Proposed Rehabilitation of the Road TR75/1 (N12 Highway) Near Oudtshoorn, Oudtshoorn Local Municipality, Garden Route District Municipality, Western Cape

Terrestrial Animal Species Compliance Statement

Compiled for

By

Cossypha Ecological

April 2023

REPORT PRODUCTION

Specialist	Role	Project Component	Qualifications and Professional Registration
Robyn Phillips	Terrestrial Ecologist	Ecological assessment of terrestrial fauna; Field work and report compilation	MSc (Zoology) UNP SACNASP: *Pr.Sci.Nat.* Reg. no.: 400401/12 Fields: Zoological and Ecological Years' Experience: 21, primary expertise in fauna and terrestrial biodiversity

Refer to **Appendix A** for an abridged CV of the specialist.

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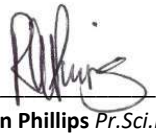
SPECIALIST DECLARATION OF INDEPENDENCE

I, **Robyn Phillips**, in my capacity as a specialist consultant, hereby declare that I –

- Act as an independent consultant;
- Do not have any financial interest in the undertaking of the activity, other than remuneration for the work performed in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998);
- Do not have and will not have vested interest in the proposed activity proceeding;
- Have no, and will not engage in, conflicting interests in the undertaking of the activity;
- Undertake to disclose, to the Competent Authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the National Environmental Management Act, 1998 (Act 107 of 1998);
- Will provide the Competent Authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not;
- As a registered member of the South African Council for Natural Scientific Professions, will undertake my profession in accordance with the Code of Conduct of the Council, as well as any other societies to which I am a member;
- Based on information provided to me by the project proponent and in addition to information obtained during the course of this study, have presented the results and conclusion within the associated document to the best of my professional ability;
- Reserve the right to modify aspects pertaining to the present investigation should additional information become available through ongoing research and/or further work in this field; and
- Undertake to have my work peer reviewed on a regular basis by a competent specialist in the field of study for which I am registered.



04 May 2023

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Terrestrial Ecologist
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Date

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ABBREVIATIONS

BA	Basic Assessment
CBA	Critical Biodiversity Area
DEA	Department of Environmental Affairs
DFFE	Department of Forestry, Fisheries and the Environment
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EN	Endangered
ESA	Ecological Support Area
GIS	Geographic Information System
GN	General Notice
IAP	Invasive Alien Plants
IBA	Important Bird Area
IUCN	International Union for the Conservation of Nature
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEMBA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
ONA	Other Natural Area
PA	Protected Area
QDGC	Quarter Degree Grid Cell
SANBI	South African National Biodiversity Institute
SACAD	South African Conservation Areas Database
SAPAD	South African Protected Areas Database
SCC	Species of Conservation Concern
VU	Vulnerable

1. INTRODUCTION

Sharples Environmental Services cc (SES) has been appointed as the independent Environmental Assessment Practitioner (EAP) to undertake the environmental process for the Application for Environmental Authorisation (EA) in terms of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998) and the 2014 Environmental Impact Assessment (EIA) Regulations of 2014, as amended (GNR 326 of 2017) for the proposed rehabilitation of the road TR75/1 (N12 Highway), near Oudtshoorn within the Oudtshoorn Local Municipality, in the Garden Route District, Western Cape. As part of the environmental process, the National Web-Based Environmental Screening Tool developed by the Department of Forestry, Fisheries and the Environment (DFFE), identified the need for a Terrestrial Animal Species Assessment / Compliance Statements for the proposed project. Cossypha Ecological was appointed to undertake the specialist study for the site in question.

2. PROJECT DESCRIPTION

The proposed road rehabilitation includes the following activities:

1. **General**
    - The establishment of the Contractor's campsite and offices for the Engineer and site staff.
    - The supply of plant, labour, tools, equipment, and materials necessary to complete the work.
    - Setting out the works, and accommodation of traffic.
2. **Road Works**
    - Rehabilitation of the existing road cross-section to include surfaced shoulders. This will include widening of the existing road prism at selected locations. The road rehabilitation will require:
        - Widening of existing cut and fill slopes,
        - In-situ reconstruction of the existing pavement layers as the upper selected layer,
        - Construction of new subbase and base layers, and
        - Construction of a new surfacing seal.
    - Construction of auxiliary (passing and climbing) lanes at selected locations.
    - Rehabilitation of selected accesses to main or minor farm access standards as applicable.
    - Extension of existing minor culverts.
    - Maintenance of existing minor culvert inlet and outlet structures.
3. **Structures**
    - Widening or raising head and wing walls at major culverts if required due to cross-section rehabilitation or introduction of auxiliary lanes.
    - Maintenance to major culverts including:
        - Concrete crack repair, and
        - Scour repair.
    - Maintenance to the bridge B4691 over the Olifants River including:
        - Repair of honeycombing in concrete, and
        - Replacement of bridge joints.
4. **Appurtenant Works**
    - Construction of concrete lined drains.
    - Installation of road signs and painting of road marking.
    - Installation of guardrails.
    - Installation of fencing, including clearing the fence line.

3. THE STUDY AREA

3.1 LOCATION

The study area is located along the road TR75/1 (N12 Highway) leaving the town of Oudtshoorn on the south side and extending for approximately 15 km along the road and road reserve. The site is located within the Oudtshoorn Local Municipality, which forms part of the Garden Route District Municipality in the Western Cape Province (**Figure 1**). The site falls within Quarter Degree Grid Cells (QDGC) 3322CA and 3322CB and lies between 33°36'51.33" and 33°42'11.82" south and 22°12'57.26" and 22°17'17.83" east. The ~15 km section of road ranges in altitude from around 287 m to 512 m above mean sea level (a.m.s.l). The assessment area is approximately 49 ha in extent.

3.2 LAND USES OF THE SITE AND SURROUNDING AREAS

The study area follows the N12 highway out of Oudtshoorn to the south with the town immediately to the north. As the road leaves the town it passes through agricultural fields before crossing the Olifants River via bridge B4691. The road then meanders along the eastern banks of the Klip River (a tributary of the Olifants River) next to a railway line south through the river valley with hills on either side covered with mostly natural Little Karoo vegetation and farmland used for grazing, or land used for tourism. A few cultivated fields are present along the banks of the river. The road then veers away from the river to the east through a valley between ridges before climbing up over a large ridge and continues south through hilly country largely covered in natural Little Karoo vegetation. The proposed road works end about 1 km before the road continues immediately adjacent to the Witkliprug Nature Reserve situated on its east side. The Ortmansgat Private Nature Reserve is situated about 3 km due south of Oudtshoorn and approximately 2 km to the west of the proposed road upgrades (**Figure 2**).

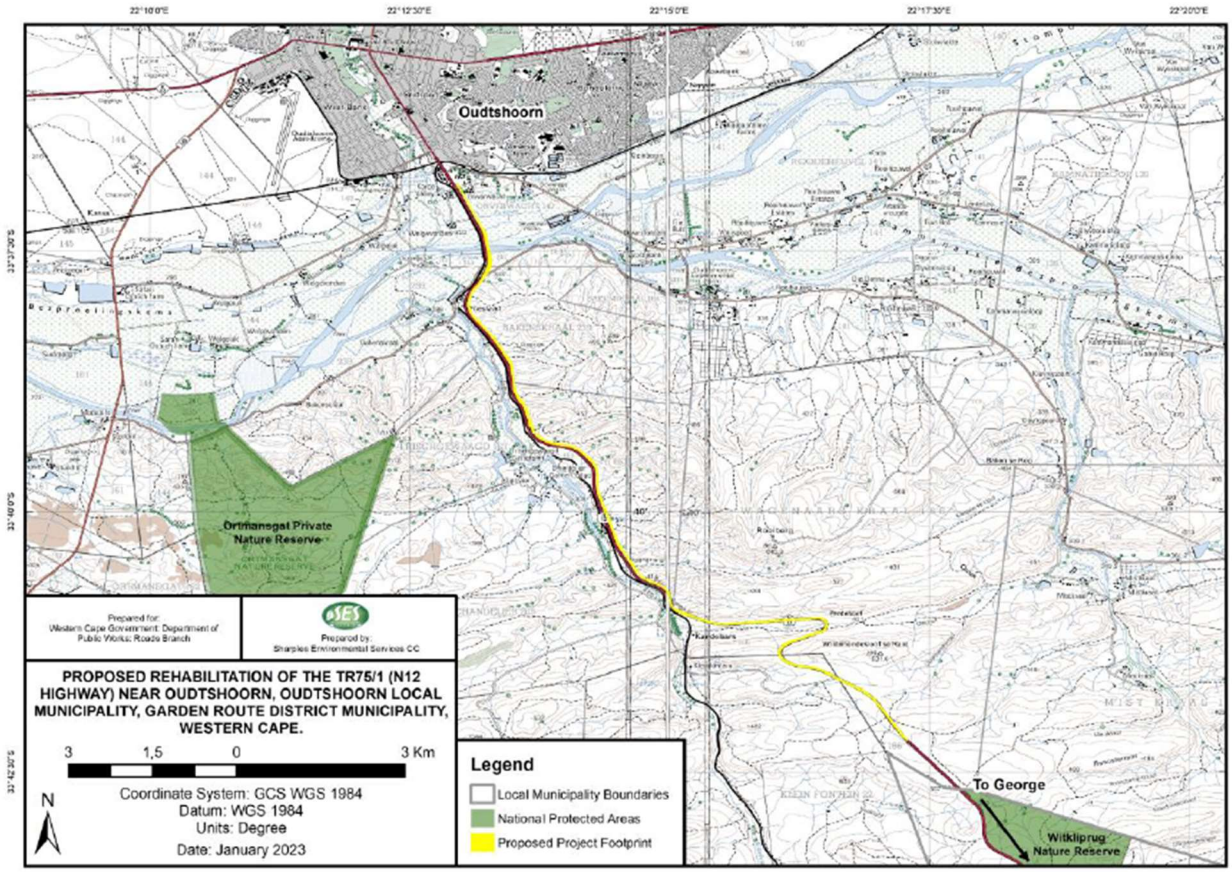


Figure 1: Locality of the study area

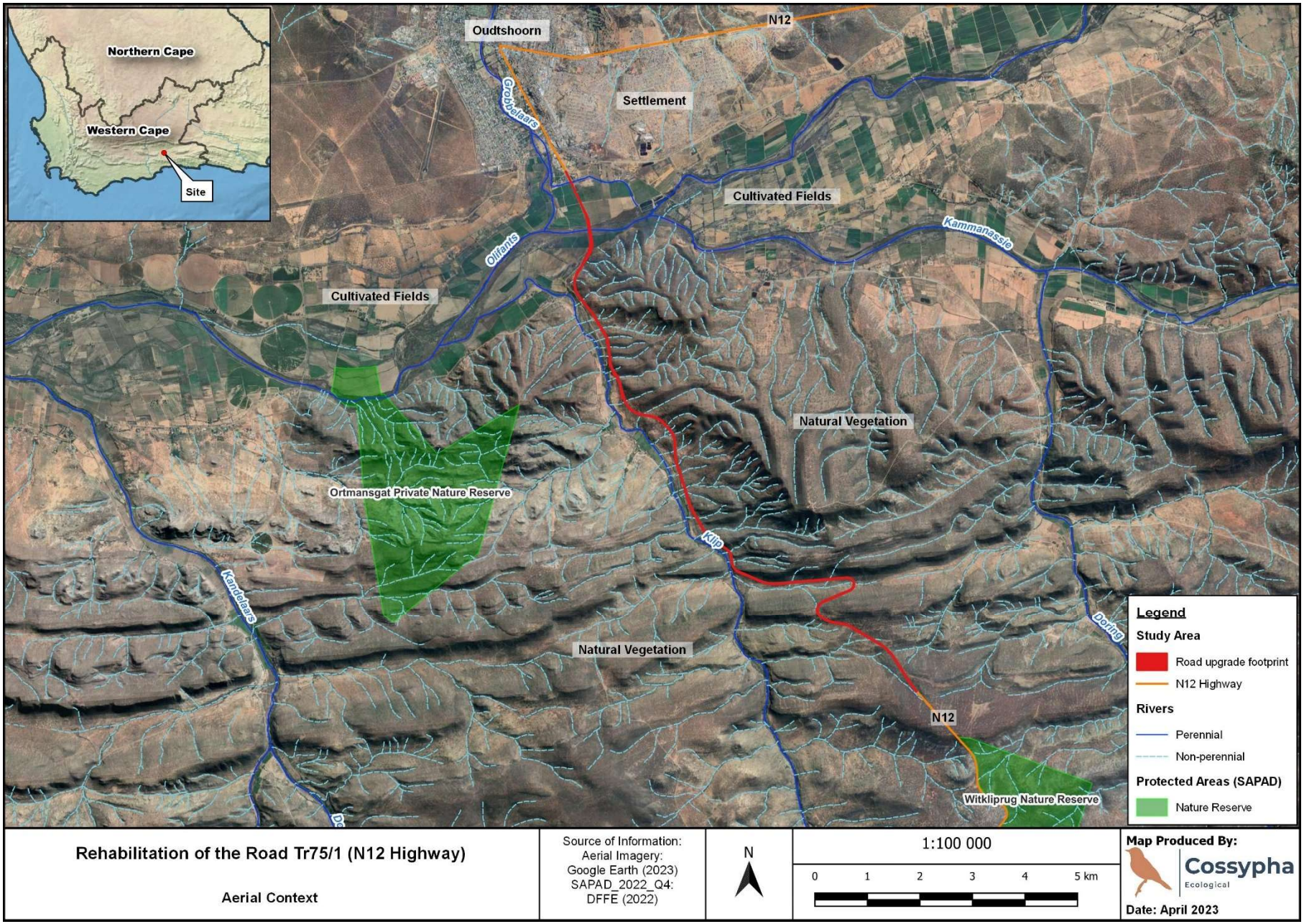


Figure 2: Aerial overview of the study area and surrounds

4. REPORTING REQUIREMENTS

A Screening Report for proposed site environmental sensitivity, as required by the EIA Regulations of 2014 (as amended in 2017) for an EA in terms of NEMA (Act 107 of 1998), was generated for the project using the National Web-Based Environmental Screening Tool on the 12th of January 2023. The report identified the majority of the northern portion of the route as having **High** sensitivity for the Animal Species theme due the potential occurrence of the following species of conservation concern (SCC):

- Aves: African Marsh Harrier *Circus ranivorus* (EN)
- Aves: Southern Black Korhaan *Afrotis afra* (VU)

The report also identified **Medium** sensitivity for the remainder of the route due to the potential occurrence of the following SCC:

- Invertebrate: Bladder Grasshopper *Physemacris papillosa* (EN)
- Invertebrate: Yellow-winged Agile Grasshopper *Aneuryphymus montanus* (VU)
- Aves: Southern Black Korhaan *Afrotis afra* (VU)
- Sensitive Species[1] 8 (VU sensitive mammal)

Therefore, a terrestrial faunal assessment is required for the project, which must be compiled in accordance with the requirements of the *Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes when Applying for EA* (GN R320 of 2020) and comply with the following gazetted protocol. This protocol replaces the requirements of Appendix 6 of the EIA Regulations, 2014 (as amended) in terms of NEMA:

- Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Animal Species, published in GN 1150 of 30 October 2020.

4.1 SITE SENSITIVITY VERIFICATION

According to the above-mentioned protocol, the current use of the land and the potential environmental sensitivity identified by the screening tool, of the site under consideration, must be confirmed by undertaking a site sensitivity verification prior to commencing with the specialist assessment. This will confirm the actual use of the land on the ground versus that which has been identified by the screening tool and the validity of the sensitivity rating assigned by the screening tool. This will confirm whether a full Specialist Assessment Report (applicable for **Very High** and **High** sensitivity sites) or a Compliance Statement (applicable for **Low** sensitivity sites) is required.

In the case of species assessments, because **Medium** sensitivity data represents suspected habitat for SCC based on occurrence records for these species collected prior to 2002 or is based on habitat suitability modelling, the presence or likely presence of the SCC identified by the screening tool must be investigated through a site inspection. Where SCC are found on the site or have been confirmed to be likely present by the specialist, a **Terrestrial Animal Species Specialist Assessment** must be compiled in accordance with the requirements specified for **Very High** and **High** sensitivity in the protocol. Where no SCC are found on the site or the presence is confirmed to be unlikely during the site inspection, a **Terrestrial Animal Species Compliance Statement** must be submitted.

[1] A SCC that is sensitive to the illegal harvesting trade. The actual name of the sensitive species may not appear in the final EIA report or in any of the specialist reports released into the public domain.

For the site in question, a field inspection took place from the 4th to the 6th of April 2023 where the footprint of the proposed road upgrade was inspected by vehicle and on foot. The season was late summer / early autumn and was deemed the appropriate time of year for the field survey. The site inspection revealed that the assessment area is in a relatively disturbed state being in the reserve and due to the proximity to the roadway. It is comprised mostly of secondary vegetation or alien plants. No animal SCC were observed on the site and are unlikely to utilise the vegetation next to the road. This confirmed the ecological sensitivity for terrestrial fauna to be **Low** (see further explanation in **Section 7**).

The following Report therefore comprises an investigation of the terrestrial fauna on the site in the form of a Compliance Statement in accordance with the Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Animal Species (GN 1150 of 2020) and written following the Species Environmental Assessment Guidelines for the implementation of the Terrestrial Fauna and Terrestrial Flora Species Protocols (SANBI, 2020).

4.2 TERMS OF REFERENCE

The terms of reference for the assessment were as follows:

- Undertake a desktop assessment and field survey of the site to inform the assessment;
- Verify the site sensitivity for terrestrial animal species;
- Determine the presence or likely presence of animal SCC;
- If any SCC are recorded, include evidence if possible, such as location and map points of where species are identified denoting them as high sensitivity areas within the site;
- Photographic record of the site characteristics, including potential habitats and/or sensitive areas;
- Compilation of a Terrestrial Animal Species Assessment or Compliance Statement following the Species Environmental Assessment Guidelines (SANBI, 2020), including a description of the baseline terrestrial biodiversity of the area; and
- Recommend impact management actions or any monitoring requirements for inclusion in the EMPr.

5. METHODOLOGY

The approach included a desktop assessment as well as a site visit. The methodology broadly entailed the following:

5.1 DESKTOP ASSESSMENT

The desktop assessment entailed the following:

- Review of available GIS layers relating to biodiversity conservation planning e.g. vegetation types, threatened ecosystems, relevant provincial spatial conservation or biodiversity plan, Important Bird Areas (IBAs), South African Protected Areas Database (SAPAD) etc.;
- Review of all relevant literature including distribution data of fauna expected to occur on the site, as well as the conservation status of species; and

- Review of historical satellite imagery obtained from Google Earth © to ascertain historical land use of the study area.

5.2 FIELD SURVEY

The field investigation was undertaken on the 4th, 5th, and 6th of April 2023 when terrestrial faunal elements within the study area were assessed. Daytime surveys were conducted by vehicle and on foot by driving the length of the route within the assessment area. Changes in land cover, habitat, and vegetation were observed and any fauna or evidence of fauna present on site noted. Photographs were taken at a series of sample points to illustrate the condition of vegetation, habitat, and representative areas of the footprint. Approximately 80 points were sampled and photographed along the route (5.33 samples/km), 30 of which (see **Figure 3** and **Figure 4**) are described in the results section below. Coverage of the study area was deemed to be sufficient. Note that no sampling was conducted in the adjacent indigenous Little Karoo vegetation.

During the field survey the following aspects pertaining to terrestrial fauna were assessed:

- Current land use of the site and immediate surrounds;
- Current ecological state of habitats on site;
- Presence of terrestrial faunal SCC, protected species, or suitable habitat for such species on site; and
- Significant landscape features, ecological corridors, and landscape connectivity.

5.3 ASSUMPTIONS AND LIMITATIONS

The following assumptions and limitations pertain to the current study:

- It is assumed that all third-party information used (e.g. GIS data and satellite imagery) was correct at the time of generating this report.
- The survey was restricted to a single day-time site visit conducted over two and half days during one season (late summer / early autumn) and it is not considered necessary to perform an additional survey.
- No sampling was conducted in the adjacent indigenous Little Karoo vegetation.
- The survey was conducted over approximately 16 hours in total.
- Findings, recommendations, and conclusions provided in this report are based on the author's best scientific and professional knowledge as well as information available at the time of compilation.

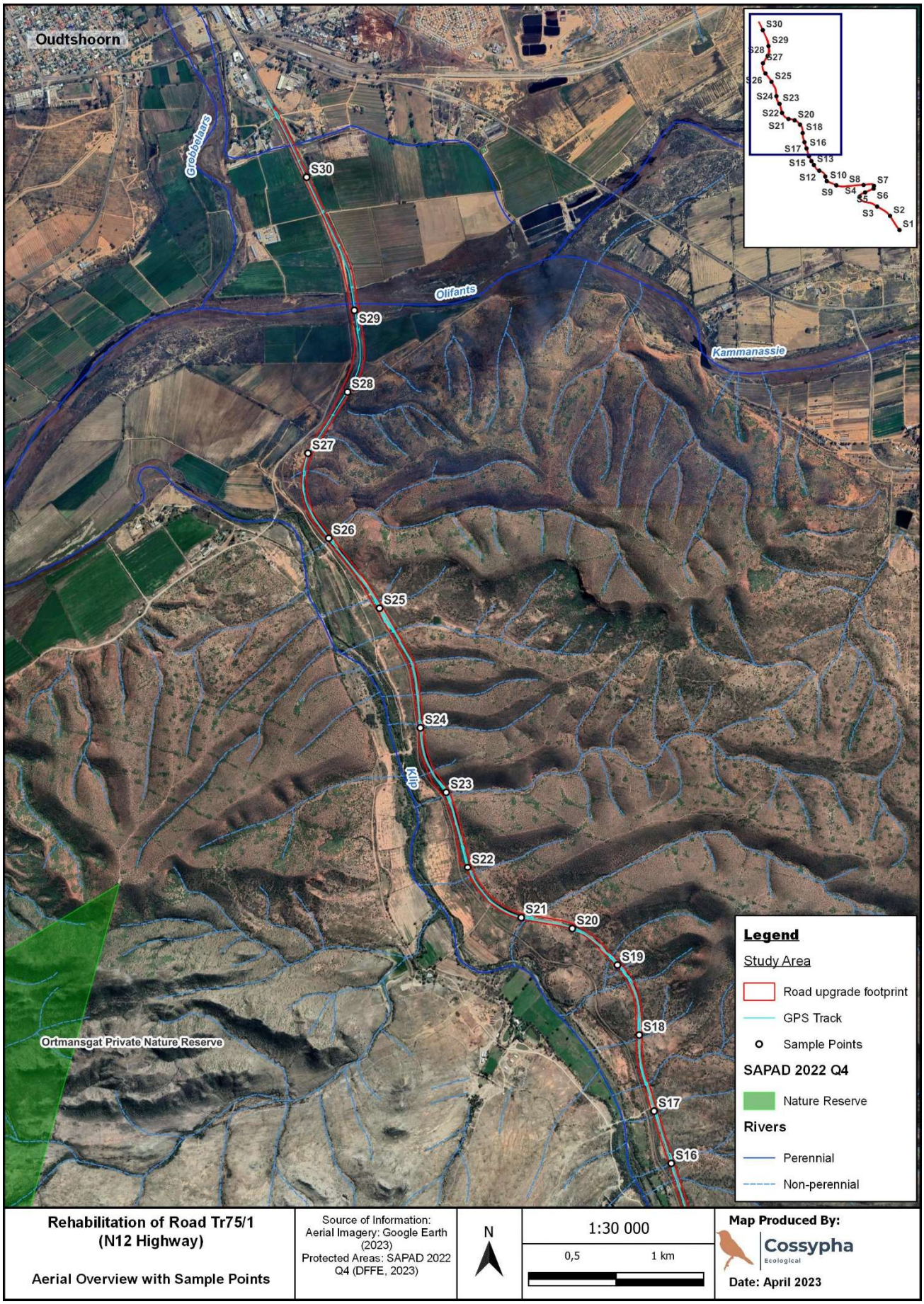


Figure 3: Aerial view of the northern section of the study area with GPS track and location of sample points

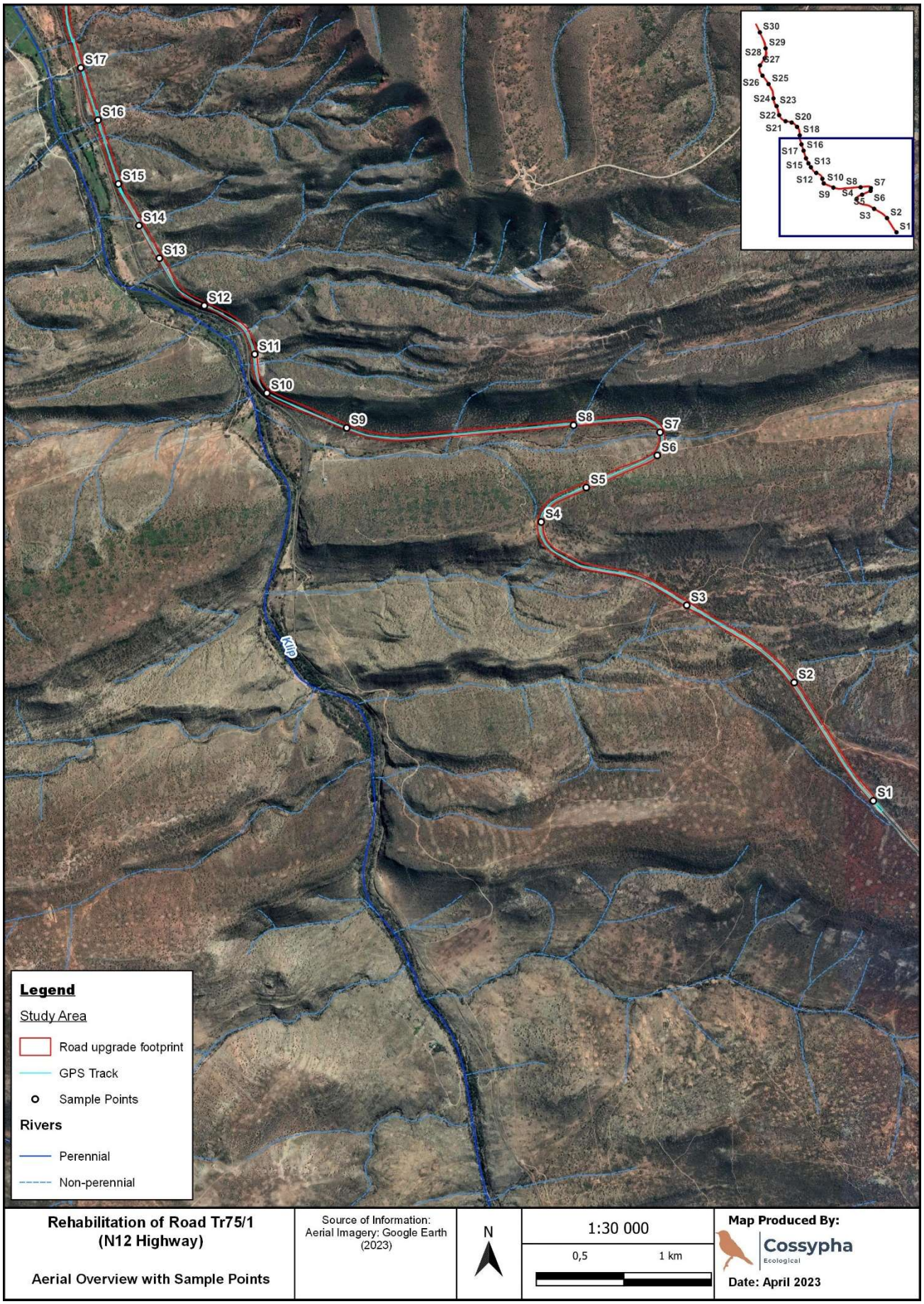


Figure 4: Aerial view of the southern section of the study area with GPS track and location of sample points

6. DESKTOP ASSESSMENT RESULTS

6.1 REGIONAL BIODIVERSITY

6.1.1 REGIONAL VEGETATION AND TERRESTRIAL ECOSYSTEMS

The study area is located within the Succulent Karoo Biome, within the Rainshadow Valley Karoo Bioregion (Rutherford and Westfall, 1994). The site falls mostly within the Eastern Little Karoo vegetation type, with the northern-most section of the site falling within the Muscadel Riviere vegetation type associated with the Olifants River (Mucina and Rutherford, 2006; 2018). Eastern Little Karoo vegetation occurs in a series of narrow belts in the eastern basin of the Little Karoo in the Western Cape, at an altitudinal range of 320-550 m a.m.s.l. The vegetation occurs on irregularly flat plains and undulating foothills and is characterised by dense succulent shrubland dominated by Aizoaceae (*Ruschia, Drosanthemum*) and Crassulaceae (*Cotyledon, Crassula, Tylecodon*) and non-succulent shrubs such as *Nymania, Pteronia* and *Rhus* (Mucina and Rutherford, 2006). Eastern Little Karoo is currently listed as an Endangered ecosystem at a national level (SANBI, 2021; DFFE, 2022), however the vegetation type is considered Vulnerable in the Western Cape (Pool-Stanvliet *et al*., 2017). Muscadel Riviere is also classified as an Endangered ecosystem at a national level with only 36.6% remaining (SANBI, 2021; DFFE, 2022), however the vegetation type is considered Critically Endangered in the Western Cape (Pool-Stanvliet *et al*., 2017).

6.1.2 FAUNA

From a faunal perspective, species that are likely to inhabit the ecosystem comprise typical Succulent Karoo species. This may include birds such as korhaan, spurfowl, robins, apalis, flycatchers, larks, bulbuls, sunbirds, warblers, and raptors such as sparrowhawk and falcons. Mammals may include aardvark, scrub hare, mongoose, genet, rock hyrax, baboon, porcupine, common duiker, steenbok, and many small mammals such as mole-rats, gerbils, and grass mice. Reptiles may include tortoises, chameleons, lizards and skinks, adders, and other snakes. In addition, many invertebrates and insect pollinators inhabit the ecosystem.

6.1.3 WESTERN CAPE BIODIVERSITY SECTOR PLAN

According to the Western Cape Biodiversity Sector Plan (WCBSP), the majority of the footprint is routed through areas not assigned to a biodiversity category (due to the transformed nature of the road), or designated as Ecological Support Area (ESA) 1: Terrestrial, ESA2: Restore from other land use, or Other Natural Area (ONA) (Pool-Stanvliet *et al*., 2017). A few sections of the route pass adjacent to areas classified as Critical Biodiversity Area (CBA) 1: Terrestrial where indigenous Little Karoo vegetation encroaches at the periphery of the proposed footprint (**Figure 5**). Reasons for these areas being considered CBA1 include ecological processes, proximity to a Southern Folded Mountains Permanent Upper Foothill River, Rainshadow Valley Karoo Floodplain Wetland, Vulnerable vegetation type, water resource and water course protection, and the potential occurrence of a threatened vertebrate (Cape Mountain Zebra) (Pool-Stanvliet *et al*., 2017).

6.1.4 PROTECTED AREAS

The study area falls within the Gouritz Cluster Biosphere Reserve and falls within the Transition and Buffer Zones of the reserve. The Transition Zone is usually the largest part of the biosphere reserve and is where the greatest development activity is allowed, while the Buffer Zone (usually surrounding the Core Zone) is managed to support the conservation objectives of the Core Zone (UNESCO, 2022). Other PAs occurring in the vicinity include the Ortmansgat Private Nature Reserve situated about 3 km due south of Oudtshoorn and approximately 2 km to the west of the proposed road upgrades, and the Witkliprug Nature Reserve situated ~1 km from where the proposed road works will end in the south of the study area (**Figure 5**).

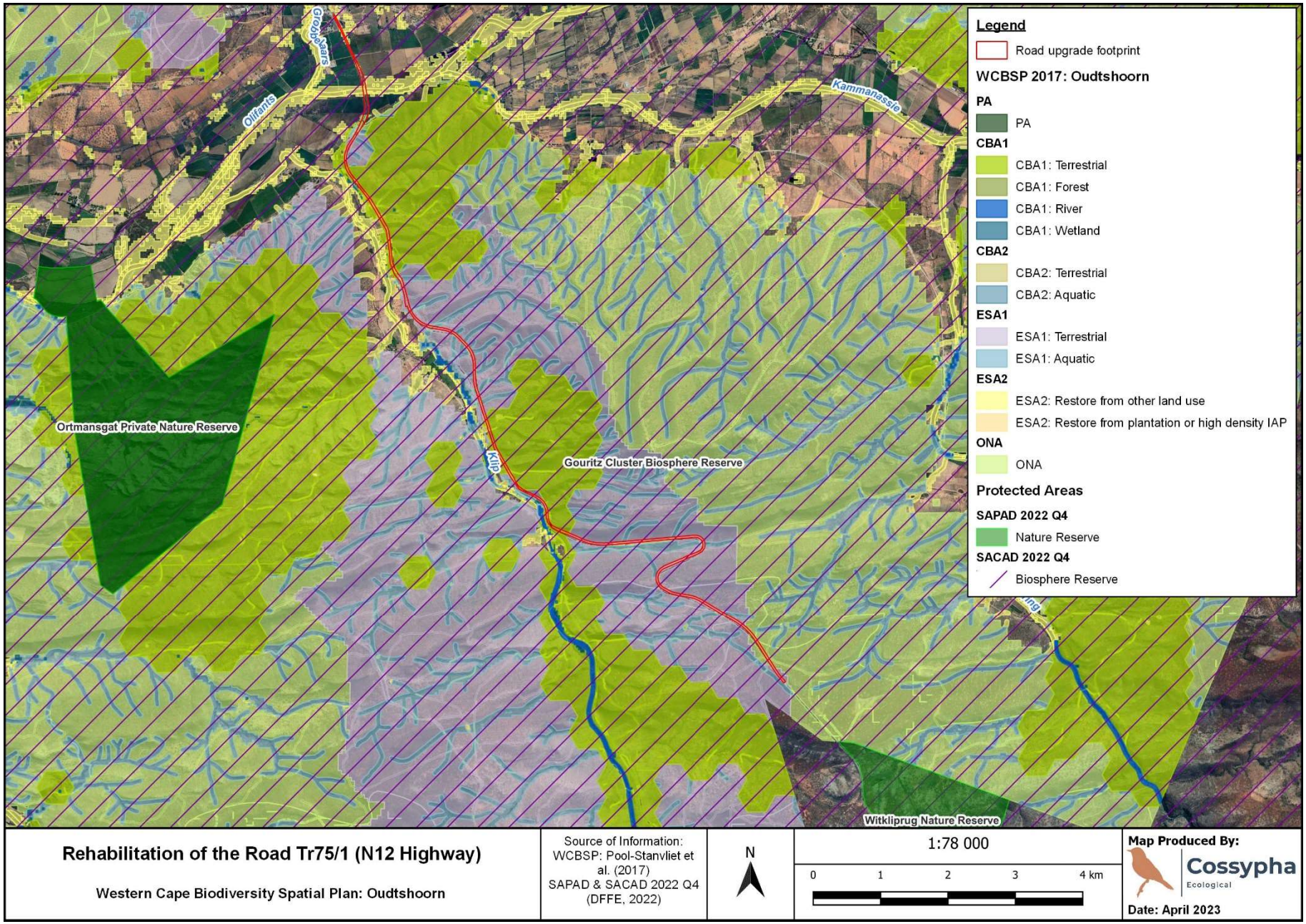


Figure 5: The study area in relation to the WCBSP and Protected Areas

7. FIELD SURVEY RESULTS

A general description of the status quo of the site is given below, with more details of each sample point provided in a table in the next section. The table also gives the likelihood of faunal SCC occurring at each point.

7.1 SITE DESCRIPTION

The assessment area was mostly comprised of the road surface and disturbed roadside with pockets of vegetation growing along the verges. Vegetation ranged from indigenous vegetation to patches with invasions of alien species such as Fountain Grass *Pennisetum setaceum*, Pepper Tree *Schinus molle*, and Willows *Salix sp*. A few cut slopes and cliff faces, where the roadway was cut through the hills, were present along the route, and comprised rocky habitat and supported mostly indigenous vegetation. The roadway also crossed several drainage lines with culverts, where mostly riverine vegetation was present.

Faunal activity on the site was generally low with only common and generalist birds and small / medium mammals recorded, usually around the riparian areas and drainage lines. Some of the bird species recorded in the study area included Cape Turtle-Dove *Streptopelia capicola*, Cape Bulbul *Pycnonotus capensis*, Karoo Prinia *Prinia maculosa*, Southern Double-collared Sunbird *Cinnyris chalybeus*, Chestnut-vented Tit-Babbler *Curruca subcoerulea*, and Bokmakierie *Telophorus zeylonus*. A few common mammal species observed during the field surveys including Scrub Hare *Lepus saxatilis*, Cape Grey Mongoose *Galerella pulverulenta*, and Chacma Baboon *Papio ursinus*.

No faunal SCC were recorded during the site surveys. The habitat along the route is largely disturbed and exists in a narrow strip that is somewhat fragmented due to the proximity to the roadway. It is unlikely that the available habitat would support any individuals or populations of faunal SCC, and such species are more likely to utilise the better-quality habitat that exists in the adjacent natural areas in far larger and more viable quantities.

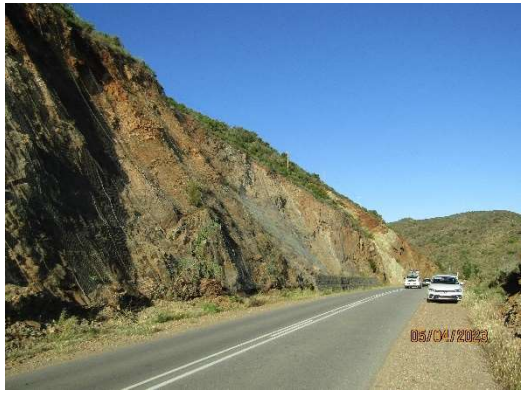
Typical example of the disturbed roadside with a strip of indigenous vegetation and rocky ledges forming the cut slope

7.2 SAMPLE POINT DESCRIPTIONS

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S1 04-Apr-23 33°42'12.06"S 22°17'17.75"E	Photo 1: Disturbed roadside with narrow strip of indigenous Little Karoo vegetation (with some succulents and *Aloe* sp.) up to the fence line. Continuous Little Karoo vegetation occurs beyond the fence. Photo 2: Disturbed fence line with dirt track	Low		
S2 04-Apr-23 33°41'50.22"S 22°17'0.20"E	Photo 1: Disturbed roadside with narrow strip of indigenous Little Karoo vegetation up to the fence line. Continuous Little Karoo vegetation occurs beyond the fence. Photo 2: Disturbed fence line with narrow strip of indigenous vegetation dirt track beyond the fence.	Low		
S3 04-Apr-23 33°41'28.68"S 22°16'12.73"E	Photo 1: Disturbed roadside with little vegetation up to the fence line. Photo 2: Disturbed fence line with narrow strip of indigenous vegetation dirt track beyond the fence.	Low		

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S4 04-Apr-23 33°41'20.56"S 22°16'4.05"E	Photo 1: Disturbed roadside with Armco barrier and very little vegetation. Photo 2: Disturbed roadside and rocky cut-slope with indigenous vegetation.	Low		
S5 04-Apr-23 33°41'14.20"S 22°16'14.05"E	Photo 1: Disturbed roadside with gravel fill-slope and very little vegetation, mostly weedy and alien species. Photo 2: Disturbed roadside with stormwater drain and rocky cut-slope with indigenous vegetation up to the fence line. Road descending into river valley between two large ridges.	Low		
S6 04-Apr-23 33°41'8.27"S 22°16'29.81"E	Photo 1: Disturbed roadside with gravel fill-slope and very little vegetation, mostly weedy and alien species. Photo 2: Disturbed roadside with culvert and little vegetation, mostly weedy and alien species.	Low		

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S7 04-Apr-23 33°41'4.01"S 22°16'30.43"E	Photo 1: Disturbed roadside with weedy and alien species. Photo 2: Disturbed roadside with gravel fill-slope and very little vegetation. Riverbed and wetland beyond the fence line. Bend of road in river valley bottom.	Low		
S8 04-Apr-23 33°41'2.69"S 22°16'11.25"E	Photo 1 &2: Disturbed roadsides with narrow strip of disturbed vegetation up to the fences, mostly weedy and alien species.	Low		
S9 04-Apr-23 33°41'3.19"S 22°15'20.89"E	Photo 1: Disturbed roadside with Armco barrier and narrow strip of disturbed vegetation up to the fence line. Photo 2: Disturbed roadside with gravel fill-slope and disturbed fence-line with mostly weedy and alien vegetation.	Low		

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S10 04-Apr-23 33°40'56.76"S 22°15'3.18"E	Photo 1: Road curves to enter Klip River valley. Disturbed roadside with railway line and Klip River below to the west. Photo 2: Disturbed roadside with mostly weedy and alien vegetation, and rocky cliff-like cut-slopes with indigenous vegetation.	Low		
S11 04-Apr-23 33°40'49.58"S 22°15'0.50"E	Photo 1: Disturbed roadside with Armco barrier with gravel fill-slope with mostly weedy and alien vegetation. Railway line and Klip River below on the west side. Photo 2: Disturbed roadside and picnic site with little vegetation.	Low		
S12 04-Apr-23 33°40'40.61"S 22°14'49.31"E	Photo 1: Disturbed roadside with Armco barrier with gravel fill-slope with mostly weedy and alien vegetation. Railway line and Klip River below on the west side. Photo 2: Disturbed roadside with high rocky cliff-like cut-slope with rock-fall prevention netting.	Low		

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S13 04-Apr-23 33°40'31.86"S 22°14'39.33"E	Photo 1 &2: Disturbed roadside with gravel fill-slope with little vegetation, mostly weedy and alien species.	Low		
S14 04-Apr-23 33°40'25.83"S 22°14'34.80"E	Photo 1: Disturbed roadside with thin strip of disturbed vegetation and gravel track on fence line. Photo 2: Disturbed roadside with rocky slope disturbed indigenous vegetation.	Low		
S15 05-Apr-23 33°40'18.12"S 22°14'30.24"E	Photo 1 & 2: Disturbed roadside with high rocky cut-slope with disturbed indigenous vegetation.	Low		

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S16 05-Apr-23 33°40'6.33"S 22°14'25.71"E	Photo 1: Disturbed roadside with narrow strip of disturbed vegetation, mostly weedy and alien species. Riparian area with large culvert and railway line on the west side. Photo 2: Disturbed roadside with weedy and alien vegetation on gravel fill slope, with riparian area and culvert below.	Low		
S17 05-Apr-23 33°39'56.68"S 22°14'21.89"E	Photo 1: Disturbed roadside with weedy and alien vegetation, with gravel road entrance to guest farm. Photo 2: Disturbed roadside with weedy and alien vegetation.	Low		
S18 05-Apr-23 33°39'42.62"S 22°14'18.59"E	Photo 1: Disturbed roadside with narrow strip of disturbed vegetation, mostly weedy and alien species. Photo 2: Disturbed roadside with weedy and alien vegetation and rocky cut slopes with disturbed indigenous vegetation.	Low		

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S19 05-Apr-23 33°39'29.69"S 22°14'13.77"E	Photo 1 &2: Disturbed roadside with narrow strip of disturbed vegetation, mostly weedy and alien species.	Low		
S20 05-Apr-23 33°39'22.96"S 22°14'3.74"E	Photo 1 & 2: Disturbed roadside with high rocky cut-slope with disturbed indigenous vegetation.	Low		
S21 05-Apr-23 33°39'20.94"S 22°13'52.43"E	Photo 1: Disturbed roadside with gravel fill-slope with disturbed vegetation. Riparian area with large culvert and railway line on the west side. Photo 2: Disturbed roadside with rocky cut-slope with disturbed indigenous vegetation.	Low		

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S22 05-Apr-23 33°39'11.58"S 22°13'40.55"E	Photo 1 & 2: Disturbed roadside with gravel fill-slope with mostly weedy and alien vegetation.	Low		
S23 05-Apr-23 33°38'57.67"S 22°13'35.79"E	Photo 1: Disturbed roadside with rocky cut-slopes with little vegetation, mostly weedy and alien species. Photo 2: Disturbed roadside with gravel fill-slope with disturbed vegetation. Riparian area with large culvert and river valley on the east side.	Low		
S24 05-Apr-23 33°38'45.75"S 22°13'30.07"E	Photo 1: Disturbed roadside with gravel fill-slope with disturbed (mostly alien) vegetation. Riparian area with large culvert and railway line on the west side. Photo 2: Disturbed roadside with gravel fill-slope with disturbed vegetation. Riparian area with large culvert and drainage valley on the east side.	Low		

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S25 05-Apr-23 33°38'23.64"S 22°13'21.01"E	Photo 1: Disturbed roadside and large picnic site with little vegetation. Photo 2: Disturbed roadside with little vegetation.	Low		
S26 05-Apr-23 33°38'10.70"S 22°13'9.75"E	Photo 1: Disturbed roadside with rocky cut-slopes with little vegetation, mostly weedy and alien species. Photo 2: Disturbed roadside with gravel fill-slope with disturbed vegetation. Riparian area with large culvert and river valley on the east side.	Low		
S27 05-Apr-23 33°37'55.00"S 22°13'5.15"E	Photo 1: Disturbed roadside with gravel entrance to homestead with little vegetation, mostly weedy and alien species. Photo 2: Disturbed roadside with rocky cut-slopes with disturbed vegetation, mostly weedy and alien species.	Low		

Sample Site	Habitat Description	Likelihood of SCC	Photo 1 (North-bound lane)	Photo 2 (South-bound lane)
S28 05-Apr-23 33°37'43.68"S 22°13'13.91"E	Tar road intersection to Bakenskraal with little vegetation, mainly alien species.	Low		
S29 05-Apr-23 33°37'28.58"S 22°13'15.43"E	Olifants River bridge with disturbed riparian habitat below. Many alien species such as Giant Reed *Arundo donax*.	Low		
S30 05-Apr-23 33°37'3.97"S 22°13'4.83"E	Photo 1: Disturbed roadside with alien vegetation and railway line on the west side. Photo 2: Disturbed roadside little vegetation, and agricultural pastures beyond the fence on the east side.	Low		

8. SUMMARY AND RECOMMENDATIONS

8.1 SUMMARY

Overall, the assessment area displays a low sensitivity from a terrestrial faunal perspective. The proposed road upgrade footprint is largely in a modified state due to the presence of the road and previous road building activities. The habitat is mostly comprised of thin pockets of indigenous vegetation and patches of alien vegetation growing along the verges. A few cut slopes create cliff faces where the roadway was cut through the hills and comprise rocky habitat that supports mostly indigenous but disturbed vegetation. The roadway also crosses several drainage lines where mostly disturbed riverine vegetation is present. Faunal activity (mostly birds) was concentrated around the riparian areas, and no faunal SCC were recorded during the site surveys. The proposed footprint does not provide important or sustainable habitat for fauna due to its disturbed and relatively fragmented (long, narrow strip) nature. The proposed footprint has limited use by fauna, and it is unlikely that the available habitat would support any individuals or populations of faunal SCC. Such species are more likely to utilise the better-quality habitat that exists in the adjacent natural areas in far larger and more viable quantities.

8.2 IMPACT MANAGEMENT

The perceived impacts from the proposed road upgrade activities from a terrestrial faunal perspective will be relatively low to negligible. The following recommendations are important for ensuring the impacts are kept to a minimum, and must be included in the Environmental Management Programme (EMPr):

1. An experienced, independent Environmental Control Officer (ECO) must be appointed to oversee the construction activities and compliance with the EMPr.
2. Sensitive areas such as riparian areas, drainage lines, rocky ledges, and pockets of indigenous vegetation that comprise *Aloe* sp. and succulent plants, must be disturbed as little as possible. (Refer to the botanical report for any specific mitigation measures for succulent plants and *Aloe* sp.)
3. The natural vegetation in the surrounding areas must be designated no-go areas for construction camps and crews. Construction camps must be placed within the footprint or within disturbed areas that are already modified.
4. During construction, no wild animal may under any circumstance be handled, removed, or be interfered with by construction workers. No wild animal may under any circumstance be hunted, snared, captured, injured, or killed. This includes animals perceived to be vermin.
5. Alien plant eradication and control must be undertaken throughout the construction phase and the operational phase.

8.3 CONCLUSION

It is the opinion of the specialist that the impacts on terrestrial fauna will be low to negligible considering the modified and currently disturbed state of the proposed footprint, and that the project may be authorised subject to the recommendations in the EMPr being adhered to.

- This compliance statement is applicable to the study area as described in the EIA documentation and shown in **Figure 3** and **Figure 4**;
- Due to the disturbed nature of the habitat, the study area is confirmed to be of **Low** sensitivity for the Terrestrial Animal Species theme;
- It is likely that the proposed development will not have any impact on terrestrial animal SCC; and
- There are no conditions to which this compliance statement is subjected.

9. REFERENCES

DFFE (2022): National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), The Revised National List of Ecosystems that are Threatened and in need of Protection, *Government Gazette Number 47526*, Notice 2747, 18 November 2022, Pretoria: Department of Forestry, Fisheries and the Environment.

Mucina, L. and Rutherford, M.C. (2006): The vegetation of South Africa, Lesotho and Swaziland, *Strelitzia 19*, Pretoria: South African National Biodiversity Institute.

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SANBI (2021): South Africa's Terrestrial Red List of Ecosystems (RLE) 2022: Technical report on the revision of the "List of terrestrial ecosystems that are threatened and in need of protection", Report 7639, Pretoria: South African National Biodiversity Institute.

SANBI (South African National Biodiversity Institute) (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*, Pretoria: South African National Biodiversity Institute, Version 3.1 2022.

UNESCO (2022): https://en.unesco.org/biosphere/africa.

APPENDICES

APPENDIX A: ABRIDGED CV OF THE SPECIALIST

Name and Surname	:	Robyn Phillips
Date of Birth	:	28 08 1975
Company Name	:	Cossypha Ecological
Field of Expertise	:	Terrestrial Ecologist and Avifaunal Specialist
SACNASP Registration	:	*Pr.Sci.Nat.* 400401/12 (Zoological and Ecological Sciences)
Highest Qualification	:	MSc (Zoology) *cum laude*
Years of Experience	:	21
Contact Number	:	084 695 1648
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The first half of my professional career was spent working in ecological research at the University of KwaZulu-Natal. Since starting in consulting in 2011, I have been involved in many projects requiring biodiversity surveys and ecological assessments as part of the legislated requirements for the Environmental Impact Assessment (EIA) process. These studies Include field assessment of habitat, species occurrence (especially those of conservation concern), assessment of ecological importance and sensitivity of floral and faunal communities and habitat, as well as assessment of impacts. Tasks also include making recommendations and prescribing mitigation measures after applying the mitigation hierarchy, aimed at minimising impacts.

Following is a selection of similar projects undertaken:

- Terrestrial Biodiversity and Animal Species Compliance Statement for the Proposed Development of a 9 MW Solar PV Plant, George, Western Cape (Sharples Environmental Services) – 2023.
- Terrestrial Biodiversity and Animal Species Compliance Statement for the Proposed Amendment of the Environmental Authorisation for the Hartenbos Landgoed Phase 2 Residential Development on a Portion of the Farm Vaale Valley 219, Mossel Bay, Western Cape (Sharples Environmental Services) – 2022.
- Terrestrial Biodiversity and Animal Species Compliance Statement for the Proposed Residential Development of ERF 19374 George, Western Cape (Sharples Environmental Services) – 2022.
- Terrestrial Biodiversity and Animal Species Compliance Statement for the Section 24G Application for the Unlawful Construction of a Road and Clearance of Vegetation at Waboomskraal, George Local Municipality, Western Cape (Sharples Environmental Services) – 2022.
- Terrestrial Biodiversity (including Fauna and Flora) Compliance Statement for the proposed Ganyesa Landfill Site, Ganyesa, North West Province (GIBB Environmental) – 2022.
- Faunal Assessment for the Proposed Upgrades and New Access Road to the Cape Flats Wastewater Treatment Works (WWTW), False Bay Nature Reserve, Cape Town, Western Cape (City of Cape Town) – 2018 to 2022.
- Terrestrial Biodiversity and Animal Species Compliance Statement for the Proposed Ceres R46 Road Upgrade Project, Ceres, Western Cape (SRK Consulting) – 2021 to 2022.
- Terrestrial Biodiversity Assessment (flora and fauna) for the Aquadene Residential Development Stormwater Infrastructure project, Richards Bay, (uMhlatuze Municipality) – 2017 to 2018.
- Terrestrial Biodiversity Assessment (flora and fauna) for the Proposed Matatiele R56 Road Upgrade Project, Matatiele, Eastern Cape (GIBB (Pty) Ltd)) – 2017.
- Terrestrial Faunal Assessment for the Proposed Upgrade of the N2 Highway between Mtunzini and Empangeni, KwaZulu-Natal (SANRAL) – 2012 to 2013.