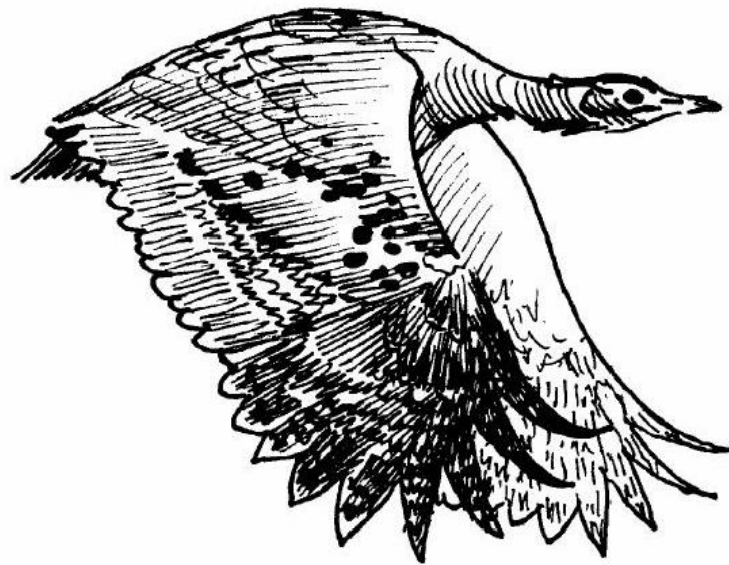
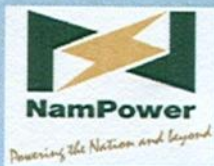


Monitoring collisions of large birds with power lines in Namibia



John Pallett



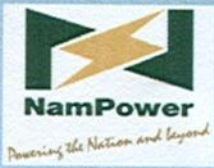
NamPower - Namibia Nature Foundation



Strategic Partnership

(Financed by the European Investment Bank)





NamPower - Namibia Nature Foundation



Strategic Partnership

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- Need evidence of collisions to motivate spending money on mitigation
- Need to test various designs and ideas to achieve optimum mitigation

[illegible]

ATLANTIC OCEAN

ANGOLA

ZAMBIA

BOTSWANA

SOUTH AFRICA

LEGEND: ■

RESEARCH ARTICLE

[View Sample Pages Online](#)

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FUTURE WATERPENS ON A

STUDY NOTE

POWER STATION



4. 8. 8. 1. 1. 1.

High-Power Thermal

Index and Sub

2004	2005
1	2

1	2000-2001	2000-2001	2000-2001
2	2000-2001	2000-2001	2000-2001

[illegible]

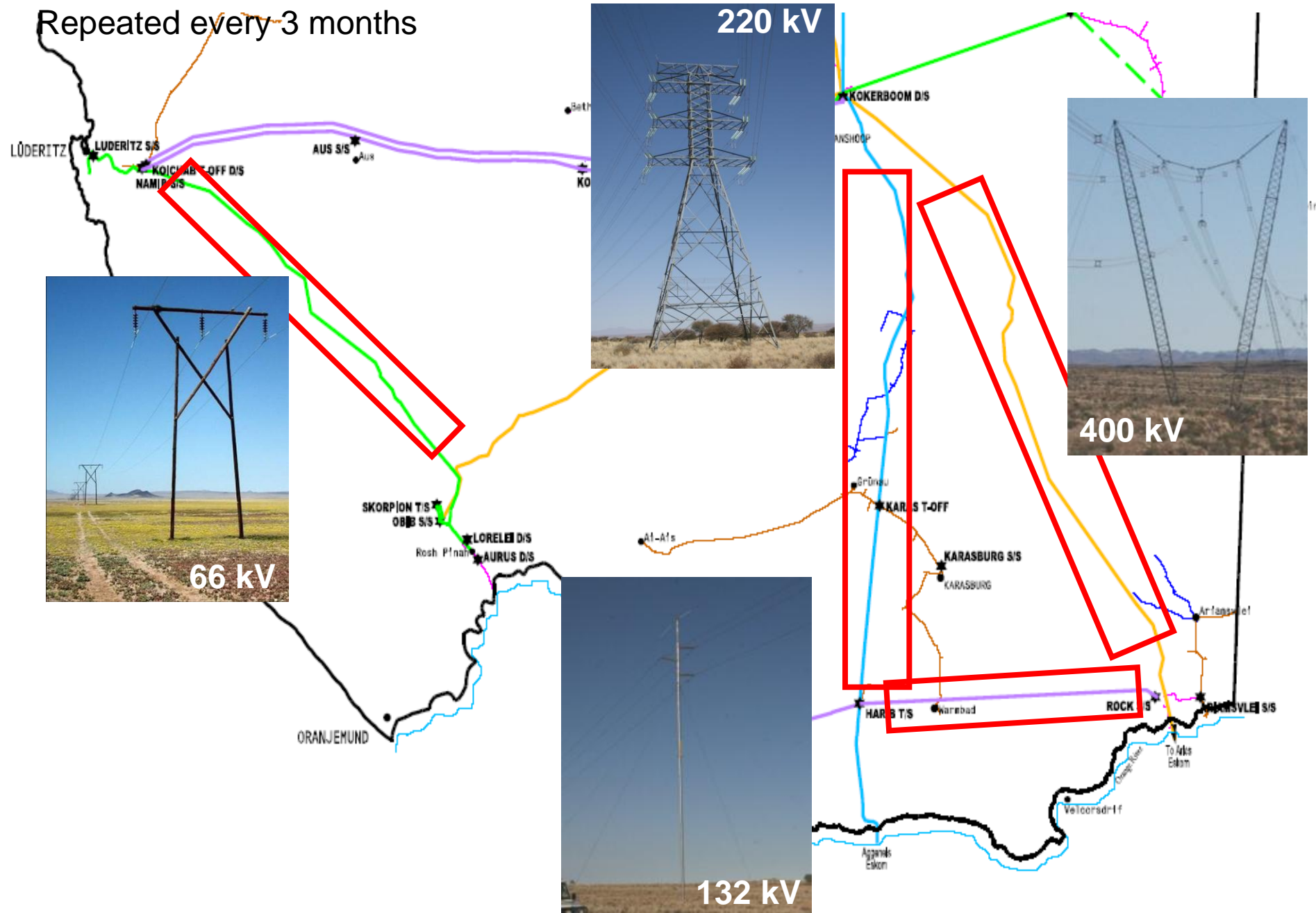
NamPower Transmission License Lines and Substations

Order #	Order Date	Order Status	Order Total
1	2010-01-01	Shipped	\$100.00
2	2010-01-02	Shipped	\$100.00
3	2010-01-03	Shipped	\$100.00
4	2010-01-04	Shipped	\$100.00
5	2010-01-05	Shipped	\$100.00
6	2010-01-06	Shipped	\$100.00
7	2010-01-07	Shipped	\$100.00
8	2010-01-08	Shipped	\$100.00
9	2010-01-09	Shipped	\$100.00
10	2010-01-10	Shipped	\$100.00

Power line surveys

~ 100 km on each line

Repeated every 3 months





15 July 2012
Kori Bustard 400 kV
Keetmanshoop area
S26 44.668 E18 48.870

2 October 2012
Ludwig's Bustard 66 kV
Luderitz area
S26 43.236 E15 26.947





5 October 2012

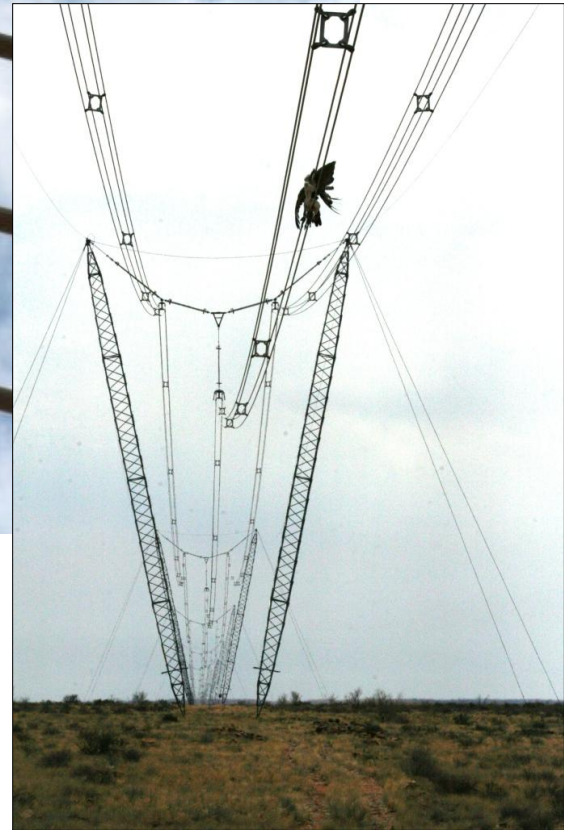
Unidentified bustard 132kV

Warmbad area

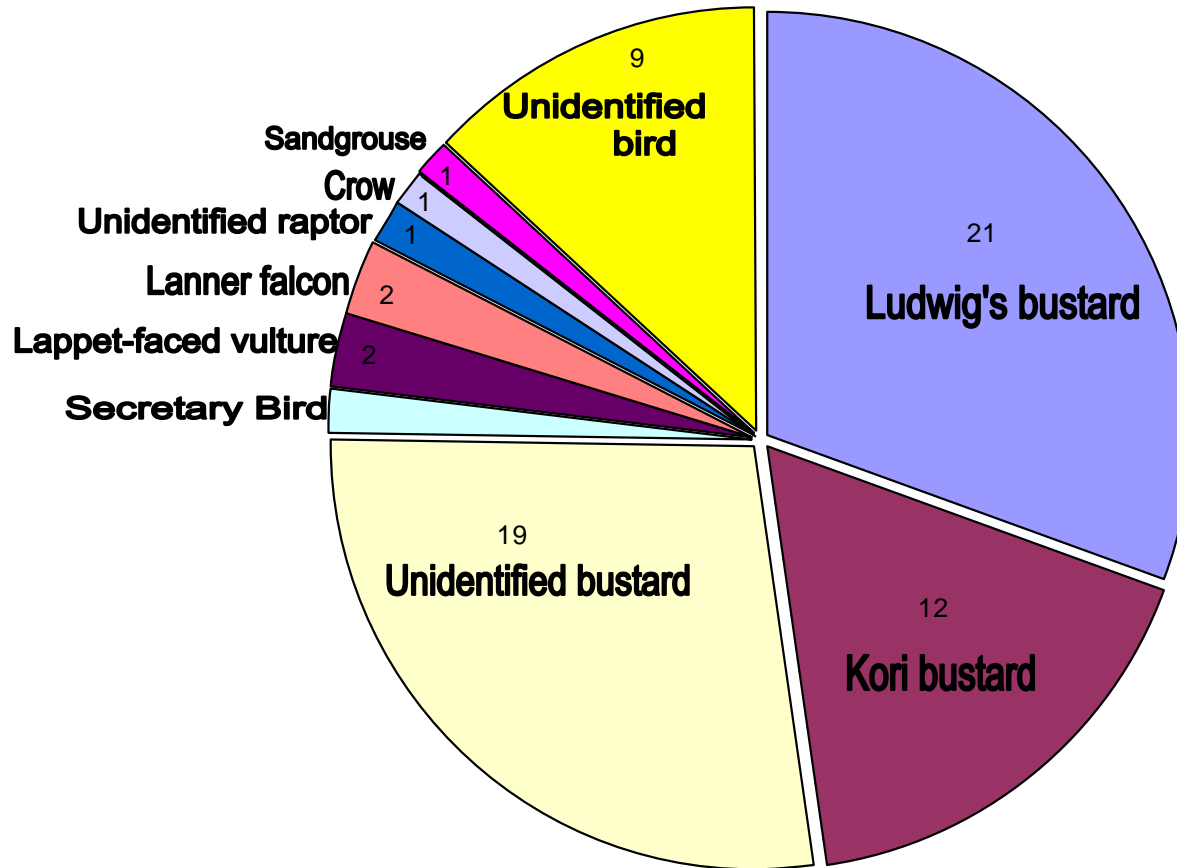
S28 26.650 E18 31.093



7 October 2012
Kori Bustard 400 kV
Karasburg area



July 2012 power line survey



70 collision fatalities
380 km surveyed

Other species being impacted:

Various korhaans
Flamingos



Comparable with situation in Karoo

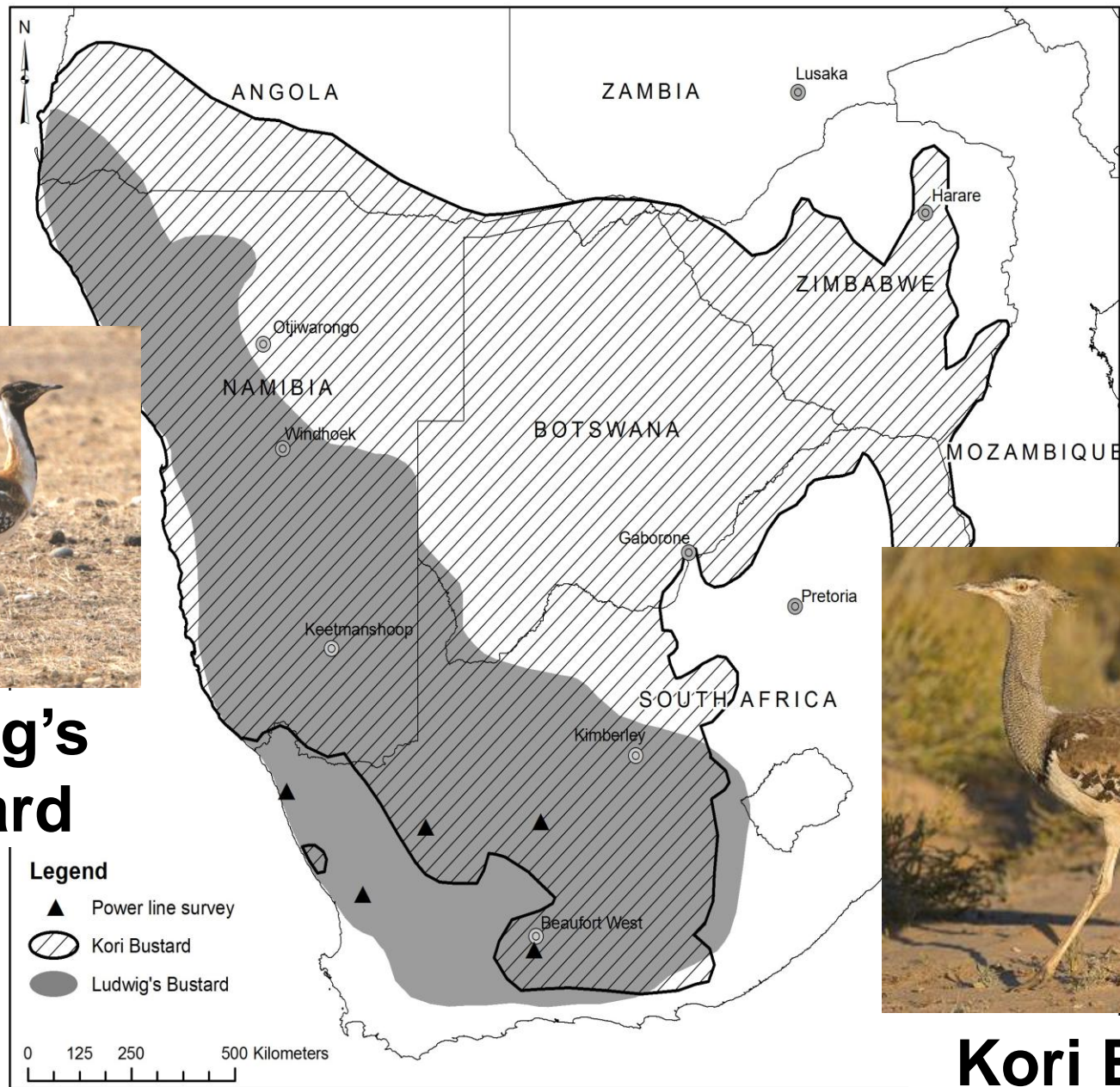
Estimate 1 large bird per km per year

Clearly a threat to the Ludwig's population

Ludwig's bustard uplisted to Vulnerable.



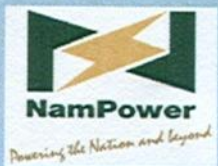
**Ludwig's
Bustard**



Kori Bustard

Mitigation

- Very difficult to find effective solution
- Likely to focus on making lines more visible with flappers, but birds fly 'blind'
- Best (only?) opportunity to mitigate: during construction



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