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APPENDIX A.1

**DETERMINING VELD CONDITION AND GRAZING CAPACITY IN THE
WESTERN REGION – NORTH WEST PROVINCE
(J. JONES AND J J OLIVIER – GLEN RESEARCH INSTITUTE**

In the North West Province, including the areas formerly falling under Bophuthatswana, two techniques were applied to determine the veld condition and grazing capacity. In the eastern region of the former Bophuthatswana, the key grass species technique developed by the University of Natal in association with the University of Fort Hare was applied and in the Western region (Kudumane, Ganyesa and Taung), the key grass species developed by Glen Research Institute was applied.

**Key grass species technique by J. Jones and J J Olivier
(Glen Research Institute).**

Date:

Type of veld: Sandy area (sagte veld).

Sample site

SPECIES NAME	%	W (F)	SAMPLE SITE SCORE	BENCH MARK SCORE
Anthehora argentea		10		
Anthehora pubescens		10		
Asthenatherum glaucum		10		
Brachiaria nigropedata		10		
Digitaria eriantha		10		
Panicum coloratum		10		
Schmidtia pappophoroides		10		
Stipagrostis uniplumis		10		
Subtotal highly desirable				
Eragrostis lehmanniana		7		
Eragrostis trichophora		7		
Eragrostis rigidior		7		
Subtotal desirable				



Aristida stapitata		4		
Aristida meridionalis		4		
Eragrostis pallens		4		
Pogonathria squarrosa		4		
Subtotal less desirable				
Aristida adscensionis		1		
Aristida berteronianus		1		
Aristida congesta		1		
Schmidtia kalahariensis		1		
Subtotal undesirable				
Veld condition score				855
Basal cover %				3.2

Bench mark score: Reflected in Appendix A.2

Factor = Grazing value - index of the grass species

Grazing capacity of the area = Grazing capacity of the area as was determined
By Government (Agricultural economic map of
South Africa 1965).

Calculation of the Grazing capacity of a sample site

$$\text{Grazing capacity} = \frac{\text{Bench mark score}}{\text{Sample site score}} \times \text{Grazing capacity of the area}$$

$$= \text{ha/M.L.U}$$

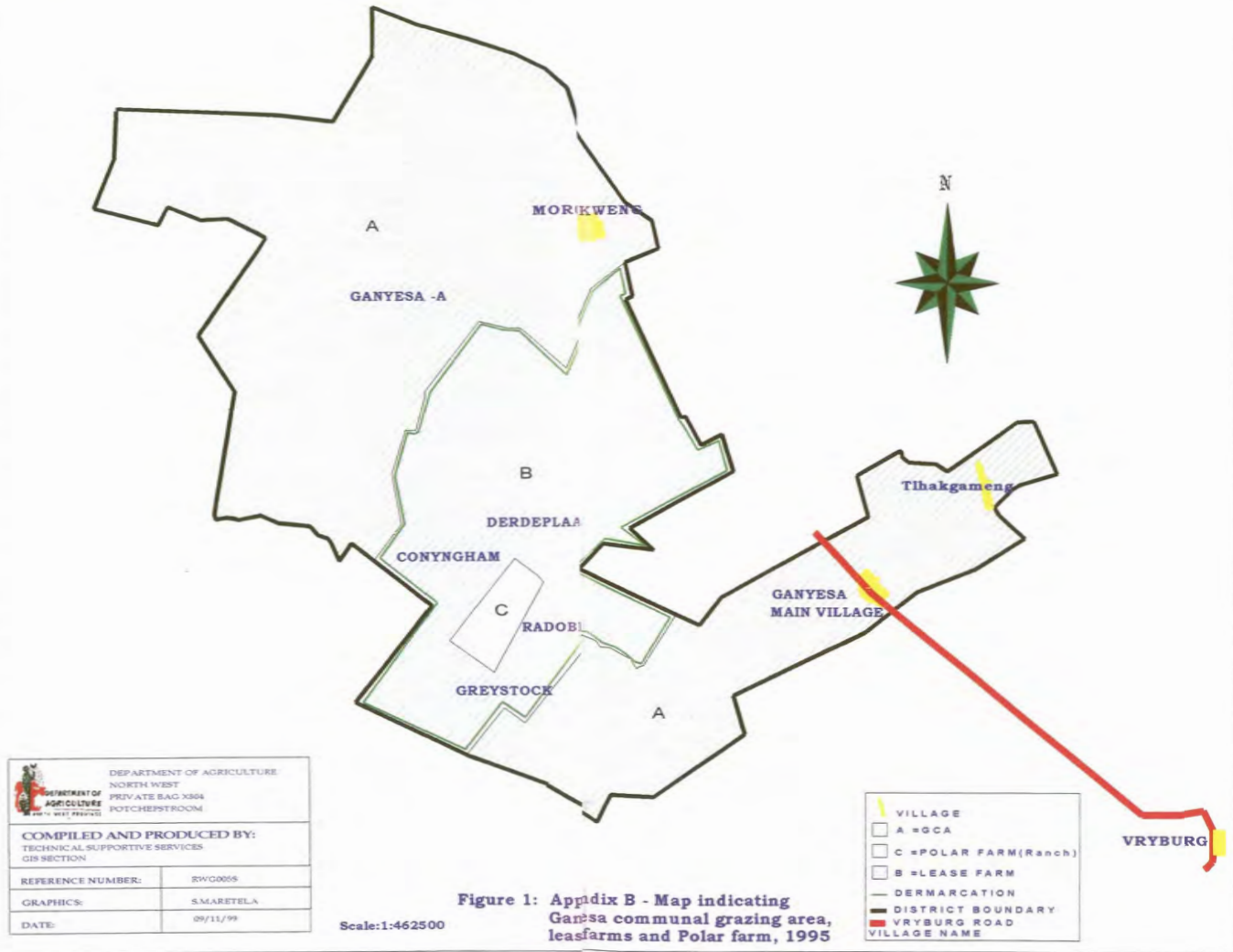
APPENDIX A2

**Bench mark site identified by annual monitoring of a specific site of the Western
Region – North West Province**

Type of veld : Sandy area by J Jones and J J Olivier

Name of the area	Site No.	Relative % Composition			
Species name	W Factor	Growing season			
		1986/87	1988/89		
		%	Score	%	Score
Antheophora argentea	10	3.43	34.3	4.43	44.3
Antheophora pubescens	10	5.66	56.6		
Asthenatherum nigropedata	10	3.43	34.3	3.01	30.1
Brachiaria nigropedata	10	0.40	4.0	0.19	1.9
Digitaria eriantha	10				
Panicum coloratum	10				
Schimidtia					
Pappophoroides	10				350.3
Stipagrostis unimplumis	10	32.93	329.3	16.29	162.9
Subtotal highly Desirable		45.85	458.5	58.95	589.5
Eragrostis lehmanniana	7	16.97	118.79	33.99	237.93
Eragrostis trichophora	7				
Subtotal desirable		16.97	118.79	33.99	237.93
Aristida stipitata	4	1.01	4.04	0.85	3.4
Aristida meridionalis	4	6.87	27.48	6.12	24.48
Eragrostis pallens	4				
Pogonathria squarrosa	4				
Subtotal less Desirable		7.88	31.52	6.97	27.88
Aristida adscensionis	1				
Aristida congesta	1				
Schmidtia Kalahariensis	1	29.09	29.09	0.09	0.09
Subtotal undesirable		29.09	29.09	0.09	0.09
Total (%)		100		100	
Veld condition score			637.9		855.4
Basal cover %					3.2

**GANYESA COMMUNAL GRAZING AREA,
 LEASE FARMS AND POLAR FARM, 1995**



POLAR: VARIATION IN GRAZING CAPACITY (GANYESA)

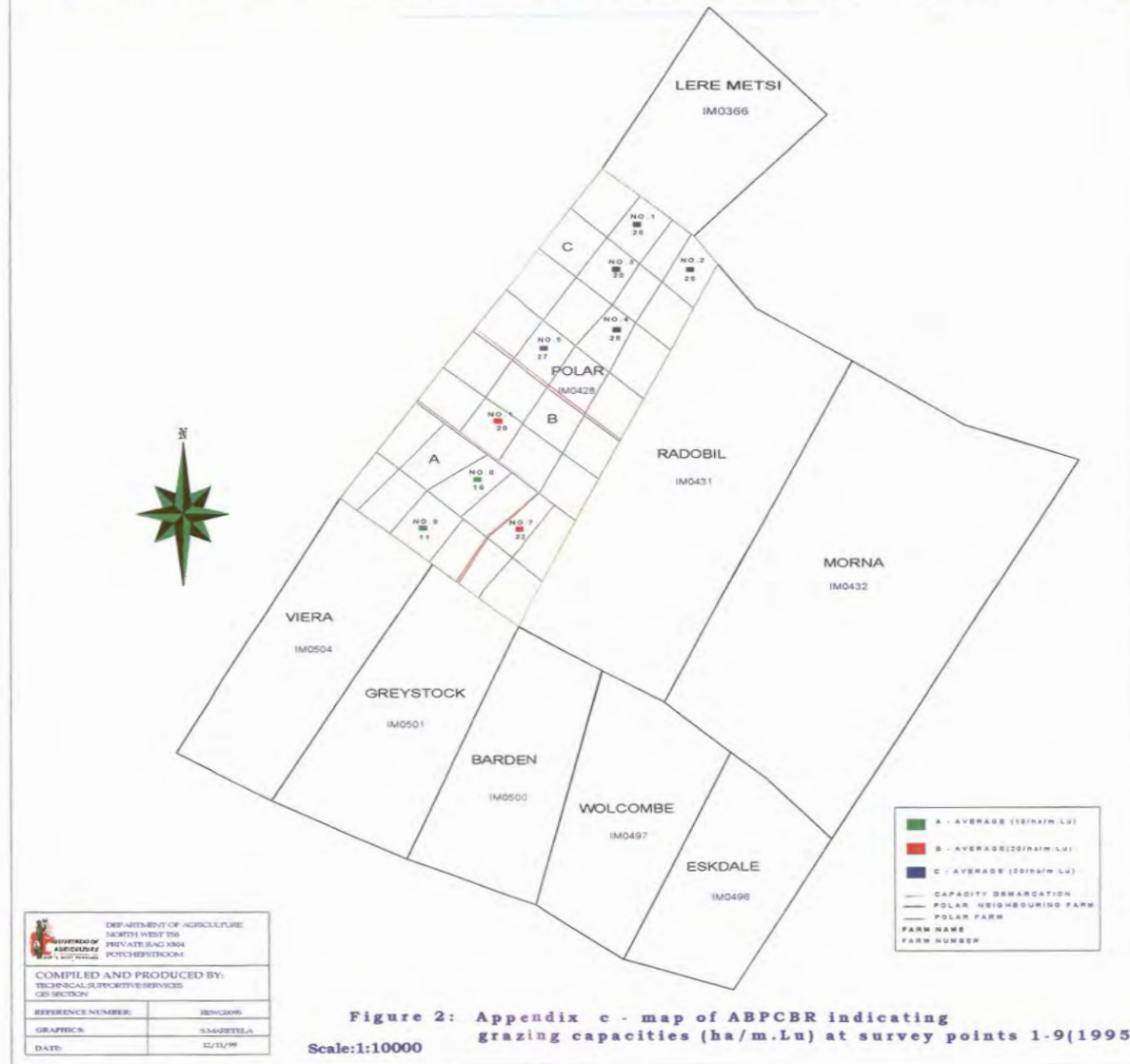


Figure 2: Appendix c - map of ABPCBR indicating grazing capacities (ha/m.Lu) at survey points 1-9 (1995)
Scale:1:10000

