# ANIMAL SPECIES COMPLIANCE STATEMENT FOR THE PROPOSED DEVELOPMENT ON PORTION 101 OF FARM 489 ZWARTE JONGERS FONTEIN, JONGENSFONTEIN, HESSEQUA MUNICIPALITY

Prepared by Mr Willem Matthee (Nelson Mandela University George Campus)

#### And

Prof. Jan A. Venter (Nelson Mandela University George Campus)

> Prepared for: Cape EAPrac (Pty) Ltd P.O. Box 2070 George Western Cape 6530

> > 23 July 2024

#### DECLARATION OF SPECIALIST INDEPENDENCE

We, Mr Willem Matthee and Prof. Jan A. Venter, hereby declare that:

- we are acting as independent specialists regarding this application;
- we do not have any interest, hidden or otherwise, in the outcome of this application, apart from financial compensation for the work done to survey the proposed development area and compile this report;
- surveying the site for this faunal compliance statement was done objectively, and that this report and the facts therein contained (regardless of its impact on the application approval process) will not be affected by any outside factors;
- we have the required expertise to perform surveys and produce compliance statements as it pertains to the faunal aspect of this proposed development
- we will comply with the relevant Acts, regulations and legislation;
- we have not, and will not, engage in conflicting interests while performing our duties for this activity, and have no influence over the decision-making authorities regarding their accepting or rejecting of this proposed development;
- we undertake to disclose to the applicant and competent authority all material and information within my possession that may influence the decision-making process regarding the proposed development;
- all particulars furnished by us in this form are true and correct, and that it is an offense to present a false declaration, and that such a false declaration is punishable in terms of Section 24F of the Act; and that
- this document is to be viewed as a whole, and not misquoted out of context.

Mathe

Date: 23 July 2024

Date: 23 July 2024

DATE	REVISION	STATUS	PREPARED	CHECKED AND
			BY	APPROVED BY
23 July 2024	0	Approved	Willem Matthee	Prof. Jan A.
		for		Venter
		submission		(SACNASP
				Registration Nr.
				400111/14)
			UMante	An

## TABLE OF CONTENTS

1.	INTRO	DUCTION	3		
2.	DETAILS OF THE SPECIALISTS				
3.	. METHODS9				
3	.1. De	sktop Study	. 10		
	3.1.1.	Location and Vegetation	. 10		
	3.1.2.	Animal species sensitivity	. 11		
3	.2. Sit	e visit	. 16		
	3.2.1.	Vegetation	. 16		
	3.2.2.	Animal species sensitivity	. 19		
	3.2.3.	Other animal species	. 21		
4.	ANIMA	L SPECIES COMPLIANCE STATEMENT	22		
5.	. RECOMMENDATIONS23				
REI	REFERENCES				

### 1. INTRODUCTION

Cape EAPrac (Pty) Ltd was appointed to facilitate the environmental impact aspects of a low-key tourism (glamping) development on Portion 101 of Farm 489, Jongensfontein, Western Cape (S34°24'59.4"; E21°21'00.7"). The property is approximately 59.4 ha in size, with the majority thereof (48.5 ha) located to the east of the tarred road that leads into Jongensfontein, and the remainder (10.9 ha) located to the west of the tarred road. The proposed development consists of 6 glamping pods (Fig. 1); each pod will have a development footprint of approximately 60 m<sup>2</sup>, with an additional parking area and entrance road (Fig. 2).



**Fig. 1:** The proposed layout of the six glamping pods and their associated entrance roads. The entire proposed development is located within the area that has a low sensitivity on the animal species sensitivity map (Appendix 2).



**Fig. 2:** The typical layout of each glamping pod, consisting of the pod itself, a deck area, parking and an entrance road.

The entire property falls within vegetation classified as Hartenbos Dune Thicket (Mucina et al., 2018). However, only the section of the property closest to the ocean, and some small sections on the property, has thicket vegetation present. The majority of the property is dominated by restioid fynbos on a sandy substrate. The thicket vegetation along the coast, as well as certain sections of the fynbos vegetation, is invaded by alien invasive plants (AIPs), notably rooikrans, *Acacia cyclops*. This species, as well as other invasive *Acacia* species, impact vegetation composition (forming monospecific stands), influencing nutrient cycling (especially nitrogen; Witkowski, 1991), and altering the local fire regime (by increasing fire frequency and intensity; Le Maitre et al., 2011).

As per the "Protocols for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes" (hereafter called "the Protocols"), as promulgated in Government Gazette Notice 320 (Government Gazette 43110, 20 March 2020), and amended in Government Gazette Notice 3717 (Government Gazette 49028, 28 July 2023), the Protocols must be adhered to for all new applications for Environmental Authorisation.

The Department of Forestry, Fisheries and the Environment (DFFE) screening tool (performed on 10 October 2023) identified the site as having **High** sensitivity in terms of the animal species theme (Fig. 3), due to the possible occurrence of nine species of conservation concern (SCC). These SCC (and their associated sensitivities) are:

- Black harrier, *C. maurus* (Aves) High and Medium sensitivity
- Denham's bustard, Neotis denhami (Aves) High and Medium sensitivity
- Knysna warbler, Bradypterus sylvaticus (Aves) High sensitivity
- Martial eagle, Polemaetus bellicosus (Aves) High sensitivity
- Southern black korhaan, Afrotis afra (Aves) High and Medium sensitivity
- Eastern red copper, Aloeides thyra orientis (Insecta) Medium sensitivity
- Southern angular opal, Chrysoritis brooksi tearei (Insecta) Medium sensitivity
- Coastal blue butterfly, Lepidochrysops littoralis (Insecta) Medium sensitivity
- Yellow-winged agile grasshopper, Aneuryphymus montanus (Insecta) Medium sensitivity



Fig. 3: The site sensitivity in terms of the animal species theme, as recorded in the DFFE screening tool (performed 10 October 2023). The entire property is classified as Medium sensitivity, due to the potential occurrence of nine SCC.

A sensitivity map (in terms of animal species) was compiled for the property (Appendix 2). This sensitivity map indicates where the animal species theme has the lowest sensitivity based on the presence (or likely presence) of SCC, and all the proposed glamping pods are located in this area of low sensitivity. The coastal thicket vegetation, as well as the roadway in the western section (and a clump of thicket vegetation in the eastern section) has been designated high sensitivity areas, due to the likely occurrence of *Bradypterus sylvaticus* in these areas. The majority of the property has been designated Medium sensitivity, due to the likelihood of some of the butterfly species (particularly *Chrysoritis brooksi tearei*), and bird species (particularly *Circus maurus, Neotis denhami* and *Polemaetus bellicosus*) occurring in those areas.

As the proposed glamping pods are only proposed for the area with low sensitivity (where the SCC are unlikely to occur), and the proposed development are therefore unlikely to impact the SCC, a compliance statement (as opposed to a specialist report) is sufficient in determining the likely impacts of this development on these (and other) SCC.

As per the Protocols, this compliance statement is based on the findings of a desktop study (using Cape Farm Mapper, iNaturalist, BGIS and GBIF) and a site visit (conducted on 16 October 2023), to determine the presence (or likely presence) of the SCC, and the potential impacts of the development on these SCC. This compliance statement also incorporates the latest site development plan, which was unavailable when the site sensitivity verification report was compiled. This document reports whether any of the SCC identified by the DFFE screening tool report are likely to occur within the development footprint (or on the property as a whole), or are likely to be affected by the proposed development, and propose mitigation measures to be implemented to reduce the impact of the proposed development.

## 2. DETAILS OF THE SPECIALISTS

Both specialists that compiled this document have experience in faunal species identification, and the identification of suitable habitats for various species, from invertebrates to large mammalian species. Their details are in the table below.

Specialist and contact Qualifications		SACNASP	Experience	
details			Registration	
Prof. Jan A Venter	PhD	(Biology)	400111/14	27 Years' experience in faunal
Email:	UKZN			ecology and conservation in both
JanVenter@mandela.ac.za				the government and tertiary
Mobile: 0824161096				education sector. Current
				position: Associate Professor in
				the Department of Conservation
				Management at Nelson Mandela
				University
Willem Matthee	M.Sc.	(Nature	Not registered	Willem has three years'
Email:	Conservation)			experience in surveying
WillemM@mandela.ac.za	NMU			amphibian populations, and an
Mobile: 084 620 4246				additional five years of bird
				surveys. He has also been
				involved in animal diversity
				surveys on an on-off basis for the
				past six years. He has completed
				his MSc in Nature Conservation in
				2014. He currently lectures as a
				lecturer in Conservation Ecology
				at the Nelson Mandela University
				George Campus.

**Table 1.** The details and experience of the specialists involved with this report.

### 3. METHODS

The findings of this report are based on:

- a desktop study to determine the potential presence of the SCC identified by the DFFE screening tool report (and any SCC not identified in the report) at the study site; and
- a site visit to the study site, to determine the presence of (and habitat suitability for) the SCC highlighted by the DFFE screening tool report, and any SCC not flagged by the screening tool report.

The desktop study included the use of iNaturalist and the Global Biodiversity Information Framework (GBIF) records. Records from these resources were used to determine whether the SCC have been recorded at (or near to) the study site, but the species' actual presence or likely presence was based on the findings of the site visit.

A site visit was performed on 16 October 2023, between 09:00 and 13:00. During the site visit, the species observed (mainly animal species, but also the plant species forming part of the habitat present at the study site) were recorded. Observations were visual (i.e., the animals were observed), acoustic (the animals were heard), or based on the presence of tracks or dung. The survey consisted of walking throughout the study area, observing the study site from different vantage points, and attempting to cover the entire property sufficiently to determine the presence or absence of the SCC (with an emphasis on the area that forms the development footprint, and the areas directly around the development footprint). The main purposes of the site visit were to determine whether:

1) any of the nine SCC flagged by the screening tool occur at the study site;

2) the site for the proposed glamping pods acts as a corridor for any of the SCC highlighted by the screening tool;

3) the vegetation that will be impacted by the proposed glamping pods likely supports undetected individuals or populations of the SCC highlighted by the screening tool (that were not picked up during the desktop study); and

4) there are any SCC present at the site that were not picked up by the screening tool.

9

#### 3.1. Desktop Study

#### 3.1.1. Location and Vegetation

The site for the proposed development is located at Jongensfontein, Hessequa Municipality (S34°24'59.4"; E21°21'00.7"). The property is approximately 59.4 ha in size, with a larger section (48.5 ha) and smaller section (10.9 ha), separated by the main entrance road to Jongensfontein.

The vegetation is a mixture of short Hartenbos Dune Thicket (AT40, classified as endangered; DFFE 2022) closest to the shore, medium-height Hartenbos Dune Thicket along the Jongensfontein entrance road and in a clump in the eastern section of the property, and restioid fynbos vegetation on a sandy substrate. Proteoids are rare in the property's fynbos vegetation, but are present (*Leucospermum*) in clumps on the border with the short coastal thicket vegetation, as well as areas right outside the southeastern property boundary. There are clumps of AIPs, notably *Acacia cyclops*, present on the property, particularly in the dune thicket vegetation and scattered in the fynbos vegetation.

#### 3.1.2. Animal species sensitivity

The DFFE screening tool identified a total of nine species of conservation concern (SCC). These species, along with their associated sensitivities were:

- Black harrier, C. maurus (Aves) High and Medium sensitivity
- Denham's bustard, Neotis denhami (Aves) High and Medium sensitivity
- Knysna warbler, Bradypterus sylvaticus (Aves) High sensitivity
- Martial eagle, *Polemaetus bellicosus* (Aves) High sensitivity
- Southern black korhaan, Afrotis afra (Aves) High and Medium sensitivity
- Eastern red copper, Aloeides thyra orientis (Insecta) Medium sensitivity
- Southern angular opal, Chrysoritis brooksi tearei (Insecta) Medium sensitivity
- Coastal blue butterfly, Lepidochrysops littoralis (Insecta) Medium sensitivity
- Yellow-winged agile grasshopper, *Aneuryphymus montanus* (Insecta) Medium sensitivity

Based on the desktop study, which included the use of iNaturalist and the Global Biodiversity Information Facility (GBIF), there are the following likelihoods of these SCC occurring on the property:

- A very low likelihood of *A. montanus*;
- A low likelihood of *N. denhami*;
- A medium likelihood of *C. maurus*, *P. bellicosus*, *A. afra*, *A. thyra orientis*, and *L. littoralis; and*
- A high likelihood of *B. sylvaticus*, *C. brooksi tearei* occurring on the property

However, within the development footprint, there is a **low likelihood** of any of these SCC occurring, as the area is degraded, none of the larval host plants (of the butterflies) were located in the area, and the thicket vegetation required by *B. sylvaticus* is not present in the area. For the following species descriptions, a rectangle around Jongensfontein and Still Bay was used (hereafter called "the general area") to determine the potential occurrence of SCC in the general area (Fig. 4), as such a large rectangular area also includes South African Bird Atlas Project (SABAP) data, which have co-ordinates as the centre point of a pentad instead of precise GPS co-ordinates)



**Fig. 4:** The relevant area demarcated on the BGIS database to determine the potential occurrence of the SCC in the area around the property (indicated with a yellow star).

*Circus maurus* (Black harrier) is an endangered raptor (Taylor, 2015a), endemic to southern Africa. It occurs in indigenous fynbos and neighbouring cropfields (Simmons et al., 2005). It is threatened mainly by habitat destruction and fragmentation, and the conservation of intact suitable habitat is therefore essential for the continued existence of this species. The majority of the eastern section (apart from the degraded section designated low sensitivity in the sensitivity map, and the thicket vegetation) is potentially suitable habitat for this species, and there are 17 records of this species on the GBIF database in the general area (mainly SABAP2 records, but also one eBird Observation Dataset record from an open field near Still Bay). However, the property is directly next to Jongensfontein, and this species therefore (despite the habitat potentially being suitable) has a medium likelihood of occurrence on the property.

**Neotis denhami (Denham's bustard)** occurs in natural vegetation (fynbos and grasslands), pastures and agricultural fields (Allan, 2005a). It is classified as Vulnerable in South Africa (Taylor, 2015b), mainly due to powerline collisions, habitat conversion to intensive monoculture fields, and overgrazing of grassland habitats. There are 34 records of this species in the general area on the GBIF database, including one eBird Observation Dataset (the other 33 records are SABAP data, without accurate GPS co-ordinates). Natural vegetation (such as the fynbos present

on the property) is used as breeding habitat (and feeding habitat during the breeding season) for this species, and it is possible that individuals in the area would occur in this type of vegetation. However, these birds are sensitive to human disturbance, and are unlikely to occur so close to human habitation (the existing houses at Jongensfontein). There is therefore a low likelihood that this species occurs on the property, particularly the western section of the property.

Bradypterus sylvaticus (Knysna warbler) is a vulnerable bird species occurring in dense thickets, including riparian vegetation and coastal thickets dominated by White milkwood, Sideroxylon inerme (Smith, 2005; Taylor, 2015c). This species is threatened mainly by habitat destruction, specifically the clearing of coastal clearings where it occurs. Although it mainly occurs in indigenous thickets, it may also occur in suitable thickets of exotics, such as exotic Rubus (bramble) and lantana (Lantana *camara*). The majority of the vegetation (i.e., the restioid fynbos) is not suitable for this species. However, the milkwood thicket vegetation along the coast is suitable vegetation, and it is likely that this species occurs in that vegetation type on the property. There are 117 records of this species in the general area on the GBIF database, with nine of those records being from the eBird Observation Database (with one of those being from Jongensfontein itself), and the other 108 records being from SABAP records (without precise GPS co-ordinates. Since this species is known from the area, and there is suitable vegetation present on the property, there is a high likelihood that this species occurs on the property. However, the area in the development footprint does not have suitable vegetation present, and it is highly unlikely that this species occurs there.

**Polemaetus bellicosus (Martial eagle)** is a large, endangered raptor that prefers open vegetation, and breeds in tall trees (Simmons, 2005b; Taylor, 2015d). This species is threatened mainly due to direct persecution by small livestock farmers, poisoning, and reduction of prey abundance due to habitat transformation. These birds use large trees as nesting sites; the largest trees on the property are White milkwood (*Sideroxylon inerme*) tree, which do not exceed 4 m in height on the property. These birds are therefore unlikely to nest on the property. Additionally, though the open fynbos vegetation is suitable hunting habitat for this species, the proximity to the town

13

of Jongensfontein reduces the likelihood that it occurs on the property (especially the development footprint, which is located on the town's edge. There are only four records of this species for the general area on the GBIF database, likely all from the surrounding farmlands to the north of Sill Bay and Jongensfontein. The scarcity of records from the general area, coupled with the proximity to a developed area and the absence of large trees indicate a medium likelihood of this species occurring on the property, but a low likelihood of it occurring within the development footprint.

*Afrotis afra* (Southern black korhaan) is a vulnerable bird species that occurs in open fynbos and arid shrublands (Allan, 2005b; Hofmeyr & Taylor, 2015). There are only three records of this species in the general area, likely from the farmlands further north (away from the developed areas). This species occurs in vegetation up to 3m in height, and this property may therefore provide suitable habitat. The absence of records on the GBIF database may be due to an underreporting of this species, as it is cryptic unless calling. Due to the potential suitability of the habitat on the property, there is a medium likelihood that this species occurs on the property. However, there is a low likelihood of it occurring in the disturbed area that is the proposed development footprint, due to the disturbed nature of the vegetation in the area, and the proximity to existing infrastructure.

*Aloeides thyra orientis* (Eastern red copper) is an endangered butterfly species that prefers sandy flats and dune systems (Edge, 2005). There are two populations known from the area around Still Bay (one at the Pauline Bohnen Nature Reserve, and one from farmlands to the north of Still Bay), but no populations known from Jongensfontein (and, subsequently, no records of this species from the GBIF database). The majority of this species is known from Brenton-on-Sea at Knysna, and the two populations around Still Bay are the only populations known from the area. Due to the potential suitability of the vegetation on the property, there is a medium likelihood that it occurs on the property. However, there is a low likelihood of this species occurring within the development footprint (see Section 3.2.2 below).

*Chrysoritis brooksi tearei* (Brook's opal) is an endangered butterfly species endemic to the coastal region between Bredasdorp and Still Bay (Edge, 2020a). There are 44 records of butterflies in the *Chrysoritis* genus from the general area on the GBIF database; of these, only two are of *C. brooksi tearei*. However, we recorded at least eight specimens of a butterfly population likely belonging to this subspecies on a property adjacent to this property. There is therefore a high likelihood that it occurs in suitable habitat on this property.

Lepidochrysops littoralis (Coastal blue) is an endangered butterfly species known from the coastal band between De Hoop and Mossel Bay (Edge, 2020b). There are seven records of this species in the general area on the GBIF database, with the most recent record from November 1997. The preferred habitat of this species is limestone ridges or sand dunes with fynbos vegetation. It is also known from areas with Hartenbos Dune Thicket vegetation. There is therefore a medium likelihood that this species occurs on the property as a whole, but a low likelihood of it occurring within the development footprint (see section 3.2.3).

Aneuryphymus montanus (Yellow-winged agile grasshopper) is a vulnerable grasshopper species known from only six localities (Hochkirck et al., 2018). There are no records of this species on the GBIF database, with the closest record being from the Swartberg Mountains (>100km from this site). *A. montanus* also prefers arid fynbos on rocky substrates, neither of which are present on this property. Due to the lack of records from the area and the lack of suitable habitat on the property, there is a very low likelihood of this species on this property.

#### 3.2. Site visit

#### 3.2.1. Vegetation

The site visit, performed on 16 October 2023, confirmed that the vegetation closest to the ocean consisted of short *Sideroxylon inerme*-dominated thicket vegetation, with *Roepera morgsana* and other shrubs in the ecotone between the thicket and the fynbos vegetation. The majority of the vegetation on the property consists of restioid fynbos on a sandy substrate. There are also clumps of AIPs, notably *Acacia cyclops*, on the property, including in the thicket vegetation.



**Fig. 5:** The thicket vegetation present on the side of the property closest to the ocean, grading into the restioid fynbos towards the crest of the rise.



Fig. 6: The restioid fynbos that dominates the property, grading into the short thicket vegetation in the front. *Roepera morgsana* are visible in this photo (the lime green shrubs on the edge of the thicket vegetation).



Fig. 7: The vegetation in the area with low sensitivity is dominated by short-lived pioneer plants, notably *Helichrysum* spp. and other Asteraceous plants. There are also a number of *Osteospermum moniliferum* (Bietou, the dark green shrub in the right of this photograph) in this section of the property.



**Fig. 8:** There is also an abundance of restios throughout the fynbos vegetation on the property, including the low sensitivity area.



Fig. 9: The section of the property designated low sensitivity has been disturbed previously, with a drainage channel running from the existing houses into this section of the property.

The area designated low sensitivity (the site of the proposed development) has a higher abundance of shorter-lived shrubs (mainly Asteraceae) than the rest of the fynbos vegetation (Fig. 9), but also has an abundance of restioids present (Fig. 8).

In terms of sensitivity (as relevant to the animal SCC), the thicket vegetation along the coast (as well as the clump present on the eastern section of the property and the thicket vegetation along the entrance road to Jongensfontein) is classified as high sensitivity. This includes the ecotone area between the thicket vegetation and the adjacent fynbos vegetation. This is due to (a) the high likelihood of *B. sylvaticus* occurring within the thicket vegetation, and (b) the ecotone containing the larval host plant (*Roepera morgsana*) of *C. brooksi tearei*. It is therefore essential that this vegetation is protected, and no development occurs within it. Additionally, it is classified as an endangered vegetation type, and the further disturbance thereof should not be considered.

The majority of the fynbos vegetation could be suitable habitat for *C. brooksi tearei*, *L. littoralis*, *A. thyra orientis*, *C. maurus*, *N. denhami*, *P. bellicosus* and *A. afra*, and is predominantly designated medium sensitivity. The section proposed for this development is, however, classified as low sensitivity, as it is located close to human habitation (reducing the likelihood of many of the SCC occurring there), and has previously been disturbed. A development in this area is highly unlikely to have an impact on SCC potentially in the larger area.

#### 3.2.2. Animal species sensitivity

During the site visit, none of the SCC were recorded in the development footprint. Additionally, no SCC were recorded on the property as a whole. Despite the lack of evidence for the presence of SCC on the property, the habitats observed are suitable for *B. sylvaticus* (in the coastal thicket vegetation), and for *C. brooksi tearei* (in the fynbos vegetation, particularly the ecotone between the fynbos and thicket vegetation). However, neither of these species are likely to utilise the vegetation in development footprint, due to the (a) lack of thicket vegetation in this area (for *B. sylvaticus*) and (b) lack of larval host plants (for *C. brooksi tearei*), and both SCC are more likely to occur within or around the existing thicket vegetation on the property.

Though the fynbos vegetation on the property is potentially suitable for *C. maurus*, *P. bellicosus*, *A. afra*, *A. thyra orientis* and *L. littoralis*, there is a low likelihood of these SCC occurring within the development footprint. Additionally, there is a low likelihood of *N. denhami*, and a very low likelihood of *A. montanus*, occurring within the development footprint is in too close proximity to existing houses of Jongensfontein for the majority of these SCC (notably *C. maurus*, *P. bellicosus*, *N. denhami* and *A. afra*) to occur. Additionally, the disturbed nature of the vegetation in the development footprint reduces the likelihood of *A. afra* and *L. littoralis* utilising this area of the property, though there is a medium likelihood of these species occurring on the property as a whole.

The larval host plants of *Lepidochrysops littoralis* are suspected to be *Selago* species (Edge, 2005), but no plants within this genus were observed within the development footprint during the site visit. Although *L. littoralis* is mainly known from rocky ridges, this species have also been observed along sand dunes close to the coast. However, no specimens were recorded, and neither primary sand dunes nor rocky outcrops are present within the development footprint, and this species is therefore unlikely to occur in this area of the property.

Two populations of *Aloeides thyra orientis* are known from the Still Bay area (one in the Pauline Bohnen Nature Reserve, and one from agricultural land between Still Bay and Riversdale. Though the vegetation and underlying geology on the property is suitable for this species (and it therefore has a medium likelihood of occurring on the property), no individuals of this species were observed within the development footprint, despite the site visit being performed during the flight period of this species and during optimal weather conditions. There is therefore a low likelihood of this species occurring within the development footprint.

Though the habitat on the property is potentially suitable for the two raptor species (*C. maurus* and *P. bellicosus*), the proximity of the development footprint to existing houses reduces the likelihood of these SCC occurring in the development footprint, and they are therefore unlikely to be affected by the proposed development. Similarly, *N. denhami* and *A. afra* are unlikely to occur within the development footprint, due to the proximity thereof to existing infrastructure, and the proposed development is unlikely to affect these species.

The vegetation within the development footprint is not the preferred habitat of *C. brooksi tearei*, and lacks the larval host species this species likely utilises in the area (*Roepera morgsana*). Though I recorded a population of *C. brooksi tearei* on a neighbouring property a day before this site visit was performed, those observations were made in an ecotonal area between thicket and fynbos vegetation, where *R. morgsana* plants were present. The lack of observations of this species within the development footprint, along with the lack of suitable larval host plants and vegetation within the development footprint, indicates this species is unlikely to occur within the area of the proposed development, and is unlikely to be affected by the proposed

development. However, this species is likely to occur on the property as a whole, and care should be taken not to disturb the remainder of the property.

Aneuryphymus montanus is highly unlikely to occur on the property, as there is a distinct lack of suitable vegetation (sclerophyllous, arid fynbos) on suitable substrate (a rocky substrate). There are also no known records of this species from the general area, and it is highly unlikely to be affected by the proposed development.

With the lack of any SCC within the development footprint of the proposed development, the development footprint was classified as low sensitivity in the site sensitivity map, and the proposed development is unlikely to impact the continued survival of any of the SCC identified by the DFFE screening tool.

#### 3.2.3. Other animal species

During the site visit, a total of 17 animal species were recorded (Appendix 1). These observations consisted of two arachnid, nine bird, four insect (two Hymenoptera and two Diptera), one reptile, and one mammal species. No noteworthy observations were made, apart from some burrows of *Opistophthalmus macer* (Fynbos burrowing scorpion) in the development footprint area. This species has a wide distribution, likely occurs throughout the property due to the sandy nature of the soil, and will be unaffected as a species by the proposed development. Tracks and dung of Cape grysbok (*Raphicerus melanotis*) were also recorded, as this species commonly observed in the region. None of the 17 species recorded at the site are species of conservation concern.

## 4. ANIMAL SPECIES COMPLIANCE STATEMENT

The DFFE screening tool identified the study area as having a **High sensitivity** for the animal species theme, due to the potential presence of nine species of conservation concern. The site visit, and site sensitivity verification report, however, determined that the development footprint of the proposed development has a **LOW SENSITIVITY**, while the rest of the property is a mixture of medium and high sensitivity. The low sensitivity of the development footprint is due to:

- The proximity of the proposed development to existing infrastructure;
- The disturbed nature of the vegetation in the development footprint;
- The absence of SCC recorded during the site visit within the development footprint;
- The lack of suitable vegetation (including larval food plants) within the development footprint; and
- The low likelihood that any of the SCC recorded by the DFFE screening tool are likely to occur in close proximity to the proposed development, or will be affected by this proposed development.

The development is unlikely to impact the continued existence of any of the SCC recorded in the DFFE screening tool report, nor are there likely to be undetected SCC present in the development footprint. *C. maurus, P. bellicosus, A. afra* and *N. denhami* are unlikely to occur within the development footprint, due to the proximity to existing infrastructure, and/or the disturbed nature of the vegetation present in the development footprint for *B. sylvaticus, A, montanus* and *L. littoralis* to occur within the development footprint, and an absence of larval host plants for the three butterfly species (*L. littoralis, A. thyra orientis* and *C. brooksi tearei*) in the development footprint or immediate surrounds. The nine SCC are therefore unlikely to occur within the development.

## 5. **RECOMMENDATIONS**

Due to the high likelihood of *C. maurus*, *B. sylvaticus*, *P. bellicosus*, *A. afra*, *N. denhami*, *C. brooksi tearei* and *A. thyra orientis* occurring in the rest of the property (outside the development footprint), it is important that the rest of the property is not disturbed. The thicket vegetation and its associated ecotone, particularly, is of high conservation importance, as it likely provides habitat for a number of SCC, and acts as an ecological corridor in the landscape.

The removal of alien invasive plants on the property should be a priority, as these plants will result in the degradation of the natural beauty (and ecological importance) of the property if left uncleared.

#### REFERENCES

- Allan, D.G. 2005a. Denham's Bustard, Neotis denhami. In P.A.R. Hockey, W.R.J. Dean & P.G. Ryan (Eds) Roberts - Birds of southern Africa 7th ed. The Trustees of the John Voelcker Bird Book Fund: Cape Town.
- Allan, D. 2005b. Southern black korhaan, Afrotis afra. In P.A.R. Hockey, W.R.J. Dean & P.G. Ryan (Eds) Roberts Birds of southern Africa 7th ed. The Trustees of the John Voelcker Bird Book Fund: Cape Town.
- Department of Forestry, Fisheries and the Environment. 2022. The revised national list of ecosystems that are threatened an in need of protection. Government Gazette Vol. 689, No. 47526. Notice Number 2747. Government Printers: Pretoria.
- Edge, D.A. 2005. Butterfly conservation in the southern Cape, South Africa. *Metamorphosis* **16** (2): 28 46.
- Edge, D.A. 2020a. *Chrysoritis brooksi tearei. In:* Mecenero, S., Edge, D.A., Staude, H.S., Coetzer, B.H., Coetzer, A.J. ... (Eds) Outcomes of the Southern African Lepidoptera Conservation Assessment (SALCA). *Metamorphosis* **31** (4): 1 160.
- Edge, D.A. 2020b. Lepidochrysops littoralis. In: Mecenero, S., Edge, D.A., Staude, H.S., Coetzer, B.H., Coetzer, A.J. ... (Eds) Outcomes of the Southern African Lepidoptera Conservation Assessment (SALCA). Metamorphosis 31 (4): 1 160.
- Hochkirck, A., Bazelet, C. & Danielczak, A. 2018. A conservation assessment of Aneuryphymus montanus <online>. Available from: http://speciesstatus.sanbi.org/assessment/last-assessment/4408/ [accessed 6 October 2023].

- Hofmeyr, S.D. & Taylor, M.R. 2015. *Afrotis afra. In* M.R. Taylor, F. Peacock & R.W.Wanless (eds). The Eskom red data book of Birds of South Africa, Lesotho and Swaziland. Birdlife South Africa: Johannesburg.
- Le Maitre, D.C., Gaertner, M., Marchante, E., Ens, E.-J., Holmes, P.M., Pauchard, A., O'Farrell, P.J., Rogers, A.M., Blanchard, R., Blignaut, J. & Richardson, D.M. 2011. Impacts of invasive Australian acacias: implications for management and restoration. *Diversity and Distributions* **17** (5): 1015 – 1029.
- Mucina, L., Rutherford, M.C. & Powrie, L.W. (Eds) 2018. The Vegetation Map of South Africa, Lesotho and Swaziland. SANBI: Pretoria.
- National Environmental Management Act (Act Nr 107 of 1998). Protocol for the specialist assessment and minimum report content requirements for the environmental impacts on terrestrial animal species. Gazette Nr 43855: Notice Nr 1150. October 2020.
- Rebelo, A.G., Boucher, C., Helme, N., Mucina, L. & Rutherford, M.C. 2006. Fynbos
  Biome. *In* L. Mucina & M.C. Rutherford (eds) *The Vegetation of South Africa, Lesotho and Swaziland*. Strelitzia 19. SANBI: Pretoria.
- Simmons, R.E. 2005b. Martial Eagle, *Polemaetus bellicosus*. In P.A.R. Hockey,
  W.R.J. Dean & P.G. Ryan (Eds) *Roberts Birds of southern Africa* 7th ed. The
  Trustees of the John Voelcker Bird Book Fund: Cape Town.
- Simmons, R.E., Curtis, O.E. & Jenkins, A.R. 2005. Black Harrier, Circus maurus. In P.A.R. Hockey, W.R.J. Dean & P.G. Ryan (Eds) Roberts - Birds of southern Africa 7th ed. The Trustees of the John Voelcker Bird Book Fund: Cape Town.
- Smith, N. 2005. Knysna Warbler, Bradypterus sylvaticus. In P.A.R. Hockey, W.R.J. Dean & P.G. Ryan (Eds) Roberts - Birds of southern Africa 7th ed. The Trustees of the John Voelcker Bird Book Fund: Cape Town.

- Taylor, M.R. 2015a. *Circus maurus*. *In* M.R. Taylor, F. Peacock & R.W. Wanless (eds).The Eskom red data book of Birds of South Africa, Lesotho and Swaziland.Birdlife South Africa: Johannesburg.
- Taylor, M.R. 2015b. *Neotis denhami. In* M.R. Taylor, F. Peacock & R.W. Wanless (eds). The Eskom red data book of Birds of South Africa, Lesotho and Swaziland. Birdlife South Africa: Johannesburg.
- Taylor, M.R. 2015c. Bradypterus sylvaticus. In M.R. Taylor, F. Peacock & R.W. Wanless (eds). The Eskom red data book of Birds of South Africa, Lesotho and Swaziland. Birdlife South Africa: Johannesburg.
- Taylor, M.R. 2015d. Polemaetus bellicosus. In M.R. Taylor, F. Peacock & R.W. Wanless (eds). The Eskom red data book of Birds of South Africa, Lesotho and Swaziland. Birdlife South Africa: Johannesburg.
- Witkowski, E.T.F. 1991. Effects of invasive alien acacias on nutrient cycling in the coastal lowlands of the Cape fynbos. *Journal of Applied Ecology* **28**: 1 15.

#### APPENDIX 1: ANIMAL SPECIES RECORDED ON PORTION 101 OF FARM 489, JONGENSFONTEIN, DURING THE SITE VISIT. OBSERVATIONS WERE ACOUSTIC OR VISUAL (INCLUDING TRACKS AND DUNG)

Common name	Scientific name		
Arachnids			
Scorpion, Fynbos burrowing	Opistophthalmus macer		
Tick, Hardbacked	lxodes sp.		
Birds			
Apalis, Bar-throated	_ Apalis thoracica		
Canary, Cape	Serinus canicollis		
Dove, Cape turtle	Streptopelia capicola		
Dove, Laughing	Spilopelia senegalensis		
Gull, Kelp	Larus dominicanus		
Heron, Black-headed	Ardea melanocephala		
Prinia, Karoo	Prinia maculosa		
Starling, Common	Sturnus vulgaris		
Sunbird, Southern Double-collared	Cinnyris chalybeus		
Insects: Diptera			
Fly, Horse	Tabanidae		
Flies, Robber	Asilidae		
Insects: Hymenoptera			
Ant, Small black sugar	Lepisiota capensis		
Insects: Lepidoptera			
Brown, Silver-bottom	Pseudonympha magus		
Mammals			
Grysbok, Cape	Raphicerus melanotis		
Reptiles			
Tortoise, Angulate	Chersina angulata		

#### <complex-block> Sensitivity map Derbein 101 of Farm 489, Jongenstontein Personality and an antipersonality and antipersonality antiper

## APPENDIX 2: THE SITE SENSITIVITY MAP FOR PORTION 101 OF FARM 489