

Expansion of Zeus Substation Site

Comments from an ornithological perspective

Chris van Rooyen
Endangered Wildlife Trust
Private Bag X11
Parkview
2122
www.ewt.org.za

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Engineering & Environmental Consultants

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1 Introduction

These comments relate to the proposed expansion of the Zeus substation in the Free State to accommodate the proposed 765kV lines that will lead into it.

PBA International has appointed the Endangered Wildlife Trust as specialists to comment on the potential bird related impacts associated with proposed expansion.

2 Background and brief

No formal terms of reference were provided, it was merely stated that “input” is required. The comments below endeavour to cover the pertinent aspects relating to possible impacts on birds flowing from the proposed expansion.

3 Discussion

Zeus substation is situated in 2629CA. The substation itself is surrounded by mixed grassland. The proposed expansion will therefore result in the destruction of a stretch of 466m x 355m of this habitat type.

Grasslands are maintained mainly by a combination of the following factors: relatively high summer rainfall; frequent fires; frost and grazing. These factors generally preclude the growth of trees and shrubs. **Sweet grassland** is generally found in the lower rainfall areas. Vegetation is taller and sparser, and nutrients are retained in the leaves during winter. Relatively few bird species favour sweet grassland over sour or mixed grassland. **Sour grassland** generally occurs in the higher rainfall areas on leached soils. Vegetation is shorter and denser, and nutrients are withdrawn from the leaves during the winter months. Many grassland bird species show a preference for sour grassland over sweet or mixed. **Mixed grassland** is a combination or a transition between the two grassland types above. The grassland in 2629CA (and around Zeus Substation) is classified as Mixed grassland (Harrison *et.al.* 1997).

It is likely that the greatest impact in the area to be transformed will be on smaller species that are currently foraging and nesting in this parcel of land. The species most likely to be directly impacted are the following (Harrison *et.al.* 1997):

Table 1: Species likely to be impacted by proposed expansion

Species	Impact	Significance
Black-shouldered (Winged) Kite	Destruction of foraging habitat	Insignificant
Steppe (Common) Buzzard	Destruction of foraging habitat	Insignificant
Amur (Eastern Red-footed) Falcon (Kestrel)	Destruction of foraging habitat	Insignificant
Lesser Kestrel	Destruction of foraging habitat	Insignificant
Greater Kestrel	Destruction of foraging habitat	Insignificant
Swainson's Spurfowl (Francolin)	Destruction of foraging and breeding habitat	Low
Helmeted Guineafowl	Destruction of foraging and breeding habitat	Insignificant
Crowned Lapwing (Plover)	Destruction of foraging and	Insignificant

	breeding habitat	
African Wattled Lapwing	Destruction of foraging and breeding habitat	Low
Spotted Thick-knee	Destruction of foraging and breeding habitat	Low
Blue Bustard (Korhaan)	Destruction of foraging and breeding habitat	Low
Barn Owl	Destruction of foraging habitat	Low
Marsh Owl	Destruction of foraging (and breeding?) habitat	Low
Spike-heeled Lark	Destruction of foraging and breeding habitat	Low
Red-capped Lark	Destruction of foraging and breeding habitat	Low
Chestnut-backed Sparrowlark (Finchlark)	Destruction of foraging and breeding habitat	Low
Anteater (Southern Anteater) Chat	Destruction of foraging (and breeding?) habitat	Low
African (Common) Stonechat	Destruction of foraging (and breeding?) habitat	Low
Zitting (Fan-tailed) Cisticola	Destruction of foraging and breeding habitat	Low
Le Vaillant's (Tinkling) Cisticola	Destruction of foraging and breeding habitat	Low

Black-chested Prinia	Destruction of foraging and breeding habitat	Low
African (Grassveld/Grassland) Pipit	Destruction of foraging and breeding habitat	Low
Cape (Orange-throated) Longclaw	Destruction of foraging and breeding habitat	Low
Common (Fiscal) Fiscal (Shrike)	Destruction of foraging habitat	Low
Pied (African Pied) Starling	Destruction of foraging habitat	Low
Long-tailed Widowbird	Destruction of foraging habitat	Low
African Quailfinch	Destruction of foraging and breeding habitat	Low
Red-headed Finch	Destruction of foraging habitat	Low
Fan-tailed (Red-shouldered) Widowbird	Destruction of foraging and breeding habitat	Low
Long-tailed Widowbird	Destruction of foraging and breeding habitat	Low
Common Waxbill	Destruction of foraging	Low
African Quailfinch	Destruction of foraging and breeding habitat	Low
Red-headed Finch	Destruction of foraging	Low
Pin-tailed Whydah	Destruction of foraging	Low
Black-throated Canary	Destruction of foraging	Low

4 Conclusion

The proposed expansion of the substation will have an impact on birds breeding and foraging in the Mixed Grassland that constitute the area that will be transformed. The impacts will be restricted to **local** species, and should not affect regional or national populations. The reasons for that are the following:

- the area is relatively small; and
- the species that are impacted on are generally or locally common (e.g. Blue Korhaan) with healthy populations occurring in close proximity in similar habitat which is freely available.

5 References

Harrison, J.A., Allan, D.G., Underhill, L.G., Herremans, M., Tree, A.J., Parker, V and Brown, C.J. (eds). 1997. The atlas of southern African birds. Vol. 1&2. BirdLife South Africa: Johannesburg.