

# Animal Species Compliance Statement

prepared in accordance with the  
*"Protocol for the Specialist Assessment and minimum report content  
requirements for environmental impacts on Terrestrial Biodiversity"*

Farm 220/209 Aalwyndal in Mossel Bay (Western Cape Province)



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# Terrestrial Animal Species Compliance Statement Report for Erf 220/209 Aalwyndal in Mossel Bay in the Western Cape Province

13 November 2023

# TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b> .....	<b>2</b>
<b>SPECIALIST DETAILS &amp; DECLARATION</b> .....	<b>3</b>
DECLARATION OF INDEPENDENCE:.....	3
DISCLOSURE:.....	4
<b>TERMS OF REFERENCE</b> .....	<b>5</b>
PROTOCOL FOR THE SPECIALIST ASSESSMENT AND MINIMUM REPORT CONTENT REQUIREMENTS FOR ENVIRONMENTAL IMPACTS ON TERRESTRIAL ANIMAL SPECIES .....	5
<b>INTRODUCTION</b> .....	<b>9</b>
SITE LOCATION .....	9
IDENTIFIED THEME SENSITIVITIES .....	10
<i>Animal Species theme</i> .....	10
<b>ASSESSMENT METHODOLOGY</b> .....	<b>12</b>
PROJECT AREA OF INFLUENCE (PAOI) .....	12
SURVEY TIMING .....	14
FIELD SURVEY APPROACH .....	15
SOURCES OF INFORMATION.....	16
<i>Fauna</i> .....	16
LIMITATIONS .....	16
<b>OUTCOME OF THE ASSESSMENT</b> .....	<b>17</b>
HISTORICAL DISTURBANCE ON SITE.....	17
NATURAL HABITATS ON SITE.....	18
<i>Fynbos</i> .....	18
ANIMAL SPECIES FLAGGED FOR THE STUDY AREA .....	19
<i>Circus ranivorus (African marsh harrier)</i> .....	19
<i>Circus maurus (Black harrier)</i> .....	19
<i>Neotis denhami (Denham's Bustard)</i> .....	19
<i>Polemaetus bellicosus (Martial Eagle)</i> .....	19
<i>Bradypterus sylvaticus (Knysna warbler)</i> .....	20
<i>Afrotis afra (Southern Black Bustard)</i> .....	20
<i>Lepidochrysops littoralis (Coastal Blue Butterfly)</i> .....	20
<i>Sensitive species 5 (predator)</i> .....	21
<i>Sensitive species 8 (small antelope)</i> .....	21
<i>Aneuryphymus montanus (Yellow-winged Agile Grasshopper)</i> .....	21
<b>SITE ECOLOGICAL IMPORTANCE</b> .....	<b>22</b>
SUMMARY OF SITE SENSITIVITY .....	24
<b>CONCLUSION</b> .....	<b>25</b>
<b>REFERENCES &amp; BIBLIOGRAPHY</b> .....	<b>26</b>

# SPECIALIST DETAILS & DECLARATION

This report has been prepared in accordance with the "Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial biodiversity", as promulgated in terms of Section 24 (5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), published in GN. No. 320 dated 20 March 2020. It has been prepared independently of influence or prejudice by any parties.

The details of Specialists are as follows –

Table 1: Details of Specialist

Specialist	Qualification and accreditation
Dr Wynand Vlok (Pr.Sci.Nat.)	<ul style="list-style-type: none"><li>• PhD Zoology</li><li>• SACNASP Reg. no. 400109/95 (Zoological Science, Botanical Science)</li></ul>

## Areas of specialisation:

- Environmental Impact Assessments (EIA's)
- Environmental Management Plans (EMP's)
- Aquatic environment and its associated biodiversity
- Terrestrial biodiversity

## Professional affiliation:

- South African Society of Aquatic Scientists (SASAqS)
- Registered at the "The South African Council for Natural Scientific Professions" (SACNASP – registered as a "Professional Natural Scientist: Registration number - 400109/95)
- SACNASP – as Chairperson for the Professional Advisory Committee (Aquatic)

## Employment history:

- BioAssets (owner of Consultancy CC) - 1/01/2007 - current
- University of Limpopo (formerly University of the North)
  - Senior lecturer: Department of Zoology/Biology (1/10/1996 – 31/12/2006)
  - Lecturer: Department of Physiology (1/1/1994 - 30/9/1996)
- Manager of a citrus farm (1992 – 1993)
- Technikon RSA (1989 – 1991) - Lecturer: Nature Conservation

## Declaration of independence:

David Hoare Consulting (Pty) Ltd in an independent consultant and hereby declare that it does not have any financial or other vested interest in the undertaking of the proposed activity, other than remuneration for the work performed in terms of the National Environmental Management Act, 1998 (Act 107 of 1998). In addition, remuneration for services provided by David Hoare Consulting (Pty) Ltd is not subjected to or based on approval of the proposed project by the relevant authorities responsible for authorising this proposed project.

## Disclosure:

David Hoare Consulting (Pty) Ltd undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and will provide the competent authority with access to all information at its disposal regarding the application, whether such information is favourable to the applicant or not.

Based on information provided to David Hoare Consulting (Pty) Ltd by the client and in addition to information obtained during the course of this study, David Hoare Consulting (Pty) Ltd present the results and conclusion within the associated document to the best of the author's professional judgement and in accordance with best practise.



13 November 2023

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Wynand Vlok

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Date

# TERMS OF REFERENCE

## PROTOCOL FOR THE SPECIALIST ASSESSMENT AND MINIMUM REPORT CONTENT REQUIREMENTS FOR ENVIRONMENTAL IMPACTS ON TERRESTRIAL ANIMAL SPECIES

The specialist study is required to follow the published Protocols, provided in full below for the assessment of impacts on Terrestrial Biodiversity, on Animal Species, and on Plant Species. Note that the Protocols require determination of the level of sensitivity, which then determines the level of assessment required, either a full assessment, or a Compliance Statement.

## Protocol For The Specialist Assessment And Minimum Report Content Requirements For Environmental Impacts On Terrestrial Animal Species

This site sensitivity assessment follows the requirements of The Environmental Impact Assessment Regulations, as promulgated in terms of Section 24 (5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), published in GN. No. 320 dated 20 March 2020.

### General information

1.1 An applicant intending to undertake an activity identified in the scope of this protocol, on a site identified by the screening tool as being of "**very high**" or "**high**" sensitivity for terrestrial animal species, must submit a **Terrestrial Animal Species Specialist Assessment Report**.

1.2 An applicant intending to undertake an activity identified in the scope of this protocol, on a site identified by the screening tool as being of "**medium sensitivity**" for terrestrial animal species, must submit either a **Terrestrial Animal Species Specialist Assessment Report** or a **Terrestrial Animal Species Compliance Statement**, depending on the outcome of a site inspection undertaken in accordance with paragraph 4.

1.3 An applicant intending to undertake an activity identified in the scope of this protocol, on a site identified by the screening tool as being of "**low**" sensitivity for terrestrial animal species, must submit a **Terrestrial Animal Species Compliance Statement**.

1.4 Where the information gathered from the site sensitivity verification differs from the screening tool designation of "very high" or "high" for terrestrial animal species sensitivity on the screening tool, and it is found to be of a "low" sensitivity, then a **Terrestrial Animal Species Compliance Statement** must be submitted.

1.5 Where the information gathered from the site sensitivity verification differs from the screening tool designation of "low" terrestrial animal species sensitivity and it is found to be of a "very high" or "high" terrestrial animal species sensitivity, a **Terrestrial Animal Species Specialist Assessment** must be conducted.

1.6 If any part of the development falls within an area of confirmed "very high" or "high" sensitivity, the assessment and reporting requirements prescribed for the "very high" or "high" sensitivity, apply to the entire development footprint. Development footprint in the context of this protocol, means the area on which the proposed development will take place and includes the area that will be disturbed or impacted.

1.7 The **Terrestrial Animal Species Specialist Assessment** and the **Terrestrial Animal Species Compliance Statement** must be undertaken within the study area.

1.8 Where the nature of the activity is not expected to have an impact on species of conservation concern (SCC) beyond the boundary of the preferred site, the study area means the proposed development footprint within the preferred site.

1.9 Where the nature of the activity is expected to have an impact on SCC beyond boundary of the preferred site, the project areas of influence (PAOI) must be determined by the specialist in accordance with Species Environmental Assessment Guideline, and the study area must include the PAOI, as determined.

### **Terrestrial Animal Species Specialist Assessment**

2.1 The assessment must be undertaken by a specialist registered with the South African Council for Natural Scientific Professions (SACNASP), within a field of practice relevant to the taxonomic groups ("taxa") for which the assessment is being undertaken.

2.2 The assessment must be undertaken in accordance with the Species Environmental Assessment Guideline and must:

2.2.1 Identify the SCC which were found, observed or are likely to occur within the study area;

2.2.2 provide evidence (photographs) of each SCC found or observed within the study area, which must be disseminated by the specialist to a recognized online database facility immediately after the site inspection has been performed (prior to preparing the report contemplated in paragraph 3);

2.2.3 identify the distribution, location, viability and detailed description of population size of the SCC identified within the study area;

2.2.4 identify the nature and the extent of the potential impact of the proposed development to the population of the SCC located within the study area;

2.2.5 determine the importance of the conservation of the population of the SCC identified within the study area, based on information available in national and international databases including the IUCN Red List of Threatened Species, South African Red List of Species, and/or other relevant databases;

2.2.6 determine the potential impact of the proposed development on the habitat of the SCC located within the study area;

2.2.7 include a review of relevant literature on the population size of the SCC, the conservation interventions as well as any national or provincial species management plans for the SCC. This review must provide information on the need to conserve the SCC and indicate whether the development is compliant with the applicable species management plans and if not, a motivation for the deviation;

2.2.8 identify any dynamic ecological processes occurring within the broader landscape, that might be disrupted by the development and result in negative impact on the identified SCC, for example, fires in fire-prone systems;

2.2.9 identify any potential impact on ecological connectivity in relation to the broader landscape, resulting in impacts on the identified SCC and its long term viability;

2.2.10 determine buffer distances as per the Species Environmental Assessment Guidelines used for the population of each SCC; and

2.2.11 discuss the presence or likelihood of additional SCC including threatened species not identified by the screening tool, Data Deficient or Near Threatened Species, as well as any undescribed species, or roosting and breeding or foraging areas used by migratory species where these species show significant congregations, occurring in the vicinity; and

2.2.12 identify any alternative development footprints within the preferred development site which would be of "low" or "medium" sensitivity as identified by the screening tool and verified through the site sensitivity verification.

2.3 The findings of the assessment must be written up in a **Terrestrial Animal Species Specialist Assessment Report**.

### **Terrestrial Animal Species Specialist Assessment Report**

3.1 This report must include as a minimum the following information:

3.1.1 contact details and relevant experience as well as the SACNASP registration number of the specialist preparing the assessment including a curriculum vitae;

3.1.2 a signed statement of independence by the specialist;

3.1.3 a statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment;

3.1.4 a description of the methodology used to undertake the site sensitivity verification and impact assessment and site inspection, including equipment and modelling used where relevant;

3.1.5 a description of the mean density of observations/number of samples sites per unit area of site inspection observations;

3.1.6 a description of the assumptions made and any uncertainties or gaps in knowledge or data;

3.1.7 details of all SCC found or suspected to occur on site, ensuring sensitive species are appropriately reported;

3.1.8 the online database name, hyperlink and record accession numbers for disseminated evidence of SCC found within the study area;

3.1.9 the location of areas not suitable for development and to be avoided during construction where relevant;

3.1.10 a discussion on the cumulative impacts;

3.1.11 impact management actions and impact management outcomes proposed by the specialist for inclusion in the Environmental Management Programme (EMPr);

3.1.12 a reasoned opinion, based on the findings of the specialist assessment, regarding the acceptability or not, of the development related to the specific theme considered, and if the development should receive approval or not, related to the specific theme being considered, and any conditions to which the opinion is subjected if relevant; and



3.1.13 a motivation must be provided if there were any development footprints identified as per paragraph 2.2.12 above that were identified as having “low” or “medium” terrestrial animal species sensitivity and were not considered appropriate.

3.2 A signed copy of the assessment must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.

# INTRODUCTION

## Site location

The site, which is Erf 220/209, is within Aalwyndal in Mossel Bay, slightly west (inland) of Diaz Strand. Refer to Figure 1 below for the general location.

The property is one of the rural properties that forms part of Aalwyndal, close to the Mossel Bay Airport. It is accessed from the Hartenbos off-ramp from the N2 National road. The road, Klipheuwel Way, forms the northern and eastern boundaries of the site. A driveway of a neighbouring property forms the western boundary. A property boundary forms the southern boundary.

valleys that runs from east to west through the existing suburbs of Still Bay. Surrounding areas are mostly similar rural plots consisting mostly of natural vegetation and existing homesteads. The current site has no existing infrastructure and is mostly in a natural state (Figure 2).

The scope of this report is the part of the property that is proposed for development. The entire site is 5.16 ha of which most is proposed for development - an area of 0.95 ha is indicated on the plan as being retained as "natural vegetation".



**Figure 1: Location of the site.**



**Figure 2: Aerial image of the site and surrounding areas.**

## Identified Theme Sensitivities

A sensitivity screening report from the DEA Online Screening Tool was requested in the application category: Transformation of land | Indigenous vegetation. The DEA Screening Tool report for the area, dated 02/11/2021, indicates the following sensitivities (see Figure 3):

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Animal Species Theme		X		

### **Animal Species theme**

Sensitivity features are indicated as follows:

Sensitivity	Feature(s)
High	Aves-Circus ranivorus
High	Aves-Circus maurus
High	Aves-Neotis denhami
High	Aves-Polemaetus bellicosus
Medium	Aves-Bradypterus sylvaticus
Medium	Aves-Afrotis afra
Medium	Insecta-Lepidochrysops littoralis
Medium	Sensitive species 5
Medium	Sensitive species 8
Medium	Invertebrate-Aneuryphymus montanus



Figure 3: Map of relative animal species theme sensitivity.

# ASSESSMENT METHODOLOGY

The detailed methodology followed as well as the sources of data and information used as part of this assessment is described below.

## Project Area of Influence (PAOI)

The proposal is to develop the site for residential purposes. This will include various housing types and a small commercial portion (see Figure 4 for preferred layout and Figure 5 for an alternative layout). Anticipated impacts will mostly occur during the construction phase. These impacts are not expected to extend significantly beyond the boundaries of the study area, except for possible edge effects. The PAOI is therefore treated here as the development footprint within which direct impacts will occur (Figures 4).

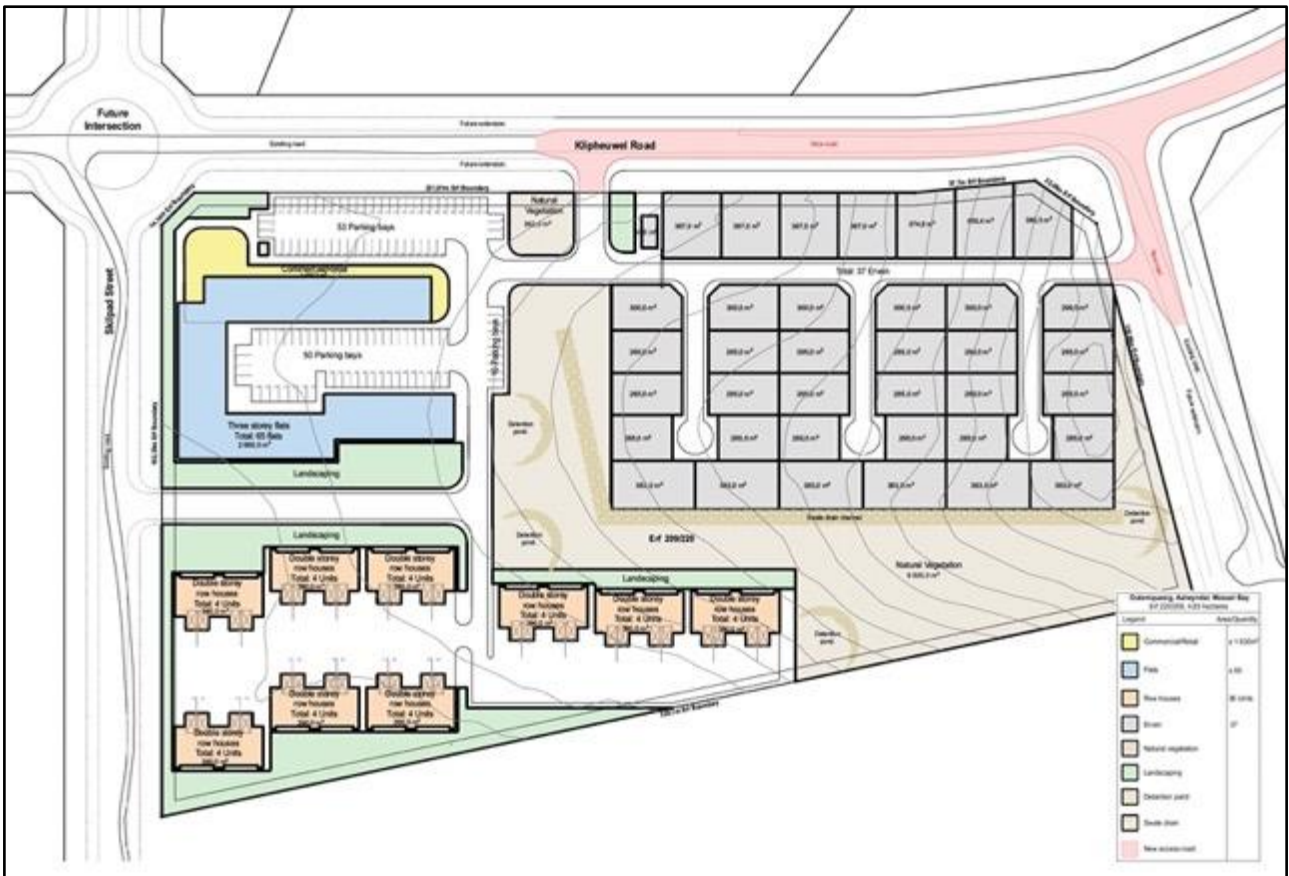


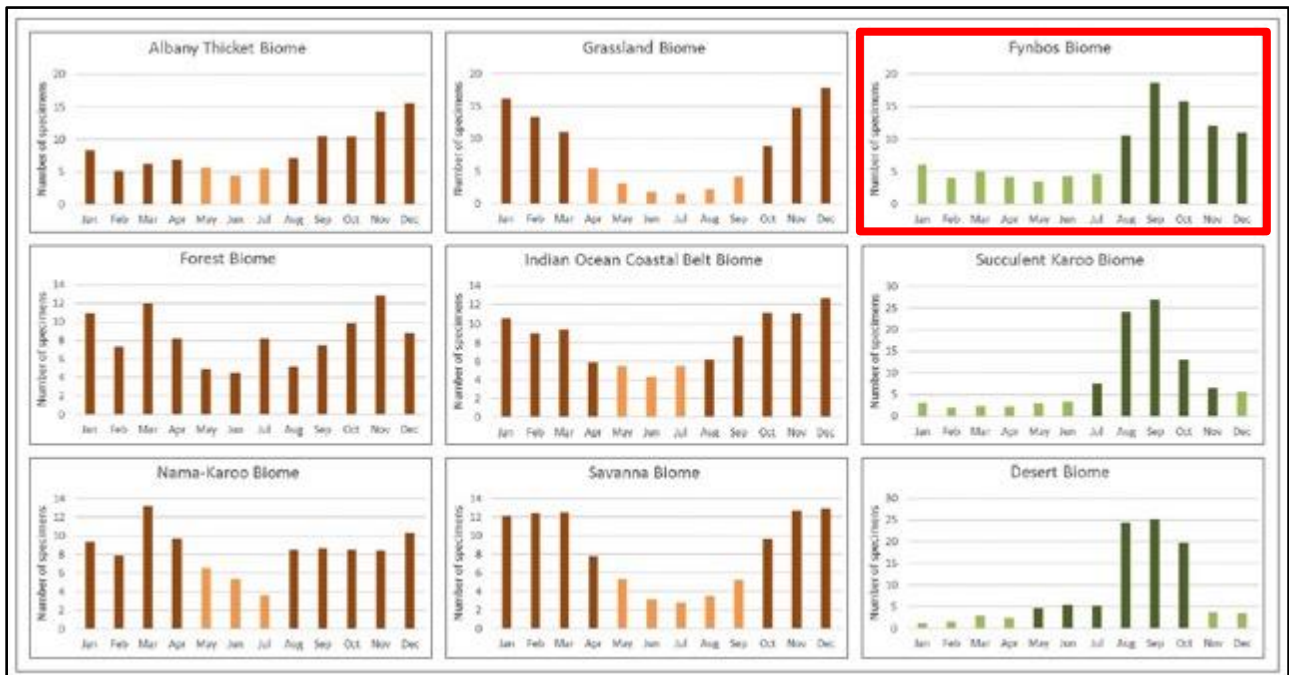
Figure 4: Proposed development on site.



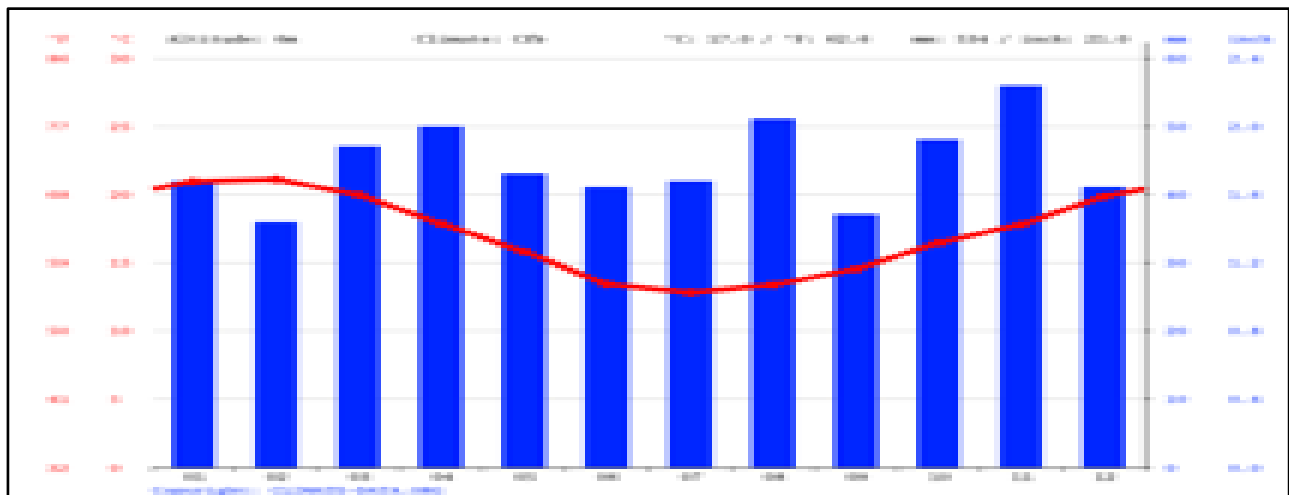
Figure 5: Original (alternative) layout for development on site.

# Survey timing

The study commenced as a desktop-study followed by site-specific field study on 26 February 2022 and 25 February 2023. The site is within the Fynbos Biome with an all-year rainfall season with a slight dip in early winter (Figure 6). A more accurate indication of rainfall seasonality, which drives most ecological processes, is shown in Figure 7, which shows that Mossel Bay has peak rainfall from August to November, with another smaller peak in March to April. The timing of the survey in February is therefore suitable in terms of assessing the flora and vegetation of the site. The overall condition of the vegetation was possible to be determined with a high degree of confidence.



**Figure 6: Recommended survey periods for different biomes (Species Environmental Assessment Guidelines). The site is within the Fynbos Biome.**



**Figure 7: Climate diagram showing average monthly rainfall and temperature for Mossel Bay.**

## Field survey approach

The study commenced as a desktop-study followed by a site-specific field study. During the field survey of habitats on site, the entire site was assessed on foot. Field surveys included both meander searches of general areas, and active searching in habitats that were considered to be suitable for specific groups or species. Meander surveys were undertaken with no time restrictions - the objective was to comprehensively examine all natural areas. A hand-held Garmin GPSMap 64s was used to record a track within which observations were made (Figure 8). Digital photographs were taken of features and habitats on site, as well as of any animal species that were seen. Any animal species recorded were uploaded to the iNaturalist website (<https://www.inaturalist.org>) and are accessible by viewing the observations for the site (use the Explore menu, zoom and pan until the desired study area is within the browser window, click the button "Redo search in map", and all observations for that area will be shown and listed).

Aerial imagery from Google Earth was used to identify and assess habitats on site. This included historical imagery that may show information not visible in any single dated image. Patterns identified from satellite imagery were verified on the ground. Digital photographs were taken at locations where features of interest were observed. During the field survey, particular attention was paid to ensuring that all habitat variability was covered physically on the ground.



**Figure 8: GPS track log of areas walked in the course of undertaking this assessment.**



## Sources of information

### **Fauna**

- Lists of animal species that have a geographical range that includes the study area were obtained from literature sources (Bates et al., 2014 for reptiles, du Preez & Carruthers 2009 for frogs, Mills & Hes 1997 and Friedmann and Daly, 2004 for mammals). This was supplemented with information from the Animal Demography Unit website ([adu.uct.ac.za](http://adu.uct.ac.za)) and literature searches for specific animals, where necessary.
- Appendix 2 is a summary (for the QDS3422AA) of amphibians, mammals and reptiles that may occur on the study site.

## Limitations

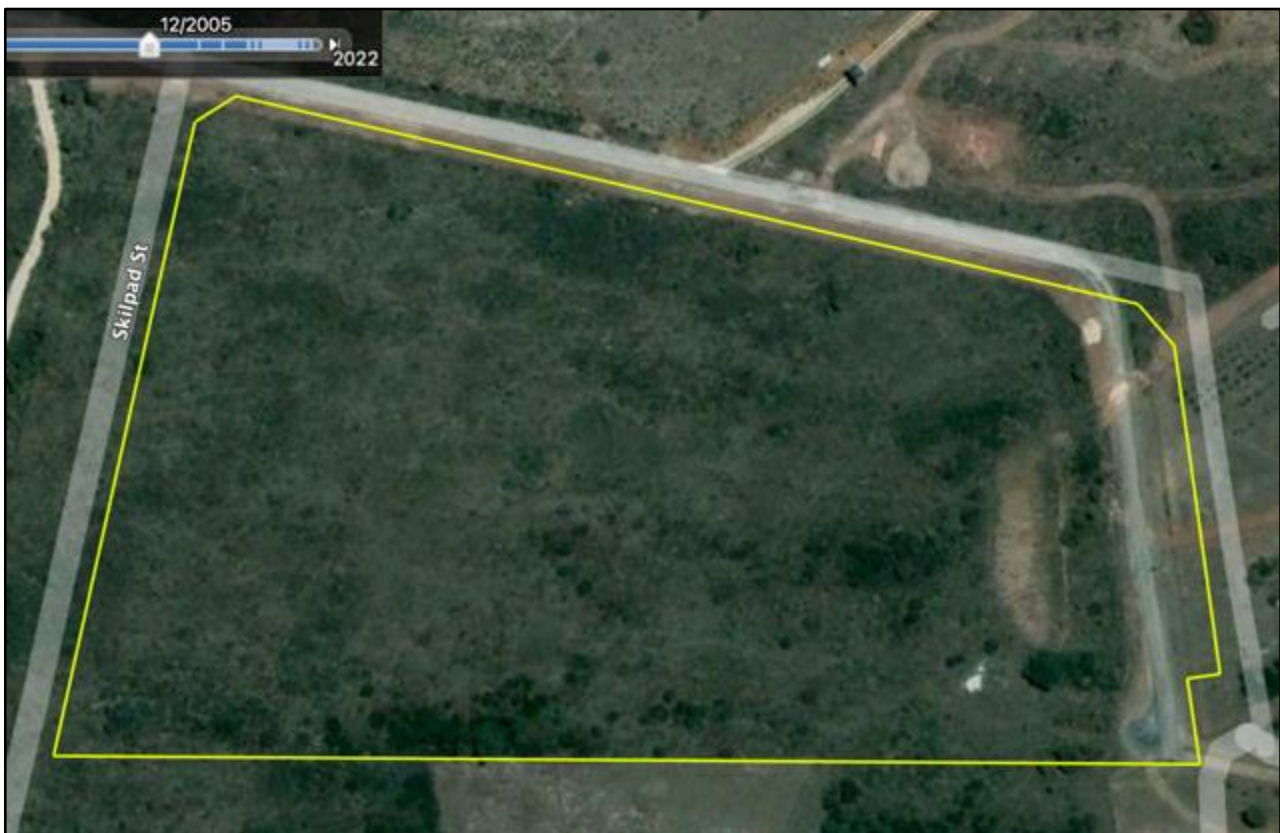
The following assumptions, limitations, uncertainties are listed regarding the assessment of the site:

- The assessment is based on two detailed site visits. The current study is based on extensive site visits as well as a desktop study of the available information. The time spent on site was adequate for understanding general patterns across affected areas.
- Compiling the list of species that could potentially occur on site is limited by the paucity of collection records for the area. The list of animal species that could potentially occur on site was therefore taken from a wider area and from literature sources that may include species that do not occur on site and may miss species that do occur on site. In order to compile a comprehensive site-specific list of the biota on site, studies would be required that would include different seasons, be undertaken over a number of years and include extensive sampling. Due to legislated time constraints for environmental authorisation processes, this is not possible.
- Rare and threatened animal species are, by their nature, usually very difficult to locate and can be easily missed.

# OUTCOME OF THE ASSESSMENT

## Historical disturbance on site

Historical aerial photographs (1939, 1963, 1974, 2003, 2006), as well as several aerial images on Google Earth (see Figure 9, for example), show that the property has always been in a natural state, with no soil disturbance from ploughing. These patterns are consistent with the vegetation patterns found on site, as determined from the site visit.



**Figure 9: Historical aerial image of the property, dated December 2005.**

## Natural habitats on site

Based on two detailed field surveys to verify conditions on site, it was determined that the site consists of a single vegetation community, namely Fynbos, with a small amount of disturbance around the edge. There is some woody encroachment that has taken place in recent years, otherwise this pattern has been stable for nearly 100 years. A general habitat map is shown for the entire property in Figure 10. For the Animal Species assessment, it provides habitats in which sensitive species could potentially occur.

### **Fynbos**

The general fynbos on site has uniform structure over most of the area, consisting of *Erica peltata*, *Erica discolor* and *Dicerotheramnus rhinocerotis* growing to a height of approximately 1 m tall. The initial impression is of relatively low local species richness, but there is a diversity of microhabitats, including local areas with ground-level rock outcrops, that contains a relatively high overall species richness. Any localised area where there has been vegetation pruning also yields high local richness.

Parts of the site are dominated by woody shrubs / small trees. It appears from historical aerial photographs that these areas are naturally more woody and may form part of the ecotone to thicket in the nearby valley system.

Although indicated as "Degraded areas" in the habitat map, these areas are mostly where vegetation has been cut to near ground level, or has been trampled. The original species composition is usually present in these areas.



**Figure 10: Map of habitats on site.**

## Animal species flagged for the study area

According to the National Web-Based Environmental Screening Tool (DFFE), a small number of animal species have been flagged as of concern for the current project (see previous section of this report). These are all species that require specific habitat conditions to inhabit the site.

### ***Circus ranivorus* (African marsh harrier)**

Endangered

This site was flagged as having **High sensitivity** potential for this species. Widespread but sparsely distributed throughout central, eastern and southern Africa, only absent from areas of lower rainfall (<300 mm p.a.). It is dependent on permanent wetlands for breeding, feeding and roosting. The main threat to this species is loss and degradation of wetlands. It also hunts over drier floodplains, grasslands, croplands, and Fynbos, where it preys mainly on small rodents, as well as birds, reptiles, frogs and insects.

There are no (suitable) wetlands on site. The proposed development is located well away from these habitats. The species is unlikely to occur on site and the proposed project will have little effect on it.

### ***Circus maurus* (Black harrier)**

Endangered

This site was flagged as having **High sensitivity** potential for this species. This is a rare endemic raptor with its main distribution centred on the fynbos and karoo inland of that. Black Harriers breed in the montane fynbos, renosterveld and strandveld habitats of the Western Cape and many individuals disperse into the karoo and grassland habitats during the autumn and winter months. This species prefers coastal and mountain fynbos, highland grasslands, Karoo sub-desert scrub and open plains with low shrubs and croplands. Harriers breed close to coastal and upland marshes, damp sites, near vleis or streams with tall shrubs or reeds. South-facing slopes are preferred in mountain areas where temperatures are cooler and vegetation is taller.

The species has been observed numerous times within 10 km of the site, but mostly inland (towards the Outeniqua Mountains). However, these observations have been almost entirely within areas that are broadly still in a natural state, for example between Herbetsdale and Brandwacht, and not in areas where significant cultivation and urbanisation has occurred. Although the habitat on site broadly corresponds with the suitable habitat for the species, it has not been recently observed anywhere in proximity to the site, is unlikely to occur on site, and the proposed project will have little effect on it.

### ***Neotis denhami* (Denham's Bustard)**

Vulnerable

This site was flagged as having **High sensitivity** potential for this species. It has a wide but fragmented Afrotropical range. It occurs widely but sparsely over much of the mesic eastern half of South Africa. In the Western Cape, it can be locally numerous in mosaics of cultivated pastures, agricultural croplands and natural vegetation with seasonal differences in the use of each habitat (Taylor et al. 2015).

It has been recorded several times in the general Garden Route area, including inland of Mossel Bay, but mostly in open landscapes with agricultural fields, not close to urban areas. Based on recent observations of the species and the general properties of the site, it is considered unlikely that it occurs there.

### ***Polemaetus bellicosus* (Martial Eagle)**

Endangered

This site was flagged as having **High sensitivity** potential for this species. The Martial Eagle is found throughout sub-Saharan Africa, only being absent from the lowland forests of West Africa (Ferguson-Lees and Christie 2001). With the exception of Lesotho, the species is widespread in the region but is

more commonly encountered in protected areas such as in the Lowveld and Kalahari (Barnes 2000). Martial Eagles still require an exceptionally large home range, in excess of 130 km<sup>2</sup> (Brown et al. 1982). Densities in areas stocked with indigenous game are higher than in areas supporting only domestic stock, and the species is virtually absent from cultivated areas (Machange et al. 2005). Martial Eagles occur in a variety of habitats but seem to prefer arid and mesic savannah but are also commonly found at forest edges and in open shrubland (Simmons 2005). Birds will occupy most habitats provided there are adequate tall trees or pylons for nesting and perching (Machange et al. 2005). It rarely occurs in mountainous areas. It is known to nest on human-made structures, such as pylons and wind-pumps, and in alien trees (Tarboton and Allan 1984).

Little suitable habitat occurs on site, especially possible nesting sites, although it has been recently observed several times in the general Mossel Bay area (from Gouritz to Friemersheim). Assuming that it occurs in the general area, the site constitutes a very small part of the overall range of any individual or breeding pair (if they occur nearby). The proposed project would have little effect on them - even loss of all habitat on site would be unlikely to affect the species, given the large ranges of individuals.

### ***Bradypterus sylvaticus* (Knysna warbler)**

Vulnerable

This site was flagged as having **Medium sensitivity** potential for this species. Has a restricted and fragmented distribution in four areas of Eastern and Western Cape. One sub-population occurs in the Garden Route between Tsitsikamma and Stilbaai. It occurs along the edges of Afrotemperate forests and in thick, tangled vegetation along the banks of watercourses or drainage lines in forest patches in the Fynbos Biome (Taylor et al. 2015). Population decline is attributed to clearance of habitat for developments, agriculture and silviculture, leading to a decrease in the amount of available habitat, as well as the quality (Taylor et al. 2015).

No suitable habitat occurs on site. The proposed project will therefore have no effect on them.

### ***Afrotis afra* (Southern Black Bustard)**

Vulnerable

This species is endemic to southwestern South Africa, where it occurs in Northern Cape, Western Cape and Eastern Cape provinces from Little Namaqualand south to Cape Town and then east to Grahamstown.

The species is restricted to the non-grassy, winter rainfall or mixed winter-summer rainfall fynbos and succulent Karoo biomes, and the extreme south of the Nama-Karoo biome, in a narrow strip along the southern and western coastlines of South Africa (Hofmeyr 2012). It also occurs in semi-arid scrub and dunes with succulent vegetation, and extends into renosterveld scrub and semi-arid karoo (del Hoyo et al. 1996, Hockey et al. 2005). It occurs occasionally in cultivated fields with nearby cover (Hockey et al. 2005). The diet consists of insects, small reptiles and plant material, including seeds and green shoots (Hockey et al. 2005).

In terms of the Animal Theme sensitivity, this species is flagged as **Medium sensitivity** for the site. It has been recorded in any nearby areas and could occur in the type of habitats found on site, but probably only as a foraging vagrant. The site is however very small and not considered to be critical habitat for the species.

### ***Lepidochrysops littoralis* (Coastal Blue Butterfly)**

Endangered

This species is endemic to the Western Cape Province in South Africa, occurring from the De Hoop Nature Reserve near Bredasdorp in the west to a few kilometres west of Mossel Bay in the east. It is found in rocky limestone ridges or sand dunes in coastal fynbos. It is usually found quite close to the sea-shore. It is known to occur in the Pauline Bohne Nature Reserve and surrounding areas. No suitable habitat occurs on site and the species is unlikely to occur there. In terms of the Animal Theme sensitivity, this species is flagged as **Medium sensitivity** for the site. The species was not found on site

during the site inspection and the presence is confirmed to be unlikely. The site therefore has **low sensitivity** with respect to this species.

### ***Sensitive species 5 (predator)***

Vulnerable

Found mostly in grasslands and deserts, it is unlikely to occur outside of conservation areas unless deliberately introduced. It will therefore not occur on site. The site is also a fraction of the size of the required range for this species. The proposed project will therefore have no effect on them.

### ***Sensitive species 8 (small antelope)***

Vulnerable

Found in a variety of forested and wooded habitats, including primary and secondary forests, gallery forests, dry forest patches, coastal scrub, farmland and regenerating forest (Venter et al. 2016). Within South Africa, they occur mainly within scarp and coastal forests, thickets or dense coastal bush (Skinner & Chimimba 2005), although they can occupy modified habitats. They frequent forest glades and open areas but need dense underbrush to rest or take cover. They are selective foragers which mainly feed on fruit, dicots and a small percentage of monocots (Venter et al. 2016). It is diurnal, but secretive and cautious. Home ranges are about 0.4 - 0.8 ha. Populations are declining due to loss of habitat, as well as hunting and poaching. In the Tsitsikamma National Park, animal numbers are lower than in other parts of its range, attributed to low frequency of occurrence of tree species palatable to the animal, which results in low food availability (Hanekom & Wilson 1991).

There are several records of the species in areas around George, and one from near Groot Brakrivier, all within thicket or forest areas. No suitable habitat occurs on site. The proposed project will therefore have no effect on them.

### ***Aneuryphymus montanus (Yellow-winged Agile Grasshopper)***

Vulnerable B2ab(iii,v)

Only known from six localities in the Cape region (Brown 1960). The species is associated almost exclusively with fynbos vegetation, although extending geographically towards East London, where it has been collected "amongst partly burnt stands of evergreen sclerophyll in rocky foothills" (Brown 1960). It prefers south-facing cool slopes (Kinvig 2005). It is a medium-sized, robust, active geophilous insect which readily flies off when disturbed and is easily distinguished in flight by the pale lemon base of the hind wing (Brown 1960).

Published descriptions suggest that it is not often seen but, when observed, occurs in obvious numbers. No grasshoppers were seen on site that matched the description of this species. If it occurred in the area it would be found within fynbos, which does occur on site. There is, however, no evidence to indicate that it would occur on site.

**It is therefore verified that the Animal Species Theme has LOW sensitivity for the site.**

# SITE ECOLOGICAL IMPORTANCE

The Species Environmental Assessment Guidelines require that a Site Ecological Importance (SEI) is calculated for each habitat on site, and provides methodology for making this calculation. The SEI is assessed separately for each biodiversity theme and is assessed below specifically for the Terrestrial Animal Species theme.

As per the Species Environmental Assessment Guidelines, Site Ecological Importance (SEI) is calculated as a function of the Biodiversity Importance (BI) of the receptor and its resilience to impacts ( $SEI = BI + RR$ ). The Biodiversity Importance (BI) in turn is a function of Conservation Importance (CI) and Functional Integrity (FI), i.e.  $BI = CI + FI$ .

An assessment of habitats on site is provided below (Table 3) specifically for the Animal Species Theme.

Table 3: Site ecological importance for habitats found on site

Habitat	Conservation importance	Functional integrity	Receptor resilience	Site Ecological Importance (BI)
Fynbos	Low No confirmed or highly likely populations of SCC.	Medium From animal species perspective: Medium (> 5 ha but < 20 ha) semi-intact area for any conservation status of ecosystem type. Only narrow corridors of good habitat connectivity or larger areas of poor habitat connectivity and a busy used road network between intact habitat patches.	Low Habitat that is unlikely to be able to recover fully after a relatively long period: > 15 years required to restore ~ less than 50% of the original species composition and functionality of the receptor functionality, or species that have a low likelihood of remaining at a site even when a disturbance or impact is occurring, or species that have a low likelihood of returning to a site once the disturbance or impact has been removed.	Medium (BI = Low)

Guidelines for development activities within different importance levels are given in the Table below (Table 4).

Table 42: Guidelines for interpreting SEI in the context of the proposed development activities

Site ecological importance	Interpretation in relation to proposed development activities
Very high	Avoidance mitigation – no destructive development activities should be considered. Offset mitigation not acceptable/ not possible (i.e. last remaining populations of species, last remaining good condition patches of ecosystems/ unique species assemblages). Destructive impacts for species/ecosystems where persistence target remains.
High	Avoidance mitigation wherever possible. Minimisation mitigation – changes to project infrastructure design to limit the amount of habitat impacted; limited development activities of low impact acceptable. Offset mitigation may be required for high impact activities.
Medium	Minimisation and restoration mitigation – development activities of medium impact acceptable followed by appropriate restoration activities.
Low	Minimisation and restoration mitigation – development activities of medium to high impact acceptable followed by appropriate restoration activities
Very low	Minimisation mitigation – development activities of medium to high impact acceptable and restoration activities may not be required.



## Summary of site sensitivity

The entire site has Medium Site Ecological Importance (Figure 11) for the Terrestrial Animal Species Theme.



Figure 11: Animal species theme Site Ecological Importance for the site.

# CONCLUSION

Desktop information, field data collection and mapping from aerial imagery provides the following verifications of patterns for various themes:

1. Most of the site consists of natural fynbos areas. These are partially connected to neighbouring areas, but mostly across existing road networks, except towards the south where there is partial connectivity towards a minor valley system in which thicket vegetation occurs.
2. The site is not considered to be suitable or critical habitat for any of the animal species flagged for the site. Fynbos is potential foraging habitat for some species, but the site constitutes a very small relative area, in terms of foraging requirements for any species that may occur within this habitat type in this geographical area.
3. The proposed development is unlikely to affect any of the species flagged for the site. The development is therefore supported.

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