggs are laid in September and October, with unfledged young present between September and January. Preference for natural vegetation over pastures	Ground-dwelling bird that forages in open grasslands and savannas. Diet is omnivorous including insects, seeds, fruit, and vegetation. Grasshoppers, beetles and termites are important insect prey, especially in the breeding season. Feeding technique is probing and pecking the ground with their long bills.

Redlist status	Species	Habitat	Breeding	Feeding
		but ploughed fields and fields with growing cereal crops are avoided. Primarily inhabits open grasslands and African savannas. Being large-bodied with low flight manoeuvrability also leads to preference for open habitat. Preference for grasslands with a mix of short and tall grasses, and good visibility for foraging. Proximity to water sources, such as rivers or wetlands, is important for drinking and potential foraging. Avoids dense forests and habitats with high human disturbance.	during summer breeding months. Larger bird groupings occur in winter, while in summer smaller groupings or individual birds occur. Nesting sites are concealed in open grasslands, often near vegetation or shrubs. Females construct shallow ground nests lined with grass or plant materials. Clutches consist of 1-3 eggs, incubated primarily by the female. Incubation lasts around 21-24 days.	Opportunistically feed on grasshopper swarms.
Near Threatened	*Certhilauda brevirostris* Agulhas Long-billed Lark	Sparsely vegetated shrubs and agricultural fields. Less common in fynbos, with favouring sandy areas with restios. Endemic to Western	Presumed to be monogamous. Males defend non-overlapping territories. Nest is a cup of dry grass lined with fine grass and	Forages on ground, digging with bill or pulling vegetation with feet. Diet includes mostly insects with some seeds.

Redlist status	Species	Habitat	Breeding	Feeding
		Cape Province and largely restricted to the Agulhas Plain and Overberg wheatbelt, east of the Hottentots Holland Mountains.	roots located on the ground under cover of shrubs. Laying dates September-October.	
TERRESTRIAL INVERTEBRATES				
Endangered	*Aloeides trimeni southeyae* Trimen's Copper Butterfly	Restricted range endemic to the southern coastal region in the Western Cape Province. Three widely separated (disjunct) populations between Albertinia in the west and Hartenbos in the east. Grassy Fynbos near Mossel Bay. Gentle north-facing slopes, sparsely covered by low shrubs with bare ground in between. Flat lands.	Two broods, Sep-Dec (peak Oct) and Jan-Apr (peak Feb).	Larval food includes *Aspalathus* spp. and *Hermannia depressa*.
Endangered	*Lepidochrysops littoralis Nimble Coastal Blue*	Endemic to the Western Cape with severely fragmented and isolated populations existing between De Hoop Nature	Extended brood from late Aug-Dec.	No larval food known.

Redlist status	Species	Habitat	Breeding	Feeding
		Reserve (near Bredasdorp) in the west to a few kilometres west of Mossel Bay in the east. Rocky limestone ridges or sand dunes in coastal fynbos. Usually found quite close to the sea-shore, as at Still Bay. May be suitable habitat between some of the known locations on rocky outcrops. Male has territories around clumps of shrubs, dune peaks and clearings in dense vegetation.		
Vulnerable	*Aneuryphymus montanus* Yellow-winged Agile Grasshopper	Very low area of occupancy between 100 and 1 000 km2. Threatened by declining habitat due to invasion by aliens and habitat transformation. Strong association with sclerophyllous fynbos vegetation on the	Not known	Not known

Redlist status	Species	Habitat	Breeding	Feeding
		southern slopes of the Outeniqua mountains, post-fire. Threats to the species include habitat transformation and invasion by alien plants.		
Vulnerable	*Circellium bacchus* Flightless dung beetle	Endemic to South Africa, on the Southern coastline in the winter and bimodal rainfall regions. Habitat types include the Albany Thicket and Fynbos biome, including vegetation units in Shale Renosterveld (FRs), Limestone Fynbos (FFl), Sandstone Fynbos (FFs), Sand Fynbos (FFd), Strandveld (FS). No association known for soil type (Davis et al. 2020)-Abundant in dense shrub/woodland on sandy soils; most uncommon in adjacent disturbed open vegetation (Davis et al. 2020).	In Addo Elephant National Park: Buffalo and cattle dung preferred for breeding, but also recorded on dung of monkey, human, rhinoceros, hare, ostrich (Davis et al. 2020).	Elephant dung preferred for feeding but also recorded on dung of monkey, human, rhinoceros, hare, ostrich (Davis et al. 2020).

Redlist status	Species	Habitat	Breeding	Feeding
		Flightless, ectothermic and diurnal with maximal activity between 18–26°C, particularly after rainfall (Davis et al. 2020).		
Near Threatened	*Aloeides pallida littoralis* Knysna Pale Copper Butterfly	Endemic taxon to the Western Cape Province. Relatively flat terrain near the coast, coastal Fynbos	Little known, but *Lepisiota capensis* ants are hosts for subspecies *A. p. grandis.*	Little is known, but larval food for the subspecies *A. p. pallida* and A. *p. jonathani* feed on *Aspalathus* species. The larvae of subspecies *A. p. grandis* are fed by trophallaxis by *Lepisiota capensis* ants and feed on these ant eggs.
MAMMALS				
Vulnerable	*Damaliscus pygargus pygargus* Bontebok	Suitable natural habitat within the indigenous natural range and coastal lowlands is limited to the remaining renosterveld patches and some grassy micro-habitat patches in the fynbos areas of the Overberg region. Bontebok also make use of small grassy	Males defend their territories throughout the year. The average nursery herd size was three adult females with 1.5 lambs. 3 ± 2.2 females have been found in a breeding herd with 18 individuals. Bachelor herds consist of males of all ages	Bontebok are almost exclusively grazers with a preference for short grass and recently burnt veld. Water is an essential habitat requirement and they stay within 1.5 km from surface water during the dry season.

Redlist status	Species	Habitat	Breeding	Feeding
		microhabitats or recently burnt fynbos and strandveld habitats.	older than one year, as well as yearling females. Young males and females leave the nursery herd on their own accord and can remain solitary but usually join bachelor groups. Males do not seem to establish territories before the age of five to six years of age and return to bachelor herds once displaced from their territories. The main calving season is September–October and the rutting season from January to mid-March.	
Near Threatened	*Poecilogale albinucha* African Striped Weasel	Rare in range and easily overlooked, predominantly nocturnal and well adapted to subterranean lifestyle. Most abundant in savanna and	Breeding season during spring and summer months in southern Africa. Usually only one litter per season,	Small mammal specialist, up to own body weight in size, but occasionally takes birds also. Has fast metabolism and requires an abundance of prey in territory (Child

Redlist status	Species	Habitat	Breeding	Feeding
		grasslands, particularly with rainfall > 600mm per year. But habitat tolerance is very broad, found in lowland rainforest, semi-desert grassland, fynbos (with dense grass) and pine plantations (Child et al. 2016).	comprises of 1-3 pups, fully grown at 20 weeks.	et al. 2016). Considered to have very close association with mole-rats, likely as a food source but also for habitat preference, especially in western, drier sections of its range (Child et al. 2016).

4. FIELD ASSESSMENT

4.1 Methods

Following the Species Environmental Assessment Guidelines (SANBI 2020) and Table 3, taxa-specific sampling techniques were conducted in habitats where SCC were likely to occur. Taxa-specific sampling was interspersed with a meander across the project area to collect additional opportunistic data for all fauna and inspect all habitat types (Table 4).

Table 4. Sampling techniques conducted for potential SCC occurring on erf 2841 Tergniet, Mossel Bay.

Taxa	Field methods	Public platform where observations were reported
Avifauna	• Meander* across site for direct observations. • Point counts (5-minute bird counts).	Birdlasser (species lists), iNaturalist (photos)
Mammals	• Meander* across site for direct observations, tracks, scats and signs.	iNaturalist (photos)
Invertebrates	• Meander* across site for direct observations. • Active searching. • Sweep netting.	iNaturalist (photos)

* Meandering involved 4.3 km of slow walking across the site through various habitat types and key landscape features. Active observations took place for all fauna throughout this walk which was then supplemented by taxa specific sampling methods in habitats deemed most suitable for SCC.

4.2 Assumptions and Limitations

1. While the public platforms mentioned in Section 3.4 are excellent sources of additional information for animal species occurring within an area, these results require some expert interpretation to determine which of the SCC are relevant to include in the faunal assessment of the project area. For example, the coarse spatial scale of reporting within the Virtual Museum platforms (Quarter Degree Square level (27km x 27km) or SABAP2 pentad level (9km x 7 km)) can result in species records from habitats quite different to those present on site. Additionally, these platforms include sightings of vagrant or transient animals upon which an assessment cannot reasonably be based. Expert interpretation is therefore applied to the full list of SCC identified by the various public platforms (see Appendix 1) and some species are then excluded from further assessment due to the project area clearly lacking suitable habitat or the species clearly representing a vagrant or transient animal outside its normal range. The SCC

assessed in this report therefore represents those which may reasonably occur on site. However, there is always the possibility that some SCC (although highly unlikely to occur on site) are overlooked in this process.

2. One field visit took place to the site for the faunal assessment. What is presented here only represents a “snap-shot” in time and it is possible that SCC occurring on site were not observed during these visits. These results should therefore be interpreted with this in mind and not be treated as an exhaustive list of species occurring on site.
3. The author of this report was not present during the site visits. The evidence (photos, recordings, direct and verified observations) and information pertaining to fauna has been collected by other staff members at Confluent Environmental and is included in this report. This information is however interpreted with caution.
4. Site visits took place during daylight hours so the likelihood of encountering nocturnal species was limited.
5. The site visit coincided with early summer months. This may be of consequence for some species showing seasonal variation in breeding and activity patterns.
6. Evidence of animals in the form of tracks, scats and signs always brings with it a level of uncertainty, but best efforts were made in this regard and uncertainties are highlighted in the report.

4.3 Site Inspection Details

One site visit took place to Erf 2841 Tergniet, Mossel Bay on 6 May 2024. Weather was sunny with clear skies. The site mainly comprises of thicket vegetation and transformed areas where invasive species were removed. Areas of disturbance in the form of sand patches can be found in these transformed areas. The core thicket area is recovering or intact. For further details on vegetation see the Botanical Specialist report (B. Fouche- Confluent Environmental). The site visit confirmed that the wetland is not present at this site despite the sloping aspect and mapping layers indicating its presence. More information on this can be found in the Aquatic Specialist report (J. Dabrowski- Confluent Environmental). An effort was made to cover the project area with the meander and to conduct taxa specific sampling techniques across a range of suitable habitats for potential SCC (Figure 9, Figure 10).

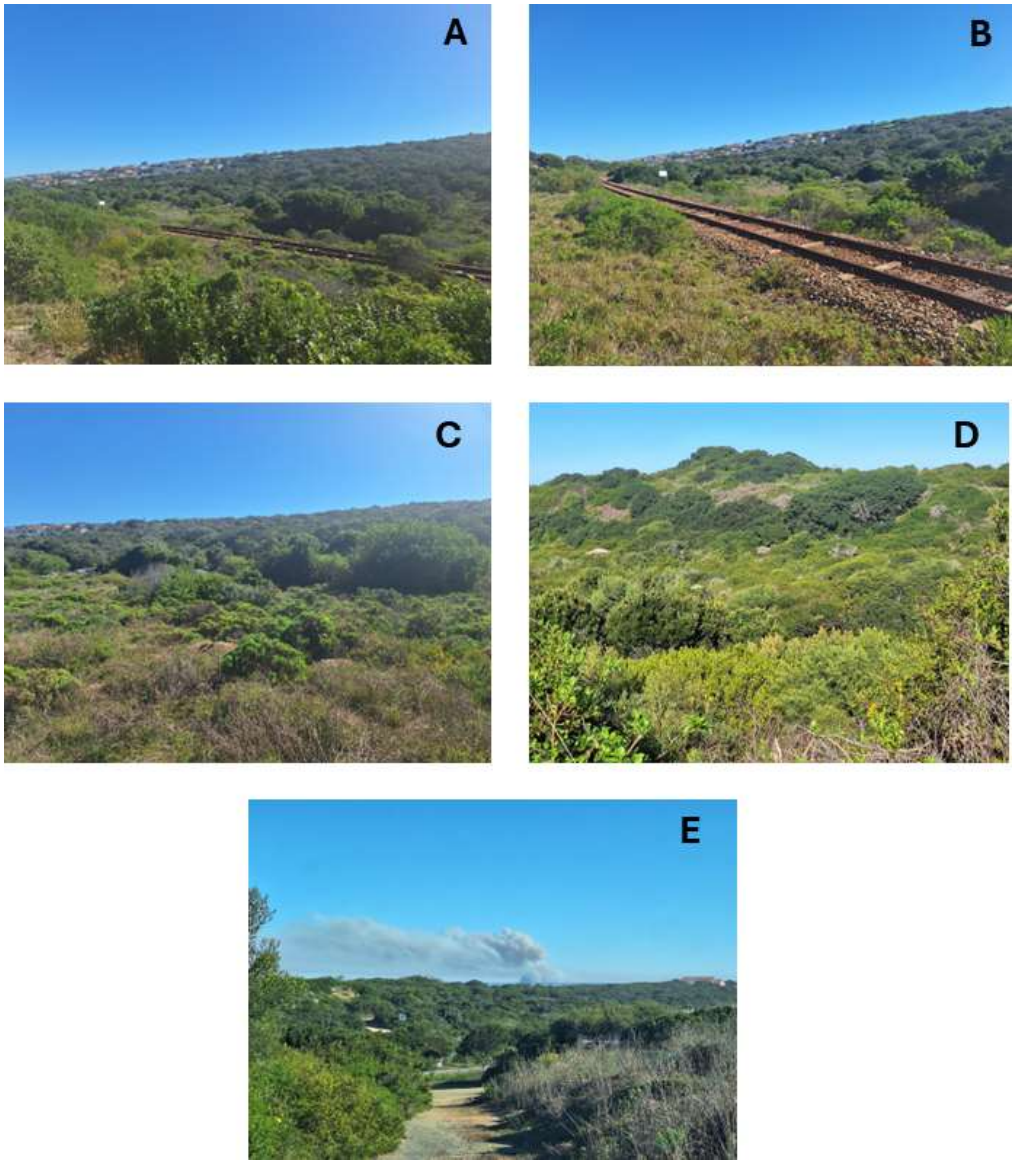

Figure 9: Habitat types identified on erf 2841, Tergniet, Mossel Bay. (A+ B) Disturbed Thicket at southern edge of the property in the foreground with Core Thicket in the background; (C) Transformed thicket; (D) Core thicket area; (E) Tarred road bisecting the property with Transformed Thicket on the right and Core thicket area on the left.

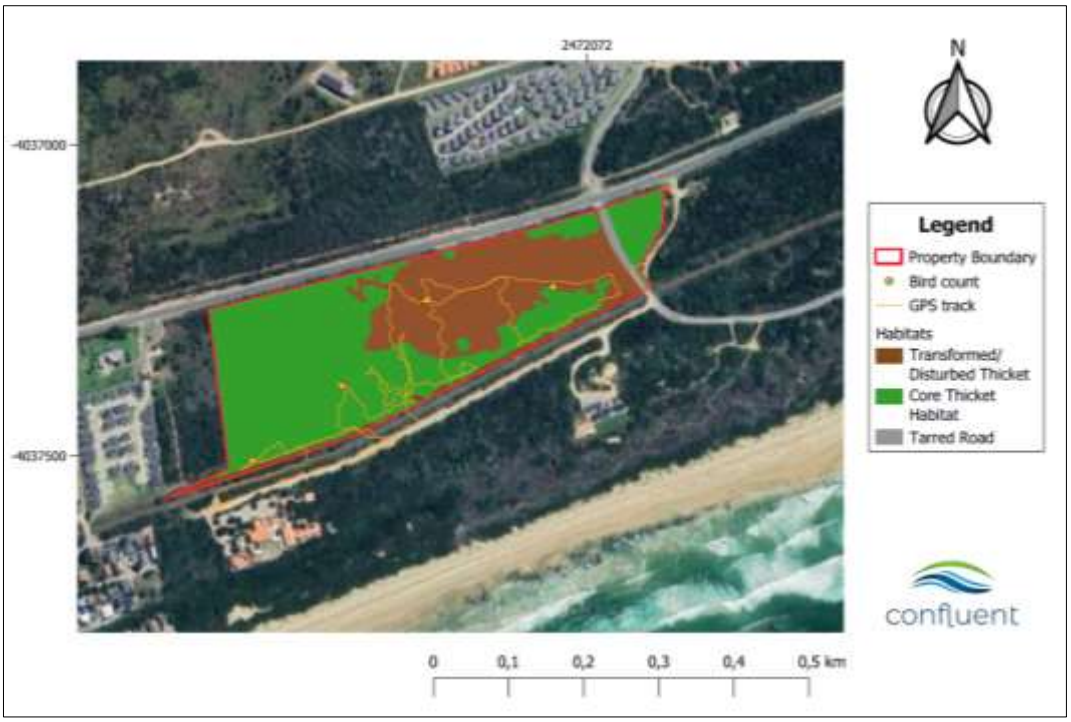

Figure 10: Habitats found on erf 2841 as well as the GPS track and bird count coordinates for the site visit conducted on 6 May 2024

4.4 Results

4.4.1 Avifauna

No SCC was encountered during the site visit. Four bird counts were conducted across the property, in addition to opportunistic sightings noted throughout the meander and searching for nests/roosting sites in suspected habitat. A total of 12 bird species were identified during the site visit (See Appendix 2: Avifauna species observed during site visit).

4.4.2 Mammals

No SCC were seen during the site visits. Mongoose and bush buck prints were found on site. Molerat burrows were also observed. Grysbok/Steenbok (Genus *Raphicerus*) was identified by the presence of middens (Figure 11). The dung was not considered indicative of Sensitive species 8, as it was found in a relatively open area (not typical habitat for this species) and the size and shape of the dung (rounded pellets slightly flattened) was not characteristic of Sensitive Species 8 (round and pointed droppings) (Walker 1996). The shape of the dung was also not characteristic of Bontebok (elongate droppings). It is acknowledged that species identification by dung includes a level of uncertainty, however based on size and shape of the droppings, Sensitive Species 8 and Bontebok are not suspected. See Appendix 3: Mammal

species observed during site visits for the list of mammals observed on erf 2841 during the site visits.

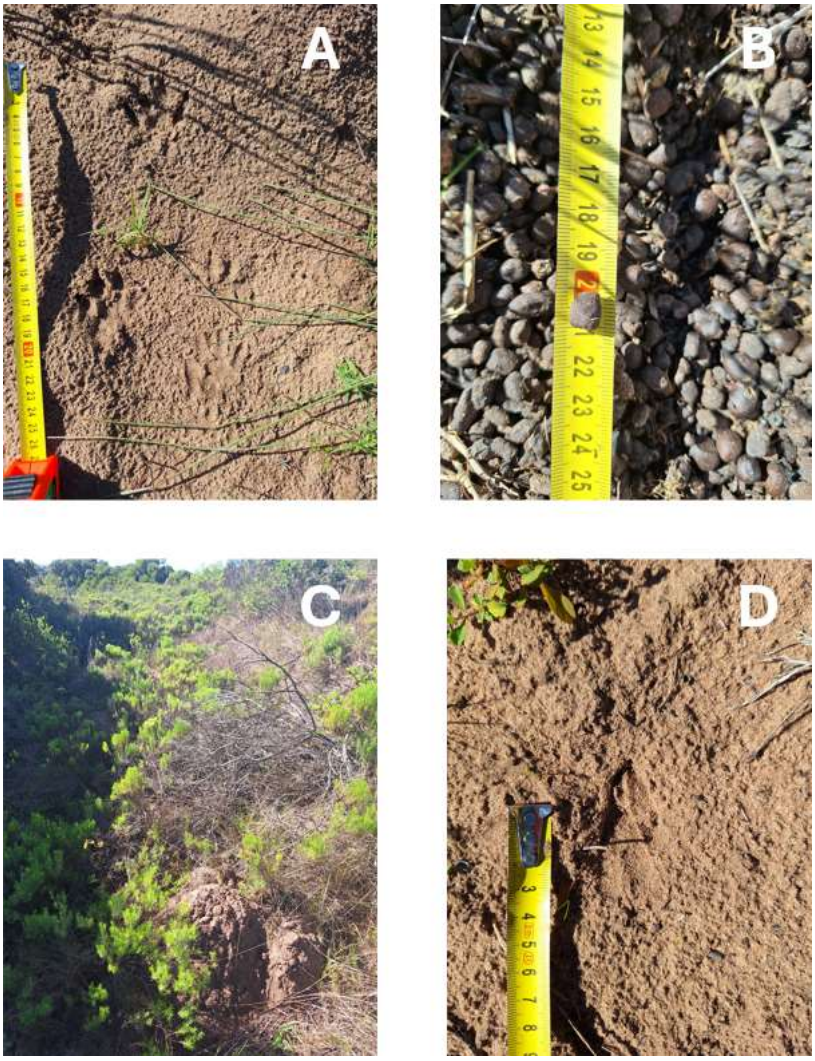

Figure 11: Some mammal signs identified during site visits to erf 2841. (A) Mongoose tracks; (B). Scats observed and identified to genus Raphicerus; (C) Mole rat hill; (D) Track of bush buck.

4.4.3 Terrestrial Invertebrates

No SCCs were found during the site inspections, but 9 insects were identified. The higher number of insects could be attributed to favourable weather conditions for insect captures (sunny and clear). No host plants for any invertebrate SCC were observed. See Appendix 4: Invertebrate species observed during site visits for the full list of invertebrates found at the site, some of which are shown in Figure 12.

Figure 12: Invertebrates photographed on erf 2841 during the site inspection on 6 May 2024.

4.4.4 Amphibians

No SCC were encountered during the site visit and only clicking stream frogs were heard (Appendix 5: Amphibian species observed during site visits).

4.4.5 Reptiles

No reptile SCC were highlighted for this site by the DFFE Screening Tool or any of the public platforms and no reptiles were encountered on site.

4.4.6 Likelihood of Occurrence for SCC

Following the terrestrial fauna surveys and site inspection, the possible SCC occurring on erf 2841, Tergniet, Mossel Bay were evaluated according to their likelihood of occurrence (Table 5). It is always possible that a species assessed as having a low probability of occurrence can

still occur on the site, especially for species with a low likelihood of detection (SANBI 2020), and therefore this table should only be used as a guideline.

Table 5. Likelihood of occurrence for terrestrial fauna SCC on erf 284, Tergniet, Mossel Bay.

Species	Red List Status	Observed on site	Suitable habitat	Likelihood of occurrence	Reason
AVIFAUNA					
Circus maurus Black Harrier	Endangered	No	No	Low	Preferred habitat is fynbos not thicket, nests primarily in marshes which does not accord with the description of the habitats on the site.
Circus ranivorus Marsh Harrier	Endangered	No	No	Low	Considered a waterbird.
Polemaetus bellicosus Martial Eagle	Endangered	No	No	Low	Nests in tall trees are not present on site. Prefers open farmland with clumps of trees, savanna and semi-desert habitats.
Bradypterus sylvaticus Knysna warbler	Vulnerable	No	No	Low	Vegetation does not have a dense and matted understory.
Neotis denhami Denham's Bustard	Vulnerable	No	No	Low	Habitat preferences are cultivated pastures and open grasslands or savannas. Avoids human disturbance which is present on site in the form of the road that runs along the northern edge of the property.
Certhilauda brevirostris Agulhas Long-billed Lark	Near Threatened	No	Maybe	Low-Medium	The habitat is suitable for obtaining forage, but individuals would be outside of their core range and habitat preference at this site. The

					species is also likely to use the larger landscape to obtain forage.
TERRESTRIAL INVERTEBRATES					
Aloeides trimeni southeyae Trimen's Copper Butterfly	Endangered	No	No	Low	Prefers a grassy fynbos habitat rather than thicket. Host plants are not present on the site.
Lepidochrysops littoralis *Nimble Coastal Blue*	Endangered	No	No	Low	Rocky limestone ridges and sand dunes absent from this landscape.
Aneuryphymus montanus *Yellow-winged Agile Grasshopper*	Vulnerable	No	No	Low	No sclerophyllous fynbos habitat.
Circellium bacchus Flightless dung beetle	Vulnerable	No	No	Low	No suitable dung for use by the species.
Aloeides pallida littoralis Knysna Pale Copper Butterfly	Near Threatened	No	No	Low	Symbiotic ant species not found on site. Fynbos habitat preferred rather than thicket found on site.
MAMMALS					
Damaliscus pygargus pygargus Bontebok	Vulnerable	No	No	Low	Suitable grazing and a permanent water source are not available.
Poecilogale albinucha African Striped Weasel	Near Threatened	No	Maybe	Low	Habitat not within the core range for this species although prey species are present.

					Species flagged based on one record in 1980 within the QDS search for MammalMap.

5. SITE SENSITIVITY VERIFICATION

After the site visit and faunal surveys, it is determined that the site sensitivity for the terrestrial animal theme of erf 2841 is low in contrast to the high sensitivity highlighted by the DFFE Screening tool.

Based on the information in this report during the desktop and field assessment, the following reasons support this finding:

- Despite its low-medium rating, the site is not within the core range of the Near Threatened Agulhas long-billed lark SCC (predominantly found on the Agulhas Plain and Overberg wheatbelts, east of the Hottentots-Holland mountains). The larger habitat could just as likely be used to obtain forage since this habitat is not unique in the region and birds are highly mobile. Detection for the species was not hindered on the day of the site visit by any aspect of the species' phenology lending credence to a lower likelihood of occurrence on the site.
- All other SCC have a low likelihood of occurrence at the site due to habitat, breeding, and feeding preferences.
- The development footprint will be on the disturbed/ transformed areas of the remainder of erf 2841 which are less likely to remain in the same condition than the core thicket habitat given the risk of re-invasion of alien plant species should the site not be managed (See Botanical Report, B. Fouche- Confluent Environmental).

As per the Published Government Notice No. 1150, Government Gazette 43855 (30 October 2020), the **LOW** sensitivity of the site allows for a Terrestrial Animal Species Compliance statement to be issued. This is however issued with the following conditions as precautionary measures:

- An Environmental Compliance Officer (ECO) must be appointed to monitor for the presence of Agulhas Long-billed Lark nesting sites in the footprint of the development during construction phase.
- Should any Agulhas Long-billed Lark nests be found or suspected to occur on site, construction should be paused until such time that their presence can be confirmed by a relevant fauna expert.

6. RECOMMENDATIONS

Recommendations made by the Botanical Specialist Report (B. Fouche, Confluent Environmental) should be implemented to reduce the impacts to native vegetation and thereby associated fauna species.

General recommendation and best practice guidelines should be followed for all animal species encountered (regardless of whether they are SCC or not) during any stage of development on a site. These are summarised in Box 1 below:

BOX 1: Best practice principles for ALL fauna encountered during construction or operational phases of projects.

If any animals are seen on site, a photo or video should be taken if at all possible (to assist in identification) and all fauna encountered on site should be reported to the ECO immediately. This is particularly important when:

- An animal is harmed or compromised in any way during construction.
- Ground-dwelling animals, their nests or eggs are unearthed during earthworks (e.g. moles, tortoise eggs, terrapins/frogs estivating).
- Any animal with limited mobility is found on site (e.g. tortoises, moles, chameleons).
- Any potentially dangerous animal is encountered. This includes any potentially venomous animal (e.g. snakes, scorpions) or any medium-large animal that has become cornered in a room/enclosed area such that it cannot escape (e.g. porcupines, monkeys, baboons, antelope). It is critical in the case of snakes/scorpions to get pictures/videos to aid in identification and appropriate treatment of anyone needing medical assistance.
- Any animal that shows reluctance to escape or move away from the construction site, thereby increasing its exposure to harm or increasing the risk of injuring people on site.

The ECO should provide guidance or assistance to get all animals to safety, treating any injured animals and issuing instructions on when to continue with construction (once they are satisfied that all animals have been removed from site) or put additional mitigation measures in place to protect animals on the site from harm.

Some helpful contact details numbers for the ECO's disposal include:

For any injured animals or animals to be removed from site (domestic or wild):

A local SPCA can collect and treat most animals, and should be a first point of call for assistance. If they cannot directly assist, they will revert and notify the relevant authorities/vets. In the Garden Route please contact:

SPCA George: 044 878 1990

SPCA Mossel Bay: 044 693 0824

For any assistance with snake removals/relocations, identifications, or bite treatment:

African Snakebite Institute (all details available on www.africansnakebiteinstitute.com)

General Enquiries: +27 73 186 9176

Snakebite Emergencies: +27 82 494 2039

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APPENDIX 1: SCC IDENTIFIED FROM PUBLIC PLATFORMS FOR THE PROJECT AREA.

SCC were included or excluded from further analysis in this report based on expert interpretation for the presence/absence of key landscape and habitat features on site. See Section 4.2 Assumptions and Limitations for more information.

Species	Common name	Regional status	Global status	Source	Assessed
AVIFAUNA					
Certhilauda brevirostris	Agulhas Long-billed Lark	NT	NT	SABAP2	Yes
Circus maurus	Black Harrier	EN	EN	SABAP2	Yes
Sagittarius serpentarius	Secretarybird	VU	EN	SABAP2	No
Buteo trizonatus	Forest Buzzard	LC	NT	SABAP2	No
Phalacrocorax capensis	Cape Cormorant	EN	EN	SABAP2	No
Grus paradisea	Blue Crane	NT	VU	SABAP2	No
Numenius arquata	Eurasian Curlew	NT	NT	SABAP2	No
Neotis denhami	Denham's Bustard	VU	NT	Screening tool	Yes
Aquila verreauxii	Verreaux's Eagle	VU	LC	SABAP2	No
Falco biarmicus	Lanner Falcon	VU	LC	SABAP2	No
Phoenicopterus roseus	Greater Flamingo	NT	LC	SABAP2	No
Phoeniconaias minor	Lesser Flamingo	NT	NT	SABAP2	No
Morus capensis	Cape Gannet	VU	EN	SABAP2	No
Limosa lapponica	Bar-tailed Godwit	LC	NT	SABAP2	No
Circus ranivorus	African Marsh Harrier	EN	LC	Screening tool	Yes
Alcedo semitorquata	Half-collared Kingfisher	NT	LC	SABAP2	No

Polemaetus bellicosus	Martial Eagle	EN	EN	Screening tool	Yes
Procellaria aequinoctialis	White-chinned Petrel	VU	VU	SABAP2	No
Coracias garrulus	European Roller	NT	LC	SABAP2	No
Calidris ferruginea	Curlew Sandpiper	LC	NT	SABAP2	No
Stercorarius antarcticus	Brown Skua	EN	LC	SABAP2	No
Ciconia nigra	Black Stork	VU	LC	SABAP2	No
Hydroprogne caspia	Caspian Tern	VU	LC	SABAP2	No
Bradypterus sylvaticus	Knysna Warbler	VU	VU	Screening tool	Yes
Campethera notata	Knysna Woodpecker	NT	NT	SABAP2	No
TERRESTRIAL INVERTEBRATES					
Aloeides pallida littoralis	Knysna Pale Copper	NT		Virtual Museum	Yes
Aloeides trimeni southeyae	Trimen's Copper	EN		Virtual Museum	Yes
Aneuryphymus montanus	Yellow-winged Agile Grasshopper	VU	VU	Screening report	Yes
Circellium bacchus	Flightless dung beetle	VU		Virtual Museum	Yes
Ceratogomphus triceraticus	Cape Thorntail	NT		Virtual Museum	No
Lepidochrysops littoralis	Coastal Nimble Blue	EN		Virtual Museum	Yes
MAMMALS					
	Sensitive species 8	VU		Virtual Museum	No
Panthera pardus	Leopard	VU		Virtual Museum	No

Damaliscus pygargus pygargus	Bontebok	VU		Virtual Museum	Yes
Poecilogale albinucha	African Striped Weasel	NT		Virtual Museum	Yes

APPENDIX 2: AVIFAUNA SPECIES OBSERVED DURING SITE VISIT

Common name	Scientific name	Source
Cape Sparrow	*Passer melanurus*	Birdlasser
Cape Spurfowl	*Pternistis capensis*	Birdlasser
Southern Double-collared Sunbird	*Cinnyris chalybeus*	Birdlasser
Southern Fiscal	*Lanius collaris*	Birdlasser
Sombre Greenbul	*Andropadus importunus*	Birdlasser
Karoo Prinia	*Prinia maculosa*	Birdlasser
Hadada Ibis	*Bostrychia hagedash*	Birdlasser
Speckled Pigeon	*Columba guinea*	Birdlasser
Red-eyed Dove	*Streptopelia semitorquata*	Birdlasser
Bokmakierie	*Telophorus zeylonus*	Birdlasser
Cape White-eye	*Zosterops virens*	Birdlasser
Kelp Gull	*Larus dominicanus*	Birdlasser

APPENDIX 3: MAMMAL SPECIES OBSERVED DURING SITE VISITS

Common name	Scientific name	Source
Bush buck	*Tragelaphus sylvaticus*	iNaturalist
Grysboks and Steenboks	*Raphicerus*	iNaturalist
Cape Dune Molerat	*Bathyergus suillus*	iNaturalist
Mongooses	Herpestidae	iNaturalist
Common Duiker	*Sylvicapra grimmia*	iNaturalist

APPENDIX 4: INVERTEBRATE SPECIES OBSERVED DURING SITE VISITS

Taxon	Common name	Scientific name	Source
Arachnida	Blackleg Orbweaver	*Trichonephila fenestrata*	iNaturalist
Insecta	Lamenting Grasshopper	*Eyprepocnemis plorans*	iNaturalist
Insecta	*Sphingonotus*	Sphingonotus	iNaturalist
Insecta	*Chrysomya*	*Chrysomya*	iNaturalist
Insecta	Broad-bordered Grass Yellow	*Eurema brigitta*	iNaturalist
Invertebrata	Meadow white butterfly	*Pontia helice*	Notes
Invertebrata	Orange and cream butterfly (unidentified)	Lepidoptera	Notes
Invertebrata	Monarch butterfly	*Danaus chrysippus*	Notes
Invertebrata	Wasp	Apocrita	Notes
Invertebrata	Locust	Acrididae	Notes
Mollusca	Shufflers	*Tropidophora*	iNaturalist

APPENDIX 5: AMPHIBIAN SPECIES OBSERVED DURING SITE VISITS

Taxon	Common name	Scientific name	Source
Amphibia	Clicking stream frogs	*Strongylopus grayii*	Notes