

TERRESTRIAL ANIMAL COMPLIANCE STATEMENTS FOR THE PROPOSED SECOND PHASE OF THE DARLING HOUSING DEVELOPMENT, DARLING, WESTERN CAPE PROVINCE

DRAFT REPORT



2026

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TERRESTRIAL ANIMAL COMPLIANCE STATEMENTS FOR THE PROPOSED SECOND PHASE OF THE DARLING HOUSING DEVELOPMENT, DARLING, WESTERN CAPE PROVINCE. DRAFT REPORT.

2026

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Citation: De Villiers FA & Swart C. 2026. Terrestrial animal compliance statements for the proposed second phase of the Darling housing development, Darling, Western Cape Province. Draft Report. Report no. 2337/1 prepared by Anchor Environmental Consultants (Pty) Ltd for CK Rumboll and Partners (Pty) Ltd. 38 pp.+ Appendices.

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DOCUMENT GUIDE

Terrestrial Animal Compliance Statements are being prepared for the proposed second phase of the Darling housing development. An Animal Species Compliance Statement must be conducted and the reports prepared in accordance with the “*Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Animal Species*”, as set out in GN 1150 of GG 43855 (30 October 2020, as amended).

This protocol has been published in terms of Section 24(5)(a) and (h) of the National Environmental Management Act (NEMA; Act 107 of 2008), and the Environmental Impact Assessment (EIA) Regulations of 2014 with the purpose of providing minimum information requirements for animal compliance statements within EIAs.

The gazetted requirements have been tabulated below and indicates the Section or Appendix number in which the specific content has been included. This “checklist” is intended to provide readers both with an easy directory to navigate their way through this document, while also indicating this report’s compliance with the protocols.

Table 1. Protocol For the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Animal Species as set out in GN 1150 of GG 43855 (2020, as amended).

No.	Protocols for Terrestrial Animal Species	Section of the reports/ Notes
5.1	The compliance statement must be prepared by a SACNASP registered specialist under one of the two fields of practice (Zoological Science or Ecological Science).	APPENDIX B
5.2	The compliance statement must:	
5.2.1	be applicable to the study area;	Section 1.1
5.2.2	confirm that the study area, is of “low” sensitivity for terrestrial animal species; and	Section 1.2.2
5.2.3	indicate whether or not the proposed development will have any impact on SCC.	Section 6
5.3	The compliance statement¹⁴ must contain, as a minimum, the following information:	
5.3.1	contact details and relevant experience as well as the SACNASP registration number of the specialist preparing the compliance statement including a curriculum vitae;	APPENDIX B
5.3.2	a signed statement of independence by the specialist;	Page x
5.3.3	a statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment;	Section 3.2
5.3.4	a description of the methodology used to undertake the site survey and prepare the compliance statement, including equipment and modelling used where relevant;	Section 3
5.3.5	the mean density of observations/ number of samples sites per unit area	Section 4
5.3.6	where required, proposed impact management actions and outcomes or any monitoring requirements for inclusion in the EMPr;	Section 5
5.3.7	a description of the assumptions made and any uncertainties or gaps in knowledge or data; and	Section 1.4
5.3.8	any conditions to which the compliance statement is subjected.	Section 1.4

No.	Protocols for Terrestrial Animal Species	Section of the reports/ Notes
6	A signed copy of the Terrestrial Animal Species Compliance Statement must be appended to the Basic Assessment Report or the Environmental Impact Assessment Report.	Noted

EXECUTIVE SUMMARY

Introduction

Anchor Environmental Consultants (Pty) Ltd was appointed by CK Rumboll and Partners to undertake a Terrestrial Animal Species Compliance Statement for the second phase of the proposed Darling housing development in the Western Cape, South Africa. The proposed development would entail the clearing of approximately 11 hectares of Swartland Granite Renosterveld. The assessment evaluated the current condition of terrestrial animal species within the study site, taking into account both the immediate site characteristics and the broader landscape context. The study aimed to assess the suitability of available habitat for terrestrial fauna, identify sensitive ecological receptors, and evaluate the potential vulnerability of these receptors to the proposed development. Where relevant, conservation-significant habitats and faunal features were considered, and appropriate mitigation and management measures were formulated for inclusion in the project's Environmental Management Programme (EMPr).

The scope of the assessment was guided by the legislative framework established under the National Environmental Management Act (NEMA; Act 107 of 1998), including the use of the Department of Forestry, Fisheries and the Environment's National Web-Based Environmental Screening Tool. The Screening Tool initially classified the terrestrial animal species theme for the proposed development area as having a "Medium" sensitivity, triggering the requirement for further verification by a suitably qualified specialist. This classification was primarily attributed to the potential occurrence of two invertebrate Species of Conservation Concern (SCC), namely the West Coast Flightless Dung Beetle and Bladder Grasshopper, based on historical distribution records. A site sensitivity verification was therefore undertaken, incorporating both desktop analysis and a field survey, to confirm the applicability of the Screening Tool outcome. Field verification and habitat assessment indicated that the study area does not provide suitable habitat for the species identified by the Screening Tool as sensitivity triggers. The preferred habitat requirements of the West Coast Flightless Dung Beetle were absent from the site, and the species is considered possibly extinct in the broader area. Similarly, the host plant required by the Bladder Grasshopper was not recorded during the field survey, rendering its presence unlikely. The site was found to be highly degraded, with evidence of frequent fires, illegal dumping, and sewage discharge from damaged infrastructure. Faunal diversity was correspondingly low, with observations largely restricted to disturbance-tolerant species. Based on these findings, the initial Medium sensitivity rating was considered an overestimation, and the terrestrial animal species sensitivity for the site was revised to Low. Consequently, the animal species theme was appropriately addressed through a Compliance Statement rather than a full Specialist Assessment.

The study focused on terrestrial fauna, including mammals, birds, reptiles, amphibians, and invertebrate SCC, and was conducted in accordance with relevant national protocols and guidelines for biodiversity assessment. The assessment incorporated a review of available literature and databases and a targeted field survey to confirm species presence. Mitigation and management recommendations were developed to ensure that potential impacts on terrestrial fauna are appropriately managed and incorporated into project planning and implementation.

The assessment was subject to several assumptions and limitations inherent to ecological studies. Firstly, the Compliance Statement was limited to the defined project footprint, although the surrounding landscape was considered during desktop analysis. In addition, as with all biodiversity surveys, not all species present may have been detected, particularly those with

cryptic behaviour or seasonal activity patterns. Furthermore, fieldwork was undertaken during the summer period, which is generally suitable for faunal surveys due to increased animal activity, and the integration of field observations with desktop data and expert knowledge was considered sufficient for the objectives of this assessment. Lastly, trapping effort was limited due to site conditions, security concerns, and sparse vegetation cover. However, these constraints are not expected to have materially affected the overall conclusions of the study.

Regulatory Framework

This assessment is informed by the applicable national and provincial legislative and policy framework governing environmental management and biodiversity conservation in South Africa. The Constitution of the Republic of South Africa (1996) provides the overarching legal basis, guaranteeing the right to an environment that is not harmful to health and well-being and mandating the protection of environmental resources for present and future generations. All environmental legislation and decision-making processes relevant to this project are aligned with these constitutional principles.

At a national level, the NEMA establishes the fundamental principles for cooperative environmental governance and introduces a statutory duty of care to prevent and remediate environmental degradation. In terms of NEMA and the associated Environmental Impact Assessment (EIA) Regulations (2014), activities that may have a significant effect on the environment must be identified, assessed, and authorised prior to implementation. The EIA Regulations, together with the associated Listing Notices, prescribe the framework for environmental authorisation processes and set minimum requirements for specialist assessments and EMPs.

The protection and management of ecologically sensitive and conservation-worthy areas are further regulated through the National Environmental Management: Protected Areas Act (NEMPAA; Act 57 of 2003). This legislation provides for the declaration and management of protected areas, including national parks, nature reserves, protected environments, and heritage sites, and assigns their management to designated authorities such as South African National Parks. The Act requires that protected areas be managed in accordance with approved management plans, which guide land-use decision-making and conservation objectives.

Biodiversity conservation at the species and ecosystem level is regulated through the National Environmental Management: Biodiversity Act (NEMBA; Act 10 of 2004). This Act provides for the protection of threatened ecosystems and species, the sustainable use of indigenous biological resources, and the equitable sharing of benefits derived from such use. It also establishes mechanisms for biodiversity planning and assessment, including the use of national biodiversity assessments and the International Union for Conservation of Nature (IUCN) Red List criteria, and defines the role of the South African National Biodiversity Institute (SANBI). NEMBA further regulates alien and invasive species through a duty-of-care framework and the associated Alien and Invasive Species Regulations (2020), requiring landowners to control listed invasive species and, where applicable, to develop and implement Alien and Invasive Species Management Plans. In addition, the Threatened or Protected Species Regulations (2015) restrict activities involving listed species unless authorised through permitting.

Spatial planning and land-use decision-making are governed by the Spatial Planning and Land Use Management Act (SPLUMA; Act 16 of 2013), which provides a coherent national framework for planning approvals and land-use management. SPLUMA establishes principles to ensure that

development is spatially just, environmentally sustainable, and aligned with applicable national and provincial legislation and policies.

At a provincial level, biodiversity conservation in the Western Cape is guided by the Western Cape Biodiversity Act (Act 6 of 2021), which provides a comprehensive framework for the protection, management, and sustainable use of biodiversity within the province. The Act mandates the use of the Western Cape Biodiversity Spatial Plan (BSP) as a key decision-support tool in land-use planning and regulatory processes and integrates biodiversity considerations into provincial and municipal planning. The BSP plays a central role in identifying priority biodiversity areas, informing stewardship initiatives, guiding protected area expansion, and supporting biodiversity offset decision-making.

Land-use planning in the province is further regulated by the Western Cape Land Use Planning Act (Act 3 of 2014), which consolidates planning legislation and establishes requirements for spatial development frameworks and development management. This Act emphasises alignment with provincial and municipal planning instruments and requires that ecological infrastructure, biodiversity conservation priorities, and environmental risk considerations be integrated into spatial planning and development decision-making processes.

South Africa's commitments under international agreements, particularly the Convention on Biological Diversity (1992), further inform national conservation objectives. As a signatory, South Africa is obligated to promote biodiversity conservation, sustainable resource use, and the expansion of protected areas in line with international targets. These commitments are reflected in national conservation strategies and stewardship programmes aimed at increasing the extent and effectiveness of the conservation estate through partnerships with landowners.

Methods

The assessment comprised a combined desktop and field-based investigation to evaluate the terrestrial faunal sensitivity of the study site and its broader ecological context. The desktop component focused on identifying habitat types, vegetation classifications, ecologically important features, and the potential occurrence of SCC within the study area. Potential faunal SCC were identified through a review of biodiversity databases, including the Global Biodiversity Information Facility and iNaturalist, with conservation status verified against the IUCN Red List and the SANBI Red List of animal species. Species-specific habitat requirements were reviewed using taxonomic literature to refine their likelihood of occurrence within the study area. Spatial data layers, including national and provincial biodiversity datasets, were analysed and mapped using GIS software to contextualise the site relative to conservation priority areas and ecological features.

Field verification was undertaken through a single survey conducted between 10 and 12 December 2025 to confirm species presence and assess site condition. A range of complementary sampling methods was applied to document terrestrial faunal diversity, including active searches, stationary bird counts, sweep-netting for insects, pitfall trapping for ground-dwelling fauna, and Sherman trapping for small mammals. Active searches were conducted along systematic meander transects across the proposed development footprint, with all direct sightings and indirect evidence of fauna recorded. Avifaunal surveys were undertaken using fixed point counts, while invertebrate sampling was conducted concurrently using sweep nets. Trapping effort was limited and strategically positioned to minimise disturbance and risk of interference, with all vertebrates photographed and released at the point of capture. Invertebrate specimens were collected for laboratory-based identification.

The integration of desktop data, spatial analysis, and field observations provided a robust basis for evaluating faunal sensitivity, confirming the presence or likely absence of SCC, and assessing the ecological condition of the study site in relation to the proposed development.

Results

The study area is located within the Fynbos Biome and falls specifically within the Swartland Granite Renosterveld vegetation type. This ecosystem occurs on gently undulating plains and foot slopes and is characterised by a heterogeneous mosaic of grassland, herbland, and shrubland communities dominated by renosterbos. Due to its high agricultural potential, approximately 80% of this vegetation type has been irreversibly transformed at a regional scale. Consequently, Swartland Granite Renosterveld is classified as Endangered under the National Red List of Terrestrial Ecosystems, indicating a high level of historical habitat loss and fragmentation.

Spatial analysis using the Western Cape BSP indicates that the entire proposed development footprint is situated within a Critical Biodiversity Area (CBA 1: Terrestrial), with a CBA 1: Wetland located in close proximity. CBA 1 areas are required to remain in a natural or near-natural state to meet biodiversity conservation targets and maintain ecological processes and landscape connectivity. Although the broader area is classified as a biodiversity priority, the site itself is degraded and strongly influenced by historical and ongoing anthropogenic activities. The proposed development does not occur within, nor adjacent to, any designated Important Bird Areas, indicating that it does not directly affect landscapes of recognised importance for avifaunal conservation at a regional or national scale.

The desktop assessment identified numerous animal SCC with potential distributional overlap within the broader area. This includes the two invertebrate SCC identified by the National screening tool. SCC included those associated with wetlands, intact renosterveld, coastal systems, and relatively undisturbed terrestrial habitats. However, habitat requirement analyses indicated that most of these species are unlikely to occur within the study site due to the absence of suitable habitat features, such as permanent waterbodies and intact renosterveld, as well as the relatively high levels of human disturbance. The identification of these species for the area on national databases highlights the regional importance of the ecosystem in supporting them, rather than confirming their presence at site-level.

Field surveys recorded a total of 36 animal species across all taxa, with invertebrates being the most prevalent, dominating both species richness and abundance. Vertebrate diversity was low and comprised mainly common, disturbance-tolerant bird species, with amphibians, reptiles, and mammals each represented by a single species. Vertebrate species were predominantly classified as Least Concern, and two were identified as alien species. No SCC were recorded during the field assessment. The low faunal diversity and absence of sensitive or habitat-specialist species reflect the degraded ecological condition of the site and its limited capacity to support conservation-significant fauna.

Overall, while the study area occurs within a regionally important and threatened ecosystem and is spatially classified as a CBA, the site itself is ecologically compromised and supports a depauperate faunal assemblage dominated by generalist and disturbance tolerant species. These findings indicate that the ecological sensitivity of the site is driven primarily by its regional conservation context rather than its current on-site biodiversity value, and this distinction is critical for informing impact significance and the application of appropriate mitigation measures.

EMPr Mitigation Recommendations

Mitigation measures proposed to address potential ecological impacts associated with the development are guided by the mitigation hierarchy, a structured framework widely applied in environmental management. This hierarchy prioritises the avoidance of impacts wherever feasible, followed by impact minimisation, rehabilitation or restoration of affected areas, biodiversity offsetting, and, as a final measure, the consideration of a no-go alternative where residual impacts remain unacceptably high. Avoidance is regarded as the preferred mitigation option. However, in the context of this project, complete avoidance of habitat loss is not feasible due to the nature and spatial requirements of the proposed development. Where avoidance cannot be achieved, mitigation efforts are therefore focused on minimising impacts through careful design, construction controls, and operational management, with rehabilitation and offsetting considered only where residual impacts cannot be adequately mitigated.

The proposed development entails the clearing of approximately 11 hectares of Swartland Granite Renosterveld to facilitate the second phase of a low-cost housing development. Although this vegetation type is classified as Endangered at a regional scale, the portion of habitat within the development footprint is already degraded and subject to substantial anthropogenic influence. As a result, the site is unlikely to provide suitable habitat for SCC that may occur in the broader landscape. Field assessments confirmed that the area primarily supports common, disturbance-tolerant fauna, and no SCC were recorded. Nevertheless, given the ecological sensitivity of the broader region and the potential for direct and indirect impacts on fauna during both construction and operation, the implementation of precautionary mitigation measures remains necessary.

The construction phase is expected to pose the greatest ecological risk, primarily due to vegetation clearance, earthworks, increased human activity, and the use of heavy machinery. Mitigation during this phase focuses on restricting disturbance strictly to the approved development footprint, minimising the spatial extent of construction activities, and preventing unnecessary habitat degradation beyond the project area. Measures include environmental awareness training for all personnel, demarcation and enforcement of no-go areas, confinement of construction infrastructure to previously disturbed areas, and the implementation of controls to prevent pollution, fire risk, and accidental fauna mortality. Additional measures are aimed at reducing faunal disturbance, including the use of daylight-only construction activities, temporary barriers around excavations, pre-construction walk-throughs to identify and relocate fauna with limited mobility, and protocols for halting construction should vulnerable fauna be encountered. Waste management, vehicle maintenance, and invasive species management are also addressed to limit indirect ecological impacts.

During the operational phase, impacts on fauna are expected to be lower in intensity but more persistent over time, largely associated with increased human presence, lighting, waste generation, and potential habitat encroachment. Mitigation measures during this phase are therefore focused on preventing further habitat loss, reducing attractants for opportunistic wildlife, and managing ongoing ecological risks. These measures include prohibiting additional vegetation clearance, implementing effective waste management systems, restricting off-road vehicle use, controlling artificial lighting to prevent light spill into surrounding natural areas, and discouraging the feeding or handling of wildlife. The promotion of indigenous landscaping within the development and the implementation of an invasive alien species management plan are recommended to enhance local biodiversity and limit further ecological degradation. Ongoing awareness initiatives and clearly communicated faunal protection protocols are essential to ensure compliance by residents and operational personnel.

Overall, while the proposed development will result in the permanent loss of degraded natural habitat, the application of the mitigation hierarchy and the implementation of appropriate construction and operational controls are expected to limit ecological impacts to an acceptable level. The recommended measures are intended to ensure that residual impacts on fauna are minimised, managed responsibly, and aligned with applicable environmental legislation and best-practice guidelines.

Discussions and Conclusions

The proposed second-phase low-cost housing development is situated along the north-eastern boundary of Darling in the Western Cape Province. The development footprint occurs within the Swartland Granite Renosterveld vegetation type, which is classified as Endangered under the 2022 National Red List of Ecosystems. This status reflects extensive historical transformation, with approximately 80% of the original extent irreversibly lost, largely due to agricultural expansion and, to a lesser extent, urban development. As a result, remaining fragments of this ecosystem are of high conservation concern at a regional scale.

According to spatial data from the Western Cape BSP, the majority of the proposed development area overlaps with a CBA 1: Terrestrial. CBA 1 areas are formally recognised as essential for meeting biodiversity conservation targets and maintaining ecosystem functioning and ecological infrastructure and are therefore generally expected to remain in a natural or near-natural state. However, despite its formal CBA 1 classification, the ecological condition of the study site is highly degraded. The vegetation structure and species composition are inconsistent with intact Swartland Granite Renosterveld, largely due to repeated fire events that have substantially reduced the fynbos component and resulted in dominance by fire-tolerant grass species. Vegetation diversity across the site is low, and the area is further impacted by significant anthropogenic disturbances, including multiple locations where untreated sewage is discharged directly into the surrounding environment and widespread illegal dumping associated with adjacent informal settlements. Collectively, these pressures have resulted in a transformed landscape that no longer reflects the ecological characteristics or conservation value typically associated with a CBA 1 area.

Faunal surveys recorded a total of 36 animal species, of which invertebrates comprised the majority. Invertebrate diversity was low, mainly dominated by ants, with Hymenoptera accounting for the majority of species recorded. Such patterns are characteristic of disturbed environments, as invertebrate communities are sensitive indicators of habitat degradation. Vertebrate diversity was low and strongly dominated by avifauna, with mammals, reptiles, and amphibians each represented by a single species. Similarly, the vertebrate assemblage was dominated by disturbance-tolerant and urban-associated species, particularly seed-eating birds adapted to grass-dominated and peri-urban environments. Ground-dwelling vertebrates were recorded in very low abundance and diversity. Amongst these were one alien and two indigenous species known to tolerate anthropogenic disturbance. The faunal composition therefore reflects a simplified and degraded ecosystem with limited ecological complexity. No SCC were recorded during the field assessment.

Given the highly disturbed condition of the site, the absence of sensitive, range-restricted, or habitat-specialist species, and the dominance of generalist fauna, the proposed development is not expected to result in significant impacts on animal species at a local or regional scale. While SCC are known to occur within the broader region, their occurrence is more likely in less disturbed areas where remnant patches of intact natural vegetation persist. The limited size,

altered ecological condition, and ongoing anthropogenic pressures at the study site reduce its suitability for such species.

Based on the findings of the assessment, and considering the existing levels of disturbance, the extent of the proposed development footprint, and the limited potential for additional ecological impact, it is the specialist's opinion that the proposed second-phase low-cost housing development constitutes an acceptable and appropriate land use. No ecological constraints have been identified that would preclude the development from proceeding, provided that all recommended mitigation and environmental management measures are implemented in full.

DECLARATION OF INDEPENDENCE

Box 1: Declaration of Independence of Specialist

I, Francois André de Villiers hereby declare that I have no conflicts of interest related to the work of this assessment. Specifically, I declare that I have no personal financial interests in the property and/or development being assessed in this assessment, and that I have no personal or financial connections to the relevant property owners, developers, planners, financiers, or consultants of the development.



February 2026

Box 2: Declaration of Independence of Reviewer

I, Cheruscha Swart hereby declare that I have no conflicts of interest related to the work of this assessment.

Specifically, I declare that I have no personal financial interests in the property and/or development being assessed in this assessment, and that I have no personal or financial connections to the relevant property owners, developers, planners, financiers, or consultants of the development.



February 2026

TABLE OF CONTENTS

DOCUMENT GUIDE.....	I
EXECUTIVE SUMMARY	III
DECLARATION OF INDEPENDENCE	X
TABLE OF CONTENTS	XI
LIST OF FIGURES	XII
LIST OF TABLES	XIII
ABBREVIATIONS AND ACRONYMS	XIV
I INTRODUCTION.....	I
1.1 BRIEF PROJECT OVERVIEW	1
1.2 TERMS OF REFERENCE	2
1.2.1 Online Screening Tool.....	2
1.2.2 Confirmation of Theme Sensitivity	3
1.3 SCOPE OF WORK	3
1.4 ASSUMPTIONS AND LIMITATIONS	4
2 REGULATORY FRAMEWORK.....	5
2.1 RELEVANT NATIONAL LEGISLATION, POLICY, AND GUIDELINES.....	5
2.1.1 The Constitution of the Republic of South Africa, 1996.....	5
2.1.2 National Environmental Management Act (NEMA, Act 107 Of 1998)	5
2.1.3 National Environmental Management: Protected Areas Act (NEMPAA, Act 57 Of 2003).....	5
2.1.4 The National Environmental Management: Biodiversity Act (NEMBA, Act 10 Of 2004).	6
2.1.5 Spatial Planning And Land Use Management Act (SPLUMA; Act 16 Of 2013).....	7
2.2 RELEVANT PROVINCIAL LAW, GUIDELINES, AND POLICIES	7
2.2.1 Western Cape Biodiversity Act (Act 6 of 2021)	7
2.2.2 Western Cape Land Use Planning Act, 2015.....	8
3 METHODS.....	9
3.1 DESKTOP ASSESSMENT	9
3.2 FIELD ASSESSMENT	9
4 RESULTS	12
4.1 VEGETATION TYPE AND ECOSYSTEM THREAT STATUS	12
4.2 WESTERN CAPE BIODIVERSITY SPATIAL PLAN	13
4.3 IMPORTANT BIRD AREAS	15
4.4 SPECIES OF CONSERVATION CONCERN.....	15
4.5 FIELD RESULTS.....	28
5 EMPR MITIGATION RECOMMENDATIONS	30
5.1 MITIGATION FRAMEWORK AND CONTEXT.....	30
5.2 CONSTRUCTION PHASE.....	30
5.3 OPERATIONAL PHASE IMPACT.....	31
6 DISCUSSION AND CONCLUSIONS.....	33
7 REFERENCES.....	35
APPENDIX A — SCREENING TOOL REPORT	37
APPENDIX B — DETAILS AND EXPERTISE OF THE SPECIALISTS.....	38

LIST OF FIGURES

Figure 1.1 The location of the proposed housing development in Darling, Western Cape Province, South Africa.....	1
Figure 1.2. The proposed second phase of the Darling housing development has been assessed by the Screening Tool as having a “Medium” sensitivity in terms of terrestrial animal species.	2
Figure 3.1. Active searching meander and bird count survey locations. The day one active search is indicated by an orange line, the day two active search by a red line, and the bird count locations by yellow circles.....	10
Figure 3.2. The location of the Sherman(indicated by the aqua circles) and Pitfall traps (lime green circles) within the study site.	11
Figure 4.1. The Swartland Granite Renosterveld vegetation type present within the study area (SANBI (2006-2024) 2024).	12
Figure 4.2. Ecosystem threat status of the study site and surrounding areas. The study site is classified as being endangered (Skowno and Monyeki 2021).....	13
Figure 4.3. Spatial representation of designated biodiversity priority areas in relation to the proposed housing development. The proposed development footprint falls within a Critical Biodiversity Area 1 (CBA 1): Terrestrial (green shading) with CBA 1: Wetland in close proximity (blue shading) (CapeNature 2024).....	14
Figure 4.4. The proposed development footprint in relation to the regional IBAs (Barnes 1998).....	15
Figure 6.1. Raw sewage spilling directly into the surrounding environment.	33

LIST OF TABLES

Table 4.1. Summary of the Western Cape Biodiversity Spatial Plan priority categories as listed in CapeNature (2024).....	14
Table 4.2. Animal SCC potentially occurring within the proposed development area. Species highlighted by the DFFE screening tool is shown in bold. The table includes scientific and common names, national Red List status, IUCN Red List status and associated habitat requirements for each species. Red list categories are as follows: Least Concern (LC), Near Threatened (NT), Vulnerable (VU), Endangered (EN) and Critically Endangered (CR). Habitat information for mammals was sourced from Child et al. (2016), for birds (Aves) from Taylor et al. (2015), for reptiles Tolley et al. (2023), for amphibians Minter et al. (2004), and for invertebrates from(Henning et al. 2009; Picker et al. 2019).	16
Table 4.3. Number of animal species and individuals recorded during the field assessment, including the species richness and encounter rate (number of individuals and species per hectare) are also presented.....	28
Table 4.4. Invertebrate orders recorded during the field assessment, including the number of species encountered per order and number of individuals encountered per order.	28
Table 4.5. Vertebrate species recorded on-site during the field assessment, along with each species' scientific name, common name, number of individuals encountered, and its conservation status (as per the national SANBI Red List classification or global IUCN classification), or invasion status (under NEMBA), where applicable. Red list categories are as follows: EN = Endangered; NT=Near Threatened; LC = Least Concern. No conservation status was given if an animal could not be identified to species level.....	28

ABBREVIATIONS AND ACRONYMS

Anchor	Anchor Environmental Consultants
BMP	Biodiversity Management Plan
BSP	Biodiversity Spatial Plan
CBAs	Critical Biodiversity Areas
CBD	Convention on Biological Diversity, 1992
CKR	CK Rumboll and partners
CR	Critically Endangered
DFFE	Department of Forestry, Fisheries and the Environment
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EN	Endangered
ESAs	Ecological Support Areas
GBIF	Global Biodiversity Information Facility
IAS	Invasive Alien Species
IBAs	Important Bird Areas
IUCN	International Union for Conservation of Nature
KBAs	Key Biodiversity Areas
LC	Least Concern
MCAA	Mountain Catchment Areas Act
MLRA	Marine Living Resources Act
MPAs	Marine Protected Areas
NBA	National Biodiversity Assessment
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEMBA	Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NEMPAA:	National Environmental Management: Protected Areas Act (Act 57 of 2003)
NFA	National Forest Act
NFEPA	National Freshwater Ecosystem Priority Areas
NT	Near Threatened
ONAs	Other Natural Areas
PAs	Protected Areas
PES	Present Ecological State
RLEs	Red List of Terrestrial Ecosystems
SANBI	South African National Biodiversity Institute
SANParks	South African National Parks
SCC	Species of conservation concern
SPLUMA	Spatial Planning and Land Use Management Act (Act 16 of 2013)
STR	Screening Tool Report
SWSA	Strategic Water Source Area
ToPS	Threatened or Protected Species
VU	Vulnerable
WHCA	World Heritage Convention Act
WHS	World Heritage Sites

I INTRODUCTION

I.1 BRIEF PROJECT OVERVIEW

Anchor Environmental Consultants (Pty) Ltd (Anchor) was appointed by CK Rumboll and partners (CKR) to undertake Terrestrial Animal Species Compliance Statements for the second phase of the proposed Darling housing development located in Darling, Western Cape Province, South Africa (hereafter referred to as the study site) (Figure 1.1).

The purpose of this report is to assess the current status and diversity of terrestrial animal species within the study site, considering both fine-scale site conditions and the broader landscape context.

The assessment further identifies and evaluates sensitive ecological receptors including areas of ecologically significant habitat features and landscape elements and considers their potential vulnerability to the proposed development. Key faunal features within the study area are described, and any conservation-significant habitats in proximity to the site are noted where relevant. Appropriate mitigation and management measures are provided to avoid or minimise potential impacts on terrestrial habitats and biodiversity, with the outcomes to be integrated into the project's Environmental Management Programme (EMPr).

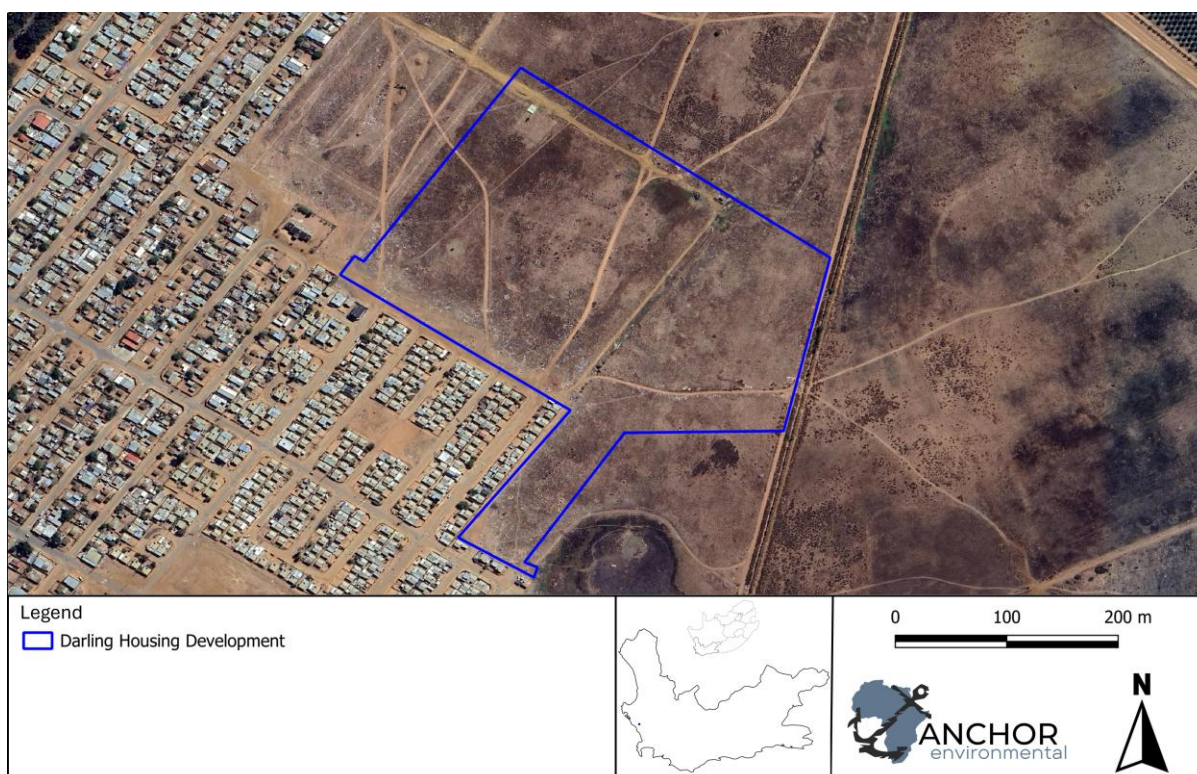


Figure 1.1 The location of the proposed housing development in Darling, Western Cape Province, South Africa.

1.2 TERMS OF REFERENCE

1.2.1 ONLINE SCREENING TOOL

The scope of this assessment was informed by the legislative framework established under the National Environmental Management Act (NEMA; Act 107 of 1998). Prior to initiating a specialist assessment, the legislated National Web-Based Environmental Screening Tool provided by the Department of Forestry, Fisheries and the Environment (DFFE) must be used to screen the proposed development area for environmental sensitivities. It generates a report that outlines key environmental themes (such as terrestrial biodiversity, etc.) and assigns to it a sensitivity rating based on the development footprint/ type, the status of the vegetation type and the overlap with any habitat of known species or provincial spatial plan layers. These ratings are categorised as “Very High”, “High”, “Medium” or “Low” and determines whether the specialist must assess the potential impacts of the development in the form of a Compliance Statement (Low sensitivity), or detailed Specialist Assessment Report (High or Very High). As the Screening Tool relies on numerous broad national datasets, its sensitivity ratings must be confirmed by undertaking a site sensitivity verification (SSV), which entails a site visit and desktop analysis by a qualified specialist.

The Screening Tool Report generated for this project is attached as APPENDIX A. According to the Screening Tool, the animal species theme for the proposed development area has been classified as having a “Medium” sensitivity rating (Figure 1.2).

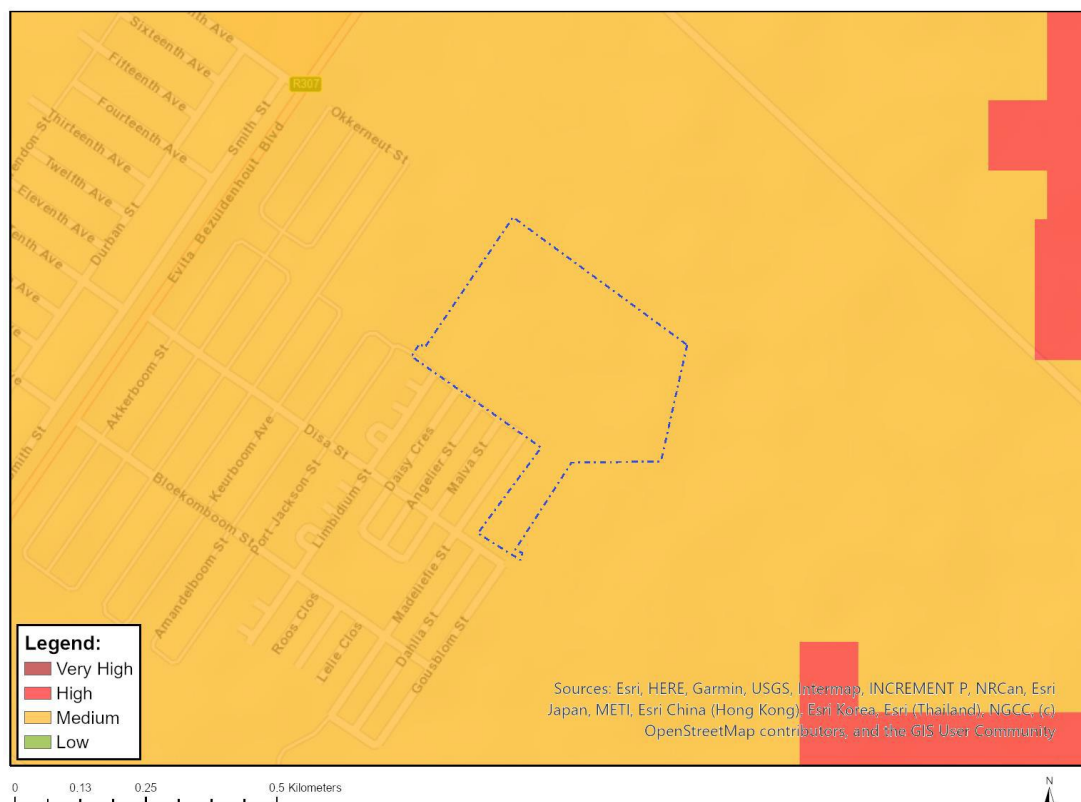


Figure 1.2. The proposed second phase of the Darling housing development has been assessed by the Screening Tool as having a “Medium” sensitivity in terms of terrestrial animal species.

I.2.2 CONFIRMATION OF THEME SENSITIVITY

The Screening Tool assigned a rating of “Medium” animal species sensitivity to the site. The “Medium” sensitivity is likely attributed to the potential occurrence of *Pachysoma aesculapius* (West Coast Flightless Dung Beetle) and *Bullacris obliqua* (Bladder grasshopper). These species triggers are based on historical distribution records, though their current occupancy of the site is uncertain.

P. aesculapius is a large, flightless dung beetle that shows a preference for firm, deep sands typical of coastal hammocks, vegetated dunes, and riverbanks (Davis et al. 2024). This preferred habitat was not present within the study area, making the occurrence of *P. aesculapius* on site unlikely. Furthermore, according to Davis et al. (2024) *P. aesculapius* is possibly extinct within the broader study area. Little is known about the habitat preferences of *B. obliqua*. *Eriocephalus africanus* is currently the only known host plant species for this taxon (Couldridge, and Bazelet, 2018). No *E. africanus* individuals were recorded during the site assessment, rendering the presence of *B. obliqua* within the study area unlikely.

The natural habitat observed was highly degraded with evidence of frequent fires occurring, illegal dumping and raw sewage flowing from three broken manholes into the surrounding field. The site visit confirmed very low faunal diversity, with observations limited primarily to disturbance-tolerant species.

Based on the field verification and the current ecological condition of the site, the initial “Medium” animal species sensitivity ratings are considered inaccurate and should be revised to “Low.” Accordingly, the Animal Species Theme for this site will be addressed in the form of a Compliance Statement rather than a Specialist Assessment.

I.3 SCOPE OF WORK

This specialist study focused on terrestrial fauna, with particular emphasis on mammals, avifauna (birds), herpetofauna (reptiles and amphibians), and invertebrate (spiders and insects) species of conservation concern (SCC). The assessment was conducted in accordance with the Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in Terms of Sections 24(5)(a) and (h) and 44 of the NEMA, with specific reference to the Protocol for the Specialist Assessment and Minimum Content Requirements for Environmental Impacts on Animals (GN 1150 of GG 43855). Additionally, this assessment was conducted in line with the “Species Environmental Assessment Guidelines” (SANBI 2020). The primary scope of the study included the following components:

- Compilation and review of existing data and literature on terrestrial fauna species known from or potentially occurring within the study area and its surrounding landscape;
- Implementation of a field-based survey programme to confirm the presence or likely presence of terrestrial fauna, with particular focus on SCC;
- Evaluation of the ecological suitability of the proposed development site and assessment of potential adverse impacts on terrestrial fauna resulting from the proposed project activities; and

- Formulation of mitigation and management recommendations for inclusion in the project's EMPr.

In alignment with this scope, the objectives of the report are to:

- Provide a baseline overview of the terrestrial fauna present within the study area, with emphasis on the presence of SCC; and
- Recommend appropriate mitigation and biodiversity management measures.

I.4 ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitation are applicable to this report:

- The Assessment was restricted to the defined boundaries of the proposed study area and did not extend to adjacent or neighbouring properties. However, the broader landscape, including the immediate surroundings, was incorporated into the desktop analysis, the outcomes of which are presented in Section 3.
- Due to the inherent limitations of ecological sampling, wherein not all individuals or species are encountered or identified, some species occurring within the project footprint may have gone undetected during the assessment.
- Fieldwork was conducted in December 2025, during the summer season. Summer is considered to be the better sampling period as the majority of the animals are active. While a more exhaustive assessment would ideally include surveys across all seasons to capture seasonal variation in species presence and activity, the integration of field observations, desktop data, and regional expert knowledge is considered adequate for the current assessment objectives.
- Due to the limited vegetation coverage and the potential for traps being stolen only a limited number of traps were used. These traps were also placed in areas where they were unlikely to be encountered.

2 REGULATORY FRAMEWORK

2.1 RELEVANT NATIONAL LEGISLATION, POLICY, AND GUIDELINES

2.1.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA, 1996

Numerous regulations govern environmental protection in South Africa. The Constitution of the Republic of South Africa, 1996 (Constitution), serves as the highest legal authority and upholds the right of all South Africans to an environment free from harm to health and well-being. It obligates the protection of this right for the well-being of both present and future generations, achieved through appropriate legislative and other actions. As such, the Constitution forms the fundamental legal basis for environmental management in South Africa, with various laws at the national, provincial, and local levels aligning with its legal principles.

2.1.2 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (NEMA, ACT 107 OF 1998)

The NEMA establishes principles for decision making on matters that affect the environment, to provide for cooperative environmental governance. It establishes statutory environmental duty of care obligations, imposing responsibilities to prevent and address pollution or environmental degradation. Activities that have the potential to impact on the environment, socio-economic conditions and the cultural heritage, need to be identified and assessed prior to their implementation. These activities should be reported to the organ of state, known as the Competent Authority, and receive Environmental Authorisation prior to their commencement. An application for Environmental Authorisation is conducted by means of an Environmental Impact Assessment (EIA) process.

ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS 2014

The EIA regulations have been promulgated in terms of Chapter 5 of NEMA, which provides the legislative framework for the authorisation of activities that may significantly affect the environment. Under the EIA Regulations, a range of legal instruments are published to guide the environmental authorisation process. These include the Listing Notices (1, 2, and 3), which detail activities that require Environmental Authorisation and trigger the need for an EIA. In addition, the regulations include provisions on minimum content requirements for specialist reports and EMPs.

2.1.3 NATIONAL ENVIRONMENTAL MANAGEMENT: PROTECTED AREAS ACT (NEMPAA, ACT 57 OF 2003)

The National Environmental Management: Protected Areas Act (NEMPAA) and its amendments primarily focus on the protection and conservation of ecologically sensitive areas and those which are representative of South Africa's rich biological diversity. NEMPAA identifies various categories of Protected Areas, including Nature Reserves, Special Nature Reserves, National Parks and Protected Environments. It acknowledges the designation of World Heritage Sites (WHS) under the World Heritage Convention Act (WHCA; Act 49 of 1999), Marine Protected Areas (MPAs) under the Marine Living Resources Act (MLRA; Act 18 of 1998) and/or NEMPAA, specially protected Forest Areas

in accordance with the National Forest Act (NFA; Act 84 of 1998) , and Mountain Catchment Areas declared by the Mountain Catchment Areas Act (MCAA; Act 63 of 1970). Furthermore, this Act empowers the designation of National Parks, Special Parks, and Heritage Sites, entrusting their management and oversight to South African National Parks (SANParks). The Act further requires management plans for all protected areas to guide conservation and land-use decisions.

2.1.4 THE NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT (NEMBA, ACT 10 OF 2004).

The National Environmental Management: Biodiversity Act (NEMBA) provides legal protection and management of South Africa's biodiversity within the framework of NEMA. The Act seeks to protect species and ecosystems that require national-level safeguarding, promote the sustainable utilisation of indigenous biological resources and ensure the fair and equitable sharing of benefits derived from activities involving such resources. It supports biodiversity planning tools such as bioregional and Biodiversity Management Plans and provides for biodiversity assessments, including the National Biodiversity Assessment (NBA), which evaluates ecosystem condition and sensitivity using International Union for Conservation of Nature (IUCN) Red List frameworks to inform conservation, spatial planning and policy. The legislation also establishes the South African National Biodiversity Institute (SANBI), defining its roles and functions.

ALIEN AND INVASIVE SPECIES

The NEMBA also regulates all alien and invasive organisms in South Africa, aiming to prevent unauthorised introduction and spread, and to manage and control alien and invasive species to minimise harm to the environment and biodiversity. The Act outlines a 'Duty of care relating to listed invasive species', specifying that landowners with listed invasive species must notify the Competent Authority, control and eradicate the species, and prevent its spread while minimising harm to biodiversity. An Alien and Invasive Species Management Plan is required as part of the project approval conditions. It serves to guide the removal of existing invasive species, prevent their establishment, and monitor their presence and management success. The Alien and Invasive Species Regulations, 2020 (GN R1020 of GG 43735), published under this Act, set out requirements for preventing the unauthorised introduction and spread of alien and invasive species and must be read with NEMBA.

THREATENED AND PROTECTED SPECIES REGULATIONS OF 2015

The Act also establishes regulations for listing and protecting threatened species and prohibits certain activities involving listed species without permits. The Threatened or Protected Species Regulations, 2015 (ToPS; GN 255 in GG 38600), established under NEMBA, aim to safeguard and preserve threatened and protected species. They outline the prohibition of specific restricted activities involving particular listed threatened or protected species. According to these regulations, obtaining a permit may be necessary for activities that involve the disturbance or removal of certain species.

CONVENTION ON BIOLOGICAL DIVERSITY 1992

The Convention on Biological Diversity (CBD) is an international legal framework aimed at safeguarding biological diversity, promoting the sustainable utilisation of its components, and ensuring the just and equitable sharing of benefits derived from genetic resources. The Convention addresses biodiversity across various levels, including ecosystems, species, and genetic resources.

South Africa became a signatory to the CBD on 4 June 1993 and has been a member state of the Convention since 2 November 1995. South Africa has adopted several management categories for protected areas that align with the established classifications of the International Union for Conservation of Nature (IUCN). One of South Africa's key conservation objectives is to increase the extent of protected areas to meet the international benchmark of 10% of the nation's total land area. The DFFE collaborates closely with landowners to encourage their active participation in the Stewardship Programme. This initiative permits landowners to utilise their properties for biodiversity and conservation purposes, contributing significantly to the expansion of the country's conservation estate.

2.1.5 SPATIAL PLANNING AND LAND USE MANAGEMENT ACT (SPLUMA; ACT 16 OF 2013)

The purpose of the SPLUMA is to establish a new framework for managing planning permissions and approvals, setting guidelines for new developments, and defining legal land uses in South Africa. It functions as a foundational law, outlining general principles for provincial laws that will manage planning. Additionally, SPLUMA clarifies how planning law interacts with other legal regulations and policies.

2.2 RELEVANT PROVINCIAL LAW, GUIDELINES, AND POLICIES

2.2.1 WESTERN CAPE BIODIVERSITY ACT (ACT 6 OF 2021)

This Western Cape Biodiversity Act aims to provide for the framework and institutions for nature conservation and the protection, management and sustainable use of biodiversity and ecosystems in the province; and for matters incidental thereto. It recognises and mandates the use of the Biodiversity Spatial Plan (BSP) as a key tool in planning and regulatory processes and integrates biodiversity considerations into land-use planning and decision-making. It also discusses and includes requirements in terms of Protected Areas, Mountain Catchment Areas, Biodiversity Stewardship and Biosphere Reserves.

This Act was signed into law on 14 December 2021 and will come into effect in a phased manner. Certain sections of the Act have come into effect on 15 November 2022. Once in fully force, the Act will repeal a number of laws applicable in the province including The Sea Shore Act (1935) The Mountain Catchment Areas Act (1970), the Nature Conservation Ordinance (1974), The Western Cape Biosphere Reserves Act (2011), and others.

BIODIVERSITY SPATIAL PLAN BY CAPENATURE

The Western Cape BSP is integral to various aspects, including guiding the Provincial Protected Area Expansion Strategy, informing biodiversity stewardship, identifying ecosystems and species listing, influencing land use planning and decision-making, shaping policies and guidelines under environmental legislation, contributing to

decision-support systems and strategic environmental assessments, influencing decisions by state organs impacting biodiversity, and playing a role in biodiversity offset considerations.

2.2.2 WESTERN CAPE LAND USE PLANNING ACT, 2015

The Western Cape Land Use Planning Act consolidates legislation in the province related to planning, development, and regulation. It establishes provisions for spatial development frameworks, minimum standards for municipal development management, and regulations for provincial development management. The Act guides municipal spatial development frameworks, emphasising compliance with legislation, predictability in land use, addressing development priorities, and alignment with provincial plans. Municipal frameworks must include essential elements, such as road networks, public transport, health and education facilities, heritage sites, agricultural and tourism resources, and areas of ecological importance, incorporating nature conservation, biodiversity, soil conservation, pollution control, and climate change adaptation strategies.

3 METHODS

3.1 DESKTOP ASSESSMENT

The desktop assessment included a review of available literature and relevant databases to determine the potential ecological condition of the study site. This comprised an evaluation of recorded habitat types and vegetation classifications in the area, identification of ecologically significant features interacting with the study site, and an assessment of SCC with a potential range overlap (i.e., SCC that could potentially occur within the site boundaries).

The animal SCC potentially occurring at the study site was assessed through a desktop review of various online biodiversity databases, including the Global Biodiversity Information Facility (GBIF) (GBIF) and iNaturalist (iNaturalist). The conservation status of each identified SCC was verified using IUCN Red list of threatened species and the SANBI Red List of animal species. To further refine the assessment, the specific habitat requirements for each SCC were reviewed to evaluate their probability of occurrence within the study area. The habitat information for mammals was sourced from Child et al. (2016), for birds (Aves) from Taylor et al. (2015), for reptiles from Tolley et al. (2023), for frogs from Minter et al. (2004), and for invertebrates from (Henning et al. 2009; Picker et al. 2019).

The ecological important features and the vegetation type was sourced as data layers and imposed on a map to visually indicate the physical location of the study site in relation to the mentioned features. The following spatial datasets were used:

- 2022 National Red List of Terrestrial Ecosystems (RLEs) (Skowno and Monyeke 2021);
- Vegetation Map of South Africa, Lesotho and Swaziland (SANBI (2006-2024) 2024)
- Western Cape Biodiversity Spatial Plan 2023 (CapeNature 2024)
- Important Bird Areas of Southern Africa (Barnes 1998)

All spatial analyses and mapping were conducted using QGIS v3.42.3 (QGIS Development Team 2025).

3.2 FIELD ASSESSMENT

A single field survey was conducted from 10 to 12 December 2025. Five complementary sampling methods were applied to document faunal diversity within the study area, namely active searching, sweep-netting, pit fall trapping, Sherman trapping and stationary bird counts. Sweep-netting was used to sample insect fauna, stationary point counts were conducted to sample avifaunal diversity, pit fall trapping was used to sample small ground dwelling animals, Sherman traps were used to sample smaller rodents, and active searching was employed to sample all faunal groups encountered.

Active searches were conducted by systematically traversing the proposed project footprint using meander transects while searching for animal species (Figure 3.1). All animal species encountered were recorded and, where possible, photographed using a Nikon Coolpix L340 digital camera. Indirect evidence of animal presence (e.g. spoor, scat, and burrows) was also documented. Stationary bird counts were undertaken at

points spaced at least 150 m apart, with all birds seen or heard within a 50 m radius of each point identified and counted (Figure 3.1). Sweep-netting involved sweeping a handheld sweep net across the vegetation over 20 m transect sections to capture insects and was done while doing the active searching process. All insects captured were euthanised using a kill jar containing acetone-drenched cotton wool, stored in sealed plastic bags, and subsequently frozen for sorting and photography in the Anchor Laboratory using an unbranded stereo zoom trinocular dissecting microscope fitted with a 4K Dewinter multimedia camera (Dewinter Optical). Pitfall trapping involved burying 9 L plastic buckets level with the surrounding soil surface to allow small animals to passively fall into the trap. Traps were checked the following morning; vertebrates were photographed and released, while insects were collected and transported to the Anchor laboratory for identification. Sherman traps were baited with a mixture of bird seed and peanut butter to attract rodents, with a piece of cucumber included as a moisture source. Traps were placed at strategic locations (e.g. along rodent runways) to maximise capture success. Sherman traps were checked the following morning, and all captured animals were photographed and released at the point of capture. Three Sherman traps and five pitfall traps were deployed (Figure 3.2). No traps were deployed near residential properties along the western boundary or the construction site along the north-western boundary to minimise the risk of disturbance or theft.

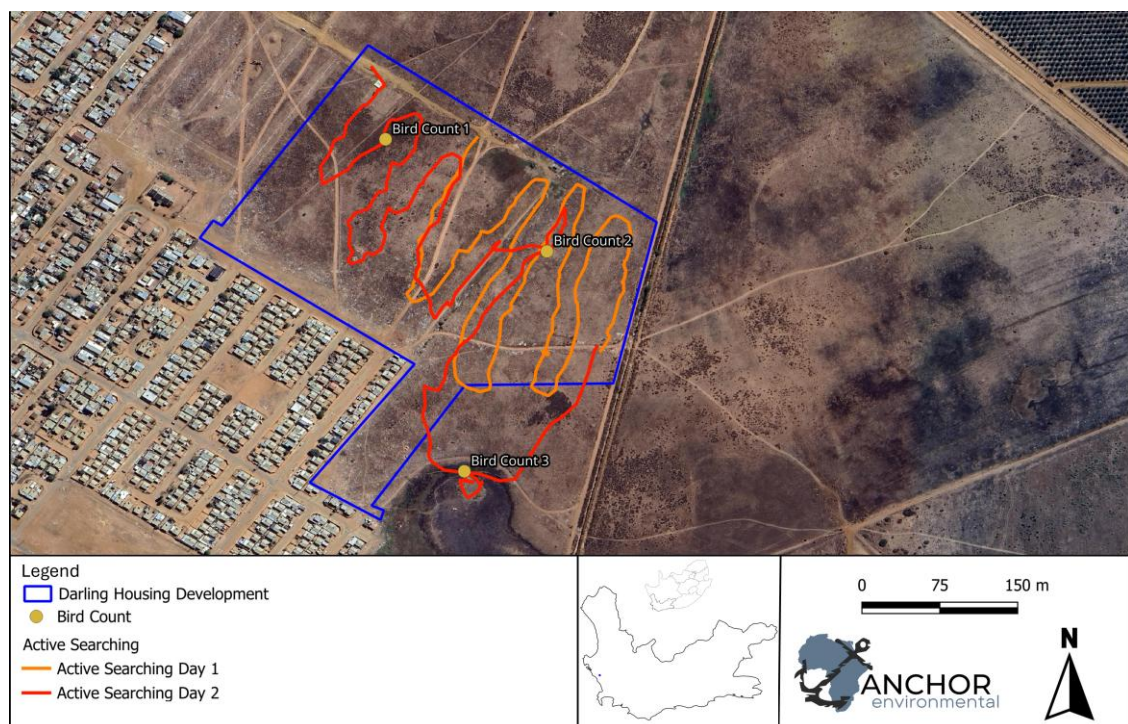


Figure 3.1. Active searching meander and bird count survey locations. The day one active search is indicated by an orange line, the day two active search by a red line, and the bird count locations by yellow circles.

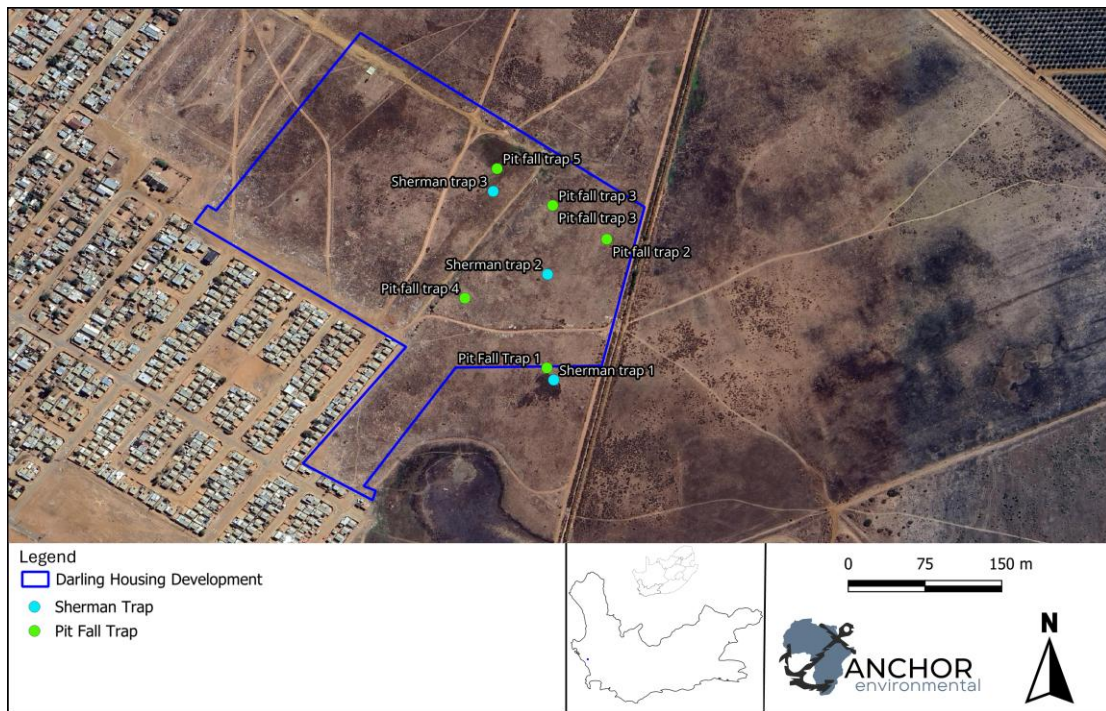


Figure 3.2. The location of the Sherman (indicated by the aqua circles) and Pitfall traps (lime green circles) within the study site.

4 RESULTS

4.1 VEGETATION TYPE AND ECOSYSTEM THREAT STATUS

The Fynbos Biome is clearly delineated geographically and encompasses three ecologically distinct and naturally fragmented vegetation types: fynbos, renosterveld, and strandveld. These vegetation types occur across both winter- and summer-rainfall regions and are primarily dominated by small-leaved, evergreen shrubs whose regeneration dynamics are closely linked to periodic fire events (Mucina and Rutherford 2006).

The Fynbos Biome has not been subdivided into bioregions in the same systematic manner as the Savannah or Grassland Biomes, rather it is divided into 'vegetation types' (Fynbos, Renosterveld, and Strandveld) each comprising numerous sub-vegetation units and veld types. The study site under investigation falls within the Swartland Granite Renosterveld (SANBI (2006-2024) 2024) (Figure 4.1).

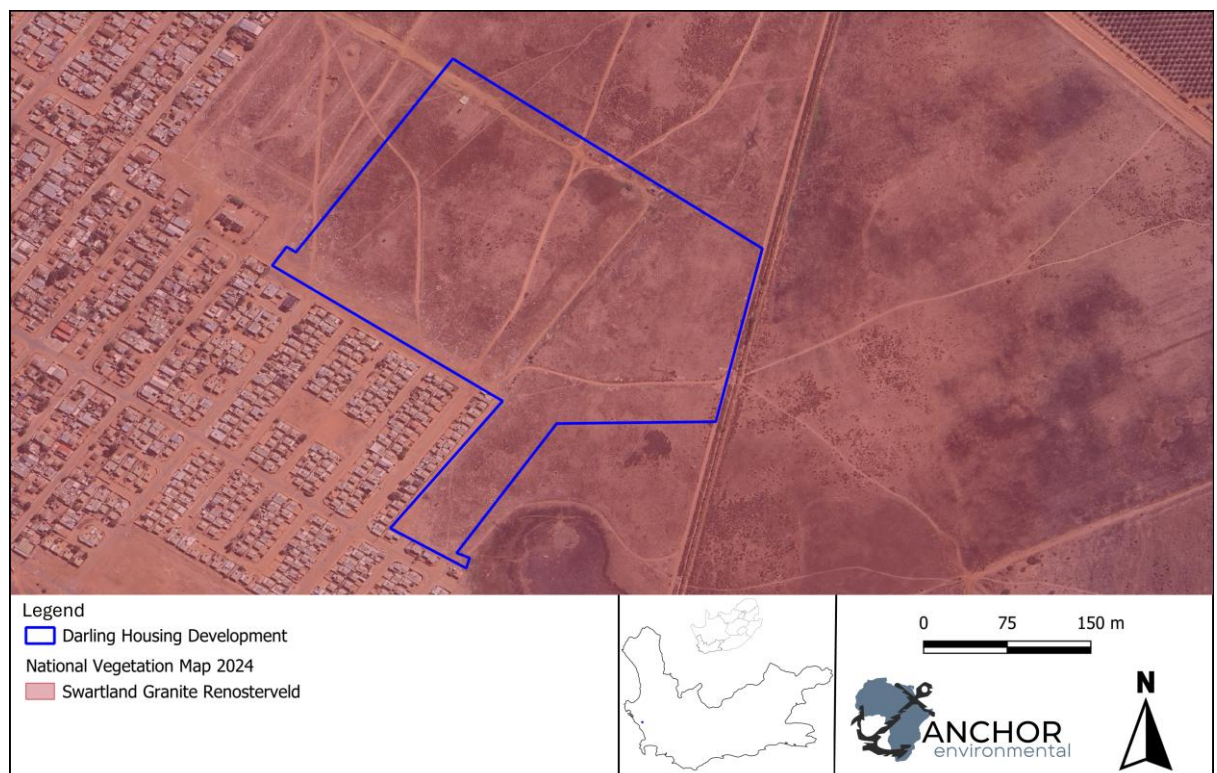


Figure 4.1. The Swartland Granite Renosterveld vegetation type present within the study area (SANBI (2006-2024) 2024).

Swartland Granite Renosterveld occurs on moderate foot slopes and gently undulating plains, where it supports a heterogeneous mosaic of grassland and herbland communities interspersed with moderately dense, microphyllous shrubland, typically dominated by *Elytropappus rhinocerotis* (renosterbos) (Mucina and Rutherford 2006). Localized assemblages of small trees and taller shrub species are commonly associated with heuweltjies and rocky outcrops, reflecting spatial variation in soil depth, moisture

availability, and nutrient enrichment (Mucina and Rutherford 2006). Approximately 80% of Swartland Granite Renosterveld has been irreversibly transformed, primarily due to its high suitability for agriculture and, to a lesser extent, expansion of urban development (Mucina and Rutherford 2006). As a result, this vegetation type has been classified as Endangered by the 2022 National RLEs developed by SANBI, which aligns with the global IUCN Red List of Species and Red List of Ecosystems frameworks (Skowno and Monyeke 2021) (Figure 4.2)

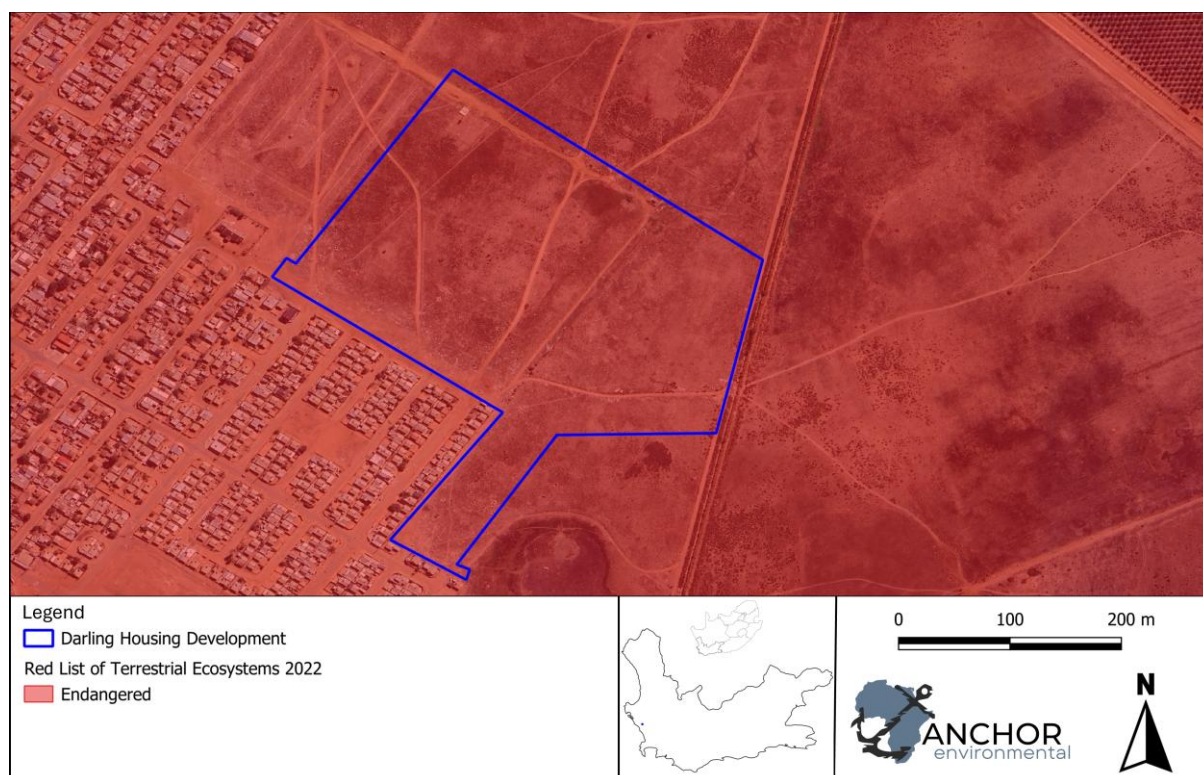


Figure 4.2. Ecosystem threat status of the study site and surrounding areas. The study site is classified as being endangered (Skowno and Monyeke 2021).

4.2 WESTERN CAPE BIODIVERSITY SPATIAL PLAN

The Western Cape BSP identifies priority terrestrial areas essential for biodiversity conservation, encompassing diverse ecosystems, species, and ecological processes. It also includes aquatic features such as rivers. It classifies areas into several categories, including Critical Biodiversity Areas (CBAs), Ecological Support Areas (ESAs), Protected Areas (PAs) and Other Natural Areas (ONAs). These are all important for maintaining representative ecosystems, species persistence, ecological functioning, and landscape connectivity (Pool-Stanvliet et al. 2017). These classifications are spatially represented in CBA maps, which guide planning and decision-making to support sustainable development. While municipalities may adapt the naming conventions of these categories in local spatial plans, they must retain alignment with the BSPs underlying principles and national policy frameworks.

For this assessment, spatial data layers from the 2024 Western Cape BSP (CapeNature 2024) were incorporated to evaluate the ecological sensitivity of the site. This included the identification and assessment of CBAs, ESAs, PAs and ONAs, as summarised in Table

4.1. The proposed development footprint falls in its entirety within a CBA 1: Terrestrial with CBA 1: Wetland in close proximity to the southwestern order (Figure 4.3).

Table 4.1. Summary of the Western Cape Biodiversity Spatial Plan priority categories as listed in CapeNature (2024).

Category	Definition
PAs	Areas that are legally protected and recognised under the National Environmental Management: Protected Areas Act (Act 57 of 2023), including formally gazetted Contract Nature Reserves and Protected Environments.
CBAs	CBAs are essential for conserving biodiversity, supporting ecosystem processes, and maintaining ecological infrastructure. They include areas needed to meet conservation targets, protect Critically Endangered ecosystems, and maintain landscape connectivity. CBAs must remain in a natural or near-natural state, with CBA 1 areas generally intact and CBA 2 areas potentially degraded or containing secondary vegetation.
ESAs	ESAs are not essential for achieving biodiversity targets but are crucial for supporting the ecological functioning of Protected Areas and Critical Biodiversity Areas, and for sustaining ecosystem services. They include key features such as climate adaptation corridors, water recharge zones, riparian habitats, and threatened vegetation types, and should be maintained in at least a functional condition. ESAs are classified as ESA 1 (functional areas in natural to moderately degraded condition) and ESA 2 (severely degraded areas requiring restoration), with land uses permitted only if they do not compromise ecological integrity or long-term biodiversity goals.
ONAs	ONAs are not designated as priorities in the current biodiversity spatial plan but still retain much of their natural character and contribute to biodiversity and ecological infrastructure. While they allow greater flexibility in management and land use, activities should aim to minimise habitat and species loss and maintain ecosystem functionality. High-impact land uses may be permitted but require appropriate environmental authorisation.

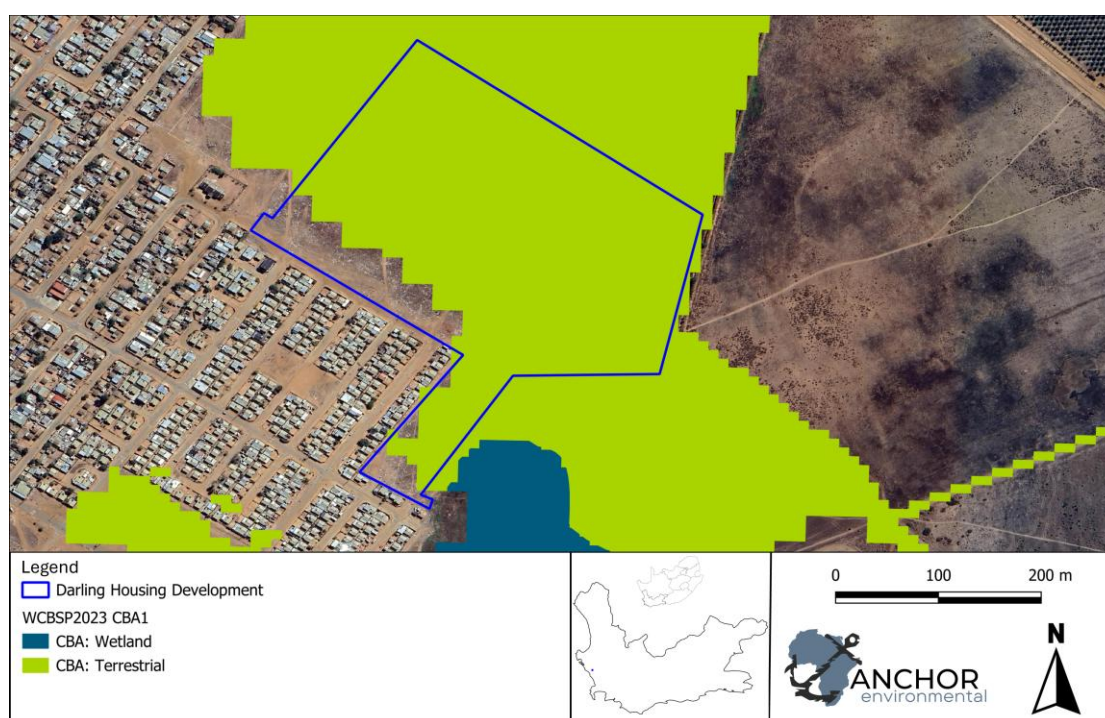


Figure 4.3. Spatial representation of designated biodiversity priority areas in relation to the proposed housing development. The proposed development footprint falls within a Critical Biodiversity Area 1 (CBA 1): Terrestrial (green shading) with CBA 1: Wetland in close proximity (blue shading) (CapeNature 2024).

4.3 IMPORTANT BIRD AREAS

South Africa's Important Bird Areas (IBAs) represent a critical network of 112 sites that serve as the last stand for bird conservation at a landscape level (Barnes 1998). These sites, identified and managed by BirdLife South Africa as part of a global initiative encompassing over 13 500 IBAs worldwide, are areas of global significance for protecting the country's remarkable avifauna. With approximately 847 bird species occurring in South Africa, representing about 8% of the world's total bird species, these protected areas are essential for conserving threatened, endemic, biome-restricted, and congregatory birds. Notably, over 15% of South Africa's bird species are threatened with extinction, primarily due to habitat loss and degradation. IBAs are designated using internationally standardised, scientifically rigorous criteria based on the presence of globally or regionally threatened species (A1/C1 criteria), assemblages of restricted-range species found in areas less than 50 000 km² (A2 criteria), biome-restricted species with 75% of their range confined to one biome (A3 criteria), and congregatory species including waterbirds that meet specific population thresholds (A4/C4 criteria) (Barnes 1998).

The proposed development does not fall within any IBAs, nor is it located in close proximity to any designated IBAs (Barnes 1998) (Figure 4.4).

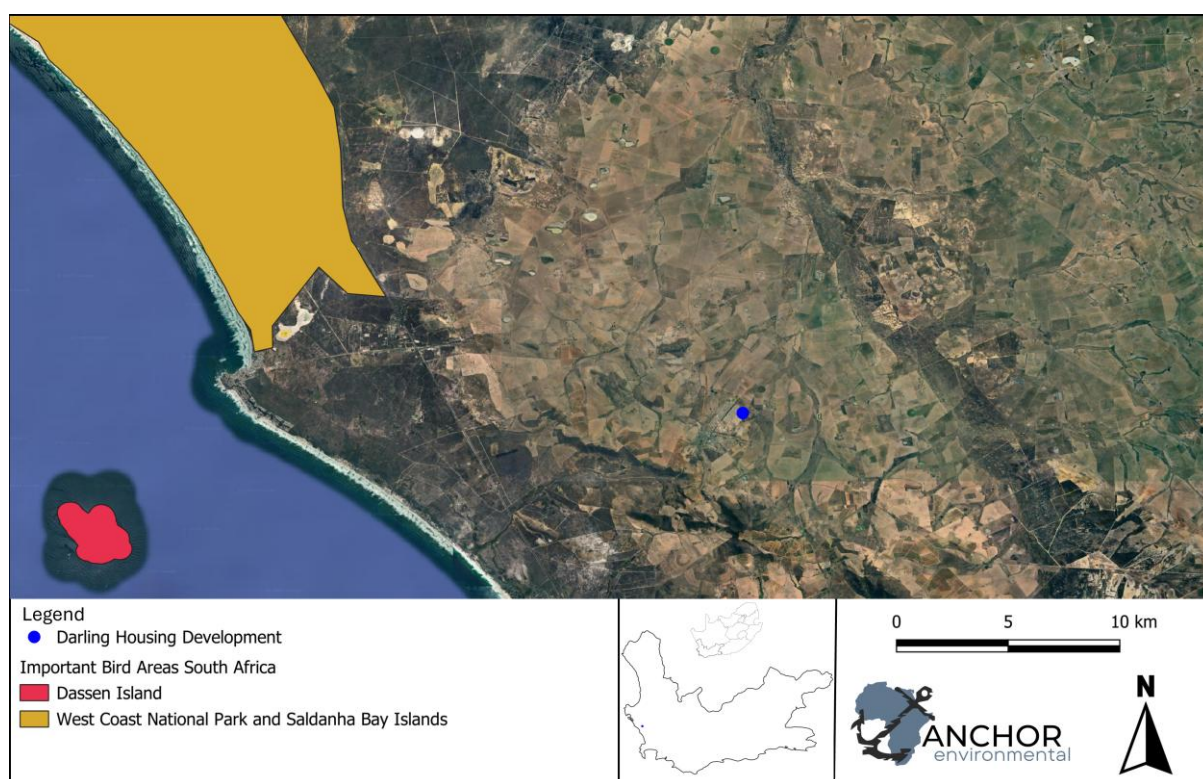


Figure 4.4. The proposed development footprint in relation to the regional IBAs (Barnes 1998).

4.4 SPECIES OF CONSERVATION CONCERN

A total of two SCC, comprising two invertebrate species, were identified by the DFFE Screening Tool. An additional 66 SCC were identified through a desktop review of online biodiversity databases, including the GBIF (GBIF.org) and iNaturalist (iNaturalist). These

species, along with their global IUCN conservation status, national Red List classification (*Red List of South African Species* produced by SANBI), and habitat requirements, are presented in Table 4.2.

Table 4.2. Animal SCC potentially occurring within the proposed development area. Species highlighted by the DFFE screening tool is shown in bold. The table includes scientific and common names, national Red List status, IUCN Red List status and associated habitat requirements for each species. Red list categories are as follows: Least Concern (LC), Near Threatened (NT), Vulnerable (VU), Endangered (EN) and Critically Endangered (CR). Habitat information for mammals was sourced from Child et al. (2016), for birds (Aves) from Taylor et al. (2015), for reptiles Tolley et al. (2023), for amphibians Minter et al. (2004), and for invertebrates from (Henning et al. 2009; Picker et al. 2019).

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Aonyx capensis</i>	African Clawless Otter	NT	NT	Cape Clawless Otters are predominantly aquatic and seldom found far from permanent water. Fresh water is an essential habitat requirement, not only for drinking but also for rinsing their fur. As otters do not have a subcutaneous layer of fat like most other aquatic mammals, they rely on their dense fur for thermoregulation. Thus, rinsing their fur in freshwater followed by rolling in sand, grass or reeds helps them cleanse their fur and restore the thermoregulatory properties. Generally, they will only occur in marine habitats provided there is access to fresh water (coastal rivers or estuaries) and rocky shores are preferred for foraging, and otter activity is often found near thick vegetation, abundant food supply and fresh water.
<i>Mystromys albicaudatus</i>	White-tailed Rat	VU	VU	The White-tailed Rat shows broad habitat tolerance but a strong association with firm substrates, particularly calcrete, dolomite, limestone, basalt and dolerite soils, most often within grasslands and sparsely vegetated habitats. It avoids soft sandy substrates, wetlands, riverbanks and rocky areas without soil cover, and does not occur in transformed habitats such as croplands or old fields. Records indicate occurrence in both natural and disturbed environments, including heavily grazed areas, sparse grasslands, slopes, ridges, and shallow stony or clay soils, with habitat use varying regionally. The species appears to select specific microhabitats (e.g. ridges, slopes), allowing limited persistence within fragmented agricultural landscapes. Overall, its habitat requirements and ecology remain poorly understood and warrant further research.

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Otomys laminatus</i>	Laminate Vlei Rat	NT	NT	<i>O. laminatus</i> is primarily associated with moist habitats in mesic sub-montane grasslands along the Drakensberg foothills, with additional records from wetlands, marshes, coastal forests, and Restio-dominated coastal and montane fynbos. Occasional occurrence in pine plantations has been reported, although the extent of plantation use and presence in agricultural landscapes remain uncertain. The species is likely strictly herbivorous, feeding on grasses, restios, and small shrubs.
<i>Afrotis afra</i>	Southern Black Korhaan	VU	VU	Occurs in semi-arid scrub and dune habitats characterized by succulent vegetation, and its range extends into renosterveld scrub and semi-arid Karoo ecosystems (del Hoyo et al., 1996; Hockey et al., 2005). It is also occasionally recorded in cultivated fields, provided that adequate cover is available nearby.
<i>Alcedo semitorquata</i>	Half-collared kingfisher	LC	VU	A strictly water-dependent kingfisher associated primarily with fast-flowing, clear, perennial rivers and streams with dense marginal vegetation. It also occurs along well-vegetated shores of lakes, dams, estuaries, and coastal lagoons, and may occasionally forage in marine environments. The species ranges from sea level to approximately 2,000 m above sea level and is most frequently recorded in broken escarpment terrain.
<i>Anarhynchus pecuarius</i>	Kittlitz's Plover	LC	NT	The Kittlitz's Plover occupies open, low-lying inland and coastal habitats, favouring dry, sparsely vegetated areas such as open mudflats and short grass near water. It breeds across a wide range of habitats including lakes, rivers, alkaline grasslands, lagoons, tidal mudflats, inland saltmarshes and artificial wetlands. The species avoids sandy or rocky beaches, steep terrain, and tall or dense vegetation, and is strictly terrestrial, carrying out all life-history activities on the ground.
<i>Anas erythrorhyncha</i>	Red-billed teal	LC	NT	The Red-billed Teal occupies shallow permanent and temporary eutrophic freshwater wetlands, including natural and artificial water bodies such as dams and sewage ponds, typically where submerged, floating, and marginal vegetation are present.
<i>Anas undulata</i>	Yellow-billed duck	LC	NT	The species occurs in open water habitats, including rivers and estuaries with slow-moving water. It also utilises artificial water bodies such as mining reservoirs, dams, salt pans, sewage treatment facilities, and the open-water sections of estuaries.

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Anhinga rufa</i>	African darter	LC	NT	This diving bird inhabits shallow freshwater and brackish environments, including lakes, swamps, lagoons, and slow-moving rivers with trees, reeds, or mangroves suitable for roosting. It avoids fast-flowing rivers, dense floating vegetation, and is rarely found in open marine waters.
<i>Anthropoides paradiseus</i>	Blue Crane	VU	NT	In the Western Cape of South Africa, <i>A. paradiseus</i> breeds in lowland agricultural areas such as pastures, cereal fields, and even coastal dunes. During the non-breeding season, it moves to lower altitudes and prefers short, dry grasslands, the Karoo, and cultivated areas in the fynbos biome. It avoids overgrazed or frequently burned grasslands and relies on agricultural lands like croplands and fallow fields for foraging.
<i>Aquila verreauxii</i>	Verreaux's eagle	LC	VU	The species inhabits remote, mountainous, and rocky regions, as well as savannah and semi-desert environments. Its distribution is closely tied to the presence of rock hyrax populations, which it relies on as a primary prey source. Consequently, it occurs wherever rock hyraxes are abundant.
<i>Ardea alba</i>	Great Egret	LC	NT	The Great Egret occurs in shallow, open freshwater and brackish habitats, including rivers, lakes, marshes, flooded grasslands, floodplains, saltpans, and estuaries. It may also use dams and sewage works, but is rarely found in marine environments.
<i>Ardea brachyrhyncha</i>	Yellow-billed Egret	LC	NT	<i>Ardea brachyrhyncha</i> occupies a range of wetland habitats, including permanent and seasonal freshwater marshes, rivers, lakes, and flooded grasslands. It also utilises coastal lagoons, mangrove swamps, and artificial wetlands such as reservoirs and sewage farms.
<i>Arenaria interpres</i>	Ruddy turnstone	NT	NT	This species breeds in the high Arctic, typically near the coast or several kilometers inland, favouring coastal plains, marshes, and tundra with a mosaic of bare substrates and vegetation near water or persistently damp areas. During the non-breeding season, it predominantly occupies coastal habitats but may also be found inland during migration along dykes and lake shores. In winter, it utilizes a variety of productive coastal environments, including rocky and shingle shores, estuaries, mangroves, mudflats, and areas with abundant molluscs.

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Calendulauda burra</i>	Red Lark	VU	VU	The Red Lark inhabits sandy, grass-dominated habitats with light grazing pressure and multi-layered vegetation structure. It prefers areas with tall tussock grasses (<i>Stipagrostis ciliata</i> , <i>S. brevifolia</i> , <i>Brachiaria glomerata</i>) for food and nesting, interspersed with scattered small trees and shrubs (1–1.5 m tall) that provide perches for singing and territorial displays (<i>Rhigozum trichotomum</i> , <i>Parkinsonia africana</i> , <i>Pogonospermum incanum</i>). The species avoids pans, degraded dunes, and heavily grazed areas, and its presence is negatively influenced by high temperatures. Anthropogenic perch structures can disrupt territorial behaviour.
<i>Calidris alba</i>	Sanderling	LC	NT	<i>Calidris alba</i> primarily inhabits sandy beaches and mixed shorelines, with less frequent occurrence on rocky shores, estuaries, lagoons, and inland wetlands.
<i>Calidris canutus</i>	Red Knot	NT	NT	<i>C. canutus</i> preferentially occupies sheltered coastal habitats, particularly bays and lagoons with extensive intertidal mudflats and sandflats. Habitat selection is closely linked to prey availability, especially bivalve molluscs, which constitute its primary food resource.
<i>Calidris ferruginea</i>	Curlew sandpiper	VU	VU	This species is found across wetlands throughout southern Africa, though it primarily occupies coastal areas and highveld pans in the Free State and Transvaal. Inland wetlands used by the species typically feature muddy margins and receding waterlines, providing suitable foraging conditions. Compared to more uniformly distributed species like the Greenshank, its occurrence in the interior is notably more scattered.
<i>Charadrius pallidus</i>	Chestnut-banded Plover	LC	VU	<i>C. pallidus</i> exhibits a strong ecological association with saline and alkaline water bodies, breeding predominantly in natural and artificial alkaline wetlands, such as inland salt pans and large alkaline lakes in East Africa. It favours sparsely vegetated habitats near water, typically remaining within 50 meters during breeding and within 1 kilometer during the non-breeding season, particularly along coastal environments like lagoons, estuarine salt marshes, and intertidal mudflats. Although rarely found in freshwater habitats, the species demonstrates adaptability by occupying anthropogenic environments such as man-made salt ponds.

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Chroicocephalus hartlaubii</i>	Hartlaub's Gull	LC	VU	Hartlaub's Gull is endemic to southwestern Africa, occurring from central Namibia to western South Africa. It is primarily a coastal species but is highly adaptable and frequently occurs in urban environments, locally extending up to approximately 50 km inland.
<i>Ciconia nigra</i>	Black Stork	LC	EN	The Black Stork is predominantly piscivorous, with fish comprising the majority of the adult diet, and is therefore closely associated with permanent waterbodies such as dams, shallow pans, and floodplains; it is absent from seasonal pans lacking fish. Nestlings consume a broader diet that includes amphibians and insects. Foraging site selection is influenced by prey availability as well as human disturbance, rendering the species sensitive to habitat degradation, altered hydrological regimes, and disturbance at foraging and nesting sites, which collectively increase its vulnerability to population decline.
<i>Circus maurus</i>	Black Harrier	EN	EN	<i>C. maurus</i> is a species primarily associated with cool, dry environments, frequenting coastal and montane fynbos, highland grasslands, Karoo subdesert scrub, open plains with low shrubs, and croplands. In the Western Cape of South Africa, it is most abundant in coastal and montane fynbos. This species prefers open ground with low vegetation for hunting, primarily feeding on small mammals such as <i>Otomys</i> and <i>Rhabdomys</i> species
<i>Circus ranivorus</i>	African Marsh Harrier	LC	EN	The species breeds in wetland habitats, where it primarily forages over reed beds and along lake margins. Its diet is predominantly composed of small mammals, with a strong preference for the striped mouse (<i>Rhabdomys pumilio</i>). This foraging behaviour is closely linked to the availability of suitable wetland vegetation and prey populations.
<i>Coracias Garrulus</i>	European Roller	LC	NT	<i>C. garrulus</i> winters in southern Africa, primarily in dry wooded savanna and bushy plains. It occurs across a wide range of habitats but avoids treeless open plains and typically nests in cavities in trees.
<i>Cursorius rufus</i>	Burchell's Courser	LC	VU	<i>C. rufus</i> inhabits open desert and semi-desert environments, including heavily grazed or recently burnt grasslands, stony or gravel plains, stubbly sandveld, dry riverbeds, and the margins of saline pans.

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Dendrocygna bicolor</i>	Fulvous whistling duck	LC	NT	The Fulvous Whistling Duck occupies shallow freshwater and brackish wetlands with tall emergent vegetation, including lakes, seasonal pools, slow-flowing streams, marshes, swamps, and flooded grasslands. It frequently utilises wet rice fields and seeks densely vegetated wetlands for cover during the flightless moulting period.
<i>Elanus caeruleus</i>	Black-shouldered Kite	LC	NT	The Black-winged Kite occupies open habitats such as savanna, shrubland, grassland, and agricultural landscapes. It is primarily a rodent specialist but also preys on small birds, reptiles, and large insects, hunting by hovering or from elevated perches.
<i>Falco biarmicus</i>	Lanner Falcon	LC	NT	Lanner Falcons favour open grassland, cleared woodlands and agricultural areas. Breeding pairs tend to favour cliffs as nesting and roosting sites; however, they will use alternative structures such as trees, pylons and buildings. The dominant prey group is birds, followed by small mammals, reptiles and insects.
<i>Falco naumanni</i>	Lesser Kestrel	LC	VU	The Lesser Kestrel is associated with open grassland systems, occurring in the grassy Karoo, along the western margins of the Grassland Biome, and in the south-eastern Kalahari. It readily forages in moderately transformed landscapes, provided habitat conversion does not result in dense monocultures such as sugarcane or plantation forestry. In the Western Cape, the species commonly forages over small-grain croplands and pastures that have replaced natural Fynbos and Renosterveld.
<i>Falco peregrinus</i>	Peregrine Falcon	LC	NT	The species typically favours riverine, mountainous, or coastal habitats, particularly those featuring high cliffs used for roosting and hunting. It has also adapted to anthropogenic environments, utilizing dam walls, quarries, and tall urban buildings for similar purposes. This flexibility in habitat use supports its widespread distribution across both natural and modified landscapes.
<i>Geocolaptes olivaceus</i>	Ground Woodpecker	NT	NT	This species typically inhabits rocky slopes, primarily in areas dominated by grass and shrubland, including anthropogenically altered environments such as road cuttings and abandoned structures. It is generally considered sedentary; however, there is some evidence suggesting the possibility of altitudinal migration, with individuals occasionally dispersing from mountainous regions during the non-breeding season.

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Gyps coprotheres</i>	Cape vulture	VU	VU	Is a long lived obligate carrion feeder which is typically associated with steep terrain, where it breeds and roosts on cliff faces. The species has demonstrated a preference for foraging in protected areas and regions with woody vegetation.
<i>Heterotetrax vigorsii</i>	Karoo Korhaan	LC	NT	The Karoo Korhaan (<i>E. vigorsii</i>) is well-adapted to a range of arid environments and exhibits a preference for denser scrubland habitats, typically with vegetation cover ranging from 10 to 50 cm in height. A smaller portion of the population also occurs in Karoo-like fynbos habitats within the southwestern region of the Cape Province
<i>Hydroprogne caspia</i>	Caspian tern	LC	VU	In Southern Africa, the Caspian Tern is largely confined to the coastline, estuaries and to large river systems and inland water bodies. Caspian Tern occurs mostly in sheltered bays and estuaries along the coast while inland occur both at natural and man-made waterbodies, showing preference for saline pans and large impoundments. At inland sites, it breeds on small low islets, while along the coast, primarily on offshore islands, but with increasing use of sandy beaches and islands at saltworks.
<i>Limosa lapponica</i>	Bar-tailed godwit	NT	LC	The Bar-tailed godwit is generally more scarce further inland and prefers estuaries, coastal lagoons and sheltered embayments. It is occasionally found on sandy beaches, coastal sewage works and commercial salt pans.
<i>Microcarbo coronatus</i>	Crowned cormorant	LC	NT	This coastal and inshore species, typically found within 5 km of the shore, breeds primarily on islands and islets, nesting on elevated structures such as trees, old buildings, jetties, rocks, and dolosses. It forages benthically in kelp beds, feeding mainly on small, non-commercial fish (e.g., Clinidae and Gobiidae), along with crustaceans, molluscs, and polychaete worms, and does not compete with commercial fisheries.
<i>Monticola explorator</i>	Sentinel Rock-thrush	NT	LC	The species inhabits high-altitude grasslands and heathlands characterised by rocky areas, exposed rock outcrops, and stony grassy rangelands. It is resident in some regions, including Lesotho and the Drakensberg, but exhibits seasonal altitudinal movements elsewhere, and occurs as a winter visitor to Gauteng grasslands.

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Morus capensis</i>	Cape Gannet	EN	VU	Ranges widely over the continental shelf while foraging for small pelagic fish (mainly sardine <i>Sardinops sagax</i> and anchovy <i>Engraulis encrasicolus</i>); can travel 130 km from colony, covering over 400 km in a single foraging trip. Out of the breeding season, they can travel widely but usually stay within 500-600 km of their breeding colony; in winter, many follow sardine shoals into KwaZulu-Natal waters. Immatures are more mobile and many travel up the West Coast as far as Angola.
<i>Netta erythrophthalma</i>	Southern pochard	LC	NT	<i>N. erythrophthalma</i> prefers large bodies of deep, clear water, both permanent and temporary, including lakes, pools, shallow marshes, and sewage ponds, particularly where submerged aquatic vegetation is present.
<i>Nycticorax nycticorax</i>	Black-crowned night heron	LC	NT	The species predominantly inhabits slow-moving water bodies rich in emergent vegetation, including estuaries, swamps, marshes, lakes, mangroves, rivers, dams, and sewage ponds. These habitats provide essential resources such as shelter and foraging opportunities. The preference for vegetated aquatic environments reflects its ecological adaptation to wetland ecosystems.
<i>Oxyura maccoa</i>	Maccoa duck	EN	NT	Prefers permanent wetlands that have rich concentrations of bottom-dwelling (benthic) invertebrates.
<i>Pelecanus onocrotalus</i>	Great White Pelican	LC	VU	Great White Pelicans occupy estuaries, lagoons, coastal bays, shallow lakes, floodplain pans, and dams, primarily feeding on fish and occasionally on other seabirds. They require dry-land roosting sites in open areas such as islands, wide shorelines, or peninsulas adjacent to their feeding habitats. Breeding occurs on predator-inaccessible islands or artificial platforms to enhance reproductive success.
<i>Phalacrocorax capensis</i>	Cape Cormorant	EN	EN	The Cape Cormorant is found on the coast and at sea mainly in inshore waters, but also offshore (<50 km from the coast). It breeds mainly on islands and islets, but also on rocky outcrops of the mainland, including cliffs or boulders. Cape Cormorants forage at sea on small pelagic fish, mainly Cape Anchovy <i>Engraulis encrasicolus</i> , South African Sardine <i>Sardinops sagax</i> and Horse Mackerel <i>Trachurus trachurus</i> .

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Phalacrocorax neglectus</i>	Bank Cormorant	EN	EN	Bank Cormorants inhabit coastal and inshore waters within 10 km of the shore, breeding predominantly on islands, islets, and mainland rocky outcrops where they construct elevated nests. Estimated breeding age is around three to four years, with an inferred adult annual survival rate of 0.8, resulting in a generation length of approximately 7.45 years, though these parameters are based on related species due to lack of direct data. Their foraging is primarily benthic, targeting West Coast Rock Lobster (<i>Jasus lalandii</i>) and benthic Clinidae fish over kelp beds and clear rocky or sandy substrates.
<i>Phoeniconaias minor</i>	Lesser Flamingo	NT	NT	Primarily inhabits shallow aquatic environments such as lagoons, saline or alkaline lakes, estuaries, and mudflats. These habitats are typically characterized by high salinity or extreme alkalinity, with recorded pH levels reaching up to 11
<i>Phoenicopterus roseus</i>	Greater Flamingo	LC	NT	Primarily inhabits shallow aquatic environments such as lagoons, saline or alkaline lakes, estuaries, and mudflats. These habitats are typically characterized by high salinity or extreme alkalinity, with recorded pH levels reaching up to 11
<i>Pluvialis squatarola</i>	Grey Plover	VU	LC	<i>P. squatarola</i> breeds in high Arctic habitats, including stony dry tundra, peat ridges in tundra marshes, riverbanks, and sandy or gravel beaches. Outside the breeding season it occupies coastal intertidal habitats such as mudflats, bays, estuaries, salt marshes, and beaches, with occasional use of inland wetlands during migration.
<i>Podiceps cristatus</i>	Great crested grebe	LC	VU	The Great Crested Grebe inhabits large, deep, permanent inland waterbodies such as lakes, pans, and wetlands with emergent fringe vegetation. It occurs occasionally on salt pans and is rarely recorded at sea, and its dependence on clean water makes it a useful indicator of water quality.
<i>Polemaetus bellicosus</i>	Martial Eagle	EN	EN	Occupies a range of habitats, including open woodlands, wooded savannas, bushy grasslands, thornbush areas, and, in southern Africa, more open landscapes and even semi-desert regions evidence indicating a strong preference for habitats that are less disturbed by human activity

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Procellaria aequinoctialis</i>	White-chinned petrel	VU	VU	The White-chinned Petrel is a colonial nesting species that breeds on an annual basis with the breeding season extending from October to May. It forages day and night, feeding mainly by surface-seizing, but is also capable of diving to depths of approximately 16 m. The diet in South African continental waters comprises mainly of offal from trawlers, small fish, mantis shrimps <i>Squilla armata</i> , cuttlefish <i>Sepia</i> spp. and other cephalopods. The species is attracted to fishing activity.
<i>Puffinus griseus</i>	Sooty Shearwater	NT	NT	This species occurs primarily over oceanic waters and the continental shelf, often forming large flocks. It breeds in large colonial burrows on islands and coastal headlands, under tussock grass and low scrub. The species forages on fish, crustaceans, and cephalopods, and may scavenge from trawlers and cetacean faeces, with winter aggregations of up to 10,000 birds off southern and western coasts of Southern Africa.
<i>Sagittarius serpentarius</i>	Secretarybird	EN	VU	<i>Sagittarius serpentarius</i> occupies a variety of open landscapes, including plains, grasslands, and lightly wooded savanna, and is also found in agricultural areas and sub-desert regions. Notably, up to 50% of recorded individuals in the Fynbos biome during winter are found in transformed environments
<i>Scopus umbretta</i>	Hamerkop	LC	NT	This species occurs in a wide range of aquatic habitats, including estuaries, rivers, ponds, lakes, and irrigation systems, and is occasionally recorded along rocky shorelines. It relies on trees for nesting and roosting. Its presence is therefore closely tied to both water bodies and suitable arboreal structures.
<i>Spatula smithii</i>	Cape shoveler	LC	NT	The Cape Shoveler inhabits shallow, plankton-rich wetlands, including dams, tidal estuaries, saltpans, saline lagoons, and shallow bays of large dams. Its breeding habitat is largely determined by food availability. In some regions, such as the Free State, it shows a preference for pans dominated by Swamp Grass.

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Spheniscus demersus</i>	African Penguin	CR	EN	African Penguins forage for small pelagic fish (predominantly sardine and anchovy) in inshore waters, usually within 15 km of the coast and can travel up to 50 km from colonies while breeding. Outside of the breeding season, they can move further offshore, especially when foraging on the Agulhas Bank off the south coast of South Africa. Juveniles are typically far-ranging and can move up to 1800 km from their natal colony, although they tend to recruit to natal colonies.
<i>Sterna dougalli</i>	Roseate tern	LC	VU	The species nests in various habitats including sand dunes, sand spits, shingle beaches, reefs, saltmarshes, and rocky, sandy, or coral islands. It prefers densely vegetated sites in temperate regions but opts for sparsely vegetated sites in tropical areas. Additionally, it favours nest sites near clear, shallow, sandy fishing grounds, particularly in tidal bays and sheltered inshore waters. Low rocky headlands, and less often beaches and sandbanks, are preferred as roosting sites.
<i>Thalassarche cauta</i>	Shy Albatross	NT	NT	<i>Thalassarche cauta</i> primarily occurs over oceanic waters, often far from land, and forms large flocks while foraging. It feeds on fish, squid, and crustaceans, frequently following ships to scavenge discards. The species nests in dense colonies on remote islands, typically under tussock grass or low vegetation.
<i>Zapornia pusilla</i>	Baillon's Crake	LC	NT	<i>Z. pusilla</i> inhabits freshwater to saline marshes, including permanent and temporary wetlands with dense emergent vegetation such as Phragmites and Typha. It occurs in a variety of wet habitats, including flooded meadows, interdune pans, irrigated crops, and artificially created marshes. This species is found at elevations up to 1,500 m.
<i>Cacosternum aggestum</i>	Klipheuwel Dainty Frog	LC	DD	<i>C. aggestum</i> is known only from pools within flooded wheat fields. Its habitat is largely unknown but it can tolerate highly modified and seasonal habitat. Very little is currently known about its broader ecological requirements or life history.
<i>Cacosternum capense</i>	Cape Caco	NT	NT	<i>C. capense</i> inhabits low-lying, poorly drained loamy to clay soils, as well as some shallow sandy areas, historically associated with Renosterveld heathland. It breeds in shallow temporary pools and depressions, laying eggs on submerged vegetation. The species tolerates disturbed and agricultural landscapes, often burrowing underground to survive dry periods.

Scientific name	Common Name	IUCN Status	National Red List Status	Habitat Preferences
<i>Cordylus macropholis</i>	Large-scaled Girdled Lizard	LC	NT	<i>C. macropholis</i> is a terrestrial lizard that primarily uses succulent plants, such as <i>Euphorbia caput-medusae</i> , for shelter. It is most abundant in areas where these plants are common. The species also shelters beneath calcrete rocks and in the stick nests of Vlei Rats (<i>Otomys</i> spp.).
<i>Scelotes montispectus</i>	Bloubergstrand Dwarf Burrowing Skink	NT	NT	<i>S. montispectus</i> occurs in sparsely vegetated coastal dune habitats. It is typically found near sea level. The species relies on open sandy areas for shelter and movement.
<i>Bullacris obliqua</i>	Bladder grasshopper	VU	VU	<i>B. obliqua</i> occurs within the Fynbos Biome, where it inhabits open shrubland and coastal lowland vegetation types characteristic of this region. The species has a specialized host association with <i>Eriocephalus africanus</i> , which is currently the only confirmed host plant. Its distribution and abundance are therefore closely linked to the presence and availability of this host species within fynbos habitats.
<i>Epirinus bento</i>		NE	VU	<i>E. bento</i> is a ground-dwelling species of dung beetle associated with fynbos vegetation. It inhabits sandy soils and low shrublands. The species is typically found in areas with sparse vegetation cover
<i>Epirinus granulatus</i>		NE	VU	<i>E. granulatus</i> is a dung beetle species endemic to the West Coast of South Africa, specifically inhabiting coastal Strandveld. Active from April to November, this species is associated with cattle dung in these sandy, shrubland environments.
<i>Pachysoma aesculapius</i>	West Coast Flightless Dung Beetle	VU	NE	<i>P. aesculapius</i> is a large, diurnal, flightless dung beetle. It is associated with firm, deep sands of coastal hummocks, riverbanks, and vegetated dunes. The species constructs permanent burrows where it stores collected dung pellets and plant detritus.
<i>Stygionympha dicksoni</i>	Dickson's Hillside Brown	CR	CR	<i>S. dicksoni</i> is a butterfly associated with renosterveld-type fynbos. It occurs preferentially on the western and southern slopes of low hills. The species is typically found in areas with low-lying shrub and grass cover.
<i>Trimenia wallengrenii</i>	Wallengren's Silver Spotted Copper	EN	CR	<i>T. wallengrenii</i> occurs near the summits and western slopes of low hills. It is associated with Renosterveld vegetation. The species is found at elevations between 350 and 450 m.

4.5 FIELD RESULTS

A total of 36 animal species were recorded during the field assessment, comprising one mammal, nine bird, one reptile, one amphibian, and 24 invertebrate species. Across all taxa, 283 individual animals were observed in the field (Table 4.3). This equates to a species encounter rate of three species per hectare and an individual encounter rate of 26 animals per hectare (Table 4.3). Invertebrates exhibited the highest species richness and abundance, with Hymenoptera (e.g., ants, bees and wasps) being the most dominant order (Table 4.4). Vertebrates exhibited low diversity with only 12 species observed, of which nine were bird species (Table 4.5). It is important to note that *Strongylopus grayii* was not observed within the footprint of the proposed development but within the wetland to the south. Each vertebrate species was assigned a conservation status based on the SANBI National Red List of South African Species. As invertebrate taxa were identified only to order level, no conservation status could be assigned. Where applicable, alien species were identified according to their classification under the NEMBA Alien and Invasive Species List, 2020. No SCC were recorded on site during the field surveys.

Table 4.3. Number of animal species and individuals recorded during the field assessment, including the species richness and encounter rate (number of individuals and species per hectare) are also presented.

Taxon	Size (ha)	Total no. of species	Total no. of animals	Species per ha	Animals per ha
Vertebrate	11	12	112	1	10
Invertebrates		24	171	2	16
All animals		36	283	3	26

Table 4.4. Invertebrate orders recorded during the field assessment, including the number of species encountered per order and number of individuals encountered per order.

Order	No. of species	No. of individuals
Aranea	5	9
Coleoptera	4	15
Diptera	3	3
Hemiptera	5	24
Hymenoptera	6	119
Lepidoptera	1	1

Table 4.5. Vertebrate species recorded on-site during the field assessment, along with each species' scientific name, common name, number of individuals encountered, and its conservation status (as per the national SANBI Red List classification or global IUCN classification), or invasion status (under NEMBA), where applicable. Red list categories are as follows: EN = Endangered; NT=Near Threatened; LC = Least Concern. No conservation status was given if an animal could not be identified to species level.

Species	Common Name	National Red List Status	IUCN	No. individuals encountered
Amphibians				

Species	Common Name	National Red List Status	IUCN	No. individuals encountered
<i>Strongylopus grayii</i>	Clicking Stream Frog	LC	LC	8
Reptiles				
<i>Trachylepis capensis</i>	Cape Skink	LC	LC	1
Birds				
<i>Hirundo rustica</i>	Barn Swallow	LC	LC	2
<i>Passer melanurus</i>	Cape Sparrow	LC	LC	60
<i>Crithagra flaviventris</i>	Yellow Canary	LC	LC	28
<i>Lanius collaris</i>	Southern Fiscal	LC	LC	1
<i>Vidua macroura</i>	Pin-tailed Whydah	LC	LC	1
<i>Columba livia</i>	Rock dove	Alien	LC	5
<i>Ploceus capensis</i>	Cape Weaver	LC	LC	2
<i>Threskiornis aethiopicus</i>	African sacred ibis	LC	LC	1
<i>Motacilla capensis</i>	Cape Wagtail	LC	LC	2
Mammals				
<i>Mus musculus</i>	House mouse	Alien	LC	1

5 EMPR MITIGATION RECOMMENDATIONS

5.1 MITIGATION FRAMEWORK AND CONTEXT

The mitigation measures that need to be implemented by a development to address potential ecological impacts are guided by the mitigation hierarchy. This is a structured, stepwise approach used in environmental management that consists of five sequential levels: (1) avoidance/prevention, (2) minimisation, (3) rehabilitation/restoration, (4) offsetting, and (5) the no-go option. The preferred approach is to avoid or prevent adverse impacts entirely. However, this is not always feasible due to technical, economic, or spatial constraints. Where avoidance is not practicable, efforts must be made to minimise impacts as far as possible. For example, by reducing the spatial footprint of the development, adjusting the layout to avoid sensitive features, timing activities to avoid critical life stages of species, or implementing low-impact construction methods, among others. If certain impacts remain unavoidable or cannot be sufficiently minimised, the next step in the hierarchy is to rehabilitate or restore the affected areas to their pre-project condition following construction. However, where rehabilitation is not sufficient to fully address significant residual impacts, biodiversity offsetting measures are considered. Offsetting involves implementing conservation actions elsewhere to provide measurable, equivalent ecological gains to compensate for the loss at the development site, such as protecting or restoring similar habitats in a different location. Should all previous mitigation levels fail to adequately address highly significant residual impacts, such as irreversible destruction/ loss of critical ecosystems, the final step, known as the no-go option, is invoked. This entails re-evaluating or relocating the proposed activity to an alternative site to avoid unacceptable environmental degradation.

The proposed project involves the clearing of approximately 11 hectares of Swartland Granite Renosterveld as part of the second phase of a low-cost housing development. Given the nature and location of the proposed development, complete avoidance of habitat loss is not feasible. However, the existing habitat to be cleared is already degraded, and heavily influenced by anthropogenic activities. Consequently, it is unlikely to provide suitable ecological conditions for any SCC that may potentially occur in the broader area. The study site primarily supports common species adapted to disturbed or anthropogenically modified environments. Although the habitat is degraded and no SCC were observed, mitigation measures to minimise potential impacts on animal species are still recommended. Accordingly, mitigation measures recommended for inclusion in the EMPr are provided below.

5.2 CONSTRUCTION PHASE

The construction phase is anticipated to have the greatest direct and indirect impacts on animal species. Recommended mitigation measures include:

- All new staff must receive environmental awareness training, especially in terms of areas to be avoided as well as No-Go areas (if applicable and have been established).
- Minimise the development footprint to the absolute area necessary for construction and operational activities.

- Limit vegetation clearance and disturbance strictly to the approved project footprint; no clearance or disturbance should occur outside these boundaries.
- Confine temporary construction facilities to previously disturbed areas.
- Clearly demarcate and enforce "no-go" zones for vehicles and personnel, including all areas outside the direct construction influence zone.
- Ensure that emergency response equipment, including fire suppression and spill containment supplies, is readily available at each proposed development location on the property.
- All construction materials, equipment, and any foreign objects introduced to the area by contractors must be removed immediately upon completion of construction activities.
- Maintain general waste storage areas in a manner that does not attract nuisance or opportunistic wildlife. Dispose of all food waste (e.g., leftovers, bones, fruit cores) in sealed, designated waste bins; under no circumstances should food waste be discarded into the surrounding environment. Use tamper-proof lids on all waste bins to prevent access by wildlife.
- Construction vehicles must be inspected before being brought onto site and every day while on site for leaks and other faults. No leaking construction vehicle will be allowed on site. Protection against accidental leaks must be present on site.
- Erect temporary barriers around open trenches and excavations to prevent fauna from becoming trapped within development area.
- Prior to the commencement of any new earthworks, a walk-through must be conducted, **by a registered specialist**, of all demarcated construction areas and access roads to identify and safely relocate fauna with limited mobility. **Relevant permits for the capture and removal of species must be obtained from CapeNature.**
- During construction activities, any observation of immobile or slow-moving fauna must be reported. Construction in that area must be temporarily halted until all fauna have been removed from harm's way.
- Maintain an incident register throughout all project phases, documenting any incidents that occur on site.
- Only individuals with appropriate training are permitted to handle fauna encountered on-site.
- Limit construction activities to daylight hours to allow for effective monitoring of fauna presence and movement.
- If night lighting is essential, all lights must be directed downward and shielded to prevent light spill into the surrounding natural environment.

5.3 OPERATIONAL PHASE IMPACT

The operational phase is expected to have continuous impacts on animal species in proximity of the proposed development. Recommended mitigation measures include:

- Avoid any additional vegetation clearance of the surrounding environment.
- Encourage the establishment of indigenous gardens within the development footprints to promote local biodiversity and reduce the spread of alien species.
- During routine infrastructure maintenance, ensure that materials are managed appropriately to avoid unnecessary habitat disturbance.
- Ensure that no waste, including construction debris or domestic refuse, is disposed of in the surrounding natural environment.

- No off-road driving is permitted for vehicles and mobile machinery used during operations and for maintenance purposes.
- Feeding of wildlife must be strictly prohibited. Disposal or discarding of food waste (e.g., bones, fruit cores, scraps) into the natural environment surrounding the development must not be permitted.
- All food and general waste should be securely stored in wildlife-proof facilities, such as lockable cages or sealed external rooms inaccessible to fauna.
- Waste bins must be wildlife-proof and designed using a double-containment method to minimise scent dispersion and deter wildlife from attempting access.
- Food waste should be regularly removed from the premises to prevent accumulation and reduce attractants in and around the development area.
- Residents/ on-site personnel must be prohibited from handling, poisoning, or harming wildlife.
- Only trained professionals will be allowed to handle and wildlife encountered within the development.
- Faunal protection protocols must be communicated to all staff and residents through clearly displayed signage and ongoing awareness training.

6 DISCUSSION AND CONCLUSIONS

The proposed second phase low-cost housing development is located on the northeastern boundary of Darling in the Western Cape Province. The area falls within the Swartland Granite Renosterveld type, which is currently classified as Endangered according to the 2022 National RLE. This classification reflects the fact that approximately 80% of Swartland Granite Renosterveld has been irreversibly transformed, primarily due to its high suitability for agriculture and, to a lesser extent, expansion of urban development (Mucina and Rutherford 2006).

Spatial data from the Western Cape BSP indicates that the majority of the proposed development footprint overlaps with a CBA 1: Terrestrial area (CapeNature 2024). CBAs are essential for the conservation of biodiversity, the maintenance of ecosystem processes, and the functioning of ecological infrastructure, and are therefore required to remain in a natural or near-natural state (CapeNature 2024). CBA 1 areas are typically considered largely intact, while CBA 2 areas are often more degraded or characterised by secondary vegetation (CapeNature 2024b). Despite its formal classification as a CBA 1, the current condition of the site does not reflect a near-natural state. The vegetation composition is inconsistent with that of Swartland Granite Renosterveld, largely as a result of frequent fire events that have substantially degraded the fynbos component. Vegetation diversity across the site is low, with the area currently dominated by fire-tolerant grass species. In addition, three locations were identified where untreated sewage is discharged directly into the surrounding environment (Figure 6.1). The site is further impacted by widespread illegal dumping of waste originating from adjacent informal settlements. Collectively, these disturbances have resulted in a highly degraded landscape that no longer reflects the ecological characteristics or conservation value typically associated with Swartland Granite Renosterveld or that of a CBA 1.



Figure 6.1. Raw sewage spilling directly into the surrounding environment.

A total of 36 animal species were recorded during the field survey, 67% of which were invertebrates and 33% vertebrates. Of the vertebrate assemblage, birds accounted for 75% of species recorded, while mammals, reptiles, and amphibians were each represented by a single species. No SCC were recorded during the field assessment. The overall low faunal species richness is indicative of the degraded condition of the study area. The invertebrate community was strongly dominated by ants, with the order Hymenoptera accounted for approximately 69% of all invertebrate species recorded, with ants being the most dominant group. The remaining invertebrate taxa were represented by low species diversity and abundances, a pattern characteristic of disturbed habitats, as insects are widely recognised as sensitive bioindicators of environmental degradation and habitat disturbance (Ruan et al. 2021). The vertebrate assemblage similarly reflected disturbance, being dominated by avifauna, most of which are seed-eating species associated with grass-dominated and urban or peri-urban environments. Ground-dwelling vertebrates were recorded in very low abundance and diversity, with only three species recorded, including one alien species (*Mus musculus*) and two disturbance-tolerant indigenous species. Of the 12 vertebrate species recorded, 11 are typically associated with disturbed or urban environments, reflecting a high tolerance to anthropogenic disturbance, further supporting the conclusion that the study area is ecologically degraded.

Considering the highly disturbed nature of the study site, and the absence of sensitive or range-restricted species, the second phase low-cost housing development is not expected to result in significant impacts on animal species within the region. Although SCCs are known to occur in the broader region, their presence is more probable in less disturbed area where isolated pockets of intact natural vegetation persist. The limited size altered condition of the site is therefore likely to discourage SCC utilisation.

Given the site conditions, existing levels of disturbance, the expected spatial extent of the development footprint, and the limited potential for ecological impact, it is the specialist's opinion that the proposed development represents an acceptable and appropriate land use. There are no ecological constraints preventing the project from proceeding, provided that all recommended mitigation and management measures are fully implemented.

7 REFERENCES

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APPENDIX A — SCREENING TOOL REPORT

APPENDIX B — DETAILS AND EXPERTISE OF THE SPECIALISTS

CURRICULUM VITAE

FRANCOIS ANDRÉ DE VILLIERS

ACADEMIC QUALIFICATIONS:

MSc Zoology, 2016, Stellenbosch University

BSc (Hons) Biodiversity & Ecology, 2013, Stellenbosch University

BSc Biodiversity & Ecology, 2012, Stellenbosch University

OTHER TRAINING:

First aid (Level 1)

SCIENTIFIC REGISTRATIONS:

- SACNASP – Pr.Sci.Nat. Ecological Science: 173875

COUNTRY EXPERIENCE: South Africa

LANGUAGE PROFICIENCY: English (Good), Afrikaans (Excellent)

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EMPLOYMENT HISTORY:

2025-Present: Consultant (Anchor Environmental Consultants)

2024-2025: ECO and Consultant (Anchor Environmental Consultants)

2022-2024: Conservation Officer (Affirmative Portfolios)

2020-2021: Director (Amet Environmental Services)

2018-2020: Environmental Officer (Proxa Water)

2017: Environmental Officer (Opti Power Projects)

2016-2017: Environmental Officer (CSV Construction)

SUMMARY PROFILE

André de Villiers holds an MSc in Zoology and a BSc (Hons) in Biodiversity and Ecology from Stellenbosch University. He has 10 years of research and environmental consulting experience across multiple disciplines and is currently employed as a consultant specialising in terrestrial animal species and terrestrial biodiversity at Anchor Environmental. His research background is centred on freshwater amphibians (Anura), with a focus on species interactions, individual performance, and population and age structure dynamics. He also has experience in invasion

biology and contributed to the control of the African clawed frog (*Xenopus laevis*) in Europe as part of the INVAXEN initiative. In addition, he has supported the City of Cape Town in efforts to mitigate the spread of the invasive Polyphagous Shot Hole Borer. André has overseen the rehabilitation of two projects and was directly responsible for the rehabilitation planning and implementation of two additional projects. He has published 13 peer-reviewed articles in Class A scientific journals, including one publication in Science. With more than seven years of experience in environmental management, he has worked on a wide range of projects across both construction and operational phases, including wind energy developments and large-scale desalination projects. He also has experience as an external environmental auditor, having conducted audits of several water treatment facilities. His professional responsibilities include environmental research, terrestrial animal species and biodiversity impact assessments, and the monitoring of projects throughout the development lifecycle. His current professional focus lies primarily on animal species impact assessments and terrestrial biodiversity assessments.

SKILLS: MARK, R, Statistica, QGIS, MS Suite.

SELECT PROJECT EXPERIENCE

Period	Country	Clients	Project, Tasks
2025	South Africa	CK Rumboll & Partners	Terrestrial animal species compliance statement: A terrestrial animal species compliance statement was conducted for phase 2 of low-cost housing in Darling
2025	South Africa	Enviro-EAP	Peer Review and amendments of terrestrial animal species specialist assessment: Peer review and amendments of terrestrial animal species assessment for the proposed development on portion 7 of farm 554, Yzerfontein Western Cape
2025	South Africa	Enviro-EAP	Peer Review of terrestrial animal species compliance statement: Peer Review of terrestrial animal species compliance statement for the proposed new Grootfontein dam on portion 24 on Misgiunt farm 499, Clanwilliam district, Western Cape
2025	South Africa	Enviro-EAP	Peer Review of terrestrial animal species compliance statement: Peer Review of terrestrial animal species compliance statement for the proposed development on erven 3677, 3680 and 3617, Citrusdal, Western Cape
2025	South Africa	Enviro-EAP	Peer Review of terrestrial animal species specialist assessment: Peer Review of terrestrial animal species specialist assessment for the proposed development on a erf 474, St Helena Bay, Western Cape
2025	South Africa	Enviro-EAP	Peer Review of terrestrial animal species specialist assessment: Peer Review of terrestrial animal species specialist assessment for the mixed used development on a portion of portion 4 of farm 560, Yzerfontein, Western Cape

Period	Country	Clients	Project, Tasks
2025	South Africa	Kovaks Investments 172 (Pty) Ltd	Terrestrial animal species specialist assessment: Terrestrial animal species assessment for the proposed housing development on erf 2732, Yzerfontein, Western Cape
2025	South Africa	Kovaks Investments 172 (Pty) Ltd	Terrestrial biodiversity specialist assessment: Terrestrial biodiversity assessment for the proposed housing development on erf 2732, Yzerfontein, Western Cape
2025	South Africa	ATKV	Terrestrial biodiversity compliance statement: Terrestrial biodiversity compliance statement was conducted for proposed dune stabilization by ATKV in Hartenbos
2025	South Africa	Breed Valley Municipality	Site sensitivity verification and terrestrial biodiversity compliance statement: The site sensitivity verification and terrestrial biodiversity compliance statement as part of the environmental authorization for the proposed residential development at Touwsrivier, Western Cape
2025	South Africa	Breed Valley Municipality	Terrestrial animal species specialist assessment: Terrestrial animal species assessment as part of the environmental authorization for the proposed residential development at Touwsrivier, Western Cape
2025	South Africa	Casidra	Freshwater Rehabilitation Monitoring Reporting on the progress and condition of the rehabilitation and the extent of invasive species at the Holsloot River
2024	South Africa	MW & S Project Services (Pty) Ltd	Terrestrial fauna and flora compliance statement Compiling the terrestrial fauna and flora compliance statement for the Proposed Tiger Brands Wheat Mill.
2024	South Africa	Private	Section 30A ECO Onrus Estuary Section 30A directive, provision Environmental Control Officer (ECO) services and environmental monitoring.
2024	South Africa	Transnet Port Authority	Port of East London Desalination EMPr Compiling the Environmental Management Programme (EMPr) for the construction and Operational phase of the Port of East London Desalination Project.
2024	South Africa	MC Ranching	Environmental Risk Assessment for abalone ranching pilot project Assisting in drafting an environmental risk assessment for abalone pilot ranching project for MC Ranching.
2024	South Africa	V&A Waterfront	V&A Waterfront Desalination OEMPr Compiling the Operational Environmental Management Programme (OEMPr) for the V&A Waterfront Desalination Project
2024-2025	South Africa	Department of Forestry, Fisheries and the Environment	ADZ ECO Investigating and reporting on the aquaculture farms within the ADZ's compliance towards the approved Environmental Authorization (EA) and Environmental Management Programme (EMPr).

Period	Country	Clients	Project, Tasks
2023	Global	IUCN	Technical note on invasive alien <i>Xenopus laevis</i> Reviewing and providing input into the Technical note on invasive alien <i>Xenopus laevis</i>
2022-2024	South Africa	City of Cape Town	Invasive Species Management Invasive species awareness; Invasive species control; Invasive species control plans
2022-2024	South Africa	City of Cape Town	Invasive species awareness Held public talks to spread awareness of the polyphagous shot hole borer beetle
2022-2024	South Africa	City of Cape Town	Invasive species management training Provided training to various stakeholders on how to prevent the spread of the polyphagous shot hole borer and how to deal with infested trees and waste
2022-2024	South Africa	City of Cape Town	Invasive alien species monitoring, control and eradication plans Drafting Invasive alien species monitoring, control and eradication plans for various nature reserves
2022-2024	South Africa	City of Cape Town	Invasive alien species monitoring, control and eradication plans Drafting species control plan for the guttural toad within the boundaries of the City of Cape Town
2022-2024	South Africa	City of Cape Town	Invasive species management protocols Drafting Invasive species management protocols for polyphagous shot hole borer
2021	South Africa	Proxa	Dune Rehabilitation Reinstatement and rehabilitation of the dunes on the footprint of the Monwabisi Salt Water Reverse Osmosis plant.
2021	South Africa	Proxa	Rehabilitation Supervisor (Independent) Oversaw and reported on the rehabilitation progress following the decommissioning of the Strandfontein Salt Water Reverse Osmosis plant.
2019-2020	South Africa	Tronox	S30A and WREMPr Compliance Monitoring Ensuring Proxa's compliance towards the issued Section 30 A (S30A), Water Resilience Environmental Management Programme (WREMPr) during the construction phase, operational and decommissioning phase of the Tronox Desalination Project
2019-2020	South Africa	Proxa	EA and OEMPr internal compliance auditing Auditing the conditions set out in the approved Environmental Authorization (EA) and Operational Environmental Management Programme (OEMPr) during the operational phase of the Central Basin Acid Mine Drainage Project.
2019-2020	South Africa	Proxa	EA and OEMPr internal compliance auditing Auditing the conditions set out in the approved Environmental Authorization (EA) and Operational Environmental Management Programme (OEMPr) during the operational phase of the East Basin Acid Mine Drainage Project.

Period	Country	Clients	Project, Tasks
2018-2022	South Africa	Proxa	S30A and WREMP Compliance Monitoring Ensuring Proxa's compliance towards the issued Section 30 A (S30A), Water Resilience Environmental Management Programme (WREMP) during the construction phase, operational and decommissioning phase of the Zandvlei Re-Use plant Project
2018-2022	South Africa	Proxa	S30A, WREMP, WUL Compliance Monitoring Ensuring Proxa's compliance towards the issued Section 30 A (S30A), Water Resilience Environmental Management Programme (WREMP) during the construction phase, operational and decommissioning phase of the Monwabisi Desalination Project
2018-2022	South Africa	Proxa	S30A, WREMP, WUL Compliance Monitoring Ensuring Proxa's compliance towards the issued Section 30 A (S30A), Water Resilience Environmental Management Programme (WREMP) during the construction phase, operational and decommissioning phase of the Strandfontein Desalination Project
2017	South Africa	Opti Power Projects	EA and CEMPr Compliance Monitoring Ensuring Opti Power Projects' compliance towards the approved Environmental Authorization (EA) and Construction Environmental Management Programme (CEMP) during the construction phase of the 440kV line from Kleinsee to Alexanderbaai Project
2016-2017	South Africa	CSV Construction	EA and CEMPr Compliance Monitoring Ensuring CSV Construction's compliance towards the approved Environmental Authorization (EA) and Construction environmental management programme (CEMP) during the construction phase of the Longyuan Mulilo De Aar Wind 2 Project

PUBLICATION RECORD

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- Kumschick, S., Vimercati, G., **Villiers, F.A.**, Mokhatla, M.M., Davies, S.J., Thorp, C.J., Rebelo, A.D. and Measey, G.J., 2017. Impact assessment with different scoring tools: How well do alien amphibian assessments match? *NeoBiota* 33: 53–66.
- Measey, G.J., Vimercati, G., **De Villiers, F.A.**, Mokhatla, M., Davies, S.J., Thorp, C.J., Rebelo, A.D. and Kumschick, S., 2016. A global assessment of alien amphibian impacts in a formal framework. *Diversity and distributions*, 22(9), pp.970-981.
- Ihlow, F., Courant, J., Secondi, J., Herrel, A., Rebelo, R., Measey, G.J., Lillo, F., **De Villiers, F.A.**, Vogt, S., De Busschere, C. and Backeljau, T., 2016. Impacts of climate change on the global invasion potential of the African clawed frog *Xenopus laevis*. *PLoS One*, 11(6), p.e0154869.
- De Villiers, F.A.**, de Kock, M. and Measey, G.J., 2016. Controlling the African clawed frog *Xenopus laevis* to conserve the Cape platanna *Xenopus gilli* in South Africa. *Conservation Evidence* 2016 (13), 17
- De Villiers, A.**, Mouton, P.L.F.N. and Flemming, A., 2015. Generation glands of cordylid lizards: mechanism of secretion transfer to the environment. *Amphibia-Reptilia*, 36(4), pp.351-360.
- Measey, G.J., Vimercati, G., **De Villiers, F.A.**, Mokhatla, M.M., Davies, S.J., Edwards, S. and Altwegg, R., 2015. Frog eat frog: exploring variables influencing anurophagy. *PeerJ*, 3, p.e1204.

THESES

- De Villiers, F.A.** 2016. The dispersal ability, performance and population dynamics of Cape *Xenopus* frogs. MSc Thesis, Stellenbosch University, 92 pp.
- De Villiers, F.A.** 2013. Generation glands of cordylid lizards: mechanism of secretion dispersal to the environment. BSc Hons. Thesis, Stellenbosch University, 28 pp.

CONFERENCES

- 2015 Zoological Society of South Africa (ZSSA). The Age Structure of Cape *Xenopus* (Anura:Pipidae) (Presentation)
- 2014 Herpetological Association of Africa. The Survival and Dispersal of Cape *Xenopus* (Anura: Pipidae) (Presentation)

CURRICULUM VITAE

CHERUSCHA SWART

DATE OF BIRTH: 3 November 1988

NATIONALITY: South African

ACADEMIC QUALIFICATIONS

- MSc (Cum Laude) Zoology, Stellenbosch University, 2015 – 2017
- BSc (Hons) Biodiversity and Ecology, Stellenbosch University, 2013
- BSc Biodiversity and Ecology, Stellenbosch University, 2010 – 2012

SCIENTIFIC REGISTRATIONS:

- EAPASA – Environmental Assessment Practitioner: Number 2021/3298
- SACNASP – Pr.Sci.Nat. Environmental Science: 155305
- IAIAsa – Member: Membership number 7398

OTHER TRAINING

- Environmental Impact Assessments, Environmental Legal Compliance, Auditing and Monitoring Training Course, Cape Town, 2020, 2023, 2024 & 2025. Business Success Solutions in association with Janice Tooley Attorneys. Accredited with SACNASP and EAPASA.
- Practical Implementation of Environmental Auditing and Monitoring Training Course, Cape Town, 2024. Business Success Solutions in association with Umhlaba Environmental Consulting. Accredited with SACNASP and EAPASA.
- First Aid Level 1.

COUNTRY EXPERIENCE: South Africa

LANGUAGE PROFICIENCY: English (Excellent), Afrikaans (Excellent)

POSTAL ADDRESS: 8 Steenberg House, Silverwood Close, Tokai 7945

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EMPLOYMENT HISTORY:

2026-current — Team Lead Environmental Management: Anchor Environmental Consultants Part of SLR

2022–2026 — Senior Consultant & Head Environmental Assessment Practitioner in Environmental Impact Assessment Department: Anchor Environmental

2019–2022 — Consultant and Environmental Assessment Practitioner: Anchor Environmental

2018 – 2019 — Junior Consultant and Taxonomist: Anchor Environmental

2014 – 2017 — Assistant Research Consultant: Stellenbosch University

2014 – 2015 — Research Intern: National Research Foundation

SUMMARY PROFILE

Cheruscha holds a Master of Science (MSc) in Zoology and a Bachelor of Science (BSc) Honours degree in Biodiversity and Ecology from Stellenbosch University. She is a Registered Environmental Assessment Practitioner (EAP) with 14 years of research and consulting experience. Cheruscha is the Team Lead and Head EAP of the Environmental Management Department at Anchor Environmental Consultants, where she leads and manages a wide range of environmental projects. Her expertise includes Environmental Impact Assessments (EIAs), applications for prospecting rights, management plan development, auditing, environmental compliance monitoring, baseline and monitoring surveys, and specialist impact assessments, all undertaken across marine, coastal, and terrestrial environments. In addition, she has specialist expertise in marine invertebrate taxonomy and rocky shore surveys. Her project portfolio spans a wide range of sectors, including land-based and offshore prospecting, offshore mining, agriculture, land- and sea-based aquaculture, solar desalination, residential and commercial developments, conservation surveys for protected areas, and long-term monitoring of bays and ports along the South African coast. Cheruscha is the author of three peer-reviewed scientific publications and numerous scientific reports, with additional projects and publications currently in preparation.

SELECT PROJECT EXPERIENCE

Period	Country	Clients	Project, Tasks
2026	South Africa	WSP	Terrestrial Biodiversity Specialist; Principal Reviewer A terrestrial biodiversity specialist assessment was conducted for the proposed expansion of the Xintong Steel facility
2026	South Africa	Greenvolts Pty (Ltd)	Terrestrial Animal Species Specialist; Principal Reviewer A terrestrial animal species compliance statement was conducted for a solar PV development in Saldanha.
2026	South Africa	Trans Atlantic Diamonds	Environmental Assessment Practitioner Reapplication process: Basic Assessment Process and application for prospecting rights in the offshore sea concession area 11C, Western Cape
2026	South Africa	Denith Engineering (Pty) Ltd	Environmental Assessment Practitioner Applicability Checklist for the Proposed Crane Installation at the Royale Cape Yacht Club, Erf RE/10256, Cape Town
2025	South Africa	Gansbaai Marine (Pty) Ltd	Marine Field Scientist Marine Rocky Shore Survey to fulfil the requirements of Gansbaai Marine's Coastal Waters Discharge Permit, Western Cape.
2025	South Africa	Enviro-EAP	Independent Reviewer Peer review of the terrestrial animal species assessment for a proposed development in Riversdal, Western Cape

Period	Country	Clients	Project, Tasks
2026	South Africa	WSP	Terrestrial Biodiversity Specialist; Principal Reviewer A terrestrial biodiversity specialist assessment was conducted for the proposed expansion of the Xintong Steel facility
2025	South Africa	CK Rumboll & Partners	Terrestrial Biodiversity/ Animal Specialist; Principal Reviewer Terrestrial animal species compliance statement as part of an EIA for phase 2 of a low-cost housing development in Darling
2025	South Africa	Enviro-EAP	Independent Reviewer Peer review and amendments of terrestrial animal species assessment for the proposed development in Yzerfontein, Western Cape
2025	South Africa	Kovaks Investments 172 (Pty) Ltd	Terrestrial Biodiversity/ Animal Specialist; Principal Reviewer Terrestrial Biodiversity Assessment for the Proposed Residential Housing Development, near Rooipan Salt Pans, Yzerfontein, Western Cape.
2025	South Africa	Kovaks Investments 172 (Pty) Ltd	Terrestrial Biodiversity/ Animal Specialist; Principal Reviewer Terrestrial Animal Species Assessment for the Proposed Residential Housing Development, near Rooipan Salt Pans, Yzerfontein, Western Cape.
2025	South Africa	Enviro-EAP Pty (Ltd)	Independent Reviewer Peer review of the Animal Species Impact Assessment for the Mixed-Use Development, Yzerfontein, Western Cape.
2025	South Africa	Enviro-EAP Pty (Ltd)	Independent Reviewer Peer review of the Animal Species Impact Assessment for the Proposed Residential Development, St Helena Bay, Western Cape.
2025	South Africa	Enviro-EAP Pty (Ltd)	Independent Reviewer Peer review of the Animal Species Compliance Statement for the Proposed Citrusdal Housing Development, Citrusdal, Western Cape.
2025	South Africa	Enviro-EAP Pty (Ltd)	Independent Reviewer Peer review of the Animal Species Compliance Statement for a new dam, Clanwilliam District, Western Cape.
2025	South Africa	ATKV Sake (RF) Pty Ltd t/a ATKV Hartenbos	Terrestrial and Animal Specialist; Principal Reviewer Terrestrial Biodiversity, Plant and Animal Compliance Statement for the Proposed Dune Stabilisation at the ATKV, Hartenbos, Western Cape Province.

Period	Country	Clients	Project, Tasks
2026	South Africa	WSP	Terrestrial Biodiversity Specialist; Principal Reviewer A terrestrial biodiversity specialist assessment was conducted for the proposed expansion of the Xintong Steel facility
2025	South Africa	Overstrand Local Municipality	Specialist and Principal Reviewer Invasive Alien Plant Species Monitoring, Control and Eradication Plan for the Onrus Catchment, Western Cape Province.
2025	South Africa	Breede Valley Municipality (Western Cape)	Terrestrial and Animal Specialist; Principal Reviewer Animal Species Specialist Assessment for the Proposed Integrated Residential Development at Touwsrivier, Western Cape Province
2025	South Africa	Breede Valley Municipality	Terrestrial and Animal Specialist; Principal Reviewer Terrestrial Biodiversity Compliance Statement for the Proposed Integrated Residential Development at Touwsrivier, Western Cape Province
2025	South Africa	Breede Valley Municipality	Terrestrial and Animal Specialist; Principal Reviewer Site Sensitivity Verification (SSV) and Report for Terrestrial Biodiversity and Animal and Plant Species for the Proposed Integrated Residential Development at Touwsrivier, Western Cape Province
2025	South Africa	Private Client	Environmental Assessment Practitioner; Terrestrial and Animal Specialist Site Sensitivity Verification (SSV) and Report for the Proposed Solar-Power Desalination Plant Jacobsbaai & Saldanha Area, Western Cape.
2025	South Africa	V&A Waterfront	Environmental Assessment Practitioner; Project Manager Basic Assessment Process for a Mixed Use Development at the V&A Waterfront, Cape Town, Western Cape
2025	Namibia	Namwaste (Pty) Ltd	Animal Specialist Invertebrate Specialist Study for the Proposed Namwaste Management Facility, Arandis, Namibia
2025	South Africa	De Beers Marine (Pty) Ltd	External Environmental Auditor; Environmental Assessment Practitioner External Environmental Compliance Audit for prospecting right NC12189 PR in South African Sea Area 6C — Phase 2 Auditing the compliance of prospecting activities, during January 2022, with the conditions and management measures stipulated in the associated Environmental Authorisation and Environmental Management Programme.

Period	Country	Clients	Project, Tasks
2026	South Africa	WSP	Terrestrial Biodiversity Specialist; Principal Reviewer A terrestrial biodiversity specialist assessment was conducted for the proposed expansion of the Xintong Steel facility
2024	South Africa	De Beers Marine (Pty) Ltd	External Environmental Auditor External Environmental Compliance Audit for prospecting right NC12189 PR in South African Sea Area 6C — Phase 1 Auditing the compliance of prospecting activities, during the period 15 April 2021 to 31 December 2021, with the conditions and management measures stipulated in the associated Environmental Authorisation and Environmental Management Programme.
2024-2026	South Africa	Overstrand Local Municipality	Environmental Assessment Practitioner Estuarine Maintenance Management Plan (MMP) for the proposed dredging and future maintenance of the Onrus Estuary—Onrus Catchment to Coast (C2C) Programme
2024- 2026	South Africa	Sunwater East London	Environmental Assessment Practitioner; Project Manager Scoping & Environmental Impact Assessment (EIA) for the proposed Solar Powered Desalination Plant in the Port of East London for Transnet National Ports Authority
2024/ 2025	South Africa	Department of Forestry, Fisheries and the Environment: Oceans and Coasts	Project Manager; Stakeholder Engagement Specialist Development of management plans for the South-East Atlantic and South-West Indian Seamounts Marine Protected Areas
2024	South Africa	Prism Environmental Management Services on behalf of property owner	Marine, Terrestrial and Animal Specialist Coastal Impact Assessment for the Proposed Property Development on two Erven in Wilderness, Western Cape.
2024	South Africa	Port Nolloth Sea Farms Ranching (Pty) Ltd	Environmental Assessment Practitioner Amendment of the Environmental Authorisation for the Port Nolloth Sea Farms ranching abalone holding and processing facility, south of Kleinzee.
2023	South Africa	Gansbaai Marine (Pty) Ltd	Marine Field Scientist Marine Impact Assessment to fulfil the requirements of Gansbaai Marine's Coastal Waters Discharge Permit

Period	Country	Clients	Project, Tasks
2026	South Africa	WSP	Terrestrial Biodiversity Specialist; Principal Reviewer A terrestrial biodiversity specialist assessment was conducted for the proposed expansion of the Xintong Steel facility
2023	South Africa	St Helena Bay Water Quality Trust	Report Editor and Reviewer The State of St Helena Bay: annual environmental monitoring and reporting campaign
2019 – present (ongoing)	South Africa	Saldanha Bay Water Quality Forum Trust	Marine Field Scientist; Co-author; Report Editor The State of Saldanha Bay and Langebaan Lagoon: Annual Monitoring and reporting campaign
2023/24	South Africa	GIZ	Co-author; Environment Legislation Section Green infrastructure options for improved waterway and catchment management for the City of Cape Town.
2023	South Africa	Impact Water Solutions and GIZ	Co-author; Environment Assessment Practitioner GIZ Green Hydrogen Desalination ESIA Scoping Study to provide strategic information on the technoeconomic, legal, environmental, and social applicability of desalination plants as water source for green hydrogen projects in South Africa.
2023	South Africa	Doug Jeffrey Environmental Consultants	Marine and Coastal Specialist Marine Specialist Study for the Residential Development in Oude Kraal, Camps Bay: Site Sensitivity and Constraints Report
2023	South Africa	African Tuna	Specialist and Lead Author Feasibility study for the commercial harvesting of periwinkles and limpets on the west coast of South Africa
2023	Angola	SHELTER (on behalf of Eni Angola)	Specialist and Co-author Preparation of a Terrestrial and Coastal Biodiversity Action Plan (BAP) as part of the Angola Northern Gas Complex Onshore Plant Project
2022/2023	South Africa	Matzikama Kaolin	Environmental Assessment Practitioner; Project Manager; Stakeholder Engagement Specialist Scoping Assessment as part of an application for prospecting rights: Prospecting of kaolin in the Western Cape
2022/2023	South Africa	Xwena Kaolin	Environmental Assessment Practitioner; Project Manager; Stakeholder Engagement Specialist Scoping Assessment as part of an application for prospecting rights: Prospecting of kaolin and silica in the Western Cape

Period	Country	Clients	Project, Tasks
2026	South Africa	WSP	Terrestrial Biodiversity Specialist; Principal Reviewer A terrestrial biodiversity specialist assessment was conducted for the proposed expansion of the Xintong Steel facility
2022 – present (ongoing)	South Africa	I&J Danger Point	Environmental Assessment Practitioner; Stakeholder Engagement Specialist Abalone ranging right application & Risk Assessment
2022 – present (ongoing)	South Africa	Drylands Farms	Terrestrial and Animal Specialist; Environmental Assessment Practitioner Terrestrial Baseline Survey as part of prefeasibility for a proposed agricultural development on a mine in the Northern Cape of South Africa
2018 – present (ongoing)	South Africa	De Beers Marine Namibia	Taxonomist; Environmental Scientist; Co-author De Beers Marine Namibia Environmental Monitoring Programme in the Atlantic 1 Mining License Area: Annual Benthic Sampling Campaign
2021/2022	South Africa	SANEK Liquidators	Environmental Site Officer (ESO) Stonehurst mountain Estate Phase 4 Development — Compliance Monitoring
2021/2022	South Africa	SRK Consulting	Marine Specialist Marine Impact Assessment for the increase in manganese handling capacity at the Multi-Purpose Terminal, Port of Saldanha, Saldanha Bay, South Africa
2021/2022	South Africa	Trans Atlantic Diamonds	Environmental Assessment Practitioner Basic Assessment Process and application for prospecting rights in an offshore sea concession 10B in the Northern Cape Basic Assessment Process and application for prospecting rights in an offshore sea concession 7C in the Northern Cape Basic Assessment Process and application for prospecting rights in the offshore sea concession area 14C, Western Cape Basic Assessment Process and application for prospecting rights in the offshore sea concession area 11C, Western Cape Basic Assessment Process and application for prospecting rights in the inshore sea concession area 14A, Western Cape
2021	South Africa	Nomalungelo Faku	Specialist and Lead Author Feasibility study for a pearl farm in the greater Nelson Mandela metropolitan area

Period	Country	Clients	Project, Tasks
2026	South Africa	WSP	Terrestrial Biodiversity Specialist; Principal Reviewer A terrestrial biodiversity specialist assessment was conducted for the proposed expansion of the Xintong Steel facility
2021	South Africa	Cliff Path Action Group	Marine Specialist Marine Environmental Impact Assessment for the Proposed Pedestrian Path to Connect the two Parts of the Hermanus Cliff Path via Poole's Bay
2018 – 2021	South Africa	Mhlathuze Water	Lab Technician and Scientist Mhlathuze Water Environmental Monitoring Programme for the Richards Bay Offshore Outfalls Region
2019/2020	South Africa	Planet Capital and Cape Nordic Corporation	Environmental Assessment Practitioner Support; Stakeholder Engagement Specialist Basic Assessment Process for the Proposed Land-based Aquaculture Facility near Elands Bay on the West Coast of South Africa
2020	South Africa	Planet Capital and Cape Nordic Corporation	Animal Specialist; Field Scientist Proposed Land-based Aquaculture Facility near Elands Bay – Bat Specialist Impact Survey and Assessment
2020	South Africa	CSIR Coastal Systems Research Group	Taxonomist CSIR Coastal Systems Research Group: Identification of benthic invertebrate macrofauna.
2020	South Africa	Department of Environmental Affairs and Development Planning	Field Scientist; Stakeholder Engagement Specialist Berg Estuary Valuation Study: Value of The Berg Estuary and Importance of Management Interventions
2019	South Africa	Department of Agriculture, Forestry & Fisheries	Environmental Assessment Practitioner Support; Stakeholder Engagement Specialist Basic Assessment Process for the Proposed Sea-Based Aquaculture Development Zone in Algoa Bay, Eastern Cape
2019	South Africa	Doring Bay Abalone	Co-Author Draft Environmental & Risk Assessment for an Application for a Right to Engage in an Abalone Ranching Pilot Project
2019	South Africa	Mozal Alumium Smelter	Taxonomist; Co-Author Estuarine Specialist Report for the Mozal Matola River Pipeline, Mozambique: Estuarine Impact Assessment

PUBLICATION RECORD

SWART C AND ROBINSON TB (2019) Horizon scanning for alien predatory crabs: insights from South Africa. *African Journal of Marine Science* 41(2): 125 – 135, DOI: 10.2989/1814232X.2019.1588782

SWART C, VISSER V AND ROBINSON TB (2018) Patterns and traits associated with invasions by predatory marine crabs. *NeoBiota* 39: 79 – 102. <https://doi.org/10.3897/neobiota.39.22002>

ROBINSON TB AND **SWART C** (2015) Distribution and impact of the alien anemone *Sagartia ornata* in the West Coast National Park. *Koedoe* 57 (1): DOI: 10.4102/koedoe.v57i1.1246

SEDICK S, CLARK B, GIHWALA K, **SWART C** (In prep.) The description of a new species of *Nereis* (Annelida, Nereididae) from the shallow waters of southern Namibia.

GIHWALA K, BICCARD A, CLARK B, **SWART C**, MAKHOSONKE A, STEFFANI N, ROOS L (In prep.). Anthropogenic disturbance and subsequent recovery of benthic habitats and associated macrofaunal communities in southern Africa.]

THESIS

SWART C (2017) An assessment of invasive predatory marine crabs and the threat they pose along the South African coastline. MSc Thesis, Stellenbosch University, 154 pp.

CONFERENCES

2014 Poster Presentation: “Distribution and impact of the alien anemone *Sagartia ornata* in the West Coast National Park”. South African Marine Science Symposium, Stellenbosch University, Stellenbosch, 15 – 18 July 2014

2015 Poster Presentation: National Research Foundation Research Day, Feb 2014; Second Prize

2017 Oral Presentation: “Horizon scanning for intertidal predatory crab invaders: South Africa as a case study”. South African Marine Science Symposium, Nelson Mandela University, Port Elizabeth, 4 – 7 July 2017

