

THE STATUS OF BIRDS ON THE SITE OF THE PROPOSED SPITSVALE PROJECT. STEELPOORT, MPUMALANGA PROVINCE.

18th & 19th JANUARY 2016



Report prepared by I.J. Whyte for:

Environmental Management Assistance (Pty) Ltd.



On behalf of Bushveld Chrome (Pty) Ltd

INTRODUCTION

This avifaunal survey forms part of a wider Environmental Impact Assessment (EIA) on the ± 200 ha site of the proposed Spitsvale Project near Steelpoort, Mpumalanga. This survey's objective was mainly to determine presence or absence of the respective avifaunal species, and made no attempt to estimate numbers (census) of the various species on the site. The emphasis was on determining whether any Red-Data species were present and to what extent any mining activities might threaten such species. The survey was conducted on 18th and 19th January 2016.

THE AREAS SURVEYED

The boundary of the site is highly irregular in shape, with tracts of land projecting outward and with some indentations (see Figure 1). Access to some of the areas by road was impossible due to the rocky terrain. Much more time would have been necessary to allow for working on foot in the hills, but as only two days had been budgeted for the survey, this precluded foot work. Figure 1 gives an indication of the areas covered during the survey.

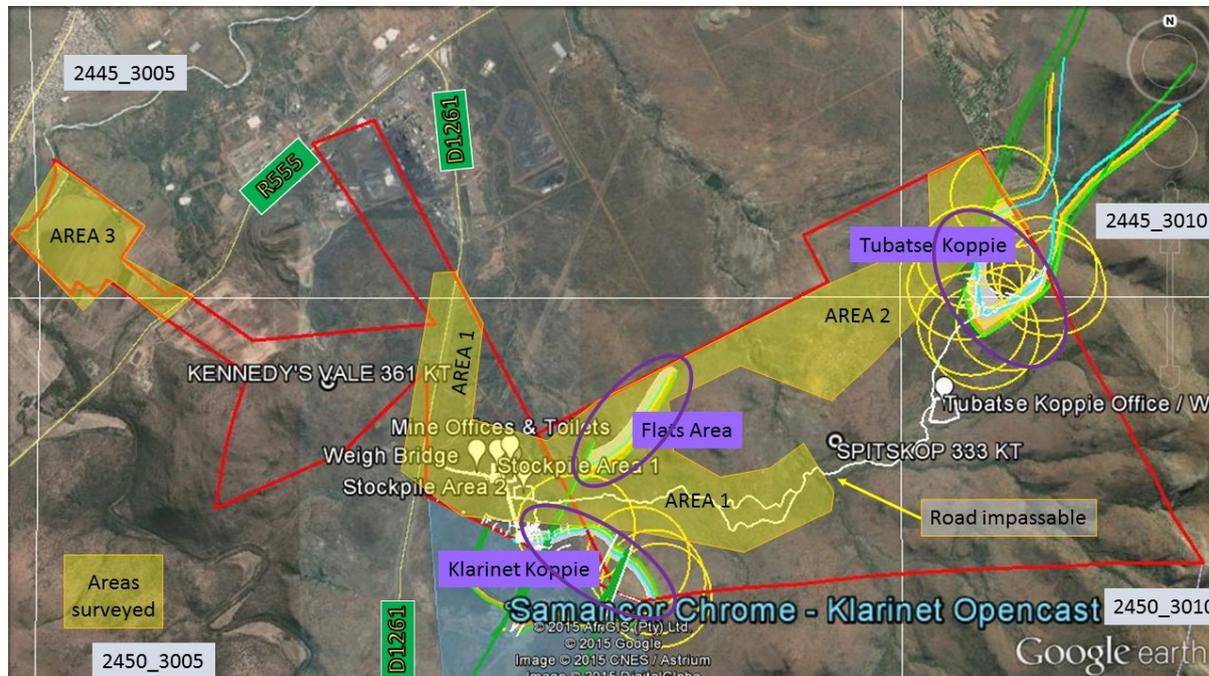


Figure 1: A Google earth image of the proposed Spitsvale Project site (red line area) and the three bird survey areas (shaded yellow). Purple ovals indicate the three areas to be mined. Numbered grey blocks (e.g. 2450_3005) indicate the pentads used by the South African Bird Atlas Project (SABAP₂).

The areas that were surveyed fell into three basic units which were loosely defined by the accessibility of the various parts of the site. The area to the east of the D1261 national road (see Figure 1, Area 1) was surveyed on the morning of Day 1. It was also surveyed very early (04h30 – 09h00) on Day 2. The gravel access road between the Main Offices and the Tubatse Koppie Office had been washed away and was impassable, so the Tubatse area to the east could not be accessed except from the north off the R555 national road. This area (see Figure 1, Area 2) was therefore surveyed mid-morning and the afternoon of Day 2. Roads in this area were very indistinct rough tracks and although it was apparently possible to get to the Tubatse Koppie, I failed to find an access road. The wash-away therefore severely hampered access to this area. Apart from the excavation pit, these two areas are still in a somewhat pristine condition, and supported the majority of the birds recorded.

The area to the northwest of Kennedy's Vale (north of the R555 national road - see Figure 1, Area 3) was surveyed on the afternoon of Day 1. This area consists almost entirely ploughed agricultural land (now lying fallow) and is dominated by a large centre-point irrigation system. The remains of this machinery is still on site but is clearly no longer functional. The disturbed nature of this area resulted in very few birds, but a small dam on its western edge yielded a few interesting water birds.

The mountainous Kennedy's Vale area could not be accessed, but some species were recorded from the tarred road (D1261) and included in the list for Area 1. Also, as mentioned, the south-eastern corner of the site (south of Tubatse Koppie) could not be accessed due to the lack of road access. However, the vegetation throughout the proposed site is rather homogeneous, so I accept that areas surveyed were representative of the property as a whole and were adequately covered, yielding comprehensive species lists.

HABITATS

The area is composed mainly of mountainous bushveld communities with alluvial soils in the low-lying valleys and rocky slopes on the hills and mountain sides. The alluvial soils support mainly Terminalia / Vachellia (used to be Acacia) communities (*T. pruioides*, *V. tortilis*, *V. karroo*, *V. erioloba*) along with *Dicrostachys cinerea* and an occasional *Boscia albitrunca*. Rocky hillsides tend to support broadleaved communities with species such as *Bolusanthus speciosus*, *Combretum apiculatum*, *Sclerocarya birrea*, with other species such as *Kirkia*

wilmsii, *Peltophorum africanum* and *Vachelia nigrescens*. Generally, the communities are typical of Bushveld (see Figures 2 and 3), and this is also reflected in the avifauna. This type of habitat is common and widespread and has no particular sensitivities to the proposed development.



Figure 2: *Acacia* thickets on alluvial valley soils with broad leaved communities on the hillsides.



Figure 3: *Kirkia wilmsii* / *Combretum apiculatum* veld with Tubatsi Koppie in the background.

METHODS

Timing and effectiveness of the survey

It is recognised that the optimum time to conduct such surveys is in the early summer months (November and early December) because all the migrant species have by then

arrived for the austral summer, and breeding and territorial calling and displays for most species are at their peak. Later in the summer less favourable conditions prevail, and the intensity of breeding and territorial activities are declining. It was hoped that this survey could have been conducted in November, but due to administrative delays, this was not possible, and the area could only be surveyed in mid-January. It was therefore not conducted quite at the optimum time of year, and breeding for some species (especially the weavers) was already over. But in spite of this, I believe that very good results were obtained.

Prevailing conditions during the survey

This survey was favoured with excellent birding conditions on the first day, being cool and mostly overcast, and without wind. Windy conditions are arguably the worst for successful birding. Birding depends largely on the detection of their calls. Wind is noisy and birds tend to be less vocal, and when they do, their calls are less audible. The second day was much warmer and avian activity declined at around midday.

Data collection

Time constraints preclude conducting the types of surveys which can yield estimates of bird numbers. Such surveys (or censuses) require repeat counts along survey lines which can deliver repeatable data sets which, with certain statistical analyses, can give estimates of densities and with further extrapolations, numbers. Such surveys are time consuming and therefore expensive, and it is debatable whether they would yield better results in terms of the requirements for this avifaunal survey. Presence or absence, combined with the frequency of species recorded in respective areas/habitats is very informative and gives an adequate indication of abundance. Comments on the status of each species are included on the basis of experience gained during survey, and of general knowledge and experience, including reference to current birding literature.

A Compact Disc (CD) with the bird calls of most of the expected species was prepared for playback from the vehicle's sound system. Also, a complete set of calls of all birds in Southern Africa were also downloaded on an Android Cellular telephone and a Hewlett Packard "tablet", both with "Blue Tooth" wireless transmission capabilities enabling remote

connection to a Shox “Spin” wireless speaker. This speaker can be placed up to 30m from the observer, and calls of specific target species played. Birds can be induced to investigate the source of the calls away from the observer which reduces potential disturbance. This equipment is now considered essential for such surveys. It offers a chance of recording cryptic species that might otherwise be missed. Species were recorded either if they were seen or could be positively identified by call.

In order to get some prior perspective on which species might be found in the proposed Spitsvale Project area, I accessed data from the relevant quarter-degree square (from the first Southern African Bird Atlas Project (SABAP₁) conducted by Harrison, Allen, Underhill, Herremans, Tree, Parker & Brown (1997) and also from the relevant pentad from the SABAP₂ database. These species are all included in the species accounts below. This list is much more extensive than the list I was able to record on the Spitsvale Project site, but this is because a pentad covers a far wider area (a pentad is 8.5 kms by 9.25 kms - see Figure 1) and a quarter-degree square is nine times this size! Prior to the survey, a data sheet was devised for use on the Spitsvale Project site which comprised the total list of birds already recorded by the South African Bird Atlas Projects (SABAP₁ and SABAP₂), with columns for each of the areas to be surveyed. During this survey, species data were also collected according to the protocols prescribed for the SABAP₂ project and these have been submitted to that project.

The data acquired from the respective areas is presented in tabular form below. In this table, the right hand column indicates the number of habitats in which each species was recorded. On this site however, the whole area is rather homogeneous and there are no clear habitat differences. The columns therefore indicate species recorded in the three survey areas rather than in different habitats. This table thus gives rough indications of respective species' abundance. Low recording rates are an indication of rarity, cryptic habits or a high degree of habitat specificity. High recording rates indicate conspicuous common species which occur over a wide range of habitats. These aspects receive further attention in the species accounts below. Totals along the bottom line of the tables indicate the species richness of the respective areas.

RESULTS

A total of 110 species was recorded during this survey. These are listed in Table 1 in the areas in which they were recorded. High recording rates were obtained for conspicuous and common species which occurred over a wide range of habitats such as European Bee-eater, Dark-capped Bulbul, Long-billed Crombec, Cattle Egret, Grey Go-away-bird, Hadedda Ibis, Red-faced Mousebird, Tawny-flanked Prinia, White-browed Sparrow-weaver, Barn Swallow, Lesser Striped Swallow and Cape Turtle Dove. Totals along the bottom line of the table indicate that Area 1 (with 80 species) yielded the greatest number of species, but this is probably a reflection of the time of day that this area was surveyed – early morning during “dawn chorus”.

TABLE 1: Species Recorded on the Proposed Spitsvale Project Site on 18th and 19th January 2016.

	Species	Area 1	Area 2	Area 3	Overhead	Aquatic	Total	Notes
1	Apalis, Yellow-breasted			1			1	
2	Babbler, Arrow-marked	1					1	
3	Barbet, Acacia Pied	1		1			2	
4	Barbet, Black-collared	1					1	
5	Barbet, Crested	1		1			2	
6	Batis, Chinspot	1		1			1	
7	Bee-eater, European	1	1		1		3	
8	Boubou, Southern	1		1			2	
9	Brubru			1			1	
10	Bulbul, Dark-capped	1	1	1			3	
11	Bunting, Cinnamon-breasted	1		1			2	
12	Bunting, Golden-breasted	1		1			2	
13	Bush-shrike, Orange-breasted	1					1	
14	Buzzard, Steppe	1	1		1		3	
15	Canary, Yellow-fronted	1		1			2	
16	Cisticola, Rattling	1	1				2	
17	Crombec, Long-billed	1	1	1			3	
18	Crow, Pied	1			1		2	
19	Cuckoo, African		1				1	
20	Cuckoo, Black			1			1	
21	Cuckoo, Diderick	1	1	1			3	
22	Cuckoo, Red-chested	1					1	
23	Dove, Emerald-spotted Wood	1		1			2	
24	Dove, Laughing	1		1			2	
25	Dove, Namaqua	1					1	

	Species	Area 1	Area 2	Area 3	Overhead	Aquatic	Total	Notes
26	Dove, Red-eyed			1			1	
27	Drongo, Fork-tailed	1		1			2	
28	Eagle, Wahlberg's	1			1		2	
29	Egret, Cattle	1	1		1		3	
30	Eremomela, Burnt-necked	1					1	
31	Falcon, Amur			1	1		2	
32	Fiscal, Common (Southern)	1					1	
33	Flycatcher, Marico	1					1	
34	Flycatcher, Southern Black			1			1	
35	Flycatcher, Spotted	1		1			2	
36	Francolin, Crested	1					1	
37	Go-away-bird, Grey	1	1	1			3	
38	Goose, Egyptian		1			1	2	
39	Goshawk, Gabar	1		1			2	
40	Guineafowl, Helmeted	1					1	
41	Heron, Purple		1			1	2	
42	Heron, Squacco		1			1	2	
43	Hoopoe, African	1					1	
44	Hornbill, African Grey	1		1			2	
45	Hornbill, Yellow-billed	1		1			2	
46	Ibis, Hadeda	1	1	1			3	
47	Indigobird, Purple			1			1	
48	Kestrel, Rock		1		1		2	
49	Kite, Black-shouldered		1		1		2	
50	Kite, Yellow-billed				1		1	
51	Lark, Sabota	1		1			2	
52	Mannikin, Bronze			1			1	
53	Masked-weaver, Lesser	1					1	
54	Masked-weaver, Southern		1				1	
55	Moorhen, Lesser					1	1	
56	Mousebird, Red-faced	1	1	1			3	
57	Mousebird, Speckled		1				1	
58	Myna, Common	1	1	1			3	
59	Neddicky	1		1			2	
60	Nightjar, European	1					1	
61	Nightjar, Freckled	1					1	
62	Owlet, Pearl-spotted	1					1	
63	Oxpecker, Red-billed	1		1			2	
64	Palm-swift, African	1			1		2	
65	Paradise-flycatcher, African	1		1			2	
66	Paradise-whydah, Long-tailed			1			1	
67	Pigeon, Speckled		1				1	

	Species	Area 1	Area 2	Area 3	Overhead	Aquatic	Total	Notes
68	Prinia, Tawny-flanked	1	1	1			3	
69	Puffback, Black-backed			1			1	
70	Quelea, Red-billed	1	1	1			3	
71	Raven, White-necked	1					1	
72	Robin-chat, White-throated			1			1	
73	Sandgrouse, Double-banded	1					1	
74	Scrub-robin, White-browed	1	1	1			3	
75	Shrike, Crimson-breasted	1		1			2	
76	Shrike, Red-backed	1	1				2	
77	Shrike, White-crested Helmet-	1					1	
78	Snake-eagle, Black-chested	1			1		2	
79	Sparrow, Southern Grey-headed	1		1			2	
80	Sparrow-weaver, White-browed	1	1	1			3	
81	Spurfowl, Natal	1					1	
82	Spurfowl, Swainson's	1					1	
83	Starling, Cape Glossy	1					1	
84	Starling, Red-winged	1					1	
85	Starling, Violet-backed	1					1	
86	Sunbird, Amethyst	1					1	
87	Sunbird, White-bellied	1		1			2	
88	Swallow, Barn	1	1	1	1		4	
89	Swallow, Lesser Striped	1	1		1		3	
90	Swift, Alpine				1		1	
91	Swift, Black	1			1		2	
92	Swift, Little				1		1	
93	Swift, White-rumped				1		1	
94	Tchagra, Black-crowned	1		1			2	
95	Tchagra, Brown-crowned	1					1	
96	Thick-knee, Spotted	1					1	
97	Tinkerbird, Yellow-fronted	1		1			2	
98	Tit, Southern Black			1			1	
99	Tit-babbler, Chestnut-vented	1					1	
100	Turaco, Purple-crested	1		1			2	
101	Turtle-dove, Cape	1	1	1			3	
102	Warbler, Lesser Swamp					1	1	
103	Warbler, Little Rush					1	1	
104	Waxbill, Blue		1	1			2	
105	Weaver, Thick-billed	1					1	
106	Weaver, Village	1		1			2	
107	White-eye, Cape	1					1	
108	Whydah, Long-tailed Paradise-			1			1	
109	Widowbird, White-winged	1	1	1			3	

	Species	Area 1	Area 2	Area 3	Overhead	Aquatic	Total	Notes
110	Wood-dove, Emerald-spotted	1		1			2	
	TOTALS:	80	34	54	17	6		

In the “Species Accounts” below, a composite alphabetical list of the 171 bird species recorded in this area, which includes the 110 recorded in this survey, and an extra 61 listed in the SABAP₁ data base for the quarter-degree square 2430 CC (Kennedy’s Vale), and SABAP₂ database for pentad 2445_3005 on which most of the proposed Spitsvle Project site is located. The asterisk (*) indicates that the species was recorded during this survey. Unless otherwise indicated, these species are all classified in as “Least Concern” in *The 2015 Red Data Book of Birds* (Taylor, Peacock & Wanless 2015) whose presence on the site would not compromise the further development of the proposed project. In this section, **(RD)** indicates that species is listed as a “Red Data” species, but only the Lanner Falcon is listed (see below).

SPECIES ACCOUNTS

- ***Apalis, Yellow-breasted:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- ***Babbler, Arrow-marked:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- ***Barbet, Acacia Pied:** A common and widespread breeding resident.
- ***Barbet, Black-collared:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- ***Barbet, Crested:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- ***Batis, Chinspot:** A common and widespread breeding resident.
- ***Bee-eater, European:** A very common non-breeding Palearctic migrant species present in the summer months. Ranges widely.
- Bee-eater, Little:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- Bee-eater, White-fronted:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- Bishop, Southern Red:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- ***Boubou, Southern:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- ***Brubru:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- ***Bulbul, Dark-capped:** A very common breeding resident.
- ***Bunting, Cinnamon-breasted:** A common breeding resident.
- ***Bunting, Golden-breasted:** A common breeding resident.

- Bunting, Lark-like:** An irruptive species from the drier west which can at times be abundant, and less common at other times.
- *Bush-shrike, Orange-breasted:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- *Buzzard, Steppe:** A common non-breeding Palearctic migrant present in the summer months.
- Camaroptera, Green-backed:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- Canary, Black-throated:** Rather uncommon on this site, but elsewhere, a common and widespread breeding resident.
- *Canary, Yellow-fronted:** Rather uncommon on this site, but elsewhere, a common and widespread breeding resident.
- Chat, Familiar:** Uncommon on this site, but elsewhere, a locally common and widespread breeding resident. Usually associated with rocky outcrops and/or human settlements.
- Cisticola, Desert:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- Cisticola, Lazy:** Uncommon on this site, but elsewhere, a common and widespread breeding resident where the habitat is right. Usually associated with rocky outcrops.
- *Cisticola, Rattling:** A very common breeding resident.
- Cisticola, Red-faced:** An uncommon breeding resident. Elsewhere favours rank waterside vegetation which probably accounts for its apparent scarcity on this site.
- Cisticola, Zitting:** An uncommon breeding resident. Elsewhere favours rank grassland which probably accounts for its apparent scarcity on this site.
- Coot, Red-knobbed:** A very common and widespread breeding resident, but rare on this site due to the lack of open water. An aquatic species.
- Cormorant, Reed:** A very common and widespread breeding resident, but rare on this site due to the lack of open water or rivers with pools. An aquatic species which feeds on fish.
- Coucal, Burchell's:** An uncommon breeding resident. Elsewhere favours rank grassland which probably accounts for its apparent scarcity on this site.
- *Crombec, Long-billed:** A common and widespread breeding resident.
- *Crow, Pied:** A very common and widespread breeding resident, favouring habitats where there are plenty of people offering scavenging opportunities.
- *Cuckoo, African:** A rather uncommon breeding intra-African migrant present in the summer months. A brood parasite of the Fork-tailed Drongo.
- *Cuckoo, Black:** A rather uncommon breeding intra-African migrant present in the summer months. A brood parasite of the Boubous.
- *Cuckoo, Diderick:** A common breeding intra-African migrant present in the summer months. A brood parasite of the bishops, weavers and sparrows.
- Cuckoo, Jacobin:** A rather uncommon breeding intra-African migrant present in the summer months. A brood parasite of the bulbuls and fiscals.
- Cuckoo, Klaas's:** A rather uncommon breeding intra-African migrant present in the summer months. A brood parasite of the batises, warblers and sunbirds.
- Cuckoo, Levillant's:** A rather uncommon breeding intra-African migrant present in the summer months. A brood parasite of the babblers.
- *Cuckoo, Red-chested:** A common breeding intra-African migrant present in the summer months. A brood parasite mainly of the Cape Robin-chat but also of many other species.
- *Dove, Emerald-spotted Wood-:** A common and widespread breeding resident.
- *Dove, Laughing:** A common and widespread breeding resident.
- *Dove, Namaqua:** A rather uncommon but wide ranging breeding resident. Numbers fluctuate considerably due to movements associated with climate. May be common or rare.
- *Dove, Red-eyed:** Uncommon on this site, but elsewhere, a common and widespread breeding resident.
- *Drongo, Fork-tailed:** A common and widespread breeding resident.

- Duck, African Black:** A rather uncommon breeding resident strongly associated with rivers. Rare on this site due to the lack of such rivers.
- Duck, White-faced:** A rather uncommon breeding resident strongly associated with dams and open water. Rare on this site due to the lack of such habitats.
- *Eagle, Wahlberg's:** A fairly common breeding intra-African migrant present in summer months.
- *Egret, Cattle:** A common and widespread breeding resident.
- *Eremomela, Burnt-necked:** A rather uncommon breeding resident strongly associated with groves of mature *Vachellia (Acacia)*, particularly *V. tortilis*.
- *Falcon, Amur:** A common and widespread non-breeding migrant from Asia present in the summer months.
- (RD) Falcon, Lanner:** Red-listed as "Near Threatened". Not recorded during this survey or by SABAP₂, but was recorded by SABAP₁ (see the "Red Data Species" section below). Birds in South Africa are known to be of both resident and migratory elements (Hockey, Dean & Ryan 2005), so individuals present here may be either resident or temporary visitors.
- Finch, Cut-throat:** Not recorded during this survey, so probably a rather uncommon breeding resident.
- Finch, Red-headed:** Not recorded during this survey, so probably a rather uncommon breeding resident.
- Finch, Scaly-feathered:** Not recorded during this survey, so probably a rather uncommon breeding resident.
- Firefinch, Jameson's:** Not recorded during this survey, so probably a rather uncommon breeding resident.
- *Fiscal, Common (Southern) :** A common and widespread breeding resident.
- *Flycatcher, Marico:** A rather uncommon but widespread breeding resident. A species of the drier west, so probably at the eastern edge of its range.
- *Flycatcher, Southern Black:** A rather uncommon but widespread breeding resident.
- *Flycatcher, Spotted:** A common and widespread non-breeding migrant from Europe present in the summer months.
- *Francolin, Crested:** A common and widespread breeding resident.
- *Go-away-bird, Grey:** A common and widespread breeding resident.
- *Goose, Egyptian:** A common and widespread breeding resident, but scarce on Spitsvle due to the lack of open water.
- *Goshawk, Gabar:** A rather uncommon but widespread breeding resident.
- *Guineafowl, Helmeted:** A common and widespread breeding resident.
- Hamerkop:** Not recorded in this survey, probably because of its close association with water. A species declining in South Africa, apparently due to declining water quality in our rivers.
- *Heron, Purple:** A single bird recorded at an old farm dam in the area to the northwest of Kennedy's Vale north of the R555 national road. A fairly common and widespread breeding resident.
- *Heron, Squacco:** A single bird recorded at an old farm dam in the area to the northwest of Kennedy's Vale north of the R555 national road. A fairly common and widespread breeding resident.
- Honeyguide, Greater:** An uncommon but widespread breeding resident. A brood parasite of hoopoes, barbets, kingfishers, bee-eaters and starlings.
- *Hoopoe, African:** A common and widespread breeding resident.
- *Hornbill, African Grey:** A common and widespread breeding resident.
- *Hornbill, Yellow-billed:** A common and widespread breeding resident.
- Ibis, Hadedda:** A very common and widespread breeding resident.
- *Indigobird, Purple:** A common and widespread breeding resident. A brood parasite of the Jameson's Firefinch which, surprisingly, has as yet not been recorded in the area.
- *Kestrel, Rock:** A fairly common resident, found in a wide variety of habitats, but usually close to

mountains and cliffs where it breeds.

Kingfisher, Brown-hooded: Uncommon on this site, but elsewhere, a common and widespread breeding resident.

Kingfisher, Pied: A common and widespread breeding resident, but water dependant, so rare on this site.

***Kite, Black-shouldered:** A common and widespread breeding resident.

***Kite, Yellow-billed:** A common and widespread breeding intra-African migrant present in the summer months.

Lapwing, Blacksmith: A common and widespread breeding resident, but rather water dependant, so rare on this site.

Lapwing, Crowned: A common and widespread breeding resident.

Lark, Rufous-naped: A common and widespread breeding resident.

***Lark, Sabota:** A common and widespread breeding resident.

***Mannikin, Bronze:** A common and widespread breeding resident.

***Masked-weaver, Lesser:** A common and widespread breeding resident.

***Masked-weaver, Southern:** A common and widespread breeding resident.

***Moorhen, Lesser:** A single bird recorded at an old farm dam in the area to the northwest of Kennedy's Vale north of the R555 national road. A fairly common but widespread breeding intra-Africa migrant, usually associated with years of high rainfall. Its occurrence here during the current drought is therefore interesting.

***Mousebird, Red-faced:** A common and widespread breeding resident.

***Mousebird, Speckled:** A common and widespread breeding resident.

***Myna, Common:** A common and widespread breeding resident. In alien species which has invaded most of South Africa.

***Neddicky:** A common and widespread breeding resident.

***Nightjar, European:** A fairly common and widespread non-breeding Palaearctic migrant.

***Nightjar, Freckled:** A rather uncommon but widespread breeding resident, restricted to rocky habitats.

***Owlet, Pearl-spotted:** A fairly common and widespread breeding resident mainly in the bushveld areas of South Africa.

***Oxpecker, Red-billed:** This species declined dramatically from the widespread use of arsenical cattle dips, but since the introduction of oxpecker friendly "green label" dips, the species has made a dramatic recovery. It is pleasing to have recorded this species on this site.

***Palm-swift, African:** A common and widespread breeding resident.

***Paradise-flycatcher, African:** A common and widespread breeding intra-African migrant present in the summer months.

***Paradise-whydah, Long-tailed:** A fairly common and widespread breeding resident. A brood parasite of the Green-winged Pytilia.

Penduline-tit, Cape: A fairly common and widespread breeding resident. Small size renders it inconspicuous.

***Pigeon, Speckled:** A common and widespread breeding resident. Wide ranging, often breeding and roosting on tall city buildings and commuting to rural agricultural areas by day.

Pipit, African: A common and widespread breeding resident.

Plover, Three-banded: Not recorded in this survey, probably because of its close association with water. A common and widespread breeding resident.

Prinia, Black-chested: Not recorded during this survey. Mainly a species of the drier west, and probably close to the limit of its range here. A common and widespread breeding resident.

***Prinia, Tawny-flanked:** A common and widespread breeding resident.

***Puffback, Black-backed:** A common and widespread breeding resident.

Pytilia, Green-winged: A fairly common breeding resident.

- *Quelea, Red-billed:** A very common and widespread breeding resident.
- *Raven, White-necked:** A fairly common but localised breeding resident. Usually associated with mountains, gorges and cliffs.
- Robin-chat, Cape:** A fairly common breeding resident.
- *Robin-chat, White-throated:** A locally common and widespread breeding resident.
- *Sandgrouse, Double-banded:** A common and widespread breeding endemic resident.
- Scrub-robin, Kalahari:** Not recorded during this survey. Mainly a species of the drier west, and probably close to the limit of its range here. A common and widespread breeding resident.
- *Scrub-robin, White-browed:** A common and widespread breeding resident.
- Seedeater, Streaky-headed:** A fairly common breeding resident.
- *Shrike, Crimson-breasted:** A fairly common and widespread breeding resident.
- Shrike, Lesser Grey:** A fairly common and widespread non-breeding Palearctic migrant usually associated with grassland habitats.
- *Shrike, Red-backed:** A common and widespread non-breeding Palearctic migrant.
- *Shrike, White-crested Helmet-:** A common and widespread breeding resident.
- *Snake-eagle, Black-chested:** A fairly common and widespread breeding resident. A juvenile bird was recorded during this survey, so probably breeds in the area.
- Snake-eagle, Brown:** A fairly common and widespread breeding resident.
- Sparrow, Cape:** A common and widespread breeding resident.
- Sparrow, Great:** A rather uncommon but widespread breeding resident, mainly from the drier west and probably just at the edge of its range.
- Sparrow, House:** A very common and widespread introduced alien species favouring habitats around humans.
- *Sparrow, Southern Grey-headed:** A common and widespread breeding resident.
- *Sparrow-weaver, White-browed:** A common and widespread breeding resident.
- Sparrowlark, Chestnut-backed:** A common and widespread breeding resident.
- *Spurfowl, Natal:** A common and widespread breeding resident.
- *Spurfowl, Swainson's:** A common and widespread breeding resident.
- *Starling, Cape Glossy:** A common and widespread breeding resident.
- *Starling, Red-winged:** A common and widespread breeding resident.
- *Starling, Violet-backed:** A fairly common and widespread breeding intra-African migrant present here in the summer months.
- Stork, White:** A non-breeding Palearctic migrant species present in the summer months. Ranges widely, so could be absent or very common at any time or place.
- *Sunbird, Amethyst:** A common and widespread breeding resident.
- Sunbird, Marico:** A common and widespread breeding resident.
- Sunbird, Scarlet-chested:** A common and widespread breeding resident.
- *Sunbird, White-bellied:** A common and widespread breeding resident.
- *Swallow, Barn:** A very common non-breeding Palearctic migrant species present in the summer months. Ranges widely.
- Swallow, Greater Striped:** A common and widespread breeding intra-African migrant present in the summer months. Generally found at higher altitudes and drier habitats than the next species.
- *Swallow, Lesser Striped:** A common and widespread breeding intra-African migrant present in the summer months. Generally found at lower altitudes and moister habitats than the previous species.
- Swallow, Red-breasted:** A locally common and widespread breeding intra-African migrant present in the summer months.
- *Swift, Alpine:** A resident and an intra-African migrant in South Africa. Non-resident in this area

and birds recorded are probably either migrants, or birds which have dispersed from their breeding areas elsewhere.

- *Swift, Black:** Probably non-resident in this area. Those recorded here are probably birds which have dispersed from their breeding areas elsewhere.
- Swift, Common:** A very common non-breeding Palearctic migrant species present in the summer months. Ranges widely. Often follows thunderstorms.
- Swift, Horus:** A rather uncommon resident which breeds in tunnels excavated in vertical banks. May be a breeding resident on the site, but no nesting sites were recorded.
- *Swift, Little:** A common and widespread resident, breeding on cliffs and also man-made structures such as buildings and bridges.
- *Swift, White-rumped:** A locally common and widespread breeding intra-African migrant present in the summer months.
- *Tchagra, Black-crowned:** A common and widespread breeding resident.
- *Tchagra, Brown-crowned:** A common and widespread breeding resident.
- *Thick-knee, Spotted:** A common and widespread breeding resident.
- Thrush, Groundscraper:** A common and widespread breeding resident.
- *Tinkerbird, Yellow-fronted:** A common and widespread breeding resident.
- *Tit, Southern Black:** A common and widespread breeding resident.
- *Tit-babbler, Chestnut-vented:** A fairly common and widespread breeding resident. Mainly a species of the drier west and is here close to the eastern edge of its range
- *Turaco, Purple-crested:** A common and widespread breeding resident. Mainly a species of lower lying bushveld and coastal areas. Probably here at the western limit of its range.
- *Turtle-dove, Cape:** A very common and widespread breeding resident.
- Wagtail, Cape:** A common and widespread breeding resident.
- Warbler, Willow:** A common but inconspicuous non-breeding Palearctic migrant species present in the summer months.
- *Warbler, Lesser Swamp:** A secretive but fairly common and widespread breeding resident. Restricted to water bodies where there are reeds and bulrushes.
- *Warbler, Little Rush:** A secretive but fairly common and widespread breeding resident. Restricted to water bodies where there are sedges, reeds and bulrushes.
- Waxbill, Black-faced:** A widespread, but locally common breeding resident. Mainly a species of the drier west and is here close to the eastern edge of its range.
- *Waxbill, Blue:** A common and widespread breeding resident.
- Waxbill, Violet-eared:** A fairly common and widespread breeding resident.
- Weaver, Spectacled:** A common and widespread breeding resident.
- *Weaver, Thick-billed:** A fairly common and widespread breeding resident, but restricted to areas close to water bodies where there are sedges, reeds and bulrushes where it breeds. A surprising record in this rather arid area.
- *Weaver, Village:** A common and widespread breeding resident.
- *White-eye, Cape:** A common and widespread breeding resident.
- Whitethroat, Common:** A rather uncommon non-breeding Palearctic migrant species present in the summer months.
- Whydah, Pin-tailed:** A common and widespread breeding resident. A brood parasite of some of the waxbills.
- Whydah, Shaft-tailed:** A rather uncommon but widespread breeding resident. A brood parasite of Violet-eared, Blue and Black-faced Waxbills
- *Widowbird, White-winged:** A common and widespread breeding resident.
- *Wood-dove, Emerald-spotted:** A common and widespread breeding resident.
- Woodpecker, Cardinal:** A common and widespread breeding resident.

STATUS OF RED DATA SPECIES WHICH OCCUR OR POSSIBLY OCCUR ON THE SPITSVALE PROJECT AREA

The World Conservation Union (IUCN) has defined seven categories of vulnerability (Gärdenfors et al. 1994; IUCN 1994). These are as follows: “*Extinct*”; “*Extinct in the wild*”; “*Critically Endangered*”; “*Endangered*”; “*Vulnerable*”; “*Near-Threatened*” and “*Least Concern*”. The first two categories are not applicable to this report, but the remaining categories are of relevance here. The status of some species have been changed since the previous edition of the Red Data List was published (Barnes 2000). Species listed here follow the new Red Data List (Taylor, Peacock & Wanless 2015). The list below includes all species that have been recorded on the Spitsvåle Project area, and also those from the relevant SABAP₂ pentad lists recorded in the vicinity. Their status is discussed in a bit more detail below.

Critically Endangered Species

None known to occur on Spitsvåle.

Endangered Species

None known to occur on Spitsvåle.

Vulnerable Species

The Lanner Falcon, is the only “Vulnerable” species known to potentially occur on the Spitsvåle Project development site.

Lanner Falcon (Falco biarmicus)

According to Taylor, Peacock & Wanless (2015), justification for its “Vulnerable” Red Data rating is that “.. *the regional population .. appears to be decreasing at a rate that satisfies the population trend criterion for regionally Vulnerable (>30% decline over 10 years or three generations). In addition, the species qualifies for regionally Vulnerable under the population-size criterion (<10 000 mature individuals, with a continuing decline estimated to be > 10% over three generations).*”

This species was not recorded during this survey, nor has it been recorded by SABAP₂ contributors. Records for this species come from the SABAP₁ database (for the quarter-degree square 2430 CC Kennedy’s Vale) whose data collection phase extended for five years

from 1987 to 1992 (Harrison, et. al. 1997). There are therefore no recent records of this species in the area, the most recent being about 25 years ago. Furthermore, SABAP₁ based its mapping units on quarter-degree squares which are of a much coarser scale, being nine times larger than a pentad. But the fact that there are no recent records is not to say that Lanners do not still occupy this area, and it is in fact more likely that they are there, but have just not been “officially” recorded.

If the Lanner still occurs in the wider area, it is probably a fairly rare resident, though some or all birds may be temporary visitors (vagrants). No suitable nesting cliffs are known to be present on the Spitsvle Project area, so if they are resident, they are likely to breed on cliff faces elsewhere in the surrounding mountains. In this case, Spitsvle simply represents a foraging area, and the Project would have little impact on them (see “Mitigation Measures” below).

Near-Threatened Species

None known to occur on Spitsvle.

Species of Least Concern

All other species recorded on the Spitsvle Project area fall into this category.

MITIGATION MEASURES

The developments on the proposed are to be mainly focused on three areas – the current excavation site near the main office (Klarinet Koppie), the Tubatse Koppie area to the east and the “Flats area” just to the north east of the Klarinet Koppie site. For the avifaunal component of this report, it is somewhat difficult to propose mitigation measures. None of the species listed above are known to be vulnerable to above ground structures. Powerlines will presumably connect the three sites, but for the species present, these should not present a problem (some species may even benefit as pylons and lines constitute potential perching and roosting sites). Of course the greater problem will be loss of habitat through bush clearing for the open-cast mine. These factors also apply to Lanner Falcons - the only Red Data species known to occur in the area. Power lines should not present a problem as Lanners often use pylons for perches while hunting. Loss of habitat might mean a reduction of home-range size for a resident pair and a consequent reduction in the size of the foraging

area, but the birds may well extend their range slightly to compensate for this loss. From an avifaunal perspective there are no areas which need to be specifically avoided. The only real mitigation would be to limit the area of the above-ground development (and its impacts) as far as is possible. These measures would include:

- To leave, as far as is possible, as much of the natural indigenous bush undisturbed and in its pristine state.
- Route connecting roads as close as is possible to already developed sites or roads.
- Restrict or prohibit any off-road driving in areas of pristine indigenous bush.
- Route powerlines along these connecting roads, or better still, route them underground.

GENERAL CONCLUSIONS

My general conclusion is that this survey, and data acquired from the Southern African Bird Atlas Projects (SABAP₁ and SABAP₂) have not recorded any species whose Red Data status might compromise the further development of the proposed project. The Lanner Falcon is the only recorded species that is listed as “Vulnerable” in the Red Data List. This record came from the SABAP₁ database and is now about 25 years old. It was not recorded during this survey, and no suitable nesting cliffs are known to be present on the Spitsvale Project area. While Spitsvale may constitute part of the species’ foraging range, the area of the site is relatively small ($\pm 2\ 200$ ha) and developments here should have minimal adverse consequences for any resident or migrant Lanners.

In my opinion, which is based on this survey and other available information and data, there is no reason from an avifaunal perspective, why the proposed Spitsvale Project should not go ahead.

CREDENTIALS OF THE AUTHOR

Dr Ian Whyte (PhD, SAIE&ES) retired in 2007 after 37 years of service in the Kruger National Park (KNP). For the majority of this time he was involved in large mammal research, but because of his lifelong personal interest in birds, he also served as ornithologist in KNP between the years 1985 and 1998. He has co-authored two Field Guides to the birds of KNP

(Sinclair & Whyte 1991; Chittenden & Whyte 2008) and acted as consulting editor to a third (Hilton-Barber & Arthur 2007). His ornithological publications include five scientific papers (authored or co-authored) and seven unpublished scientific reports. He was responsible for writing policies pertaining to birds in the Kruger National Park (Joubert 2007). He has also published 17 articles in popular birding journals. He has been involved in the monitoring the status of birds in the plantations of Komatiland Forests (Pty) Ltd since 2008. He has been involved in assessing Important Bird Areas (IBAs) for BirdLife South Africa in the Graskop / Sabie areas, and has recently undertaken avifaunal Scoping Assessments for an EIA on a wind farm project in the Eastern Cape.

ACKNOWLEDGEMENTS

The author would like to acknowledge with thanks the assistance of Ms Anandi Alers and Ms Taryn Bigwood of Environmental Management Assistance for logistical arrangements. Mr Jaco Mayer, the Site Manager of the Spitsvle Project, is also thanked for his logistical assistance with my visit, and also for “rescuing” me when I was stranded with a flat battery resulting from the “headlights on” regulation.

BIBLIOGRAPHY

- BARNES, K.N. (Ed.). 2000. *The Eskom Red Data Book of Birds of South Africa, Lesotho and Swaziland*. Birdlife South Africa, Johannesburg.
- CHITTENDEN, H. 1992. *Top Birding Spots in Southern Africa*. Ed. Chittenden, H. pp. 107-116. Halfway House, Southern Books.
- CHITTENDEN, H. 2007. *Roberts Bird Guide*. John Voelcker Bird Book Fund, Cape Town.
- CHITTENDEN, H. & WHYTE, I.J. 2008. *Roberts Bird Guide for the Kruger National Park*. Jacana Books, Durban.
- COHEN, C., SPOTTISWOODE, C. & ROSSOUW, J. 2006. *Southern African Birdfinder*. Struik Publishers, Cape Town.
- GÄRDENFORS, U., RODRÍGUEZ, J.P., HILTON-TAYLOR, C., HYSLOP, C., MACE, G., MOLUR, S. & POSS, S. 1994. Draft guidelines for the application of IUCN Red List Criteria at national and regional levels. *Species* 31/32:58-70.

- HARRISON, J.A., ALLEN, D.G., UNDERHILL, LG., HERREMANS, M., TREE, A.J., PERKER, V & BROWN, C.J.)Eds.) 1997. *The Atlas of Southern African Birds*. Vols. 1 & 2. BirdLife South Africa, Johannesburg.
- HILTON-BARBER, B. & ARTHUR, L. 2007. *Best Birding in Kruger*. Consulting Editor: Whyte, I.J. Prime Origins, Cape Town.
- HOCKEY, P.A.R., DEAN, W.R.J. & RYAN, P.G. (Eds.) 2005. *Roberts – Birds of Southern Africa. VIIth Edition*. John Voelcker Bird Book Fund, Cape Town.
- IUCN. 1994. IUCN Red List Categories. Gland, Switzerland: IUCN
- SINCLAIR, I. & WHYTE, I.J. 1991. *Field Guide to the Birds of the Kruger National Park*. Struik, Cape Town.
- TAYLOR, M.R., PEACOCK, F. & WANLESS, R.M. (Eds.) 2015. *The 2015 Eskom Red Data book of birds for South Africa, Lesotho and Swaziland*. Birdlife South Africa, Johannesburg.

APPENDIX 1

DECLARATION OF INDEPENDENCE

I, Dr Ian John Whyte (ID number 470710 5029 082), hereby declare that I was contracted by Environmental Management Assistance (Pty.) Ltd., as an independent consultant, for the purposes of conducting the Avifaunal Survey reported on above.

I declare that I have no other interest in the Spitsvaley Project either commercial or otherwise and that there is no conflict of interest in my participation.

Signed this 25th day of January 2016 at Graskop.



APPENDIX 2

Compliance to Appendix 6 of GNR 982 (EIA 2014 regulations)

The following is a copy of the specified requirements of Appendix 6 of GNR 982 (EIA 2014 regulations) indicating compliance by this specialist and this report. The symbol indicates that, in my opinion as the author of this report, the point has been adequately addressed.

Specialist reports

1. (1) A specialist report prepared in terms of these Regulations must contain-

(a) details of-

- (i) the specialist who prepared the report; and
- (ii) the expertise of that specialist to compile a specialist report including a curriculum vitae;

(b) a declaration that the specialist is independent in a form as may be specified by the competent authority;

(c) an indication of the scope of, and the purpose for which, the report was prepared;

(d) the date and season of the site investigation and the relevance of the season to the outcome of the assessment;

(e) a description of the methodology adopted in preparing the report or carrying out the specialised process;

(f) the specific identified sensitivity of the site related to the activity and its associated structures and infrastructure;

(g) an identification of any areas to be avoided, including buffers;

(h) a map superimposing the activity including the associated structures and infrastructure on the environmental sensitivities of the site including areas to be avoided, including buffers;

(i) a description of any assumptions made and any uncertainties or gaps in knowledge;

(j) a description of the findings and potential implications of such findings on the impact of the proposed activity, including identified alternatives on the environment;

(k) any mitigation measures for inclusion in the EMPr;

- (l) any conditions for inclusion in the environmental authorisation;
- (m) any monitoring requirements for inclusion in the EMPr or environmental authorisation;
- (n) a reasoned opinion-
- (i) as to whether the proposed activity or portions thereof should be authorised;
 - (ii) and if the opinion is that the proposed activity or portions thereof should be authorised, any avoidance, management and mitigation measures that should be included in the EMPr, and where applicable, the closure plan;
- (o) a description of any consultation process that was undertaken during the course of preparing the specialist report; (None was necessary except in terms of the structure of the report itself).
- (p) a summary and copies of any comments received during any consultation process and where applicable all responses thereto; and (None was necessary except in terms of the structure of the report itself).
- (q) any other information requested by the competent authority. (None was necessary except in terms of the structure of the report itself).