TERRESTRIAL FAUNAL SPECIES AND TERRESTRIAL BIODIVERSITY COMPLIANCE STATEMENT REPORT FOR THE AMENDMENT OF AMENDED APPEAL ENVIRONMENTAL AUTHORISATION FOR THE EA DATED 18 AUGUST 2009 FOR THE PROPOSED RESIDENTIAL DEVELOPMENT ON A PORTION OF THE FARM VAALE VALLEY 219, MOSSEL BAY MUNICIPALITY

October 2024

Prepared for:

Sharples Environmental Services cc (SES)

Prepared by:

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- MSc (Zoology), Stellenbosch University (2011 - 2013)
- BSc Honours (Zoology) cum laude, Stellenbosch University (2010)
- BSc (Biodiversity and Ecology) cum laude, Stellenbosch University (2007 - 2009)

Expertise

- 28 years of in-the-field naturalist experience involving all faunal groups
- Zoologist with 17 years of professional experience
- 14 Peer-reviewed publications in high impact national and international scientific journals on the patterns and processes which drive and maintain faunal biodiversity, as well as on aspects of faunal biology and ecology
- Five IUCN Red List assessments

- Involved in the Southern African Bird Atlas Project 2 (SABAP2)
- Contributor on the National Biodiversity Assessment 2018: The status of South Africa's ecosystems and biodiversity. Synthesis Report. South African National Biodiversity Institute, an entity of the Department of Environment, Forestry and Fisheries, Pretoria.

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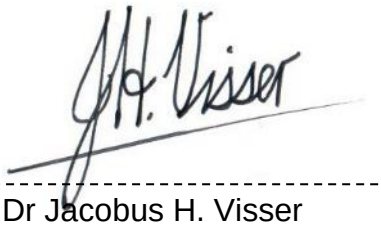
Declaration of independence by the independent person who compiled a specialist report or undertook a specialist process

I, Dr Jacobus Hendrik Visser, as the appointed independent specialist hereby declare that I:

• act/ed as the independent specialist in this application;
• regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
• do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations and any specific environmental management Act;
• have no and will not have any vested interest in the proposed activity proceeding;
• have disclosed, to the applicant, EAP and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations and any specific environmental management Act;
• am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification;
• have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
• have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;

• have ensured that the names of all interested and affected parties that participated in terms of the specialist input/study were recorded in the register of interested and affected parties who participated in the public participation process;
• have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not; and
• am aware that a false declaration is an offence.



04 October 2024

Dr Jacobus H. Visser
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04 October 2024

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1. Introduction

The applicant is proposing the amendment of amended Appeal Environmental Authorisation for the EA dated 18 august 2009 for the proposed residential development on a portion of the farm Vaale Valley 219, Mossel Bay Municipality (Hartland Development). An Appeal Environmental Authorisation was granted in 2009 for the development of a residential area and was amended by the Addendum to the EA dated 22 June 2023. The applicant proposes to amend the current EA with the proposed amendments consisting of two parts:

- The addition of a new section of road; and
- The installation of a telecommunication mast (within a fenced off area of 8m x 8m or 64m^2).

Blue Skies Research was appointed by Sharples Environmental Services cc (SES) on behalf of the applicant to perform the required terrestrial faunal assessment of the study area (see Sections 2 and 3). The current report represents a Compliance Statement for the proposed development, following a terrestrial faunal assessment of the site.

2. Terms of Reference

2.1. General legislature pertaining to this report

This terrestrial faunal assessment report is compiled in accordance with the following guidelines:

- *Department of Environmental Affairs and Development Planning (DEA&DP) Guidelines for Involving Biodiversity Specialists in the EIA Process* (Brownlie, 2005).
- *Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes, Government Notice No. 320* (Gazetted 20 March 2020).
- *Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Animal Species*, *Government Notice No. 1150* (Gazetted 30 October 2020).
- South African National Biodiversity Institute (SANBI). 2020. *Species Environmental Assessment Guideline. Guidelines for the implementation of the terrestrial fauna and terrestrial flora species protocols for environmental impact assessments in South Africa*. South African National Biodiversity Institute, Pretoria. Version 2.1 2021.

2.2 Other sources consulted

Other sources pertaining to this report are as follows:

- IUCN. 2021. The IUCN Red List of Threatened Species. Version 2021-3. https://www.iucnlist.org. Accessed on 25 September 2024.
- *National Environmental Management: Biodiversity Act, 2004 (Act 10 of 2004): Publication of lists of critically endangered, endangered, vulnerable and protected species, Government Notice No. 2007* (Gazetted 14 December 2007).

3. Reporting protocol

The DFFE Screening Tool Report generated for the project footprint identifies the site as being of an overall “Medium” sensitivity under the “Relative Animal Species Sensitivity Theme” (Figure 1). This follows from the projected and possible occurrence of one mammal and one invertebrate Species of Conservation Concern (SCC) (see Table 1). The current report therefore assesses the presence or likely presence of these mammal and invertebrate SCC (as well as other possible SCC within one of these faunal groups, see Section 9) within the study area in accordance with the protocols outlined in the Species Environmental Assessment Guideline (SANBI, 2020).

Table 1 List of Species of Conservation Concern (SCC) identified in the DFFE Screening Tool Report (https://screening.environment.gov.za/screeningtool/). For each, the listed sensitivity (possibility of occurrence within the study area), scientific name and common name is shown, along with its current IUCN status. The name of “Sensitive Species 8” is purposefully omitted, given the sensitivity of this species.

Sensitivity	Species	Common name	IUCN status
Medium	*Sensitive Species 8*	Sensitive Species 8	Least Concern
Medium	*Aneuryphymus montanus*	Yellow-winged Agile Grasshopper	Vulnerable

4. Overview of the study area

4.1 Geographic location

The project footprints are located on a portion of the farm Vaale Valley 219 in the Hartland Development north of Hartenbos, and adjacent (south-east) of the N2 Road (Figures 1 and 2). Both footprints are located in previously cleared areas with little to no remaining natural vegetation (also see Section 7).

Figure 1 Spatial location of the project footprints relative to surrounding built up areas and man roads on a broad scale (Red line = New road section, White dot = Telecommunication mast; map generated in Cape Farm Mapper version 3.0, Western Cape Department of Agriculture).

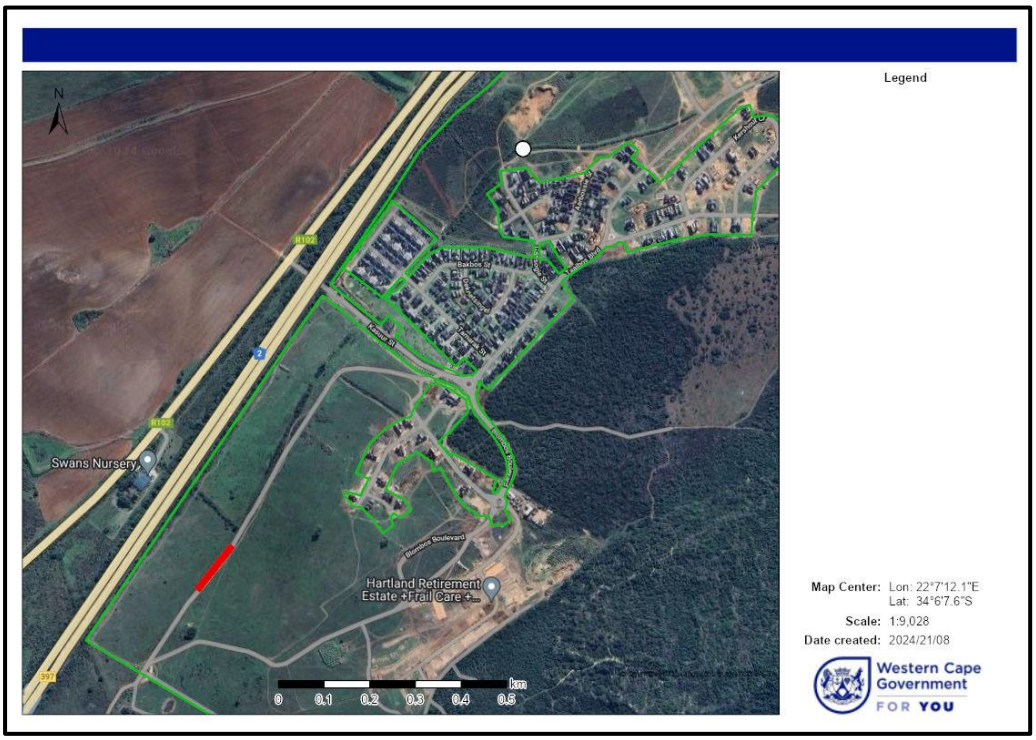


Figure 2 Spatial location of the project footprints relative to surrounding built up areas and main roads at a finer scale (Red line = New road section, White dot = Telecommunication mast; map generated in Cape Farm Mapper version 3.0, Western Cape Department of Agriculture).

4.2 Topology

Both project footprints are located on relatively flat areas with the new section of road corresponding to an existing used dirt track on an area of lower elevation and the proposed telecommunication mast on a hill to the north of the existing residential development (Figure 3).

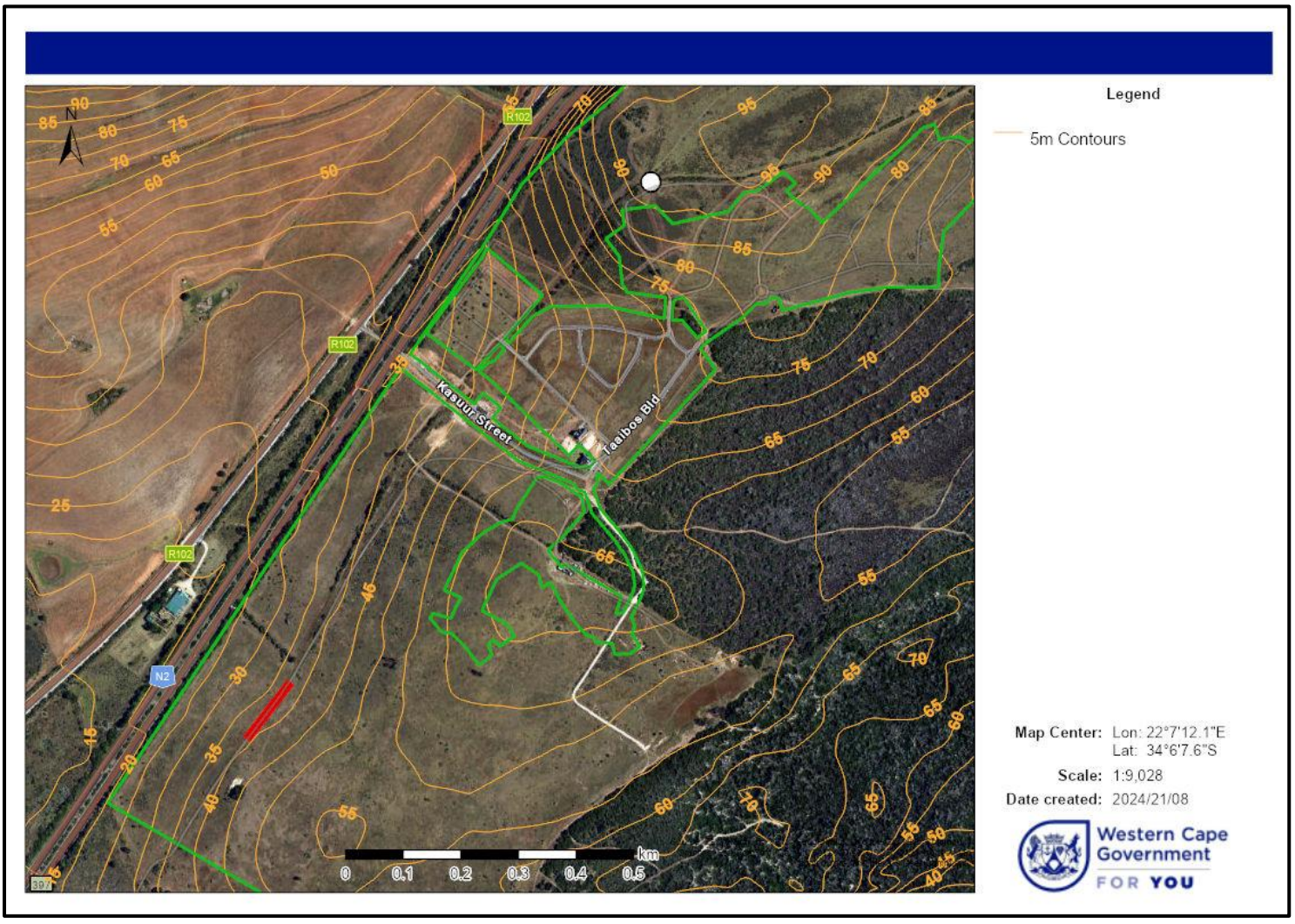


Figure 3 Topology of the project footprints showing 5 meter contour lines (Red line = New road section, White dot = Telecommunication mast; map generated in Cape Farm Mapper version 3.0, Western Cape Department of Agriculture).

4.3 Wetlands

According to the National Freshwater Ecosystem Priority Areas (NFEPA) spatial layer, neither of the project footprints overlaps any notable freshwater features or drainage channels (Figure 4).

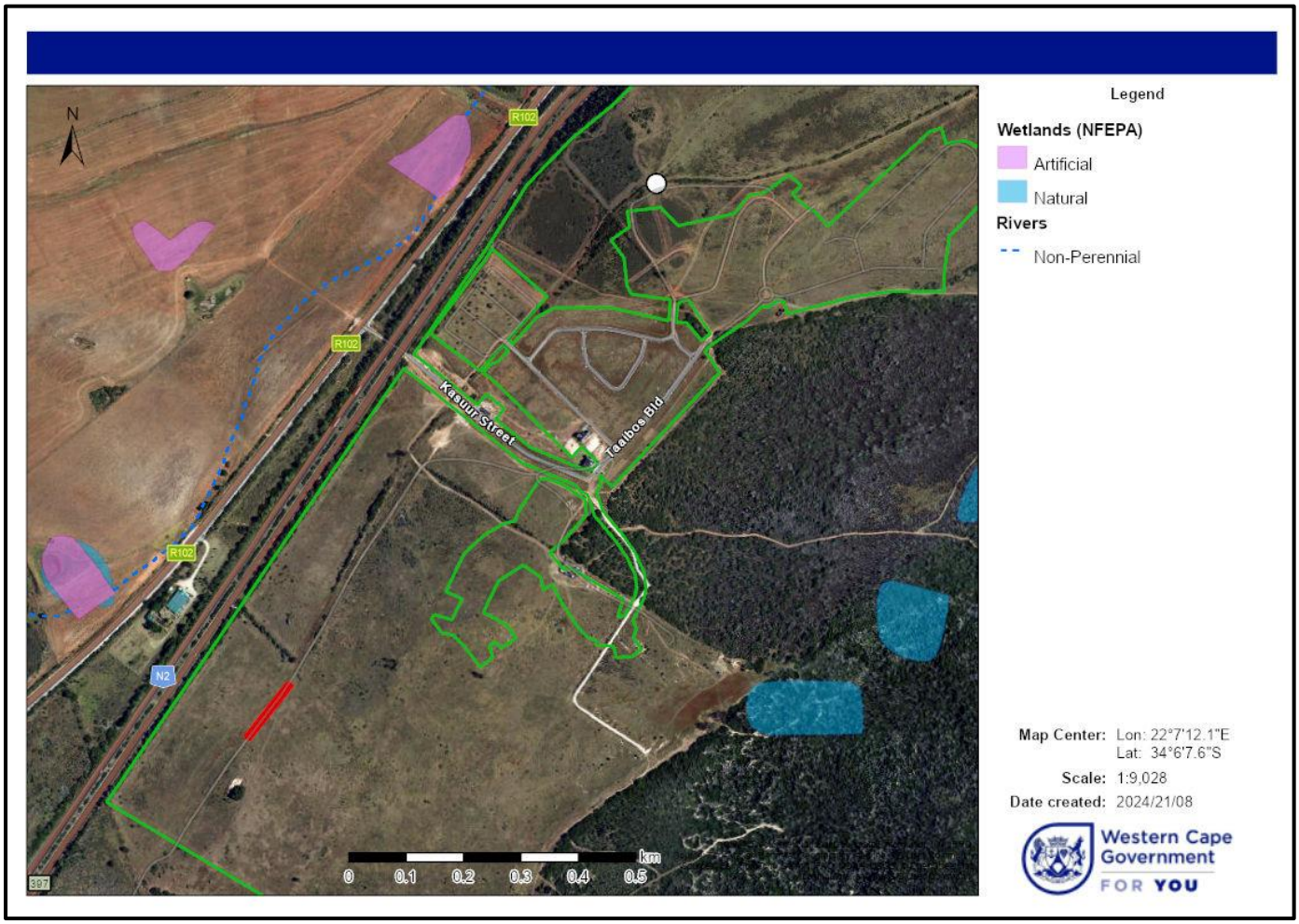


Figure 4 Distribution of aquatic features (NFEPA) relative to the project footprints (Red line = New road section, White dot = Telecommunication mast; map generated in Cape Farm Mapper version 3.0, Western Cape Department of Agriculture).

4.4 Vegetation

Vegetation across the landscape of the proposed project footprints would have historically comprised Canca Limestone Fynbos over the new section of road and Mossel Bay Shale Renosterveld in the area of the telecommunication mast (Figure

5). According to *The National List of Ecosystems that are Threatened and Need of Protection* (Government Gazette, 2011), these vegetation types correspond to “Least Threatened” and ”Endangered” ecosystem types respectively (Figure 6). Even so, none of the natural vegetation remains over the new section of road, with only remnant patches of shrubland in the area of the telecommunication mast (see Section 7). To this end, neither of the project footprints overlap with any significant biodiversity features.

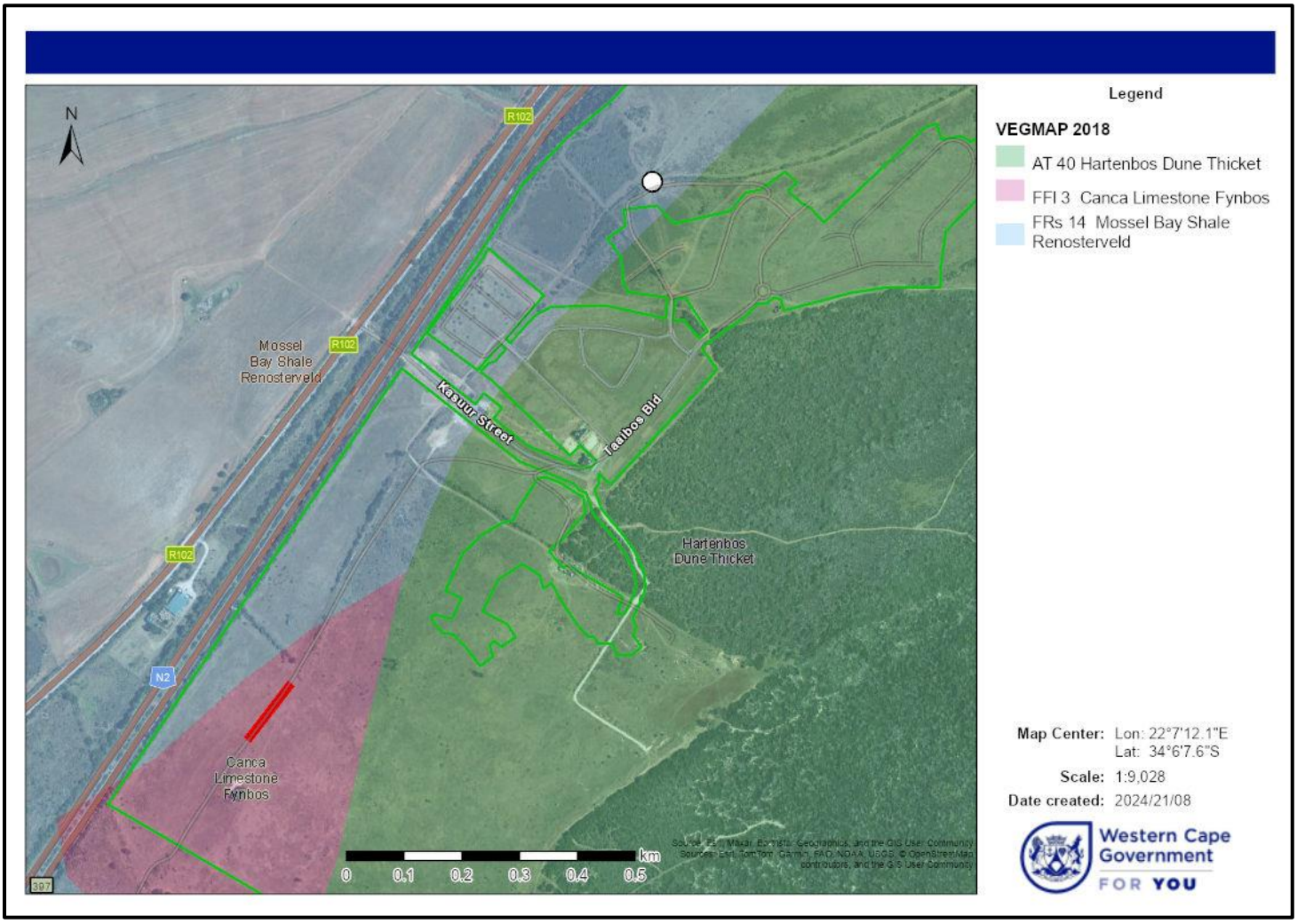


Figure 5 Vegetation type across the project footprints (VEGMAP, SANBI 2018; Red line = New road section, White dot = Telecommunication mast; map generated in Cape Farm Mapper version 3.0, Western Cape Department of Agriculture).

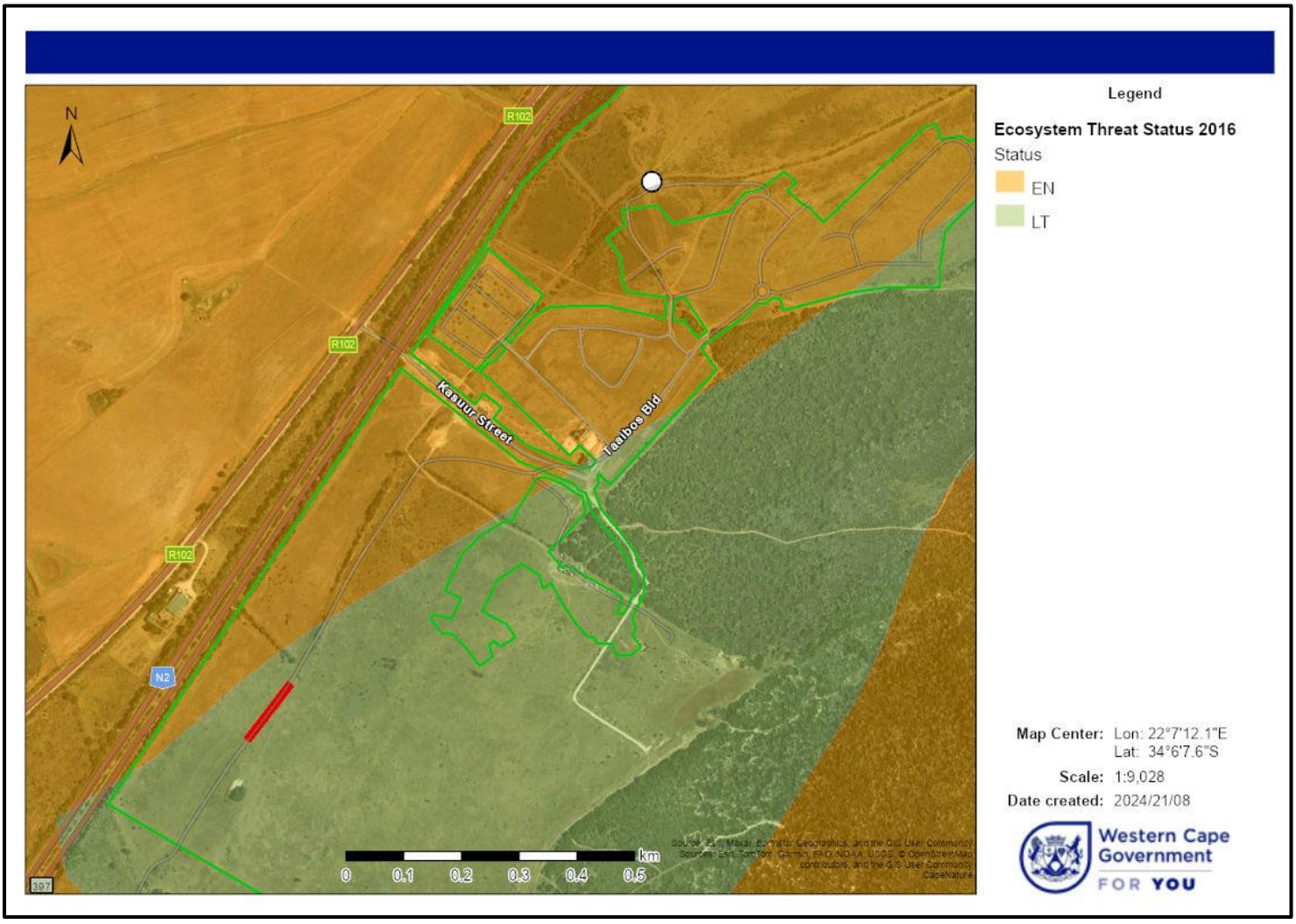


Figure 6 Spatial location of ecosystems and their threat statuses overlapping with project footprints (Red line = New road section, White dot = Telecommunication mast; map generated in Cape Farm Mapper version 3.0, Western Cape Department of Agriculture).

4.5 Land cover

Classification of land cover over both the project footprint indicates the presence commercial annual crops rain-fed / dryland (Figure 7; Land Cover 73-class, Department of Environmental Affairs, 2020), indicating the placement of these footprints in already disturbed areas and accounting for the lack of an intact vegetation structure. Following the field survey, it was also established that the new section of road corresponds to an existing used dirt track with the telecommunication mast footprint proposed to be located in an area cleared of vegetation adjacent to the existing residential area.

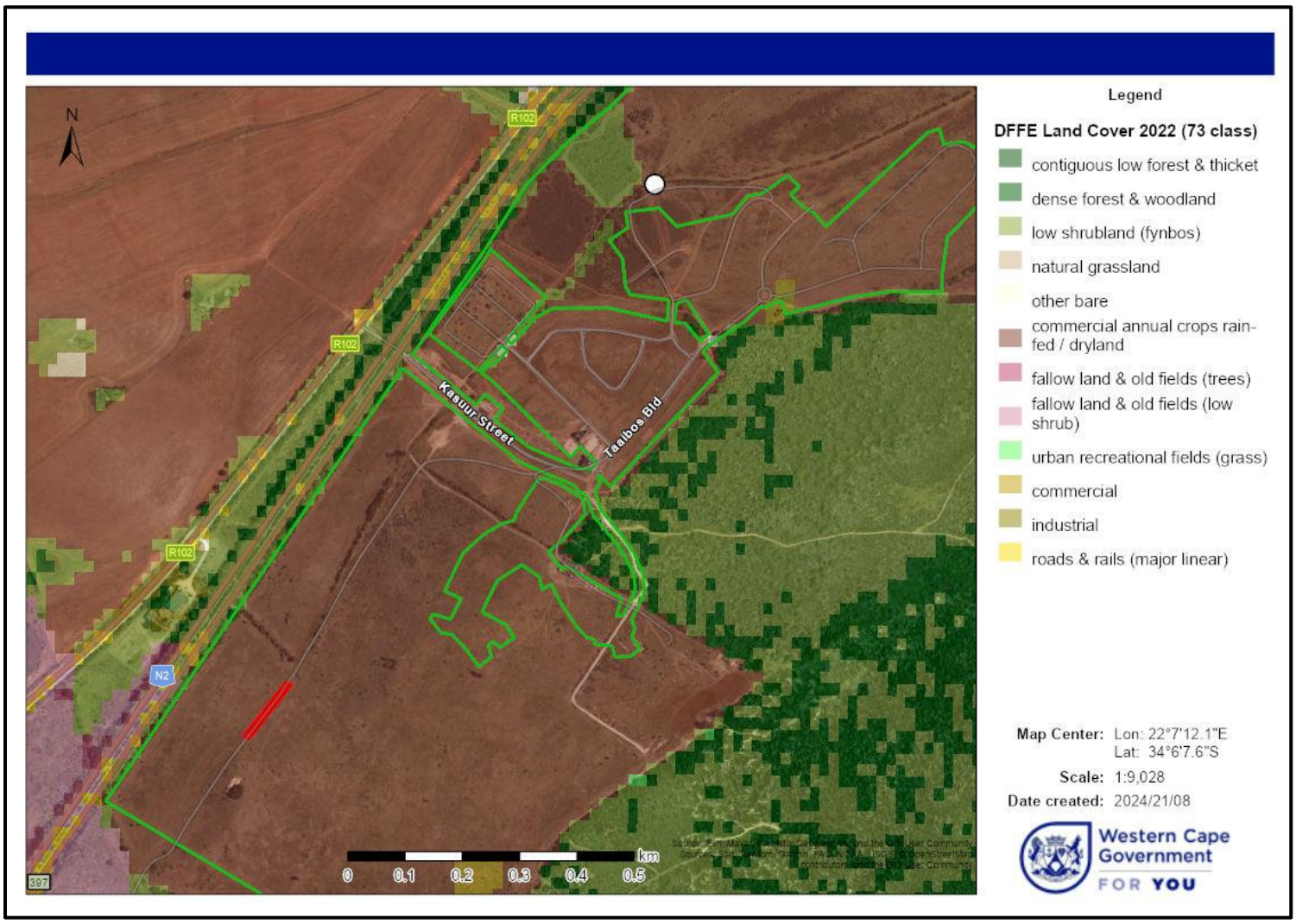


Figure 7 Land cover (Land Cover 73-class, Department of Environmental Affairs, 2020) within the project footprints (Red line = New road section, White dot = Telecommunication mast; map generated in Cape Farm Mapper version 3.0, Western Cape Department of Agriculture).

4.6 Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs)

Critical Biodiversity Areas (CBAs) are areas required to meet biodiversity targets for ecosystems, species and ecological processes, as identified in a systematic biodiversity plan (Purves and Holmes, 2015). Ecological Support Areas (ESAs) are not essential for meeting biodiversity targets but play an important role in supporting the ecological functioning of CBAs and/or in delivering ecosystem services.

Neither of the project footprints currently overlap with areas regarded as CBA or ESA (Figure 8) and are therefore not currently classed as notable terrestrial biodiversity features in the landscape (also see Subsection 12.2).

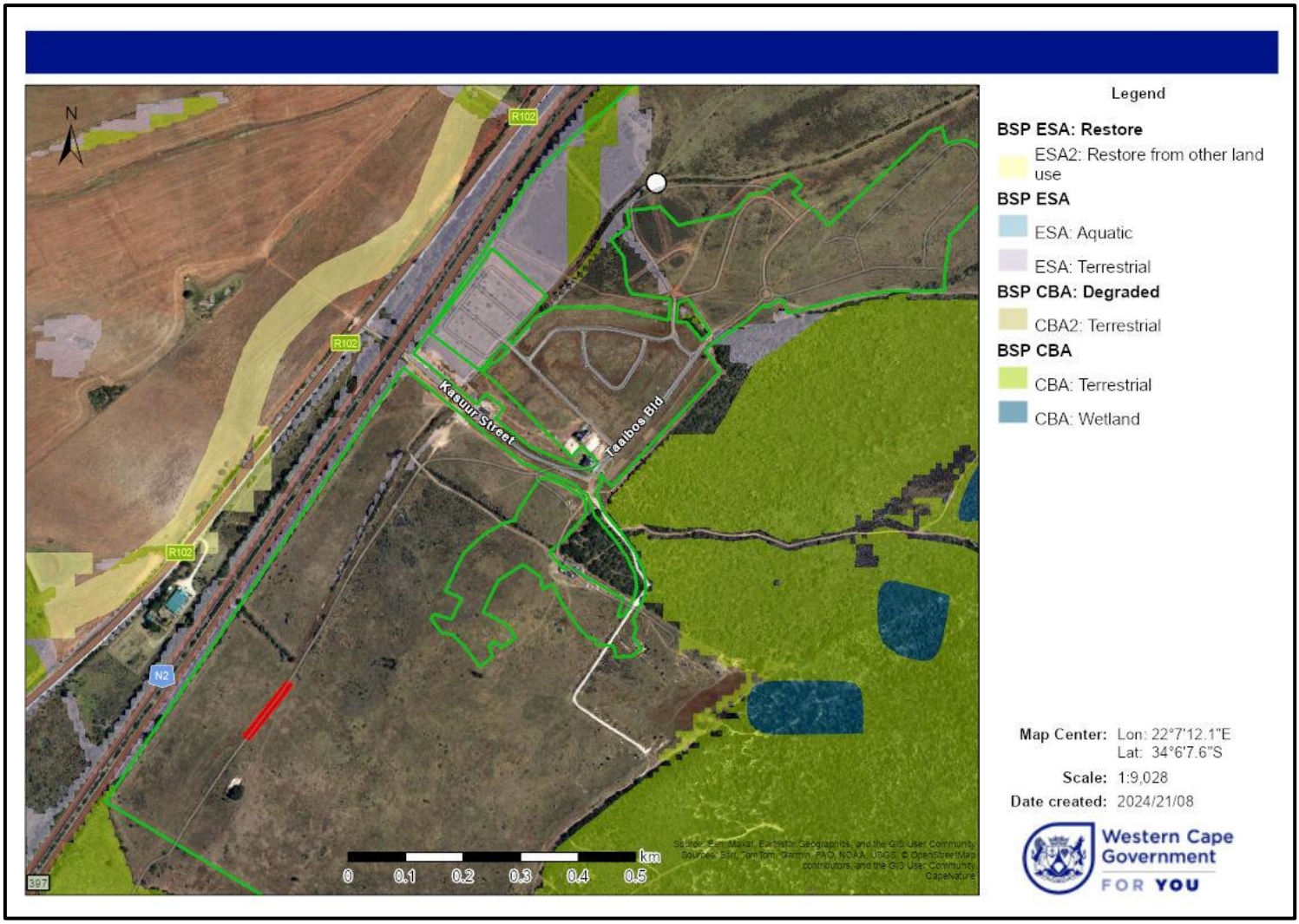


Figure 8 Spatial locations of Critical Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) overlapping with the development footprints (Red line = New road section, White dot = Telecommunication mast; map generated in Cape Farm Mapper version 3.0, Western Cape Department of Agriculture).

5. Study methodology

5.1 Study aims

This study represents an assessment of the terrestrial faunal diversity and abundances, -habitat composition, ecosystem dynamics and potential occurrence of mammal and invertebrate (and other) SCC within the study area. As such, the aims of this investigation were to:

1.) Assess, define and create a spatial rendering of available faunal habitats across the study area landscape based on information gathered during the field survey as well as through a desktop assessment using the latest satellite imagery,

2.) compile a complete faunal desktop species list (including mammals) for the study area based on a thorough desktop assessment so as to assess the presence of any of the listed SCC (Table 1) as well as any additional SCC within this faunal group,

3.) compile a faunal species list (including mammals, avifauna and butterflies) within the study area through field surveying so as to assess the possibility of occurrence of the SCC retrieved in the desktop assessment (based on appropriate sampling methods, as well as the presence of suitable habitat for these species), or any additional SCC which are present on the site, and

4.) generate spatial occurrence maps for the recovered faunal species within the study area to assess the spatial extent of areas supporting higher levels of diversity, and SCC sub-populations and habitats which may be of conservation concern.

5.2 Desktop assessment

To assess the possible occurrence of the listed (Table 1) as well as any additional mammal SCC, a desktop assessment was performed to create a representative desktop species list for this faunal group. Given the low number

of records for grasshopper species, the presence or absence of the Yellow-winged Agile Grasshopper could only be evaluated during the field survey.

5.2.1 Mammals

The desktop species list for mammals (Appendix A) was constructed with reference to the distributional data available in Skinner and Chimimba (2005). This list was further bolstered by referring to the observational records available on the MammalMAP (https://vmus.adu.org.za/) and iNaturalist (www.iNaturalist.org) platforms for the study area landscape (QDGS: 3422AA).

5.3 Field survey

The study area (project area footprints) was surveyed on foot over a single day on the 16th of august 2024, during the Winter season. Weather conditions during the surveying period were characterised by relatively warm daily temperatures, no cloud cover and low wind conditions (Figure 9).

Surveying included unconstrained point sampling through search meanders. All tracks surveyed were recorded by GPS (Garmin eTrex® 10, Garmin International Inc, USA) and are represented in Figure 10. Terrestrial faunal species (mammals) were identified by direct visual observation, or by their tracks, burrows, remains or scat. Avifaunal species were identified by visual observation, using a 180x zoom lens, or by auditory means. Butterfly species were identified from less than one meter away. Finally, the presence or absence of the Yellow-winged Agile Grasshopper was evaluated based on suitable habitat (recently burnt Schlerophyll on south-facing slopes) for this species. All observations were recorded by GPS and the species or evidence of species' presence or activity were photographed using a digital camera (Canon PowerShot SX430 IS, Canon Inc, USA). A species list for all fauna recorded within the study area is given in Appendix B.

Given relatively optimal weather conditions, faunal and avifaunal species' activity was observed to be high over the surveying period, thereby resulting in 28 recorded

observations across the study area (Figure 11, Appendix B). During surveying, faunal habitats were broadly identified in the field, and thereafter delineated through a desktop assessment of the study area using satellite imagery (CapeFarmMapper Version 3.0, Western Cape Department of Agriculture).

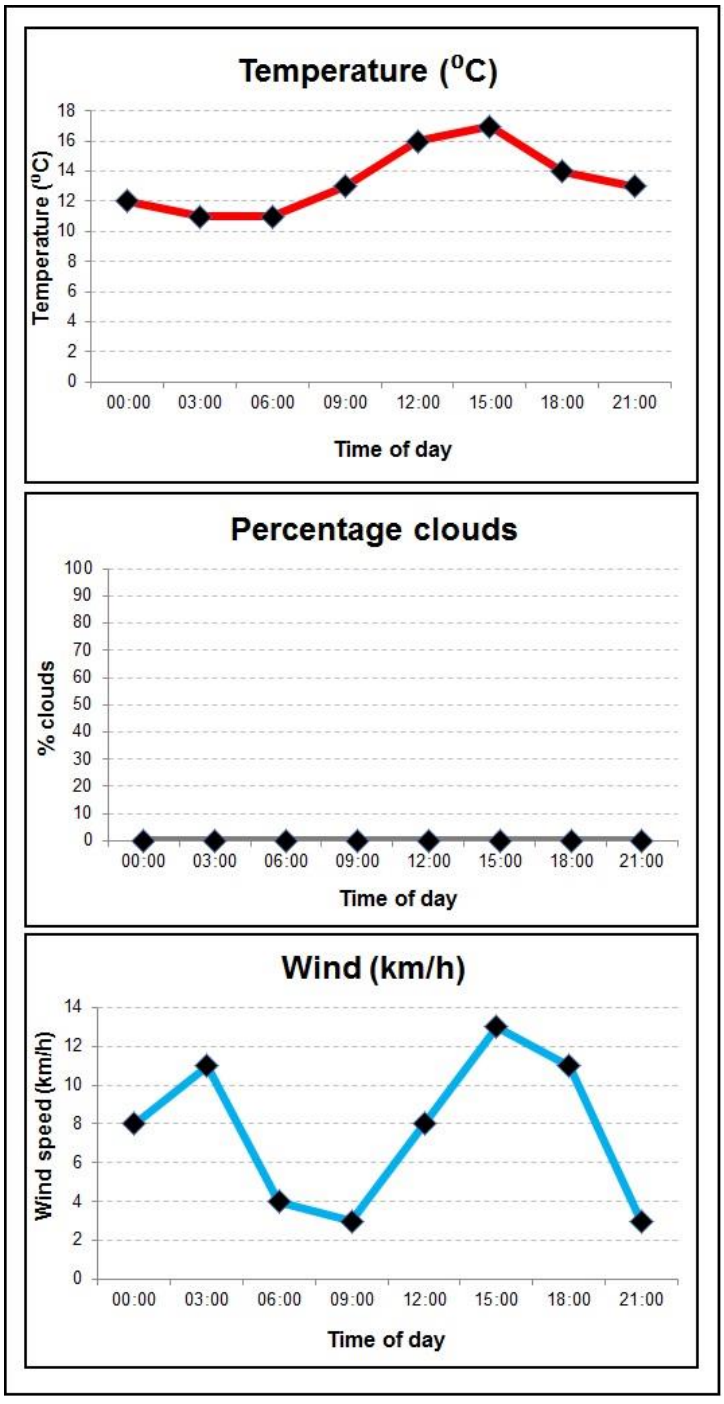


Figure 9 Weather conditions in the study area over the surveying period (16 August 2024). The time of day is indicated, along with the temperature (in °C), percentage cloud cover and wind speed (in km/h) (weather data sourced from https://www.worldweatheronline.com).

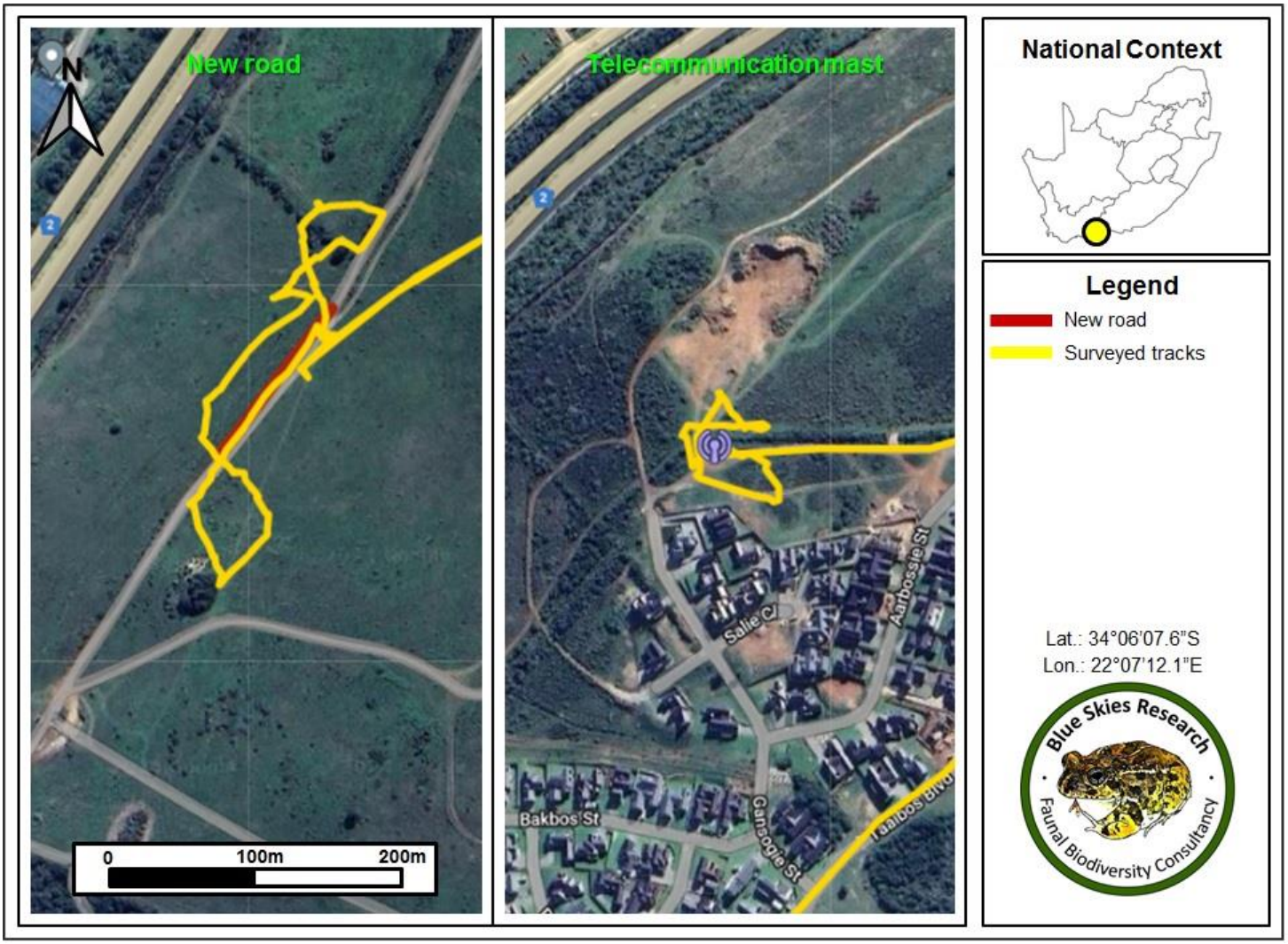


Figure 10 Spatial tracks recorded by GPS for all the search meanders across the study area over the surveying period.

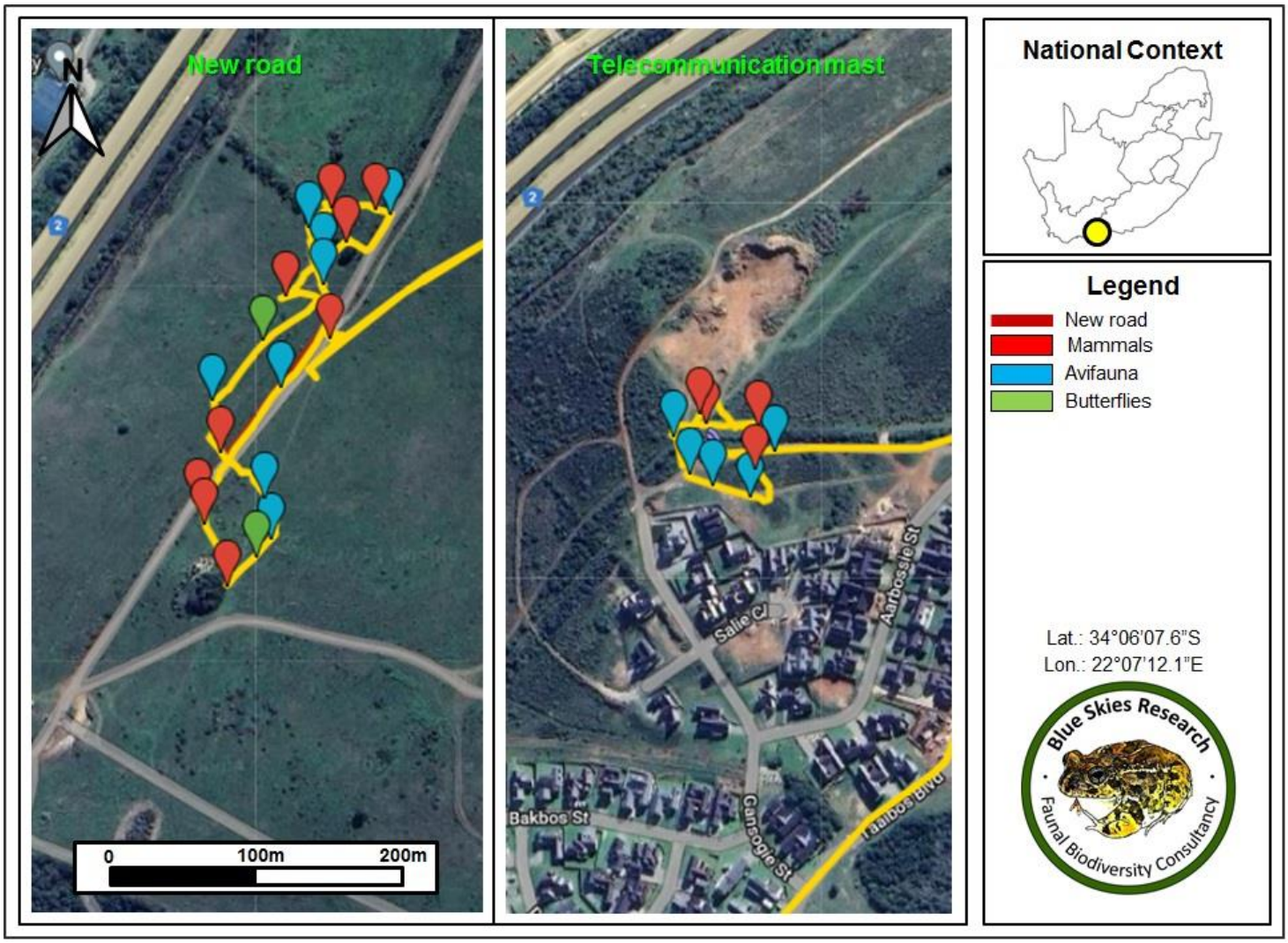


Figure 11 Spatial locations of all the faunal observations across the study area over the surveying period.

6. Assumptions and limitations

Optimal weather conditions during the surveying period along with a degraded and open habitat structure across the proposed project footprints were ideal for detecting a representative sample of the resident terrestrial faunal and avifaunal species diversity. Even so, not all species could be observed (especially cryptic species), and it is further possible that the surveying period did not correspond to the activity period or activity season of some species. To allow for this, the thorough desktop assessment for the included faunal group (mammals; Appendix A) meant that all possibly occurring SCC were considered (Section 9) in the current assessment.

7. Faunal habitat types within the study area

The study area landscape is comprised of two broadly identified habitat types based on habitat composition and habitat integrity (Figures 12). Both the placement and surrounding areas of the new section of road and telecommunication mast correspond to previously farmed areas and are of an open and degraded condition with only pioneer grasses being present. The new section of road currently corresponds to an existing used dirt track (Figure 13). Similarly, the telecommunication mast footprint will be located in a cleared area adjacent to the existing residential area where there is some remaining vegetation corresponds to small patches of remnant shrubland which will likely be excluded from the development.

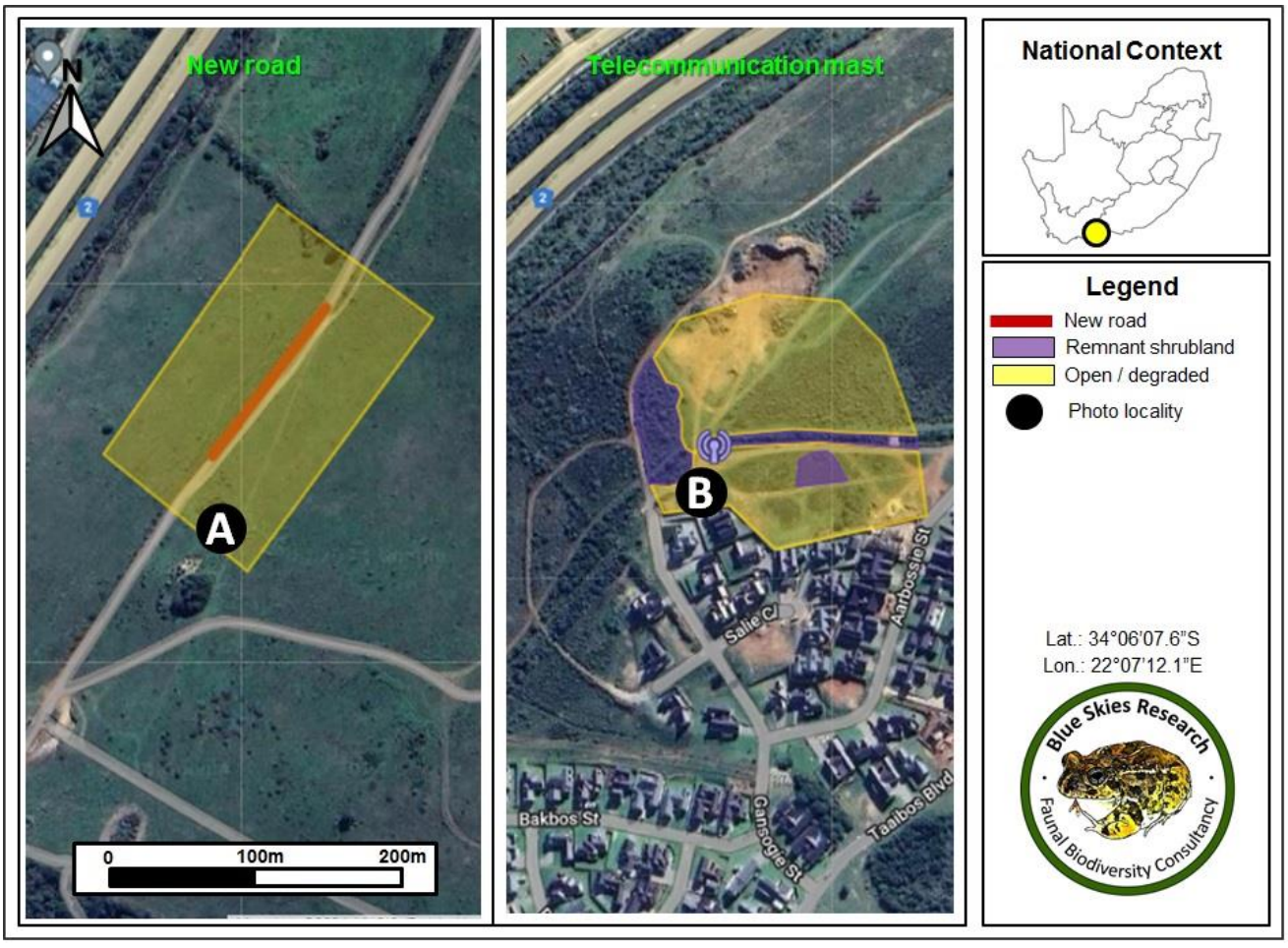


Figure 12 A broad indication of the spatial extent of habitat types surrounding the proposed project footprints. Photo localities (A and B) correspond to the habitat photos in Figures 13 and 14 respectively.

Figure 13 Photo locality A (coordinates: -34.10653, 22.11545) showing the open and degraded habitat conditions around the proposed new section of road.

Figure 14 Photo locality B (coordinates: -34.09761, 22.1227) showing the open and degraded habitat at the proposed telecommunication mast site. Note small patches of remnant shrubland in the background.

8. Faunal and avifaunal composition within the study area

8.1 Mammals

8.1.1 Desktop assessment

The distributions of 66 mammal species overlap with the study area landscape (Appendix A). Among these, 59 species are currently listed as “Least Concern” by the IUCN (IUCN, 2021), with the remaining seven species representing mammal SCC. These mammal SCC include the following:

1. The Duthie's Golden Mole (*Chlorotalpa duthieae*) classified as “Vulnerable”,
2. Fynbos Golden Mole (*Amblysomus corriae*) classified as “Near-Threatened”,
3. Grey Rhebok (*Pelea capreolus*) classified as “Near-Threatened”,
4. Leopard (*Panthera pardus*) classified as “Vulnerable”,
5. African Clawless Otter (*Aonyx capensis*) classified as “Near-Threatened”,
6. Long-tailed Forest Shrew (*Myosorex longicaudatus*) classified as “Endangered”, and
7. White-tailed Rat (*Mystromys albicaudatus*) classified as “Vulnerable” by the IUCN.

From the observational records available on the MammalMAP (https://vmus.adu.org.za/) and iNaturalist (www.iNaturalist.org) platforms (QDGS: 3422AA), only six mammal species have been confirmed in the study area landscape (Appendix A), all of which are currently listed as “Least Concern” by the IUCN.

8.1.2 Field survey

Five mammal species were recorded within the study area (Figures 15 and 16), all of which are currently classified as “Least concern” (Appendix B). These species include a common small mammal predator, the Cape Grey Mongoose (*Herpestes pulverulentus*), along with rodent species such as Cape Porcupine (*Hystrix*

africaeaustralis), Cape Short-eared Gerbil (*Desmodillus auricularis*) and Four-striped Grass Mouse (*Rhabdomys pumilio*). Small introduced herds of the Springbok (*Antidorcas marsupialis*) are also present on the site. Overall mammal species diversity appears depauperate, most likely given the open and degraded habitat structure over the parts of the site corresponding to the proposed development footprints.

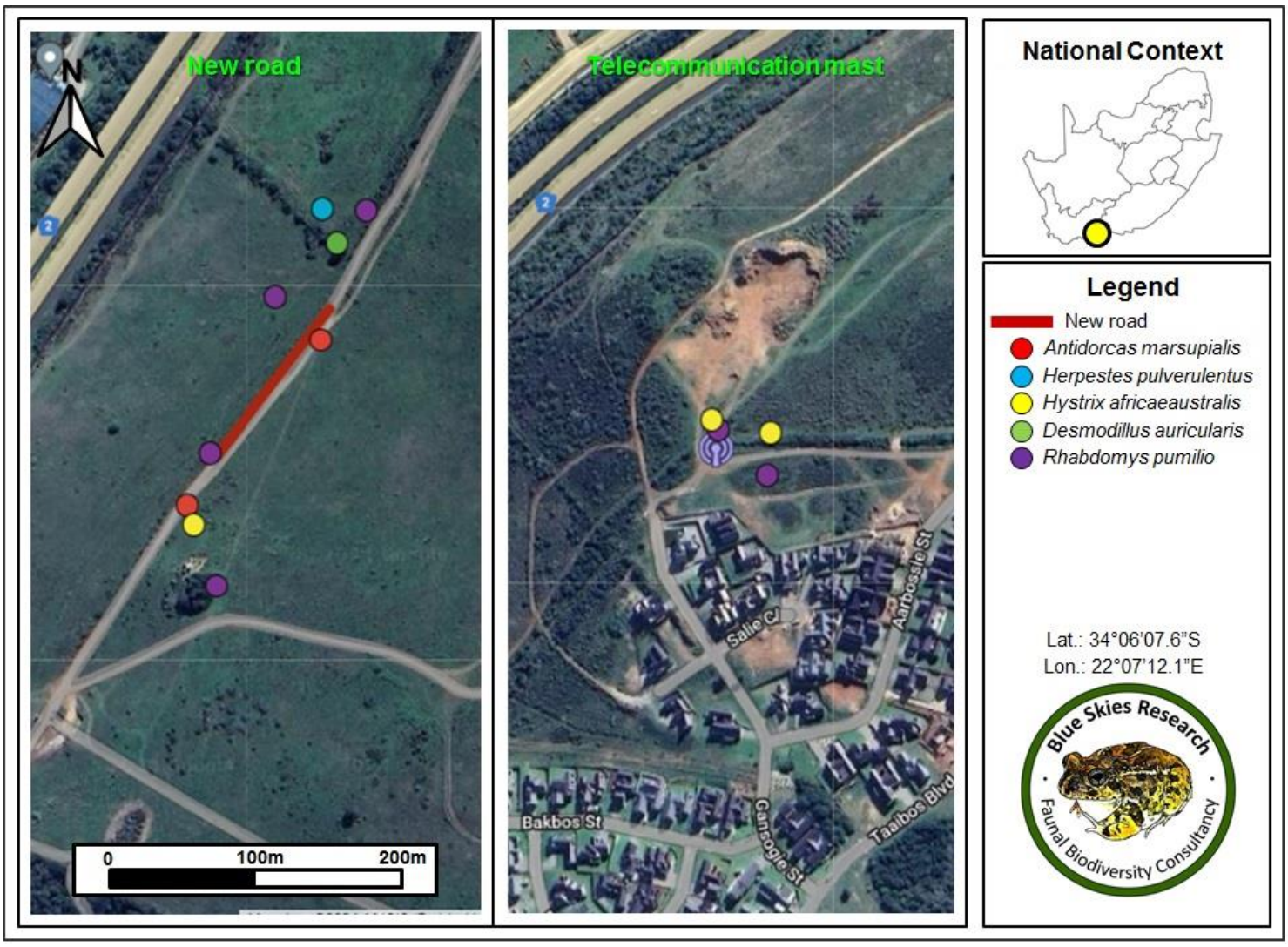


Figure 15 Spatial locations of the different mammal species recorded within the study area.

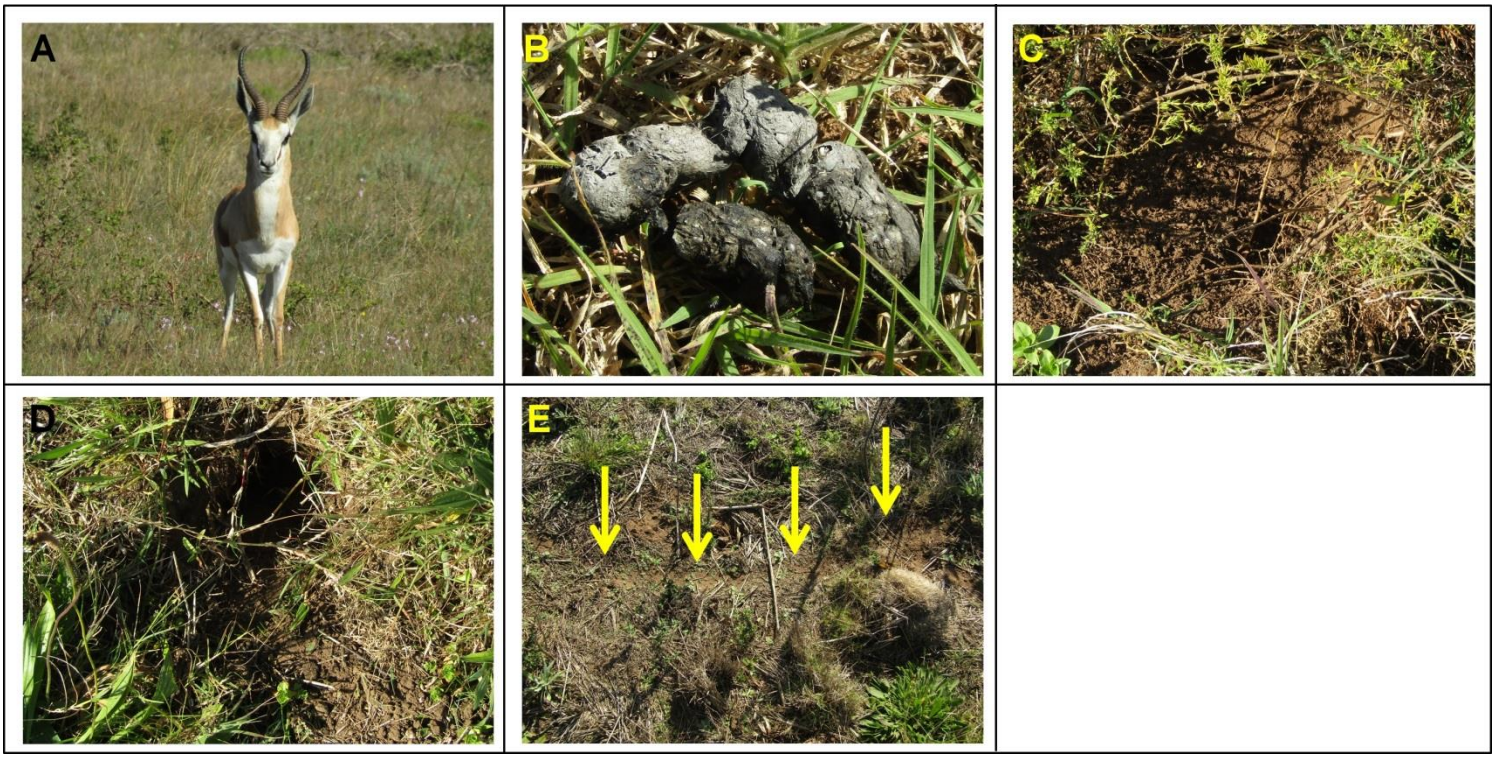


Figure 16 Photographic evidence of the different mammal species recorded in the study area. A) Springbok (*Antidorcas marsupialis*). B) Scat of the Cape Grey Mongoose (*Herpestes pulverulentus*). C) Dig of the Cape Porcupine (*Hystrix africaeaustralis*). D) Burrow of the Cape Short-eared Gerbil (*Desmodillus auricularis*). E) Run (arrowed) of the Four-striped Grass Mouse (*Rhabdomys pumilio*).

8.2 Avifauna

Only 11 avifaunal species were recorded within the study area, all of which are currently classified as “Least concern” (Figures 17 and 18, Appendix B). The majority of avifauna constitute common vegetation associated and terrestrial species. The only notable raptor species includes the Jackal Buzzard (*Buteo rufofuscus*) which is likely to feed on the resident rodent prey base. Given the open and degraded habitat conditions over the proposed project footprints however, avifaunal diversity appears highly impaired over these parts.

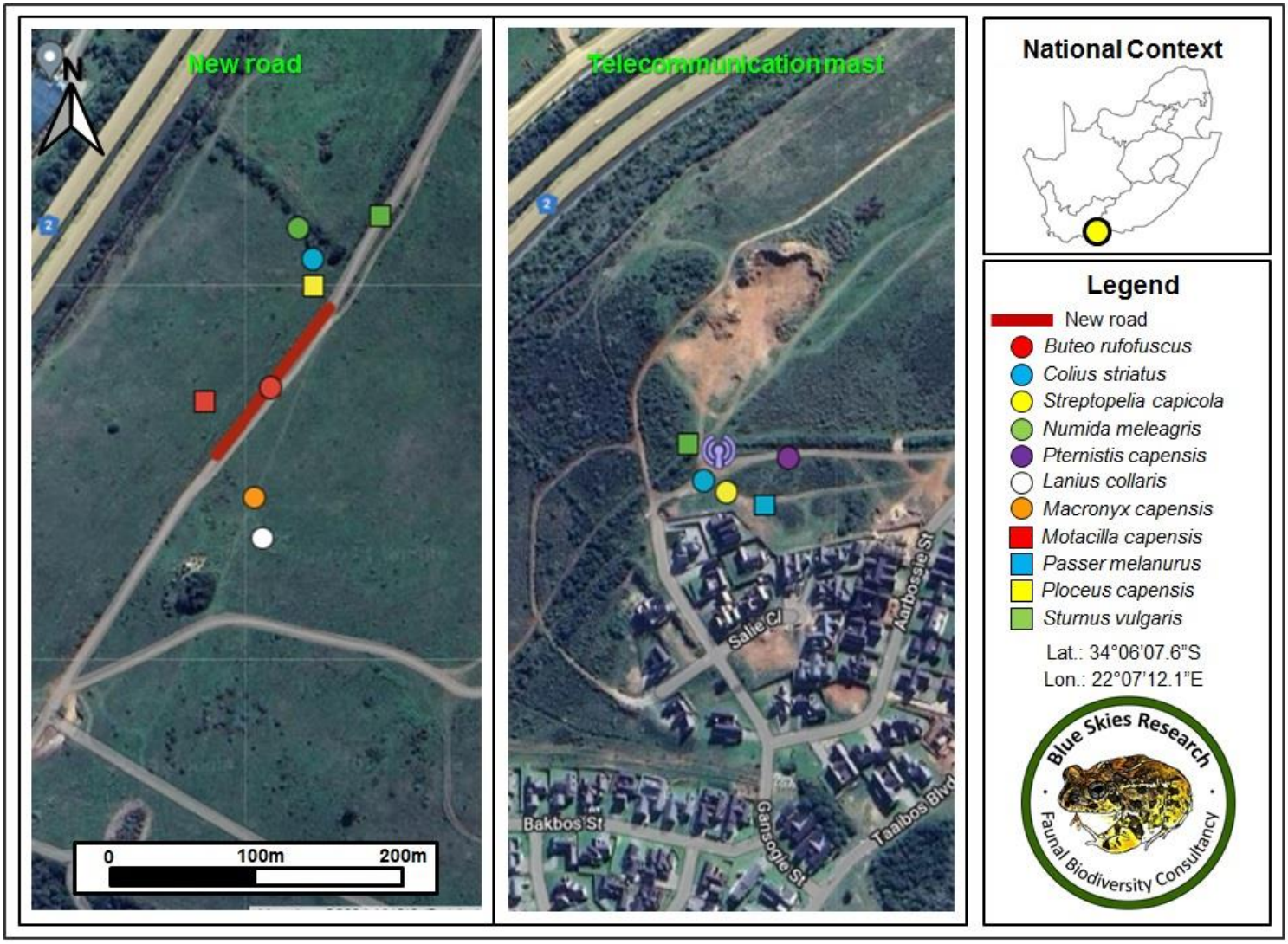


Figure 17 Spatial locations of the different avifaunal species recorded within the study area.

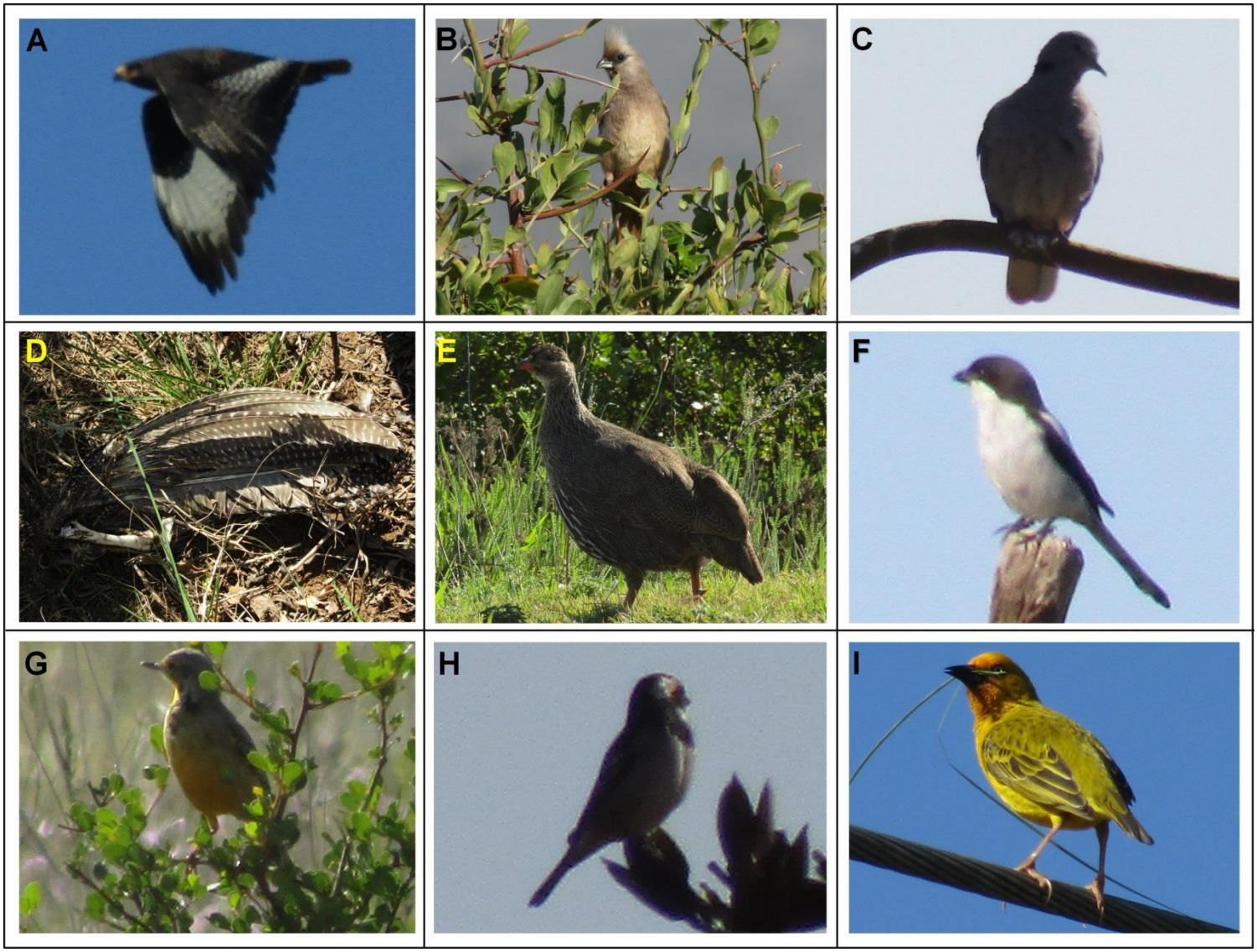


Figure 18 Photographic evidence of different avifaunal species recorded in the study area. A) Jackal Buzzard (*Buteo rufofuscus*). B) Speckled Mousebird (*Colius striatus*). C) Cape Turtle Dove (*Streptopelia capicola*). D) Remains of a Helmeted Guineafowl (*Numida meleagris*). E) Cape Spurfowl (*Pternistis capensis*). F) Southern Fiscal (*Lanius collaris*). G) Cape Longclaw (*Macronyx capensis*). H) Cape Sparrow (*Passer melanurus*). I) Cape Weaver (*Ploceus capensis*).

8.3 Butterflies

Only two butterfly species, the African Clouded Yellow (*Colias electo*) and Southern Meadow White (*Pontia helice*), were recorded in the study area (Figure 19), both of which are currently classified as “Least concern” by the IUCN (Appendix B). As with

the other faunal groups, this lack of butterfly diversity may be ascribed to the he open and degraded habitat conditions over the proposed project footprints.

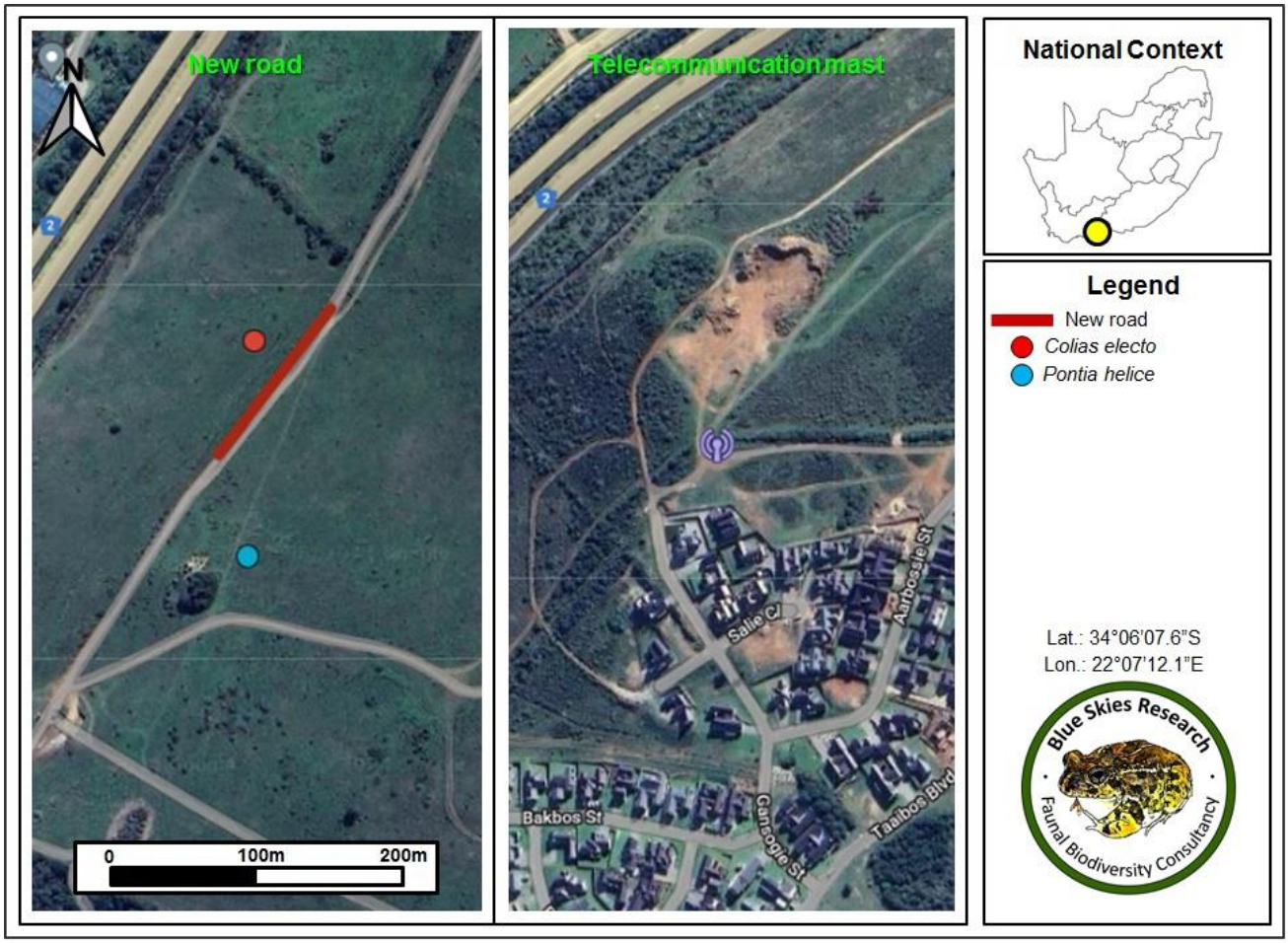


Figure 19 Spatial locations of the different butterfly species recorded within the study area.

8.4 Faunal and avifaunal diversity within the study area

Because faunal habitats over the proposed project footprints exist in an open and degraded state (Section 7) with a number of other regular impacts also evident (Section 11), only a low number of relatively common faunal species of “Least Concern” (IUCN, 2021) are present. Furthermore, although single (one mammal and one avifaunal) predatory species are present, predator-prey dynamics appears impaired over this fenced area, with ecosystem dynamics appearing altered to an irreversible degree and with the site further not acting as an important dispersal corridor in the surrounding landscape. Taken together, the proposed project footprints are of a low sensitivity from faunal biodiversity and ecological perspectives.

9. Species of Conservation Concern

Along with the two (one mammal and one invertebrate) SCC listed in the DFFE Screening Tool (Table 1), the potential occurrence of seven other mammal SCC within the study area was assessed (Table 2), given their recovery in the desktop assessment (see Section 8). The probability of occurrence of each specific SCC within the study area landscape was assessed based on the following criteria:

Confirmed - The species was confirmed as present within or near the study area during the field survey.

High - The species was not confirmed as present within or near the study area during the field survey but has been recorded in the overlapped QDGS recently (<2 years ago) and is likely to also occur in the study area, given suitable habitat characteristics.

Medium - The species was not confirmed as present within the study area during the field survey, but has been recorded in the overlapped QDGS historically (>2 years ago). Suitable habitat for the species is also present in the study area.

Low - No suitable habitat for the species is present in the study area.

Because of the altered ecosystem dynamics, impaired terrestrial faunal and avifaunal diversity and open and degraded habitat structure with significant regular impacts over the proposed project footprints, no suitable habitat is present for any of the considered faunal SCC and it is highly unlikely that these small areas will harbour any subpopulations of these SCC. This further highlights the low sensitivity of the proposed project footprints from a faunal biodiversity perspective.

Table 2 Probability of occurrence of specific SCC in the study area. For each species, the taxonomic Family, scientific name and common name is shown, along with its current classification under the IUCN Red List of Threatened Species (IUCN, 2021). In addition, the species' preferred habitat and the probability that the species occurs within the study area is given, along with a justification for listing this probability.

Order	Family	Species	Common name	IUCN status	Habitat	Probability of occurrence in the study area	Justification of probability
Sensitive Species 8	Sensitive Species 8	*Sensitive Species 8*	*Sensitive Species 8*	-	-	Low	The species was not confirmed as present on the site during the field survey, and has not been documented within the study area landscape. The project footprints are furthermore characterised by open and degraded habitats with notable sings of regular disturbance, and it is therefore unlikely that the species will be present.
Artiodactyla	Bovidae	*Pelea capreolus*	Grey Rhebok	Near-Threatened	The species is associated with the rocky hills of mountain fynbos. They are predominantly browsers, often feeding on ground-hugging forbs, and largely water independent, obtaining most of their water requirements from their food (Avenant, 2013). Forbs constitute the majority of their diet, especially the flowers and leaves of the plants (Esser, 1973, Rowe-Rowe, 1983, Beukes, 1988). They require good grass cover within their home ranges for shelter and to hide from predators, but often use steep open areas with little cover when feeding. In the Western Cape, they are often observed on agricultural lands (Radloff, 2008).	Low	The species was not confirmed as present on the site during the field survey, and has not been documented within the study area landscape. The project footprints furthermore do not harbour the rocky hills of mountain fynbos or high grass cover which the species prefers, and habitats exist in an open and degraded state. It is therefore unlikely that the species will be present.
Afrosoricida	Chrysochloridae	*Chlorotalpa duthieae*	Duthie's Golden Mole	Vulnerable	The species occurs on alluvial sands and sandy loams in Southern Cape Afrotemperate forests (especially coastal platform and scarp forest patches) in the Fynbos and Moist Savanna biomes (Bronner, 2015). The species also thrives in cultivated areas and gardens.	Low	The species was not confirmed as present on the site during the field survey, and has not been documented within the study area landscape. The site furthermore does not harbour the alluvial sands and sandy loams in Southern Cape Afrotemperate forests which the species prefers, and habitats on the site exist in an open and degraded state. It is therefore unlikely that the species will be present on the site.
Afrosoricida	Chrysochloridae	*Amblysomus corriae*	Fynbos Golden Mole	Near-Threatened	The species prefers sandy soils and soft loams in Mountain Fynbos, Grassy Fynbos and Renosterveld of South West Cape (Bronner and Mynhardt, 2015). Also in Afromontane forest and southern African moist savanna along the southern Cape coast. The species furthermore thrives in gardens, cultivated lands, golf courses and livestock paddocks, and is also present in exotic plantations, but apparently at lower densities (Bronner, 2013).	Low	The species was not confirmed as present on the site during the field survey, and has not been documented within the study area landscape. The project footprints furthermore do not harbour the sandy soils and soft loams with Mountain Fynbos, Grassy Fynbos and Renosterveld, or Afromontane forest and southern African moist savanna, which the species prefers, and habitats exist in an open and degraded state. It is therefore unlikely that the species will be present.

Carnivora	Felidae	*Panthera pardus*	Leopard	Vulnerable	The species occurs in the widest range of habitats among any of the Old World Cats, including the larger part of Africa and Asia (Nowell and Jackson 1996). Generally, Leopards prefer medium-sized ungulate prey (10- 40 kgs) where available (Hayward et al. 2006). They have a highly varied diet, however, feeding on insects, reptiles, birds and small mammals up to large ungulates.	Low	The species was not confirmed as present on the site during the field survey, and has not been documented within the study area landscape. Habitats over the project footprints further exist in an open and degraded state. It is therefore unlikely that the species will be present.
Carnivora	Mustelidae	*Aonyx capensis*	African Clawless Otter	Near-Threatened	The species occupies aquatic freshwater areas and is seldom found far from water. It may occur in many seasonal or episodic rivers provided suitable-sized pools persist (Nel and Somers, 2007, Somers and Nel, 2013).	Low	The species was not confirmed as present on the site during the field survey, and has not been documented within the study area landscape. Furthermore, no aquatic environments are present over the project footprints, with habitats existing in an open and degraded state. It is therefore unlikely that the species will be present.
Eulipotyphla	Soricidae	*Myosorex longicaudatus*	Long-tailed Forest Shrew	Endangered	The species is found in forests, forests edges, fynbos and boggy grassland, and depends on moist microhabitats (typically above the 800 mm isohyet). It is restricted to pristine primary habitat that has not been degraded (Baxter et al. 2020).	Low	The species was not confirmed as present on the site during the field survey, and has not been documented within the study area landscape. The project footprints harbour almost no natural vegetation, and habitats exist in an open and degraded state. It is therefore unlikely that the species will be present.
Rodentia	Nesomyidae	*Mystromys albicaudatus*	White-tailed Rat	Vulnerable	The species' habitat requirements are not well known, but it appears associated with calcrete soils within grasslands. The species can occur in disturbed areas (heavily grazed, D. MacFadyen pers. obs.) and in sparse grasslands (Kuyler, 2000; Kaiser, 2006; Avenant and Cavallini, 2007; Avenant and Schulze, 2012; Morwe 2013), but does not occur in transformed habitat (croplands, fallow fields, or old fields). In the Blaauwberg Conservation Area (BCA), Western Cape Province it may occur in Dune Thicket on sloped clay soils.	Low	The species was not confirmed as present on the site during the field survey, and has not been documented within the study area landscape. Furthermore, the project footprints do not harbour the calcrete soils within grasslands required by the species, and furthermore exist in an open and degraded state. It is therefore unlikely that the species will be present.
Orthoptera	Acrididae	*Aneuryphymus montanus*	Yellow-winged Agile Grasshopper	Vulnerable	The species is associated with fynbos vegetation, where it has been collected "amongst partly burnt stands of evergreen Sclerophyll in rocky foothills" (Brown 1960). It prefers south-facing cool slopes (Kinvig 2005).	Low	The species is associated partly burnt stands of evergreen Sclerophyll in rocky foothills on south-facing cool slopes - habitat which is not present over the project footprints. It is therefore unlikely that this species will be present.

10. Evaluation of Site Ecological Importance (SEI)

10.1 Evaluating SEI for habitats in the study area

Given the low probability of occurrence of any of the assessed SCC, the evaluation of the Site Ecological Importance (SEI) was performed for a combination of faunal groups, and follows the methods and criteria outlined in the Species Environmental Assessment Guideline (SANBI, 2020). In short, SEI is a function of the Biodiversity Importance (BI) of the receptor (e.g., SCC, the vegetation/faunal community or habitat type present on the site) and its resilience to impacts (Receptor Resilience, RR) as follows: SEI = BI + RR. Biodiversity Importance (BI) is in turn a function of Conservation Importance (CI) and the Functional Integrity (FI) of the receptor as follows: BI = CI + FI.

To calculate the Conservation Importance (CI) and Functional Integrity (FI) of each habitat within the study area, the criteria outlined in Table 3 and Table 4 were respectively used.

According to the Species Environmental Assessment Guideline, Conservation Importance (CI) may defined as follows:

Conservation Importance (CI): "*The importance of a site for supporting biodiversity features of conservation concern present, e.g. populations of IUCN threatened and Near Threatened species (CR, EN, VU and NT), Rare species, range-restricted species, globally significant populations of congregatory species, and areas of threatened ecosystem types, through predominantly natural processes.*"

Table 3 Conservation importance (CI) criteria (table adapted from the Species Environmental Assessment Guideline, SANBI, 2020).

Conservation Importance (CI)	Fulfilling Criteria
Very high	Confirmed or highly likely occurrence of CR, EN, VU or Extremely Rare or Critically Rare species that have a global EOO of < 10 km^2. Any area of natural habitat of a CR ecosystem type or large area (> 0.1% of the total ecosystem type extent) of natural habitat of EN ecosystem type. Globally significant populations of congregatory species (> 10% of global population).
High	Confirmed or highly likely occurrence of CR, EN, VU species that have a global EOO of > 10 km^2. IUCN threatened species (CR, EN, VU) must be listed under any criterion other than A. If listed as threatened only under Criterion A, include if there are less than 10 locations or < 10 000 mature individuals remaining. Small area (> 0.01% but < 0.1% of the total ecosystem type extent) of natural habitat of EN ecosystem type or large area (> 0.1%) of natural habitat of VU ecosystem type. Presence of Rare species. Globally significant populations of congregatory species (> 1% but < 10% of global population).
Medium	Confirmed or highly likely occurrence of populations of NT species, threatened species (CR, EN, VU) listed under Criterion A only and which have more than 10 locations or more than 10 000 mature individuals. Any area of natural habitat of threatened ecosystem type with status of VU. Presence of range-restricted species. > 50% of receptor contains natural habitat with potential to support SCC.
Low	No confirmed or highly likely populations of SCC. No confirmed or highly likely populations of range-restricted species. < 50% of receptor contains natural habitat with limited potential to support SCC.
Very low	No confirmed and highly unlikely populations of SCC. No confirmed and highly unlikely populations of range-restricted species. No natural habitat remaining.

According to the guideline, Functional Integrity (FI) is defined as:

Functional integrity (FI): "*The receptors' current ability to maintain the structure and functions that define it, compared to its known or predicted state under ideal conditions. Simply stated, FI is: 'A measure of the ecological condition of the impact receptor as determined by its remaining intact and functional area, its connectivity to other natural areas and the degree of current persistent ecological impacts.*"

Table 4 Functional integrity (FI) criteria (table adapted from the Species Environmental Assessment Guideline, SANBI, 2020).

Functional Integrity (FI)	Fulfilling Criteria
Very high	Very large (> 100 ha) intact area for any conservation status of ecosystem type or > 5 ha for CR ecosystem types. High habitat connectivity serving as functional ecological corridors, limited road network between intact habitat patches. No or minimal current negative ecological impacts with no signs of major past disturbance (e.g. ploughing).
High	Large (> 20 ha but < 100 ha) intact area for any conservation status of ecosystem type or > 10 ha for EN ecosystem types. Good habitat connectivity with potentially functional ecological corridors and a regularly used road network between intact habitat patches. Only minor current negative ecological impacts (e.g. few livestock utilising area) with no signs of major past disturbance (e.g. ploughing) and good rehabilitation potential.
Medium	Medium (> 5 ha but < 20 ha) semi-intact area for any conservation status of ecosystem type or > 20 ha for VU ecosystem types. Only narrow corridors of good habitat connectivity or larger areas of poor habitat connectivity and a busy used road network between intact habitat patches. Mostly minor current negative ecological impacts with some major impacts (e.g. established population of alien and invasive flora) and a few signs of minor past disturbance. Moderate rehabilitation potential.
Low	Small (> 1 ha but < 5 ha) area. Almost no habitat connectivity but migrations still possible across some modified or degraded natural habitat and a very busy used road network surrounds the area. Low rehabilitation potential. Several minor and major current negative ecological impacts.
Very low	Very small (< 1 ha) area. No habitat connectivity except for flying species or flora with wind-dispersed seeds. Several major current negative ecological impacts.

Based on assessments of CI and FI for habitats within the study area, the Biodiversity Importance (BI) of each habitat was calculated using the matrix in Table 5 (based on the formula: BI = CI + FI). As Biodiversity Importance (BI) is a function of Conservation Importance (CI) and the Functional Integrity (FI) of a receptor, BI can be derived from a simple matrix of CI and FI as follows:

Table 5 Matrix for calculating Biodiversity Importance (BI) (table adapted from the Species Environmental Assessment Guideline, SANBI, 2020).

Biodiversity Importance (BI)		**Conservation Importance (CI)**				
		Very high	High	Medium	Low	Very low
Functional Integrity (FI)	Very high	Very high	Very high	High	Medium	Low
	High	Very high	High	Medium	Medium	Low
	Medium	High	Medium	Medium	Low	Very low
	Low	Medium	Medium	Low	Low	Very low
	Very low	Medium	Low	Very low	Very low	Very low

Finally, the Receptor Resilience for each habitat was evaluated following the criteria listed in Table 6. According to the Species Assessment Guidelines, Receptor resilience (RR) may defined as follows:

Receptor resilience (RR): "*The intrinsic capacity of the receptor to resist major damage from disturbance and/or to recover to its original state with limited or no human intervention.*"

Table 6 Receptor Resilience (RR) criteria (table adapted from the Species Environmental Assessment Guideline, SANBI, 2020).

Receptor Resilience (RR)	**Fulfilling Criteria**
Very high	Habitat that can recover rapidly (~ less than 5 years) to restore > 75%28 of the original species composition and functionality of the receptor functionality, or species that have a very high likelihood of remaining at a site even when a disturbance or impact is occurring, or species that have a very high likelihood of returning to a site once the disturbance or impact has been removed.
High	Habitat that can recover relatively quickly (~ 5–10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a high likelihood of remaining at a site even when a disturbance or impact is occurring, or species that have a high likelihood of returning to a site once the disturbance or impact has been removed.
Medium	Will recover slowly (~ more than 10 years) to restore > 75% of the original species composition and functionality of the receptor functionality, or species that have a moderate likelihood of remaining at a site even when a disturbance or impact is occurring, or species that have a moderate likelihood of returning to a site once the disturbance or impact has been removed.
Low	Habitat that is unlikely to be able to recover fully after a relatively long period: > 15 years required to restore ~ less than 50% of the original species composition and functionality of the receptor functionality, or species that have a low likelihood of remaining at a site even when a disturbance or impact is occurring, or species that have a low likelihood of returning to a site once the disturbance or impact has been removed.
Very low	Habitat that is unable to recover from major impacts, or species that are unlikely to remain at a site even when a disturbance or impact is occurring, or species that are unlikely to return to a site once the disturbance or impact has been removed.

Taken together, the Site Ecological Importance (SEI) was calculated for each habitat within the study area using the formula: SEI = BI + RR, and following the matrix outlined in Table 7. The interpretation of the development actions allowed for each SEI category are outlined in Table 8.

Table 7 Matrix for calculating Site Ecological Importance (SEI) (table adapted from the Species Environmental Assessment Guideline, SANBI, 2020).

Site Ecological Importance (SEI)		Biodiversity Importance (BI)				
		Very high	High	Medium	Low	Very low
Receptor Resilience (RR)	Very high	Very high	Very high	High	Medium	Low
	High	Very high	Very high	High	Medium	Very low
	Medium	Very high	High	Medium	Low	Very low
	Low	High	Medium	Low	Very low	Very low
	Very low	Medium	Low	Very low	Very low	Very low

Table 8 Guidelines for interpreting SEI in the context of the proposed development activities (table adapted from the Species Environmental Assessment Guideline, SANBI, 2020).

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

10.2 SEI for habitats over the proposed project footprints

The SEI results for habitats over the proposed project footprints are given in Table 9 with the spatial representation for each habitat and its concomitant SEI category portrayed in Figure 20. The project footprints are spatially limited and currently do not support any confirmed or potential subpopulations of faunal SCC, with all

habitats existing in a degraded state, and with multiple major negative ecological impacts being evident. As such, all habitats over the project footprints are retrieved as having a “Very low” SEI. Minimisation mitigation is therefore acceptable, allowing for development activities of medium to high impact without restoration activities being required (Table 8).

Table 9 Evaluation of SEI for habitats surrounding the project footprints. BI = Biodiversity Importance, RR = Receptor Resilience.

Habitat type	Conservation Importance	Functional Integrity	Receptor Resilience	Site Ecological Importance
Remnant shrubland	**Very low** - No confirmed and highly unlikely populations of faunal SCC.	**Very low** - Very small area (<1ha) with several major current negative ecological impacts (only remnant vegetation, and noise and vibration form the adjacent residential area along with a busy used road network over this part of the site).	**Very high** - Because this habitat exists in an already heavily degraded state with significant daily impacts, it can only recover to this state.	Very low - BI = Very low; RR = Very high
Open / degraded	**Very low** - No confirmed and highly unlikely populations of faunal SCC.	**Very low** - Very small area (<1ha) with several major current negative ecological impacts no remaining natural vegetation and noise and vibration from the adjacent N2 Road and residential areas along with a busy used road network over these parts of the site).	**Very high** - Because this habitat exists in an already heavily degraded state with significant daily impacts, it can only recover to this state.	Very low - BI = Very low; RR = Very high

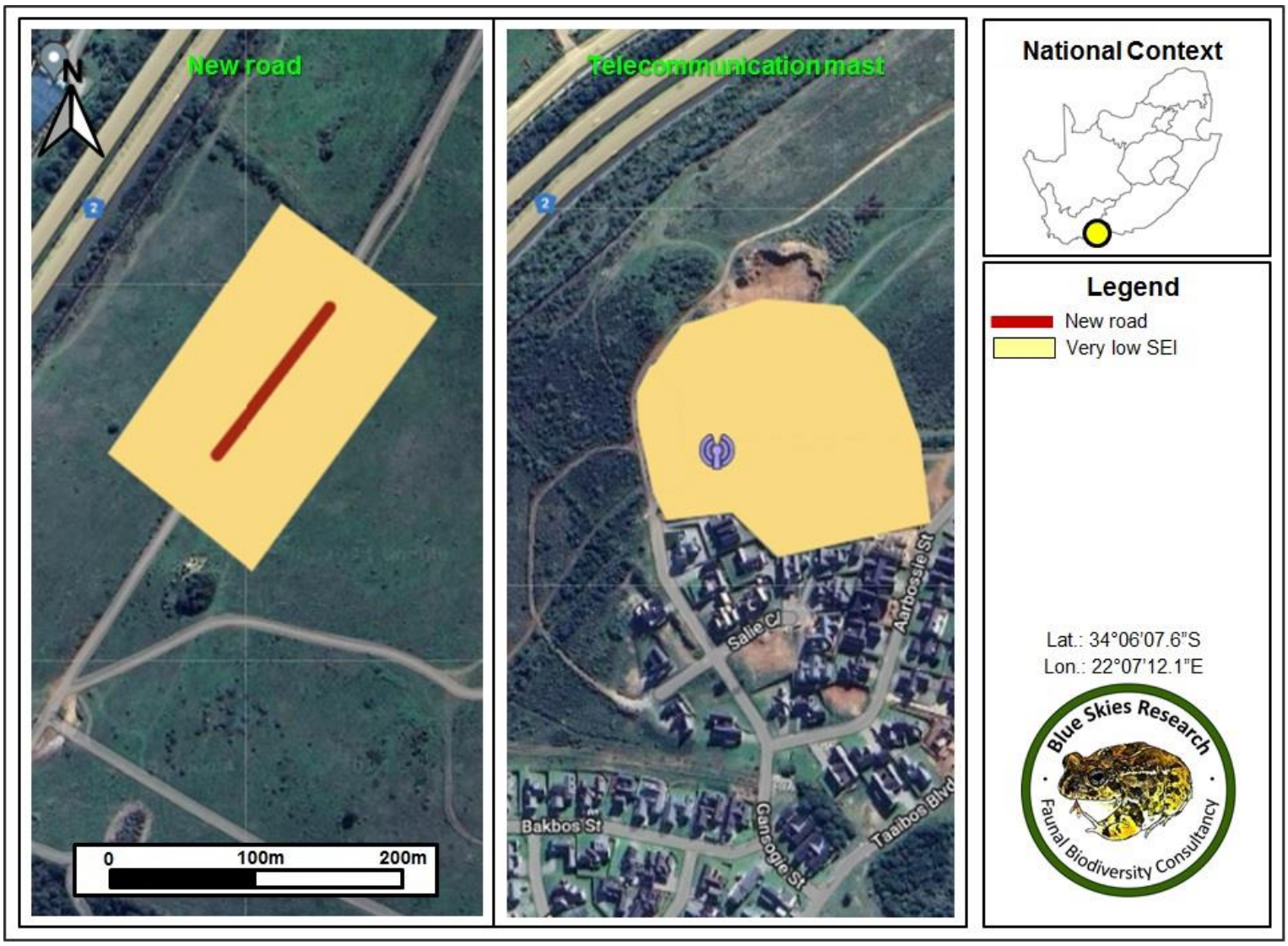


Figure 20 Spatial representation of the SEI of over the proposed project footprints.

11. Current impacts, project-related impacts and mitigation measures

11.1 Current impacts

Current impacts over the proposed project footprints include the following:

- No to very little remaining natural vegetation with an open and degraded habitat structure.
- Noise and vibration form the adjacent N2 Road and adjacent residential areas.
- Busy used road network over the parts of the site where the project footprints are located.
- A highly impaired faunal assemblage.

Collectively, these current impacts are severe to the point where little ecosystem integrity remains within these parts of the site, meaning that these small proposed footprints are of a low sensitivity with regards to faunal diversity and terrestrial biodiversity.

11.2 Anticipated project impacts and general mitigation measures

Planned development activities for amendment of the existing EA will include:

- The addition of a new section of road; and
- The installation of a telecommunication mast (within a fenced off area of 8m x 8m or 64m^2; see Figures 21 and 22).

Proposed development activities will include:

- Soil preparation;
- The installation of the new section of road;
- Construction of the foundation for the telecommunication mast;

- Installation of the telecommunication mast; and
- Installation of fencing around the telecommunication mast (64m^2).

These development activities will be restricted to very small (<1 hectare) open and degraded areas of “Very low” SEI which do not support any notable ecological infrastructure or biodiversity processes. Project activities will also be of a short term (less than a year). To this end, development of the proposed footprints will have a negligible impact on the receiving environment and are therefore able to proceed without considering major mitigation measures or impact management actions. To this end, only general recommendations are provided, should the development proceed:

- The development footprint should be kept at the provided minimum to minimise disturbance of any surrounding natural habitats on the site.
- Every effort should be made to save and relocate any mammal, reptile, amphibian, bird, or invertebrate that cannot flee of its own accord, encountered during site preparation (i.e., to avoid and minimise the direct mortality of faunal species). These animals should be relocated to a suitable habitat area immediately outside the project footprint, but under no circumstance to an area further away.

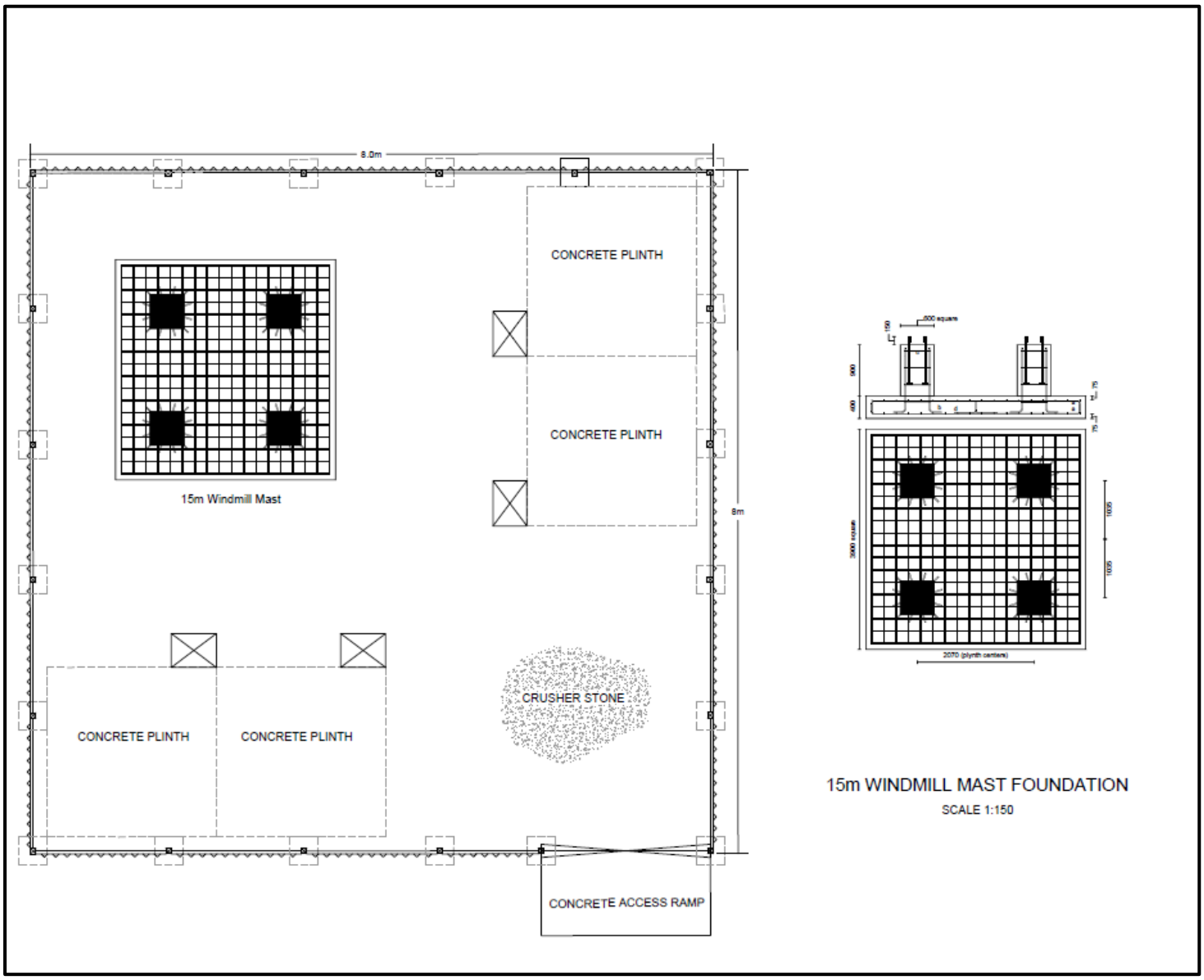


Figure 21 Top view of the telecommunication mast.

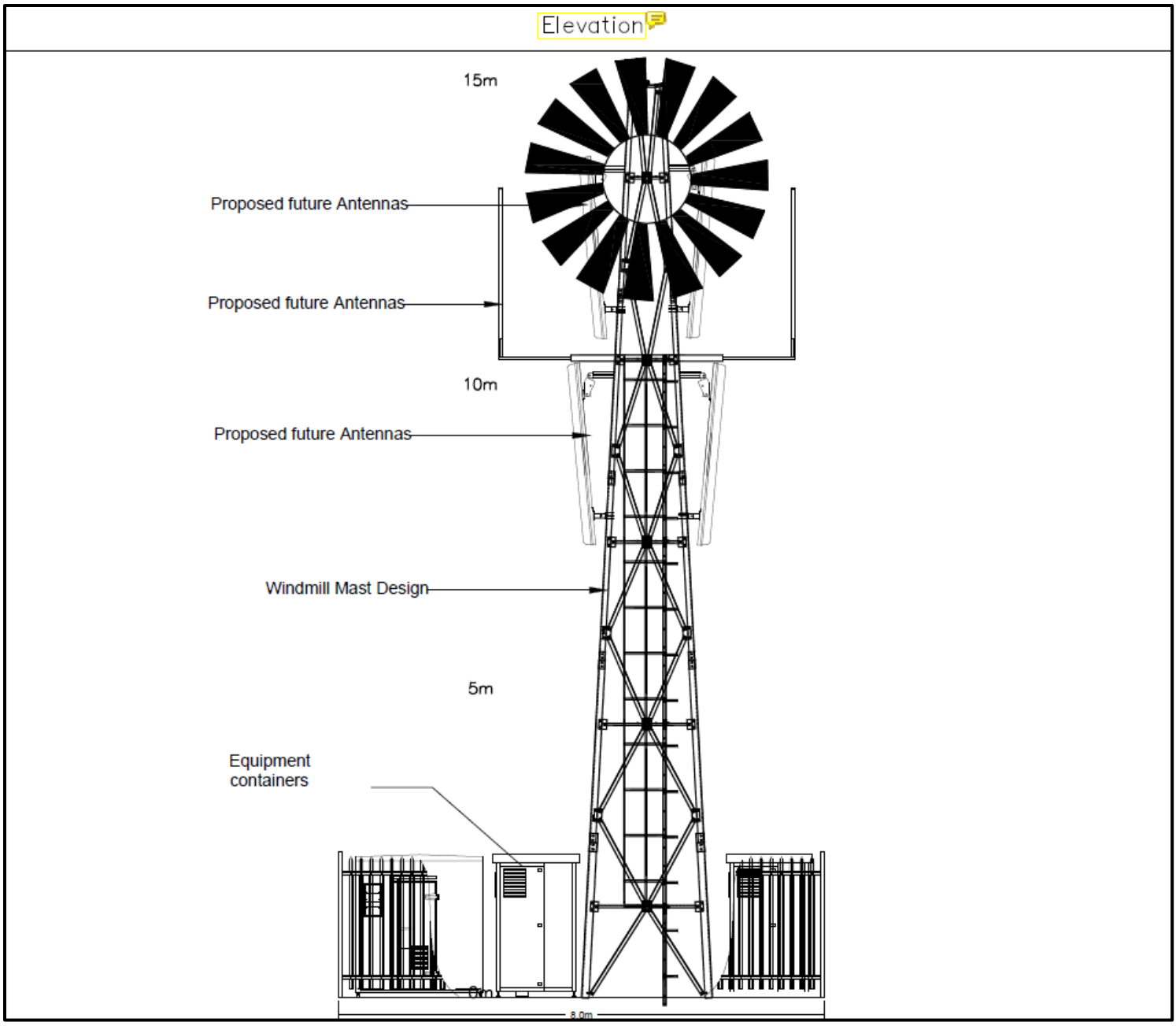


Figure 22 Side view of the telecommunication mast.

12. Conclusion

12.1 Listed sensitivity in the DFFE Screening Tool Report

The results from this report confirm the site sensitivity to be “Low” to “Very low” in contrast to the “Medium” site sensitivity retrieved in the DFFE Screening Tool Report (Figure 1, Section 3). The site currently does not support any confirmed or potential subpopulations of terrestrial faunal SCC (Section 9), with all habitats existing in an open and degraded state (Section 7), and with multiple major negative ecological impacts being evident (Section 11). Habitats over the proposed project footprints are retrieved as having a “Very low” SEI (Section 10). Taken together, these factors confirm the sensitivity of the project footprints to be “Low” to “Very low” from a terrestrial faunal (and avifaunal) perspective, thereby confirming the requirement for this Compliance Statement Report.

12.2 Terrestrial biodiversity

Both proposed project footprints do not overlap with any mapped CBA or ESA or any notable aquatic-, biodiversity- or ecological features while further representing small parts of the receiving environments exhibiting an open and degraded habitat structure, low faunal diversity and -abundances and which do not support any notable ecosystem dynamics. To this end, both project footprints are of a “Low” to “Very low” sensitivity from a terrestrial biodiversity perspective.

12.3 Conclusion

This report provides a representative faunal assessment of the study area considering facets of:

- Terrestrial faunal and avifaunal habitat composition (Section 7),
- terrestrial faunal and avifaunal components (Section 8),
- the presence of any terrestrial faunal SCC (Section 9),

- the SEI of habitats over the proposed project footprints with associated acceptable development activities (Section 10), and
- current impacts in the study area landscape, along with possible project-related impacts and general mitigation measures (Section 11).

Taken together, the results of the report indicate the following:

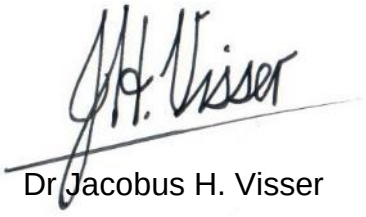
- Faunal habitats on the site exist in an open and degraded state (Section 7).
- The study area landscape supports an impaired terrestrial faunal and avifaunal diversity with only relatively common species of “Least Concern” (IUCN, 2021) being present and with altered ecosystem dynamics (Section 8).
- The site does not contain any subpopulations of, or suitable habitat for any of the faunal SCC considered (Section 9).
- Habitats within and adjacent to the project footprints are retrieved as “Very low” SEI (Section 10).
- Current impacts are severe to the point where little ecosystem integrity remains within these parts of the site, meaning that these small proposed footprints are of a low sensitivity with regards to faunal diversity and terrestrial biodiversity (Section 11).
- Development of the proposed footprints will have a negligible impact on the receiving environment and are able to proceed without considering major mitigation measures or impact management actions (Section 11).
- The sensitivity of the project footprints is retrieved as “Low” to “Very low” from a terrestrial faunal (and avifaunal) perspective (Subsection 12.1).
- The project footprints are of a “Low” to “Very low” sensitivity from a terrestrial biodiversity perspective (Subsection 12.2).

Taken together therefore, the site is of a lower sensitivity from a faunal biodiversity perspective and project activities will not have any significant impacts on terrestrial biodiversity features in the study area landscape. The current development layout and associated activities are therefore supported from a faunal biodiversity perspective.

13. Conditions to which this statement is subjected

The content of this report is based on the author's best scientific and professional knowledge as well as available information. Since environmental impact studies deal with dynamic natural systems, additional information may come to light at a later stage which is not listed in this report. As such, the conclusions and recommendations made in this report are done in good faith based on information gathered at the time of the investigation.

This report must not be altered or added to without the prior written consent of the author. This also refers to electronic copies of the report, which are supplied for the purposes of inclusion as part of other reports, including main reports. Similarly, any recommendations, statements or conclusions drawn from or based on this report must make reference to this report. If these form part of a main report relating to this investigation or report, this report must be included in its entirety as an appendix or separate section to the main report.



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Appendix A

Appendix A Desktop species list of the mammal species which have a distribution overlapping with the study area (constructed with reference to Skinner and Chimimba, 2005). Species in bold have been previously recorded within the study area landscape (QDGS: 3422AA, MammalMAP, https://vmus.adu.org.za/; iNaturalist, www.iNaturalist.org). For each species, the taxonomic Order, Family, species binomial name and common name is shown, along with the current IUCN Red List classification of the species.

Mammals Desktop Species List				
Order	**Family**	**Species**	**Common name**	**Status**
Artiodactyla	Bovidae	*Oreotragus oreotragus*	Klipspringer	Least Concern
		Pelea capreolus	Grey Rhebok	Near-Threatened
		Philantomba monticola	Blue Duiker	Least Concern
		Raphicerus campestris	Steenbok	Least Concern
		Raphicerus melanotis	Cape Grysbok	Least Concern
		Sylvicapra grimmia	Common Duiker	Least Concern
		Tragelaphus scriptus	**Southern Bushbuck**	**Least Concern**
	Suidae	Potamochoerus larvatus	Bushpig	Least Concern
Afrosoricida	Chrysochloridae	*Chlorotalpa duthieae*	Duthie's Golden Mole	Vulnerable
		Amblysomus corriae	Fynbos Golden Mole	Near-Threatened
		Amblysomus hottentotus	Hottentot Golden Mole	Least Concern
Carnivora	Canidae	*Canis mesomelas*	Black-backed Jackal	Least Concern
		Otocyon megalotis	Bat-eared Fox	Least Concern
		Vulpes chama	Cape Fox	Least Concern
	Felidae	*Caracal caracal*	Caracal	Least Concern
		Felis silvestris	African Wild Cat	Least Concern
		Leptailurus serval	Serval	Least Concern
		Panthera pardus	Leopard	Vulnerable

	Hyaenidae	*Proteles cristata*	Aardwolf	Least Concern
	Herpestidae	***Atilax paludinosus***	**Marsh Mongoose**	**Least Concern**
		Cynictis penicillata	Yellow Mongoose	Least Concern
		Herpestes ichneumon	Egyptian Mongoose	Least Concern
		Herpestes pulverulentus	**Cape grey Mongoose**	**Least Concern**
	Mustelidae	*Aonyx capensis*	African Clawless Otter	Near-Threatened
		Ictonyx striatus	Zorilla	Least Concern
		Mellivora capensis	Honey Badger	Least Concern
		Poecilogale albinucha	African Striped Weasel	Least Concern
	Viverridae	*Genetta genetta*	Common Genet	Least Concern
		Genetta tigrina	Cape Genet	Least Concern
Chiroptera	Molossidae	*Tadarida aegyptiaca*	Egyptian Free-tailed Bat	Least Concern
	Nycteridae	*Nycteris thebaica*	Cape Long-eared Bat	Least Concern
	Pteropodidae	Epomophorus wahlbergi	Wahlberg's Epauletted Fruit Bat	Least Concern
		Rousettus aegyptiacus	Egyptian Fruit Bat	Least Concern
	Rhinolophidae	*Rhinolophus capensis*	Cape Horseshoe Bat	Least Concern
		Rhinolophus clivosus	Geoffroy's Horseshoe Bat	Least Concern
	Vespertilionidae	*Myotis tricolor*	Temminck's Hairy Bat	Least Concern
		Neoromicia capensis	Cape Bat	Least Concern
Eulipotyphla	Soricidae	*Crocidura cyanea*	Reddish-grey Musk Shrew	Least Concern
		Crocidura flavescens	Greater Red Musk Shrew	Least Concern
		Myosorex longicaudatus	Long-tailed Forest Shrew	Endangered
		Myosorex varius	Forest Shrew	Least Concern
		Suncus infinitesimus	Least Dwarf Shrew	Least Concern
		Suncus varilla	Lesser Dwarf Shrew	Least Concern
Hyracoidea	Procaviidae	***Procavia capensis***	**Rock Hyrax**	**Least Concern**
Lagomorpha	Leporidae	*Lepus saxatilis*	Cape Scrub Hare	Least Concern
		Pronolagus saundersiae	Hewitt's Red Rock Hare	Least Concern
Primates	Cercopithecidae	*Chlorocebus pygerythrus*	Vervet Monkey	Least Concern

		Papio ursinus	Chacma Baboon	Least Concern
Rodentia	Bathyergidae	***Bathyergus suillus***	**Cape Dune Mole-rat**	**Least Concern**
		Cryptomys hottentotus	African Mole-rat	Least Concern
		Georychus capensis	Cape Mole-rat	Least Concern
	Gliridae	*Graphiurus murinus*	Woodland Dormouse	Least Concern
	Hystricidae	***Hystrix africaeaustralis***	**Cape Porcupine**	**Least Concern**
	Muridae	*Acomys subspinosus*	Cape Spiny Mouse	Least Concern
		Gerbillurus paeba	Hairy-footed Gerbil	Least Concern
		Micaelamys namaquensis	Namaqua Rock Rat	Least Concern
		Mus minutoides	Pygmy Mouse	Least Concern
		Myomyscus verreauxii	Verreaux's Mouse	Least Concern
		Otomys irroratus	Southern African Vlei Rat	Least Concern
		Rhabdomys pumilio	Four-striped Grass Mouse	Least Concern
	Nesomyidae	*Dendromus melanotis*	Grey Climbing Mouse	Least Concern
		Dendromus mesomelas	Brant's Climbing Mouse	Least Concern
		Mystromys albicaudatus	White-tailed Rat	Vulnerable
		Saccostomus campestris	Pouched Mouse	Least Concern
		Steatomys krebsii	Krebs' Fat Mouse	Least Concern
Tubulidentata	Orycteropodidae	*Orycteropus afer*	Aardvark	Least Concern

Appendix B

Appendix B Species list of the faunal species recovered within the study area during the field survey. For each, the taxonomic Order, Family, species binomial name and species common name are shown, along with the current IUCN Red List classification of the species, and the number of records of the species during the surveying period.

Mammals					
Order	**Family**	**Species**	**Common name**	**Status**	**No. observations**
Artiodactyla	Bovidae	*Antidorcas marsupialis*	Springbok	Least Concern	2
Carnivora	Herpestidae	*Herpestes pulverulentus*	Cape Grey Mongoose	Least Concern	1
Rodentia	Hystricidae	*Hystrix africaeaustralis*	Cape Porcupine	Least Concern	3
	Muridae	*Desmodillus auricularis*	Cape Short-eared Gerbil	Least Concern	1
		Rhabdomys pumilio	Four-striped Grass Mouse	Least Concern	6
Avifauna					
Order	**Family**	**Species**	**Common name**	**IUCN status**	**No. observations**
Accipitriformes	Accipitridae	*Buteo rufofuscus*	Jackal Buzzard	Least Concern	1
Coliiformes	Coliidae	*Colius striatus*	Speckled Mousebird	Least Concern	2
Columbiformes	Columbidae	*Streptopelia capicola*	Cape Turtle Dove	Least Concern	1
Galliformes	Numididae	*Numida meleagris*	Helmeted Guineafowl	Least Concern	1
	Phasianidae	*Pternistis capensis*	Cape Spurfowl	Least Concern	1
Passeriformes	Laniidae	*Lanius collaris*	Southern Fiscal	Least Concern	1
	Motacillidae	*Macronyx capensis*	Cape Longclaw	Least Concern	1
		Motacilla capensis	Cape Wagtail	Least Concern	1
	Passeridae	*Passer melanurus*	Cape Sparrow	Least Concern	1
	Ploceidae	*Ploceus capensis*	Cape Weaver	Least Concern	1
	Sturnidae	*Sturnus vulgaris*	Common Starling	Least Concern	2
Butterflies					

Order	Family	Species	Common name	IUCN status	No. observations
Lepidoptera	Pieridae	*Colias electo*	African Clouded Yellow	Least Concern	1
		Pontia helice	Southern Meadow White	Least Concern	1

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Appendix D

Curriculum Vitae of Jacobus Hendrik Visser

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Qualifications

- PhD (Zoology), University of Johannesburg (2015 - 2017)
- MSc (Zoology), Stellenbosch University (2011 - 2013)
- BSc Honours (Zoology) cum laude, Stellenbosch University (2010)
- BSc (Biodiversity and Ecology) cum laude, Stellenbosch University (2007 - 2009)

Scientific publications

- **Visser J.H.** (2013). Gene-flow in the rock hyrax (*Procavia capensis*) at different spatial scales. MSc thesis, Stellenbosch University, Stellenbosch, South Africa. https://core.ac.uk/download/pdf/37420485.pdf
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- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Compliance Statement Report for a Portion of Brazil 329, Nama Khoi Municipality, Namakwa District. April 2022. Prepared for WNel Environmental Consulting Services.
- **Visser, J.H.** Terrestrial Faunal And Avifaunal Species Scoping Report for the Proposed Waste Management Facility at Portions 1 and 6 of Farm 32 Brakkefontein, City of Cape Town. April 2022. Prepared for SLR Consulting.
- **Visser, J.H.** Terrestrial Faunal And Avifaunal Species Impact Assessment Report for a Portion of Riet Valleij (Somerset Vale, Farm Portion RE/150), Estelm Boerdery, Swellendam Municipality, Overberg District. June 2022. Prepared for PHS Consulting.
- **Visser, J.H.** Site Sensitivity Verification Report for Remainder of Farm De Draay No 563, Overstrand Municipality. August 2022. Prepared for PHS Consulting.
- **Visser, J.H.** Terrestrial Faunal and Avifaunal Impact Assessment Report for Remainder of Farm Rooilandia No. 472, Breede Valley Municipality. October 2022. Prepared for McGregor Environmental Services.
- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Impact Assessment Report for Portion 3 of Farm 781, Theewaterskloof Local Municipality. December 2022. Prepared for PHS Consulting.
- **Visser, J.H.** Terrestrial Faunal Species Compliance Statement Report for Farm Portion 49, Hansmoeskraal Farm 202, George Local Municipality. April 2023. Prepared for Sharples Environmental Services cc (SES).
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- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Compliance Statement Report for the Proposed Sandmine on Portion 109 of the Farm Zwarte Jongers Fontein No. 489, Hessequa Municipality. August 2023. Prepared for Pro-Earth Consulting.
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- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Compliance Statement Report for the Proposed Hartenbos Waste Water Treatment Works PV Solar Plant on Remainder of Portion 101 of the Farm Hartenbosch 217, Mossel Bay, Mossel Bay Municipality. September 2023. Prepared for Sharples Environmental Services cc (SES).
- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Site Sensitivity Verification Report for the Proposed Construction of Tourist Accommodation on Portions 10, 11 and 13 of the Farm Arieskraal A 456, Elgin. September 2023. Prepared for PHS Consulting.
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- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Compliance Statement Report for the Proposed Construction of Two Hard Water Reservoirs and Associated Infrastructure at the Koeberg Nuclear Power Station Located on the Farm Duynefontyn No. 1552, City of Cape Town Metropolitan Municipality. November 2023. Prepared for Sharples Environmental Services cc (SES).
- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Site Sensitivity Verification Report for Portion 7 of The Farm Hans Moes Kraal No. 202, George Local Municipality. December 2023. Prepared for Sharples Environmental Services cc (SES).
- **Visser, J.H.,** Colville, J.F., McDonald, D., Proposed Low Cost Housing Development on Farm Witteklip 69/123, Vredenburg, Saldanha Bay Municipality - Biodiversity Offset Report. December 2023. Prepared for Ecosense Environmental Consultants.
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- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species-, Aquatic Biodiversity- and Terrestrial Biodiversity Compliance Statement Report for the Mining Permit or Mining Right Application for the Existing Stone Crushing Operation on Portion 3 of the Farm Klipfontein No. 275, Still Bay, Hessequa Municipality. March 2024. Prepared for Pro-Earth Consulting.
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- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Site Sensitivity Verification Report for the Proposed Expansion of Cultivation Areas on Farm No. 757 and 758, Scherpenheuwel Valley, Breede Valley Municipality. May 2024. Prepared for inClover Environmental Consulting.

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- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Impact Assessment Report for the Proposed Development of a Shopping Center and Associated Infrastructure on a Portion of Remainder Erf 666 Hout Bay, City of Cape Town, Western Cape. May 2024. Prepared for MSEC Environmental Consultants.
- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Impact Assessment Report for the Proposed Agricutural Expansion by Anglo American on Their Farms Demaneng and Lyleveld, Kathu Region, Gamagara Local Municipality, Northern Cape. June 2024. Prepared for Victoria Read Environmental Consulting.
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- **Visser, J.H.** Terrestrial Faunal and Avifaunal Species Impact Assessment for the Proposed Waste Management Facility at Portions 1 and 6 of Farm 32 Brakkefontein, City of Cape Town. September 2024. Prepared for SLR Consulting.

Other projects

- Southern African Bird Atlas Project 2 (SABAP2)

- Endemism, genetic variance and conservation priorities in the highlands of south-western Africa.
- Biodiversity and ecology of scorpions in the Cape Floristic Region.
- National Biodiversity Assessment 2018: The status of South Africa's ecosystems and biodiversity. Synthesis Report. South African National Biodiversity Institute, an entity of the Department of Environment, Forestry and Fisheries, Pretoria.

Conferences

- Presenter at the 2017 conference of the South African Wildlife Management Association (Presentation title: The influence of commercial game farming on maintaining genetic diversity in the sable antelope (*Hippotragus niger*) and roan antelope (*Hippotragus equinus*)
- Presenter at the 2017 conference of the Zoological Society of Southern Africa (Presentation title: Evolution of the South African Bathyergidae: Patterns and processes)
- Presenter at the 2010 conference of the Zoological Society of Southern Africa (Presentation title: Local and regional scale genetic variation in the Cape dune mole-rat, *Bathyergus suillus*