

AVIFAUNAL SITE SENSITIVITY VERIFICATION REPORT

SUNVELD SOLAR ENERGY FACILITY

RECONNAISSANCE REPORT

(IN TERMS OF PART B OF THE ASSESSMENT PROTOCOLS PUBLISHED IN GN 320 ON 20 MARCH 2020 AND GN 43855 ON 30 OCTOBER 2020)

INTRODUCTION

Prior to commencing with the specialist assessment in accordance with Appendix 6 of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) Environmental Impact Assessment (EIA) Regulations of 2014, a site sensitivity verification (SSV) was undertaken to confirm the current land use and environmental sensitivity of the proposed project area as identified by the National Web-Based Environmental Screening Tool (Screening Tool). NEMA makes provision for the prescription of procedures for the assessment and minimum criteria for reporting on identified environmental themes (Sections 24(5)(a) and (h) and 44) when applying for environmental authorisation. The Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial animal species (Government Gazette No 43855, 30 October 2020) is applicable in the case of solar PV developments.

The details of the SSV are noted below:

Date of Site Visit	26 June 2023
Supervising Specialist Name	Albert Froneman
Professional Registration Number	MSc Conservation Biology (SACNASP Zoological Science Registration number 400177/09)
Specialist Affiliation / Company	AfriAvian Environmental

SITE SENSITIVITY VERIFICATION

The following methods and information sources were used to compile this report:

- Bird distribution data from the Second Southern African Bird Atlas Project (SABAP2) was obtained (<https://sabap2.birdmap.africa/>) to ascertain which species occur in the pentads where the proposed Project is located. A pentad grid cell covers 5 minutes of latitude by 5 minutes of longitude (5' x 5'). Each pentad is approximately 9 x 8 km in size. To get a representative impression of the bird species in the area a consolidated dataset was obtained for a total of four (4) pentads some of which intersect and others that are near the Project Site, henceforth referred to as "the Broader Area". The four pentad grid cells are: 3245_1810, 3245_1815, 3250_1810 and 3250_1815. To date, a total of 1,234 full protocol checklists (i.e., intensive bird listing surveys lasting at least two hours each) and 622 ad hoc protocol lists (surveys lasting less than two hours but still yielding valuable data) have been completed for the four pentads where the Project Site is located.
- The SABAP2 data was regarded as a reliable reflection of the avifauna that occurs in the Broader Area, but the data was also supplemented with data collected during the on-site surveys and with general knowledge of the area.
- A classification of the vegetation types in the Project Site was obtained from the First Atlas of Southern African Birds (SABAP1) and the National Vegetation Map (2018) compiled by the South African National Biodiversity Institute (Mucina & Rutherford 2006).

- The national threatened status of all priority species was determined with the use of the most recent edition of the Red List Book of Birds of South Africa, Lesotho and Swaziland (Taylor *et al.* 2015), and the latest authoritative summary of southern African bird biology (Hockey *et al.* 2005).
- The global threatened status of all priority species was determined by consulting the latest (2022.2) IUCN Red List of Threatened Species (<http://www.iucnredlist.org/>).
- The Important Bird and Biodiversity Areas of South Africa (Marnewick *et al.* 2015; <http://www.birdlife.org.za/conservation/important-bird-areas>) was consulted for information on potentially relevant Important Bird Areas (IBAs).
- An intensive internet search was conducted to source information on the impacts of solar energy facilities on avifauna.
- Satellite imagery (Google Earth © 2023) was used to view the broader area on a landscape level and to help identify bird habitat on the ground.
- The South African National Biodiversity BGIS map viewer was used to determine the locality of the Project Site relative to National Protected Areas.
- The DFFE National Screening Tool was used to determine the assigned avian sensitivity of the Project Site.
- The following sources were consulted to determine the investigation protocol that is required for the site:
 - Procedures for the Assessment and Minimum criteria for reporting on identified environmental themes in terms of sections 24(5)(a) and (h) and 44 of NEMA when applying for Environmental Authorisation (Gazetted October 2020)
 - Guidelines for the Implementation of the Terrestrial Flora (3c) & Terrestrial Fauna (3d) Species Protocols for EIAs in South Africa produced by the South African National Biodiversity Institute on behalf of the Department of Environment, Forestry and Fisheries (2020).
 - The BirdLife South Africa (BLSA) Guidelines for assessing and monitoring the impact of solar power generating facilities on birds in southern Africa. BirdLife South Africa by Jenkins, A.R., Ralston-Patton, Smit- Robinson, A.H. 2017 (hereafter referred to as the Solar Guidelines) consulted to determine the level of survey effort that is required.
- A SSV survey was conducted on 23 June 2023. The Project Site was inspected with a 4x4 vehicle and on foot. All birds were recorded.
- Priority species were defined as follows:
 - South African Red Data species.
 - South African endemics and near-endemics.
 - Raptors
 - Waterbirds

OUTCOME OF SITE RECONNAISSANCE

➤ Natural Environment

The Project Site falls within the Fynbos Biome in the West Strandveld Bioregion (Mucina & Rutherford 2006, VegMap 2018). The terrain in the Project area and surrounds is mostly flat. Rainfall in the area varies from approximately 250 mm to 380 mm and falls almost exclusively in winter. The mean daily maximum and minimum temperatures are 26.6°C and 7.9°C for February and July, respectively. Fog and dew from the nearby Atlantic Ocean contribute to the moisture balance in summer and autumn. Strong southeasterly winds are typical of the summer period, and northerly winds are more frequent in the winter months, especially between May and August.

The main vegetation type within the Project Site is Saldanha Flats Strandveld (**Figure 1**). The Saldanha Flats Strandveld vegetation type is characterized by *Sclerophyllous* shrublands made up of a sparse emergent and moderately tall shrub layer, with an open succulent shrub layer forming the undergrowth. With conspicuous displays of geophytes and annual herbaceous flora in spring.



Figure 1: Saldanha Flats Strandveld vegetation in the Project Site.

The Project Site lies just north (800m) and east (1.3 km) of the Berg River at its associated estuarine vegetation, salt marshes, reeds, and sedges. These areas provide important habitats for several bird species, especially waterbirds, and waders.

The Project Site also contains seasonal wetlands/pans that could potentially attract priority species, like waterbirds and the raptors that prey on them, to the area (**Figure 2**).



Figure 2: Natural pan in the Project Site.

Whilst the distribution and abundance of the bird species in and near the Project Site is mostly associated with natural vegetation, it is also necessary to examine the anthropogenic modifications to the environment that have relevance for birds.

➤ **Modified Environment**

The following avifaunal-relevant anthropogenic habitat modifications were recorded within the Project Site:

- **High Voltage Power Lines:** The 400kV Aurora Juno 1 power line traverses the Project Site (**Figure 3**). Power lines could provide roosting and nesting habitat for priority species, especially raptors.
- **Alien Trees:** The Project Site contains clumps of alien trees (**Figure 4**). The trees could attract a variety of bird species for nesting and roosting.
- **Agriculture:** The Project Site contains agricultural fields, mainly canola, wheat, grains, and planted pastures (**Figure 5**). Some priority species are likely to be associated with the cultivated fields, especially to forage (e.g., raptors and small birds). The Cape Weaver, Large-billed Lark, Blue Crane, and Barn Swallow are some of the priority species that could utilise these areas.



Figure 3: High voltage power line in the Project Site.



Figure 4: Alien trees in the Project Site.



Figure 5: Agricultural field in the Project Site.

➤ **DFFE Screening Tool**

The Project Site and immediate environment is classified as **HIGH/MEDIUM** sensitivity for avifauna according to the Animal Species Theme (**Figure 6**). The sensitivity classification is linked to the possible occurrence of Southern Black Korhaan *Afrotis afra* (Globally and Regionally Vulnerable), Black Harrier *Circus maurus* (Globally and Regionally Endangered), African Marsh Harrier *Circus ranivorus* (Regionally Endangered), and Lanner Falcon (Regionally Vulnerable). The Project Site contains confirmed habitat for species of conservation concern (SCC) as defined in the Protocol for the specialist assessment and minimum report content requirements for environmental impacts on terrestrial animal species (Government Gazette No 43855, 30 October 2020). SCCs are listed on the IUCN Red List of Threatened Species or South Africa's National Red List website as Critically Endangered, Endangered, Near Threatened or Vulnerable. The Project Site contains suitable habitat for Black Harriers (**Figure 7**).

The occurrence of SCC at the Project Site was confirmed during the SSV site visits (June and July 2023) with observations of Blue Crane *Grus paradisea* (Globally Vulnerable and Regionally Near-threatened) and Southern Black Korhaan recorded on-site. A Black Harrier was also observed on site on 07 September 2023.

Based on the confirmed habitat and the field surveys, the classification of **HIGH** sensitivity for avifauna in the Screening Tool is supported.

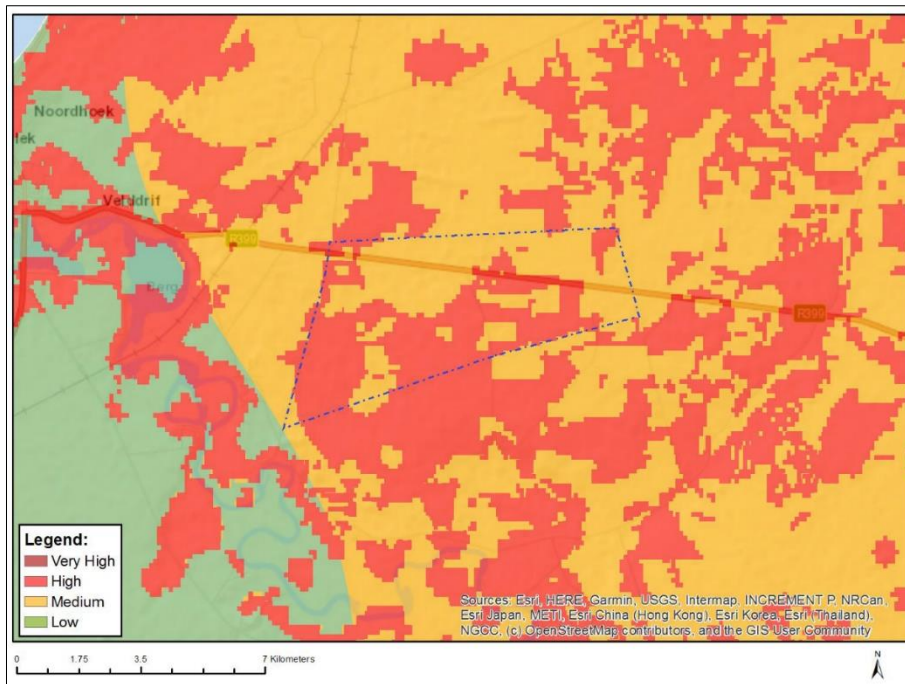


Figure 6: The classification of the Sunveld SEF Project Site according to the Animal Species Theme in the DFFE National Screening Tool. The High and Medium sensitivity classification is linked to the potential occurrence of Black Harrier (Globally and Regionally Endangered), Southern Black Korhaan (Globally and Regionally Vulnerable), Lanner Falcon (Regionally Vulnerable), and African Marsh Harrier (Regionally Endangered).

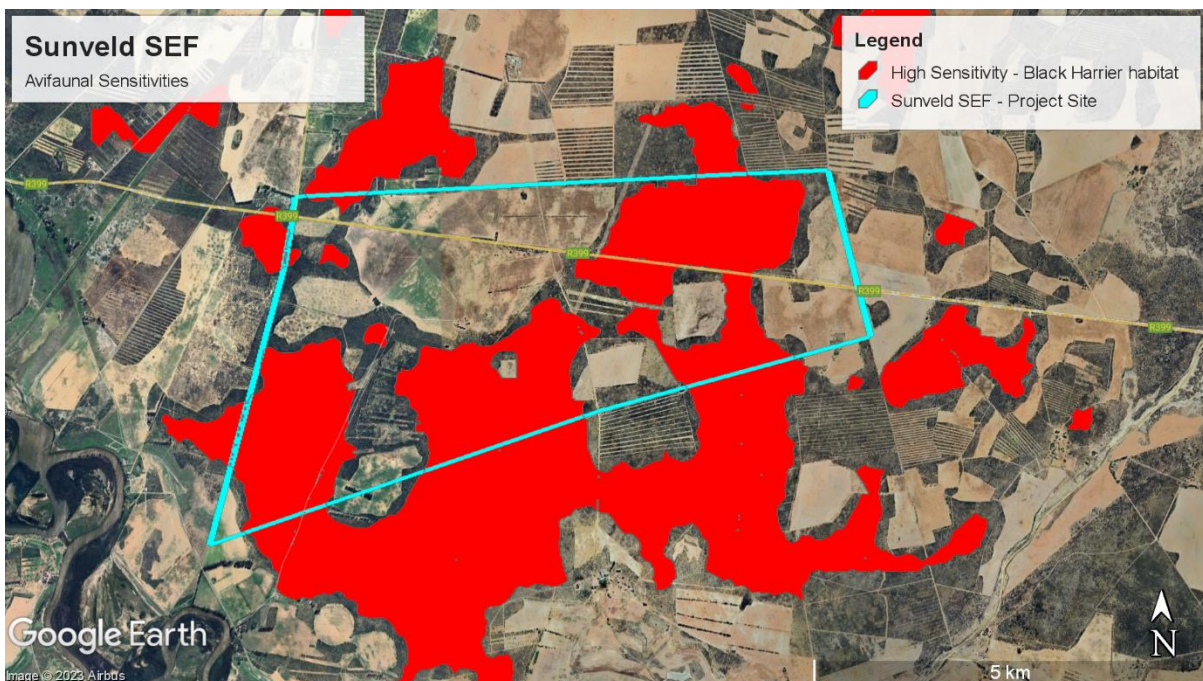


Figure 7: Avifaunal sensitivities (i.e., Black Harrier habitat identified through habitat suitability modelling) at the Sunveld SEF Project Site.

➤ Avifauna

The SABAP2 data indicates that a total of 259 bird species could potentially occur within the Broader Area where the Project Site is located (**Appendix A**). Of these, 135 species are classified as priority

species for solar developments and 20 of these are South African Red Listed species (i.e., Species of Conservation Concern – SCC). Of the 135 priority species, 85 are likely to occur regularly in or near the Project Site.

CONCLUSION

The occurrence of SCC at the Project Site was confirmed during the SSV Site Visits (June and July 2023) with observations of Blue Crane *Grus paradisea* (Globally Vulnerable and Regionally Near-threatened) and Southern Black Korhaan recorded on-site. A Black Harrier was also observed on site on 07 September 2023.

Based on the confirmed habitat, the SABAP2 data, and the field surveys, the classification of **HIGH** sensitivity for avifauna in the Screening Tool is supported.

APPENDIX A – Bird Species List for the Broader Area (SABAP2)

Species Name	Scientific Name	Full Protocol	Ad Hoc Protocol
Acacia Pied Barbet	Tricholaema leucomelas	65,80	5,95
African Black Duck	Anas sparsa	0,49	0,00
African Black Swift	Apus barbatus	6,40	0,64
African Darter	Anhinga rufa	84,60	16,40
African Dusky Flycatcher	Muscicapa adusta	0,24	0,00
African Fish Eagle	Haliaeetus vocifer	42,54	3,54
African Harrier-Hawk	Polyboroides typus	2,19	0,00
African Hoopoe	Upupa africana	53,48	4,02
African Marsh Harrier	Circus ranivorus	38,65	4,34
African Openbill	Anastomus lamelligerus	0,16	0,00
African Oystercatcher	Haematopus moquini	1,54	0,32
African Palm Swift	Cypsiurus parvus	0,08	0,00
African Paradise Flycatcher	Terpsiphone viridis	1,05	0,16
African Pied Wagtail	Motacilla aguimp	0,08	0,00
African Pipit	Anthus cinnamomeus	26,66	2,09
African Rail	Rallus caerulescens	5,27	0,48
African Red-eyed Bulbul	Pycnonotus nigricans	0,49	0,00
African Reed Warbler	Acrocephalus baeticatus	1,54	0,16
African Sacred Ibis	Threskiornis aethiopicus	90,92	35,05
African Snipe	Gallinago nigripennis	0,65	0,00
African Spoonbill	Platalea alba	66,29	10,77
African Stonechat	Saxicola torquatus	60,53	8,20
African Swampphen	Porphyrio madagascariensis	13,37	0,32
Alpine Swift	Tachymarptis melba	19,21	1,29
American Golden Plover	Pluvialis dominica	1,30	0,48
Ant-eating Chat	Myrmecocichla formicivora	6,89	0,80
Arctic Tern	Sterna paradisaea	0,16	0,00
Banded Martin	Riparia cincta	18,80	1,45
Bank Cormorant	Phalacrocorax neglectus	0,41	0,16
Barn Swallow	Hirundo rustica	38,82	10,45
Bar-tailed Godwit	Limosa lapponica	7,86	0,80
Bar-throated Apalis	Apalis thoracica	2,51	0,80
Black Crake	Zapornia flavirostra	1,54	0,16
Black Harrier	Circus maurus	6,56	0,16
Black Sparrowhawk	Accipiter melanoleucus	6,40	0,16
Black Stork	Ciconia nigra	0,24	0,00
Black-chested Snake Eagle	Circaetus pectoralis	0,16	0,00
Black-crowned Night Heron	Nycticorax nycticorax	41,65	2,57
Black-headed Canary	Serinus alario	1,70	0,16

Species Name	Scientific Name	Full Protocol	Ad Hoc Protocol
Black-headed Gull	<i>Chroicocephalus ridibundus</i>	0,08	0,00
Black-headed Heron	<i>Ardea melanocephala</i>	50,24	6,27
Black-necked Grebe	<i>Podiceps nigricollis</i>	56,32	13,67
Blacksmith Lapwing	<i>Vanellus armatus</i>	88,49	21,22
Black-winged Kite	<i>Elanus caeruleus</i>	57,29	7,88
Black-winged Stilt	<i>Himantopus himantopus</i>	91,98	35,21
Blue Crane	<i>Grus paradisea</i>	45,38	13,50
Blue-billed Teal	<i>Spatula hottentota</i>	0,08	0,00
Bokmakierie	<i>Telophorus zeylonus</i>	80,88	10,77
Booted Eagle	<i>Hieraaetus pennatus</i>	6,32	1,29
Brimstone Canary	<i>Crithagra sulphurata</i>	0,97	0,00
Brown-throated Martin	<i>Riparia paludicola</i>	67,42	8,84
Burchell's Coucal	<i>Centropus burchellii</i>	0,97	0,00
Cape Batis	<i>Batis capensis</i>	0,08	0,00
Cape Bulbul	<i>Pycnonotus capensis</i>	64,99	5,63
Cape Bunting	<i>Emberiza capensis</i>	3,97	0,96
Cape Canary	<i>Serinus canicollis</i>	30,96	2,09
Cape Clapper Lark	<i>Mirafra apiata</i>	0,81	0,00
Cape Cormorant	<i>Phalacrocorax capensis</i>	54,05	14,31
Cape Gannet	<i>Morus capensis</i>	0,16	0,00
Cape Grassbird	<i>Sphenoeacus afer</i>	0,89	0,00
Cape Long-billed Lark	<i>Certhilauda curvirostris</i>	1,13	0,16
Cape Longclaw	<i>Macronyx capensis</i>	8,51	0,96
Cape Penduline Tit	<i>Anthoscopus minutus</i>	1,70	0,16
Cape Robin-Chat	<i>Cossypha caffra</i>	67,83	4,50
Cape Shoveler	<i>Spatula smithii</i>	54,54	5,14
Cape Sparrow	<i>Passer melanurus</i>	92,30	22,67
Cape Spurfowl	<i>Pternistis capensis</i>	67,67	8,36
Cape Teal	<i>Anas capensis</i>	83,06	22,03
Cape Turtle Dove	<i>Streptopelia capicola</i>	79,58	9,97
Cape Wagtail	<i>Motacilla capensis</i>	92,87	19,61
Cape Weaver	<i>Ploceus capensis</i>	85,33	15,76
Cape White-eye	<i>Zosterops virens</i>	59,56	4,66
Capped Wheatear	<i>Oenanthe pileata</i>	68,31	17,04
Cardinal Woodpecker	<i>Dendropicos fuscescens</i>	5,75	0,32
Caspian Plover	<i>Charadrius asiaticus</i>	2,51	0,16
Caspian Tern	<i>Hydroprogne caspia</i>	77,55	15,76
Chat Flycatcher	<i>Melaenornis infuscatus</i>	0,08	0,00
Chestnut-banded Plover	<i>Charadrius pallidus</i>	57,54	9,16
Chestnut-vented Warbler	<i>Curruca subcoerulea</i>	20,91	2,57

Species Name	Scientific Name	Full Protocol	Ad Hoc Protocol
Cloud Cisticola	Cisticola textrix	1,38	0,00
Common Buzzard	Buteo buteo	23,26	3,86
Common Greenshank	Tringa nebularia	59,89	10,13
Common House Martin	Delichon urbicum	0,57	0,16
Common Moorhen	Gallinula chloropus	8,51	0,80
Common Ostrich	Struthio camelus	3,97	2,41
Common Quail	Coturnix coturnix	2,92	0,00
Common Redshank	Tringa totanus	1,05	0,32
Common Ringed Plover	Charadrius hiaticula	45,30	4,82
Common Sandpiper	Actitis hypoleucos	30,63	3,70
Common Shelduck	Tadorna tadorna	0,41	0,16
Common Starling	Sturnus vulgaris	87,68	16,40
Common Swift	Apus apus	0,41	0,16
Common Tern	Sterna hirundo	35,49	3,05
Common Waxbill	Estrilda astrild	10,62	0,48
Crowned Cormorant	Microcarbo coronatus	0,73	0,32
Crowned Lapwing	Vanellus coronatus	47,65	2,09
Curlew Sandpiper	Calidris ferruginea	57,54	8,04
Damara Canary	Serinus leucolaema	0,00	0,16
Diederik Cuckoo	Chrysococcyx caprius	0,73	0,32
Domestic Duck	Anas platyrhynchos domestica	14,67	1,45
Domestic Goose	Anser anser domesticus	16,45	3,22
Dusky Sunbird	Cinnyris fuscus	1,78	0,00
Egyptian Goose	Alopochen aegyptiaca	74,72	19,77
Eurasian Curlew	Numenius arquata	14,83	0,96
Eurasian Whimbrel	Numenius phaeopus	47,49	3,86
European Bee-eater	Merops apiaster	23,83	3,70
European Roller	Coracias garrulus	0,00	0,16
Familiar Chat	Oenanthe familiaris	12,32	0,48
Fiery-necked Nightjar	Caprimulgus pectoralis	8,83	0,00
Fiscal Flycatcher	Melaenornis silens	50,49	2,09
Fork-tailed Drongo	Dicrurus adsimilis	0,08	0,00
Giant Kingfisher	Megaceryle maxima	5,67	0,64
Glossy Ibis	Plegadis falcinellus	42,46	5,14
Goliath Heron	Ardea goliath	7,37	1,77
Great Crested Grebe	Podiceps cristatus	27,88	3,54
Great Egret	Ardea alba	3,97	1,13
Great White Pelican	Pelecanus onocrotalus	81,69	13,18
Greater Crested Tern	Thalasseus bergii	61,02	6,59
Greater Flamingo	Phoenicopterus roseus	89,63	45,34

Species Name	Scientific Name	Full Protocol	Ad Hoc Protocol
Greater Kestrel	Falco rupicoloides	1,38	0,00
Greater Sand Plover	Charadrius leschenaultii	2,43	0,16
Greater Striped Swallow	Cecropis cucullata	7,29	0,96
Grey Heron	Ardea cinerea	89,47	25,88
Grey Plover	Pluvialis squatarola	35,66	3,38
Grey Tit	Melaniparus afer	8,67	0,00
Grey-backed Cisticola	Cisticola subruficapilla	23,26	1,77
Grey-backed Sparrow-Lark	Eremopterix verticalis	6,08	0,16
Grey-headed Gull	Chroicocephalus cirrocephalus	53,00	6,11
Grey-winged Francolin	Scleroptila afra	0,41	0,00
Groundscraper Thrush	Turdus litsitsirupa	0,08	0,00
Gull-billed Tern	Gelochelidon nilotica	0,65	0,48
Hadada Ibis	Bostrychia hagedash	80,06	13,99
Hamerkop	Scopus umbretta	0,41	0,00
Hartlaub's Gull	Chroicocephalus hartlaubii	86,06	32,48
Helmeted Guineafowl	Numida meleagris	79,90	14,95
House Sparrow	Passer domesticus	75,53	8,84
Hybrid Duck	Anas hybrid	0,08	0,00
Hybrid Mallard	Anas hybrid	1,05	1,29
Indian Peafowl	Pavo cristatus	0,16	0,00
Intermediate Egret	Ardea intermedia	2,27	0,80
Jackal Buzzard	Buteo rufufuscus	53,16	8,68
Karoo Chat	Emarginata schlegelii	0,32	0,16
Karoo Lark	Calendulauda albescens	3,57	0,32
Karoo Prinia	Prinia maculosa	72,69	7,40
Karoo Scrub Robin	Cercotrichas coryphoeus	72,37	6,59
Karoo Thrush	Turdus smithi	12,72	0,00
Kelp Gull	Larus dominicanus	90,84	38,26
Kittlitz's Plover	Charadrius pecuarius	63,86	9,97
Klaas's Cuckoo	Chrysococcyx klaas	12,24	0,96
Lanner Falcon	Falco biarmicus	8,02	2,09
Large-billed Lark	Galerida magnirostris	55,67	6,75
Lark-like Bunting	Emberiza impetواني	4,38	0,16
Laughing Dove	Spilopelia senegalensis	79,74	10,61
Layard's Warbler	Curruca layardi	0,32	0,00
Lesser Flamingo	Phoeniconaias minor	71,31	28,78
Lesser Honeyguide	Indicator minor	4,38	0,00
Lesser Kestrel	Falco naumanni	0,97	0,32
Lesser Sand Plover	Charadrius mongolus	0,49	0,16
Lesser Swamp Warbler	Acrocephalus gracilirostris	26,58	2,09

Species Name	Scientific Name	Full Protocol	Ad Hoc Protocol
Levaillant's Cisticola	Cisticola tinniens	75,77	8,52
Little Bittern	Ixobrychus minutus	0,81	0,00
Little Egret	Egretta garzetta	86,06	19,77
Little Grebe	Tachybaptus ruficollis	55,19	8,52
Little Rush Warbler	Bradypterus baboecala	24,47	2,73
Little Stint	Calidris minuta	56,73	9,49
Little Swift	Apus affinis	47,65	5,95
Little Tern	Sternula albifrons	4,62	0,32
Long-billed Crombec	Sylvietta rufescens	18,56	0,32
Ludwig's Bustard	Neotis ludwigii	1,38	0,16
Maccoa Duck	Oxyura maccoa	2,67	0,16
Malachite Kingfisher	Corythornis cristatus	16,45	1,61
Malachite Sunbird	Nectarinia famosa	49,11	2,73
Mallard	Anas platyrhynchos	50,49	2,41
Marsh Sandpiper	Tringa stagnatilis	23,10	2,25
Martial Eagle	Polemaetus bellicosus	0,24	0,00
Mountain Wheatear	Myrmecocichla monticola	0,08	0,00
Namaqua Dove	Oena capensis	50,41	8,04
Namaqua Sandgrouse	Pterocles namaqua	1,54	0,00
Neddicky	Cisticola fulvicapilla	1,46	0,48
Olive Thrush	Turdus olivaceus	0,97	0,00
Pale Chanting Goshawk	Melierax canorus	2,59	0,00
Pearl-breasted Swallow	Hirundo dimidiata	29,01	1,77
Peregrine Falcon	Falco peregrinus	8,83	0,16
Pied Avocet	Recurvirostra avosetta	67,75	18,81
Pied Crow	Corvus albus	89,79	40,51
Pied Kingfisher	Ceryle rudis	86,79	19,77
Pied Starling	Lamprotornis bicolor	55,59	11,41
Pink-backed Pelican	Pelecanus rufescens	0,16	0,16
Pin-tailed Whydah	Vidua macroura	17,10	0,32
Plain-backed Pipit	Anthus leucophrys	0,32	0,16
Purple Heron	Ardea purpurea	43,60	3,70
Quailfinch	Ortygospiza atricollis	0,16	0,16
Red Knot	Calidris canutus	0,65	0,16
Red-backed Shrike	Lanius collurio	0,16	0,00
Red-billed Quelea	Quelea quelea	0,73	0,00
Red-billed Teal	Anas erythrorhyncha	11,83	1,93
Red-capped Lark	Calandrella cinerea	32,33	1,61
Red-eyed Dove	Streptopelia semitorquata	80,79	12,06
Red-faced Mousebird	Urocolius indicus	56,48	3,86

Species Name	Scientific Name	Full Protocol	Ad Hoc Protocol
Red-knobbed Coot	<i>Fulica cristata</i>	45,87	3,54
Red-necked Phalarope	<i>Phalaropus lobatus</i>	30,47	6,11
Red-winged Starling	<i>Onychognathus morio</i>	0,57	0,16
Reed Cormorant	<i>Microcarbo africanus</i>	84,20	12,22
Rock Dove	<i>Columba livia</i>	57,13	7,23
Rock Kestrel	<i>Falco rupicolus</i>	54,30	6,27
Rock Martin	<i>Ptyonoprogne fuligula</i>	67,34	6,59
Rosy-faced Lovebird	<i>Agapornis roseicollis</i>	0,08	0,00
Ruddy Turnstone	<i>Arenaria interpres</i>	2,35	0,32
Ruff	<i>Calidris pugnax</i>	42,79	4,34
Sand Martin	<i>Riparia riparia</i>	0,57	0,80
Sanderling	<i>Calidris alba</i>	3,24	0,64
Sandwich Tern	<i>Thalasseus sandvicensis</i>	31,12	5,79
Secretarybird	<i>Sagittarius serpentarius</i>	1,78	1,13
Sickle-winged Chat	<i>Emarginata sinuata</i>	0,65	0,00
South African Shelduck	<i>Tadorna cana</i>	53,65	4,66
Southern Black Korhaan	<i>Afrotis afra</i>	34,68	2,09
Southern Boubou	<i>Laniarius ferrugineus</i>	0,24	0,00
Southern Double-collared Sunbird	<i>Cinnyris chalybeus</i>	81,60	9,65
Southern Fiscal	<i>Lanius collaris</i>	85,01	25,72
Southern Grey-headed Sparrow	<i>Passer diffusus</i>	2,92	0,48
Southern Masked Weaver	<i>Ploceus velatus</i>	53,32	4,34
Southern Pochard	<i>Netta erythrophthalma</i>	0,32	0,00
Southern Red Bishop	<i>Euplectes orix</i>	53,81	6,43
Speckled Mousebird	<i>Colius striatus</i>	1,30	0,16
Speckled Pigeon	<i>Columba guinea</i>	86,95	13,02
Spotted Eagle-Owl	<i>Bubo africanus</i>	36,14	1,45
Spotted Flycatcher	<i>Muscicapa striata</i>	0,08	0,00
Spotted Thick-knee	<i>Burhinus capensis</i>	45,30	1,61
Spur-winged Goose	<i>Plectropterus gambensis</i>	49,35	5,14
Streaky-headed Seedeater	<i>Crithagra gularis</i>	4,54	0,16
Terek Sandpiper	<i>Xenus cinereus</i>	0,32	0,00
Three-banded Plover	<i>Charadrius tricollaris</i>	46,76	4,34
Verreaux's Eagle	<i>Aquila verreauxii</i>	0,08	0,00
Water Thick-knee	<i>Burhinus vermiculatus</i>	5,92	0,64
Wattled Starling	<i>Creatophora cinerea</i>	6,08	0,00
Western Barn Owl	<i>Tyto alba</i>	29,17	1,13
Western Cattle Egret	<i>Bubulcus ibis</i>	32,90	5,95
Western Osprey	<i>Pandion haliaetus</i>	11,99	1,93
Whiskered Tern	<i>Chlidonias hybrida</i>	3,65	0,00

Species Name	Scientific Name	Full Protocol	Ad Hoc Protocol
White Stork	<i>Ciconia ciconia</i>	2,03	0,00
White-backed Duck	<i>Thalassornis leuconotus</i>	0,16	0,00
White-backed Mousebird	<i>Colius colius</i>	65,07	4,02
White-breasted Cormorant	<i>Phalacrocorax lucidus</i>	78,61	15,27
White-faced Whistling Duck	<i>Dendrocygna viduata</i>	0,65	0,00
White-fronted Plover	<i>Charadrius marginatus</i>	20,42	1,77
White-necked Raven	<i>Corvus albicollis</i>	5,02	0,00
White-rumped Sandpiper	<i>Calidris fuscicollis</i>	0,89	0,16
White-rumped Swift	<i>Apus caffer</i>	17,59	0,80
White-throated Canary	<i>Crithagra albogularis</i>	26,01	1,45
White-throated Swallow	<i>Hirundo albigularis</i>	55,19	4,50
White-winged Tern	<i>Chlidonias leucopterus</i>	9,97	0,32
Wilson's Phalarope	<i>Phalaropus tricolor</i>	1,94	0,80
Wood Sandpiper	<i>Tringa glareola</i>	3,48	0,16
Yellow Bishop	<i>Euplectes capensis</i>	7,70	0,96
Yellow Canary	<i>Crithagra flaviventris</i>	70,75	7,56
Yellow-billed Duck	<i>Anas undulata</i>	72,04	9,97
Yellow-billed Kite	<i>Milvus aegyptius</i>	49,92	14,95
Yellow-billed Stork	<i>Mycteria ibis</i>	1,70	0,16
Zitting Cisticola	<i>Cisticola juncidis</i>	3,00	0,48