ANNEXES

Annex 1 Corporate and Project Objectives

Annex 1.1 Corporate Objectives

Overview:

Chobe Agrivision is part of an investment company (the "Fund") whose vision is to create world-class farming operations and integrated businesses across the agricultural value chain, and to leave a legacy of responsible commercial agricultural practices in the region. The company's goals for the project include:

- Achieving economies of scale through the creation of service businesses along the value chain;
- Focusing on exporting food cross-border within Africa, building infrastructure throughout the region, and providing skill transfer at the local level;
- Acquiring brown field sites and significantly boost productivity, increasing production through a combination of farming techniques (improving soil quality through conservation tillage and crop rotation) and irrigation methods;
- Creating jobs and improving conditions for the farming workforce and their families;
- Offering a source of training within communities through outreach programmes and formal education, cultivating next generation of farm management from within the local communities;
- Providing small-scale farmers routes to market and access to infrastructure such as storage and milling.

Environmental, Social Responsibility and Environmental Risk Management Approach

The Fund shall use reasonable efforts to ensure that the following policies and guidelines are enforced.

The Fund's investments will strive to enhance economic development and have a positive impact on social advancement in the following manner:

(i) by fostering broad-based citizen economic empowerment in host countries beginning with indirect empowerment through employment, skill development, technology transfer and socio-economic capacity building. This is intended ultimately to lead to direct empowerment through equity ownership and management representation.

(ii) by adopting the IFC's Exclusion List for future investments. The IFC Exclusion List defines the types of projects that the IFC will not finance. The Fund shall not invest in the following:

- Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCBs, wildlife or products regulated under the Convention on International Trade in Endangered Species (CITES).
- Production or trade in weapons and munitions.
- Production or trade in alcoholic beverages (excluding beer and wine).
- Production or trade in tobacco.
- Gambling, casinos and equivalent enterprises.
- Production or trade in radioactive materials. This does not apply to the purchase of medical equipment, quality control (measurement) equipment and any equipment where IFC considers the radioactive source to be trivial and/or adequately shielded.
- Production or trade in unbonded asbestos fibres. This does not apply to purchase and use of bonded asbestos cement sheeting where the asbestos content is less than 20 percent.
- Drift net fishing in the marine environment using nets in excess of 2.5 km in length.
- Production or activities involving harmful or exploitative forms of forced labour/harmful child labour.
- Commercial logging operations for use in primary tropical moist forest.
- Production or trade in wood or other forestry products other than from sustainably managed forests.
- Production or activities that impinge on the lands owned, or claimed under adjudication, by indigenous peoples, without full documented consent of such peoples.

A reasonableness test will be applied when the activities of the project would have a significant development impact but circumstances of the country require adjustment to the Exclusion List.

The Fund shall use reasonable efforts to uphold the investment process to the same or equivalent standards as those set forth in the IFC, CDC, and DEG Environmental, Health and Safety guidelines. All projects in which the Fund invests shall to adhere to the Fund's framework.

Environmental Risk Management Policy

The Fund shall use reasonable efforts to ensure that Investments comply with local and international environmental guidelines in addition to the aforementioned guidelines.

The Fund is an agribusiness and food production fund which involves the use of agricultural chemicals and fertilisers. These products are registered and have been approved for use for annual crop production by the Ministry of Agriculture in the countries in which the Fund intends to operate. The Fund shall comply with the guidelines of the local Ministry of Agriculture or the appropriate regulatory body and be subject to the registration process for such chemicals to be used in this field. For example, the nature of crop production requires the use of fossil fuel for agricultural equipment; however such fuel will be used and stored in a manner that is compliant with local guidelines. Where local guidelines do not exist, the Fund shall adopt good international industry practice as recommended in the IFC Environmental, Health, and Safety Guidelines for Annual Crop Production. A copy of the guideline shall be made available to the management of the Fund's subsidiaries to ensure compliance.

The Fund's primary produce shall be processed and used largely in the domestic footprint of SADC. The Fund shall adopt the IFC Environmental, Health, and Safety Guidelines for Food and Beverage Processing. The Fund intends to adopt best practice in managing the environmental issues in food processing such as solid waste, wastewater, energy consumption and emissions to air. The Agricultural Advisor's management are pioneers in zero tillage practices and intend to employ and expand the use of conservation tillage practices to minimise the impact on global warming, and reduce carbon emissions.

The Fund's employment policy shall strictly adhere to the guidelines established by the Ministry of Agriculture of host country. There is also a broad based outline by the Ministry of Labour that covers all aspects of employment under the ministry of Agriculture. Where such guidelines do not exist in other countries, the Fund shall adopt the IFC Environmental, Health and Safety General Guidelines.

Annex 1.2 Project Objectives

CHOBE AGRIVISION* CO *LTD
Phone +260 211 292515

5th November, 2010

Letter of **Intent** - Cropit Farming, Mkushi.

Dear Sir,

We are proposing further developments in two phases on Whispering Hope Farm and Parklands Farm (adjoining properties on the right bank of the Munshiwemba River in Mkushi District), as described below.

Phasing
Phase 1 is proposed for immediate development.
Phase 2 is proposed for mid-20ll.

Proposed Developments

1. Proposed new irrigation holding dam of approximately 900,000m^3 with an underground pipeline to supply it from the Masebe Dam of approximately l, 000 m, serviced by a 3l5 kVa transformer. This pump house will also service the two proposed centre pivots for stage 1 of 70ha and 80 ha respectively. A 50 kVa feeder transformer for these two pivots is proposed. 2,300m of underground mainline will service these two pivots.

2. Proposed stage 2 development will be four centre pivots, two of 40ha and two of 60ha. These will be serviced by 2,7s0m of underground main line from the new irrigation holding dam described above. There will be a 3l5 kVa transformer at the base of the said dam to service the pumps to these centre pivots. A 200 kVa feeder transformer will service t he pivots a well as an inline booster pump.

3. Parklands - one extra 30ha pivot is proposed to complete the irrigation development on this farm.

Water Rights

The proposed new centre pivot irrigation will utilise existing water rights from the Masebe Dam, provide through membership of the Munshiwemba River Project consortium that was subject to a full EIA in 2005.

Land Clearing:

The following additional woodland clearance is anticipated to provide for new centre pivots:

Phase 1 (Whispering Hope Farm), approximately 80 ha of additional clearing to provide for the new 70 ha and 80 ha pivots

Phase 2 (Whispering Hope Farm), approximately 85 ha for the two new 60ha and two 40ha pivots
Phase 2 (Parklands Farm), approximately 15 ha of clearing to accommodate the additional 30ha pivot.

Roads:

Farm roads will need to be either relocated and/or constructed to accommodate the new developments (New roads to and around the new centre pivots will be required)

Housing

A number of new houses are proposed in the vicinity of the current homestead/farm yard on Whispering Hope for management. The on-going process of replacing pole and thatch houses labour housing with new brick houses and ventilated pit latrines will be continued without significant disruption to the woodland cover.

Boreholes:

Two boreholes are proposed for Whispering Hope to supplement existing domestic supplies.

We would appreciate your consideration of the above and advise on the level of environmentalassessment required.

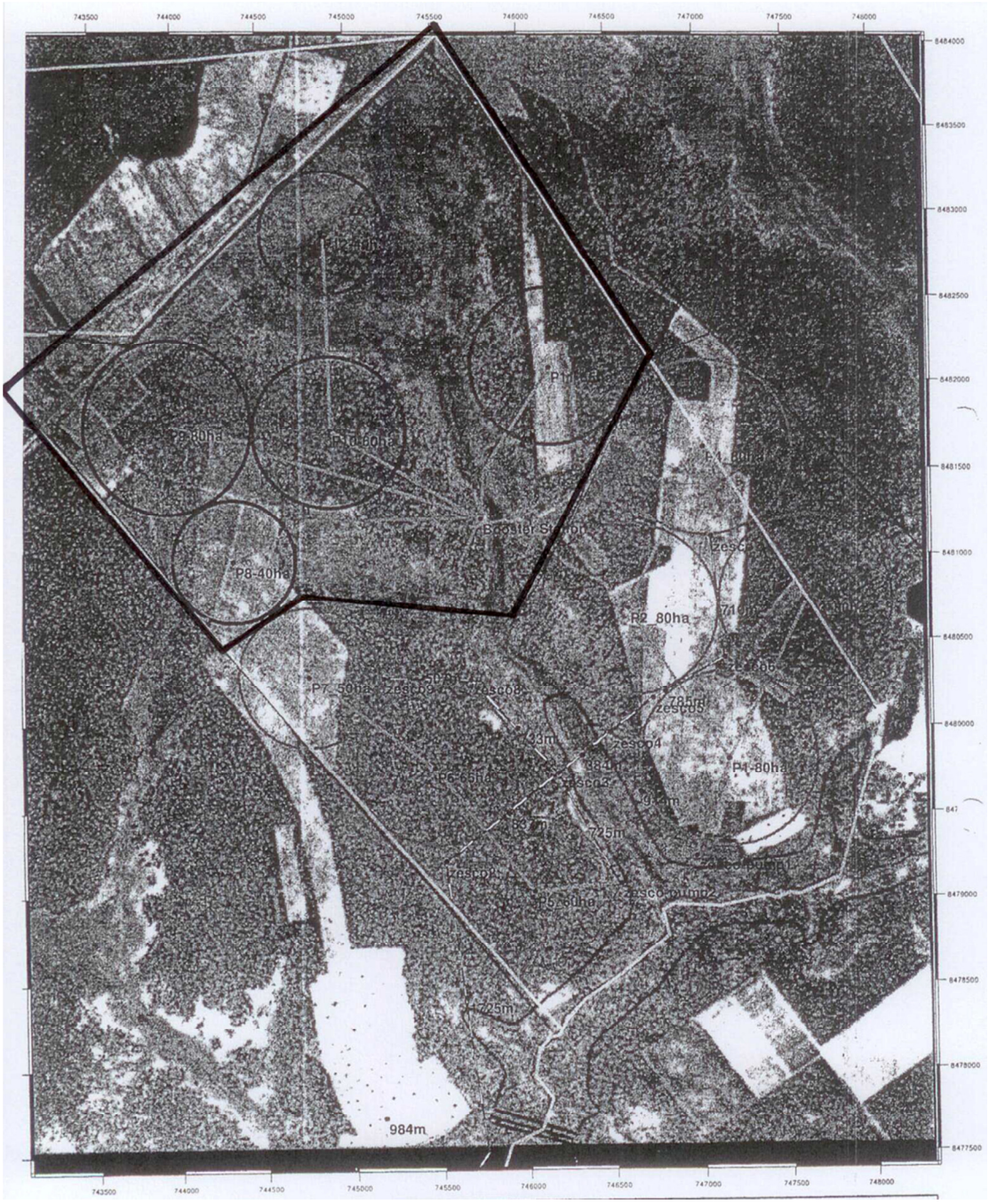
Yours faithfully,

F.D. Wallis.
For &on behalf of Chobe Agrivision Co. Ltd.
Mobile +260 0964 056131
Plot

Annex 1.3 Development Plan Diagrams

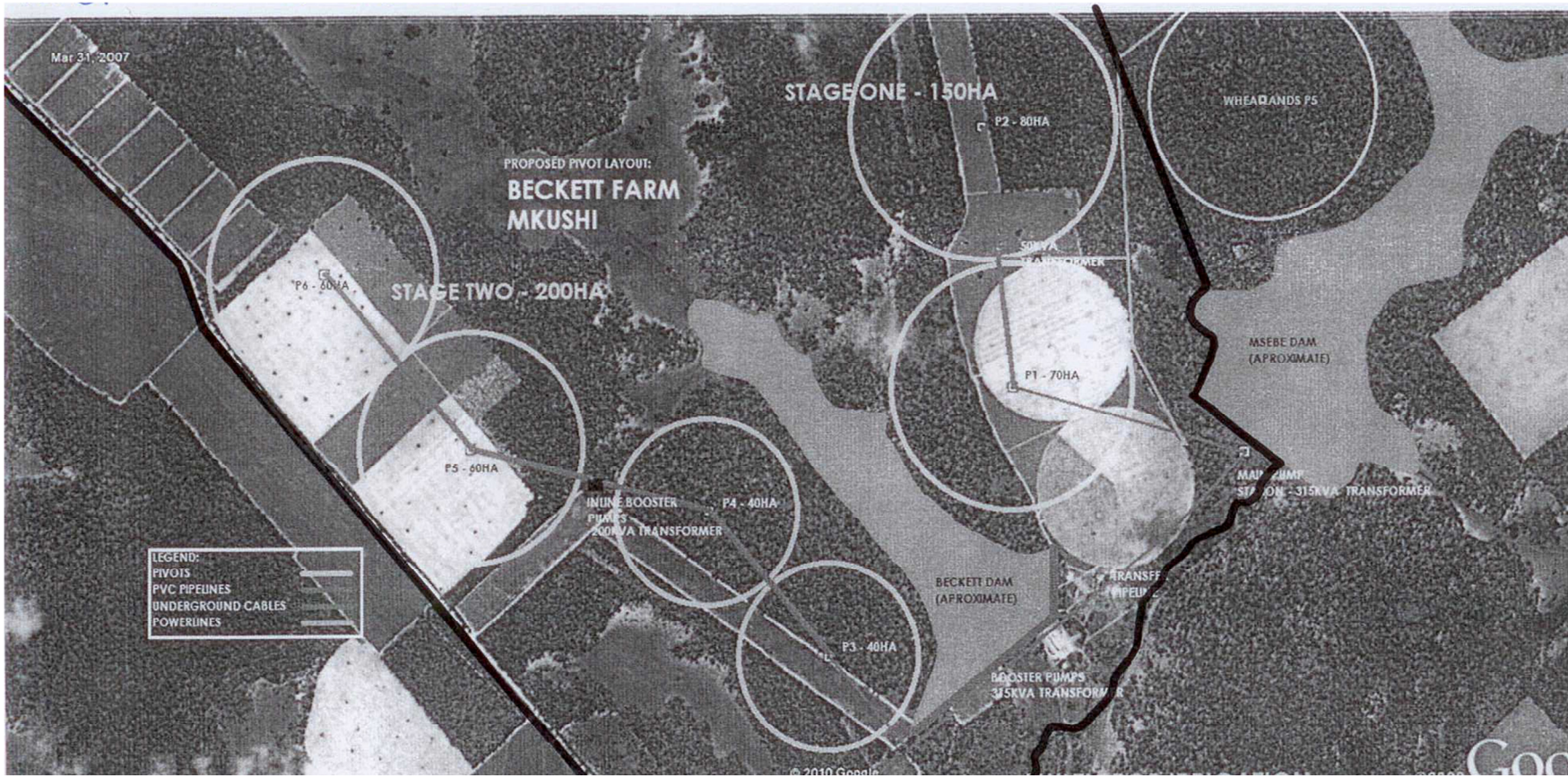
Annex 1.3.1 Parklands Farm Developments

(All three large centre pivots are already in operation)



Annex 1.3.2 Whispering Hope Developments

(The two large stage one centre pivots in the eastern corner are already operational- replacing the two smaller pivots that preceded them)



Annex 2 Environmental Impact Definitions

Nature of impact – positive or negative, direct or indirect

Duration

Temporary	–	very transient
Short term	–	only during the construction phase and mitigated or disappears during that phase
Medium term	–	only lasting for the construction phase
Long term	–	impacts expending beyond the construction phase, but progressively mitigated, or removed by natural processes
Permanent	–	impacts that will change the environment, or environmental processes on a permanent basis

Intensity
Severity

Low	-	impact on the environment does not affect natural processes in a significant way
Moderate	-	the environment is affected, but environmental processes continue in a modified way
High	-	impact changes environmental processes temporarily or permanently

Spatial extent

Project site	-	impacts limited to all, or part of the project development area
Local area	-	impacts affecting areas outside he immediate development area
Regional	-	impacts reaching well beyond the immediate zone of the project

Probability

Uncertain	-	there is insufficient information to determine a probability, but the uncertainty principle increases the significance of the impact
Improbable	-	the impact is unlikely to occur
Probable	-	the impact is likely to happen and warrants mitigating actions
Certain	-	the impact will be experienced and only mitigating actions can alleviate it.

Significance

Negligible	-	impact likely to be insignificant and no mitigating actions are required
Low	-	impact does not require revision on the project design, but may warrant mitigation
Moderate	-	impacts are expected on the environment and/or livelihoods and mitigation is required to minimise negative influences, or to maximise positive outcomes
High	-	significant negative impacts are expected and unless mitigating actions are possible to reduce the impacts, the project should be rejected or significantly re-designed.

Annex 3 Multilateral Agreement Data

Annex 3.1 Restricted Hazardous Chemicals Listed Under the Rotterdam Convention

2,4,5-T and its salts and esters

Aldrin

Asbestos - Actinolite, Anthophyllite, Amosite, Crocidolite, and Tremolite only

Benomyl (certain formulations)

Binapacryl

Captafol

Carbofuran (certain formulations)

Chlordane

Chlordimeform

Chlorobenzilate

DDT

Dieldrin

Dinitro-ortho-cresol (DNOC) and its salts

Dinoseb and its salts and esters

1,2-dibromoethane (EDB)

Ethylene dichloride

Ethylene oxide

Fluoroacetamide

Hexachlorocyclohexane (mixed isomers)

Heptachlor

Hexachlorobenzene

Lindane

Mercury compounds including inorganic and organometallic mercury compounds

Methamidophos (certain formulations)

Methyl parathion (certain formulations)

Monocrotophos

Parathion

Pentachlorophenol and its salts and esters

Phosphamidon (certain formulations)

Polybrominated biphenyls (PBB)

Polychlorinated biphenyls (PCB)

Polychlorinated terphenyls (PCT)

Tetraethyl lead

Tetramethyl lead

Thiram (certain formulations)

Toxaphene

Tris (2,3-dibromopropyl) phosphate (TRIS)

Substances Proposed for Addition to the Convention

Alachlor

Aldicarb

Chrysotile Asbestos

Endosulfan

Tributyl tin compounds

Annex 3.2 Persistent Organic Pesticides Listed Under the Stockholm Convention

LIST OF PERSISTENT ORGANIC POLLUTANTS IN THE STOCKHOLM CONVENTION

The chemicals targeted by the Stockholm Convention are listed in the annexes of the convention text:

Annex A (Elimination)

Parties must take measures to **eliminate** the production and use of the chemicals listed under Annex A.
Specific exemptions for use or production are listed in the Annex and apply only to Parties that
register for them.

	PESTICIDE	INDUSTRIAL CHEMICAL	BY=PRODUCT
Aldrin	✓		
Chlordane	✓		
Chlordecone	✓		
Dieldrin	✓		
Endrin	✓		
Heptachlor	✓		
Hexabromobiphenyl		✓	
Hexabromodiphenyl ether and Heptabromodiphenyl ether		✓	
Hexachlorobenzene (HCB)	✓	✓	
Alpha hexachlorocyclohexane	✓		✓
Beta hexachlorocyclohexane	✓		✓
Lindane	✓		
Mirex	✓		

	PESTICIDE	INDUSTRIAL CHEMICAL	BY=PRODUCT
Pentachlorobenzene	✓	✓	
Polychlorinated biphenyls (PCB)		✓	
Tetrabromodiphenyl ether and pentabromodiphenyl ether		✓	
Toxaphene	✓		

Annex B (Restriction)

Parties must take measures to **restrict** the production and use of the chemicals listed under Annex B in light of any purposes and/or specific exemptions listed in the Annex.

	PESTICIDE	INDUSTRIAL CHEMICAL	BY=PRODUCT
DDT	✓		
Perfluorooctane sufonic acid, its salts and Perfluorooctane sufonyi fluoride		✓	

Annex C (Unintentional production)

Parties must take measures to reduce the **unintentional releases** of chemicals listed under Annex C with the goal of continuing minimization and, where feasible, ultimate elimination.

	PESTICIDE	INDUSTRIAL CHEMICAL	BY=PRODUCT
Polychlorinated dibenzo-p-dioxins (PCDD)			✓
Polychlorinated dibenzofurans (PCDF)			✓
Hexachlorobenzene (HCB)			✓
Pentachlorobenzene			✓

Polychlorinated biphenyls (PCB)	✓

LIST OF CHEMICALS PROPOSED FOR LISTING UNDER THE CONVENTION

Any Party may submit proposal for listing a new chemical in Annex A, B, or C of the Convention. The POPs Review Committee evaluates the proposals and makes recommendation to the Conference of the Parties on such listing. Currently following chemicals are under review:

Short-chained chlorinated paraffins
Endosulfan
Hexabromocyclododecane.

Annex 4 Photographic Record

Left to Right: Temporary and traditional housing, Parklands, and Beckett



Left to Right: Improved housing at Parklands, and Whispering Hope



Left to Right: Water provision Parklands, Whispering Hope and Beckett



Left to Right: Improved Sanitation at Parklands, Whispering Hope and Parklands managers' houses



Parklands Farm Infrastructure: left to right plant shed and grain silos

Storage of agricultural chemicals (no secure fence), seed and fertilizers

Farm bulk diesel supply

Parklands Farm: Raw water re-pumping station and Masebe Dam wall (the originally bulk water source for Parklands Farm)

Stabilising the downstream face of the Kampelembe Dambo night storage dam

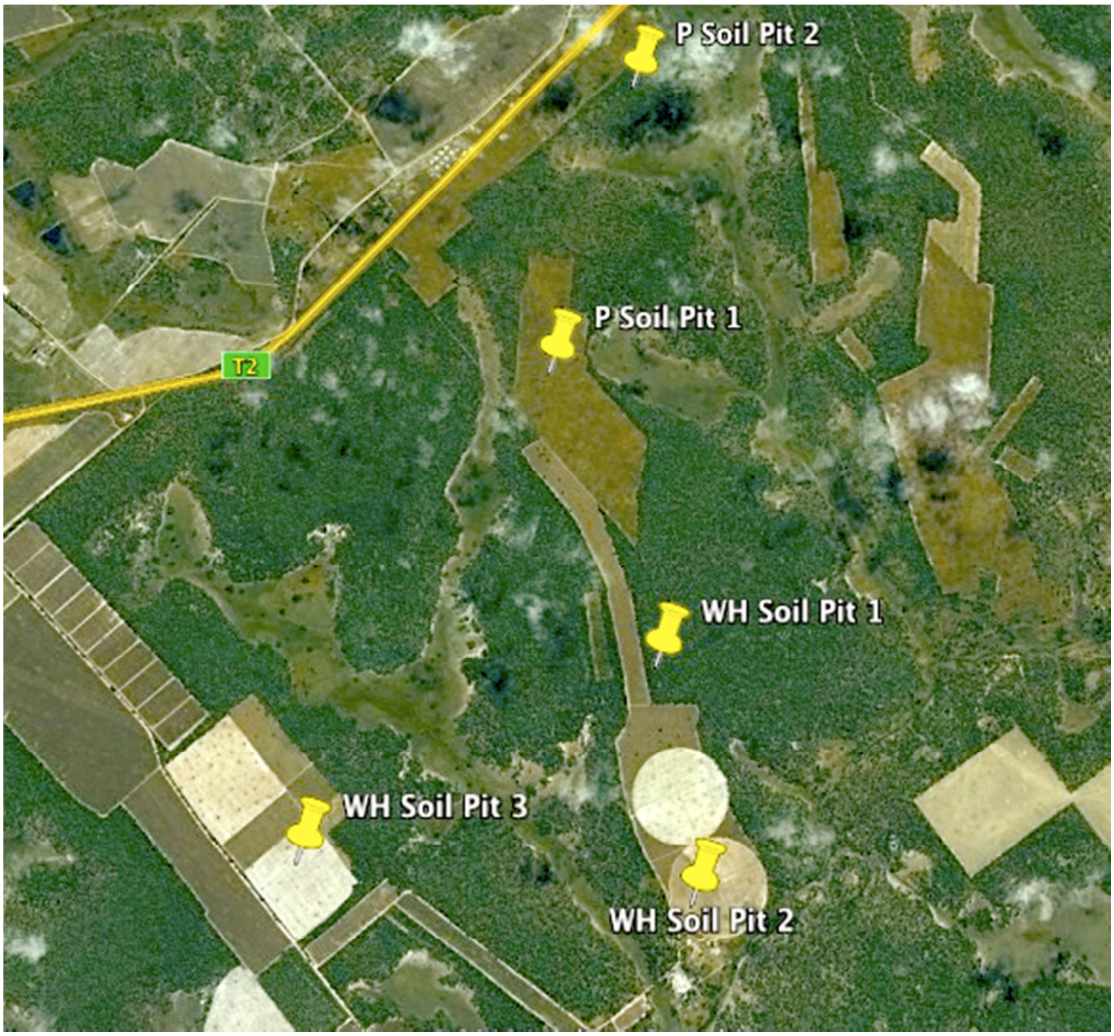
Parklands Farm looking south from the main northern gate illustrating the valley slope, terrace and dambo head draining right into the Munshiwemba River and the extent of uninterrupted field area following extensive woodland clearing

Soil profiles on the Parklands and Whispering Hope Farms illustrating the largely undifferentiated nature of these soils, the low granular nature of soil structure and the existence of an organic horizon

Soils are (left) from the upper slope of Whispering Hope Farm, (centre) from the upper slope on Parklands Farm and (right) from the head of the Kampelembe Dambo on Parklands Farm (note presence of mottling in the lower horizon)

Annex 5 Materials Testing Results

Annex 5.1 Location of Soil Pits



Annex 5.2 Soil Testing Results (Analysed by the University of Zambia Soil Science Department)

Lab no.	Sample	Sample Id	pH	OM	P	K	Na	Ca	Mg	Cu	Fe	Mn
			$CaCl_2$	%	mg/kg	cmol/kg	cmol/kg	cmol/kg	cmol/kg	mg/kg	mg/kg	mg/kg
20101978	P1/A	Parklands Northeast P1	5.26	1.68	6.06	0.15	0.05	1.97	1.36	0.65	20.20	16.06
20101979	P1/O	Parklands Northeast P1	4.46	0.16	23.77	0.16	0.04	1.06	0.27	0.64	7.62	19.44
20101980	P2/O	Parklands dambo P2	3.94	1.84	30.49	0.17	0.04	0.35	0.22	0.55	48.80	2.82
20101981	P2/A	Parklands dambo P2	3.56	0.40	0.28	0.07	0.04	0.12	0.06	0.56	9.88	0.36
20101982	P3/O	Parklands Northwest P3	6.05	2.56	8.05	0.32	0.06	2.06	2.06	0.60	7.90	9.20
20101983	P3/A	Parklands Northwest P3	4.66	0.64	16.28	0.17	0.05	0.50	0.56	0.58	6.88	5.26
20101984	WH1/O	Whispering Hope northwest WH1	5.13	3.12	15.75	0.17	0.05	2.59	1.27	0.63	9.18	16.44
20101985	WH1/A	Whispering Hope northwest WH1	5.04	0.96	6.41	0.11	0.04	0.47	0.25	0.54	4.60	6.92
20101986	WH2/O	Whispering Hope northeast WH2	4.86	1.28	7.07	0.17	0.06	0.78	0.69	0.65	18.12	10.74
20101987	WH2/A	Whispering Hope northeast WH2	4.06	0.64	12.43	0.11	0.05	0.45	0.53	0.75	4.78	4.66
20101988	WH3/O	Whispering Hope south WH3	4.90	0.72	10.36	0.19	0.03	1.19	0.98	0.67	9.88	4.88
20101989	WH3/A	Whispering Hope south WH3	4.01	0.40	4.20	0.17	0.05	0.43	1.11	0.67	1.46	1.44
Averages			**4.66**	**1.20**	**11.76**	**0.16**	**0.05**	**1.00**	**0.78**	**0.63**	**12.44**	**8.19**

Lab	Sample	Sample	Zn	S	B	CEC	NO_3-N	Sand	Clay	Silt	Texture
no.	**Id**	**Id**	**mg/kg**	**mg/kg**	**mg/kg**	**cmol/kg**	**mg/kg**	**%**	**%**	**%**	**Class**
20101978	P1/A	Parklands Northeast P1	0.42	25.17	0.59	6.00	210.00	62.80	22.00	15.20	Sandy clay
20101979	P1/O	Parklands Northeast P1	0.29	29.67	0.04	6.00	126.00	72.80	8.00	19.20	Sandy loam
20101980	P2/O	Parklands dambo P2	0.29	13.67	0.63	3.33	205.33	84.80	8.00	7.20	Loamy sand
20101981	P2/A	Parklands dambo P2	0.20	7.67	0.03	4.00	140.47	48.80	40.00	11.20	Sandy clay
20101982	P3/O	Parklands Northwest P3	0.86	24.33	0.05	6.67	172.67	78.80	8.00	13.20	Loamy sand
20101983	P3/A	Parklands Northwest P3	0.20	15.33	0.08	4.67	121.33	76.80	10.00	13.20	Sandy loam
20101984	WH1/O	Whispering Hope	0.76	4.33	0.21	7.33	88.67	84.80	10.00	5.20	Loamy sand
20101985	WH1/A	Whispering Hope	0.12	26.50	0.40	4.00	93.33	80.80	10.00	9.20	Loamy sand
20101986	WH2/O	Whispering Hope	0.50	46.83	0.61	4.00	126.00	76.80	12.00	11.20	Sandy loam
20101987	WH2/A	Whispering Hope	0.15	<0.17	0.31	5.33	140.00	66.80	20.00	13.20	Sandy loam
20101988	WH3/O	Whispering Hope south	0.40	56.00	1.28	6.00	70.00	72.80	16.00	11.20	Sandy loam
20101989	WH3/A	Whispering Hope south	0.16	2.50	<0.01	7.33	65.33	52.80	40.00	7.20	Sandy clay
Averages			**0.36**	**21.00**	**0.35**	**5.39**	**129.93**	**71.63**	**17.00**	**11.37**	

Annex 5.3 Water Quality Test Results (Analysed by the University of Zambia Environmental Engineering Laboratory

Parklands and Whispering Hope Farms Pesticide Analyses							
Parameter	**Results**	**Results**	**Results**	**Results**	**Results**	**Results**	
	P1 Parklands dam raw water	**P3 Parklands borehole**	**W1 Wheatlands dam raw water**	**W2 Whispering Hope borehole 1**	**W3 Whispering Hope borehole 2**	**W4 Whispering Hope well source**	**WHO maximum permissible value for drinking water**
pH	7.41	8.01	7.90	7.79	7.19	7.80	6.5-8.5
Turbidity (NTU)	28.2	5.12	5.95	0.64	0.17	39.40	5
Conductivity (mMhos/cm)	64	78	58	107	350	48	1500
Total Dissolved Solids (mg/l)	42	51	26	72	228	32	1000
Total Hardness (as $CaCO_3$ mg/l)	46	52	38	66	318	34	500
Ammonia (as NH_4-N mg/l)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1.5
Sulphates	4.95	18.50	1.8	<0.01	<0.02	11.90	250
Sulphides	<0.02	<0.2	<0.02	<0.02	<0.01	<0.02	-
Nitrites (as NO_2-N mg/l)	0.001	0.003	0.007	0.006	0.003	0.008	0.100
Nitrates (as NO_3-N mg/l)	0.15	<0.01	0.29	0.59	0.34	0.11	10
Total Phosporous	0.92	0.35	0.52	0.37	0.07	1.15	5
Dissolved Oxygen (as O_2 mg/l)	4.3	3.7	5.1	4.8	4.2	5.2	-
Chemical Oxygen Demand (as O_2 mg/l)	28	26	18	21	16	30	-
Biological Oxygen Demand (as O_2 mg/l)	0.28	0.02	0.33	0.20	0.22	0.20	-
Nitrogen	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.2
Aluminium							
Cadmium	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01

Arsenic	0.014	0.01	0.01	<0.01	<0.01	<0.01	3
Zinc	3.16	0.48	0.55	0.14	0.13	2.62	0.3
Iron	2.16	2.11	1.06	2.02	4.86	1.98	-
Potassium	19.63	17.08	10.66	9.16	31.38	17.1	200
Sodium	10.4	17.6	6.4	25	91.2	9.6	200
Calcium	4.8	1.92	2.4	0.48	21.6	2.4	-
Magnesium	0.02	<0.01	<0.01	<0.01	<0.01	0.02	0.05
Manganese	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	1.5
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.02
Nickel	10	20	12	-	10	15	-
Bacteriological Results							
Total Coliforms (No./100ml)	128	0	88	88	94	96	0
Faecal Coliforms (no./100ml)	100	0	35	35	75	85	0

Annex 5.4 Pesticide Test Results (Analysed by the Zambia Bureau of Standards Testing Laboratory)

Parklands and Whispering Hope Farms Pesticide Analyses

Parameter	Units	Method	Results	Results	
			WL4 Dam Water	**P3A2 Soil**	**Banned Chemicals**
Aldrin	ppb	BS EN 12393	0	5.2	**X**
Dieldrin	ppb	BS EN 12393	0.01	4.6	**X**
DDE	ppb	BS EN 12393	0	0	**X**
DDD	ppb	BS EN 12393	0	0	**X**
DDT	ppb	BS EN 12393	0	0	**X**
Endosulphan	ppb	BS EN 12393	0	0	
Heptachlor	ppb	BS EN 12393	0.04	15	**X**
Heptachlor epoxide	ppb	BS EN 12393	0	4.5	**X**
Lindane (alpha BHC)	ppb	BS EN 12393	0	5.4	**NR**
Methoxychlor	ppb	BS EN 12393	0	0	**X**
Endrin	ppb	BS EN 12393	0	0	**NR**

X	Banned	**NR**	Not recommended

Annex 6 Plant Species List From Parklands and Whispering Hope Farms

MKUSHI FARM BIODIVERSITY SURVEY

Farm No. 3283 Parklands and Farm No. 2380 Whispering Hope (formerly Beckett Farm)

Bemba/Lala names given by Charles Tembo

WOODLAND

Canopy trees

Acacia goetzei	mutandacuwa
Brachystegia longifolia	musamba
Brachystegia spiciformis	muputu
Burkea africana	mukosho
Julbernardia globiflora	munye
Julbernardia paniculata	mutondo
Parinari curatellifolia	mupundu
Pericopsis angolensis	mubanga
Pterocarpus angolensis	mulombe
Pterocarpus rotundifolius	mulombe

Smaller trees & shrubs

Acacia gerrardii	mungalushi
Allophylus africanus	-
Bridelia cathartica	-
Combretum adenogonium	-
Combetum molle	-
Crotalaria natalitia	lundawaciti
Dalbergiella nyasae	kafundansofu
Dichrostachys cinerea	katenge
Diospyros kirkii	mucenja
Diplorhynchus condylocarpon	mwenge
Dombeya rotundifolia	mukole
Erythrina abyssinica	-
Faurea rochetiana	mushokoto
Ficus burkei	mutaba
Flacourtia indica	mukulumbisha
Flueggea virosa	kasansubwanga
Gymnosporia buxifolia	musekankwali
Lannea discolor	nakaumbu
Maprounea africana	kafulameme
Monotes glaber	cimpampa
Monotes sp.	cimpampa
Multidentia crassa	mupapala
Ozoroa sp.	mabelemabele
Pappea capensis	mubangaculu
Pavetta schumanniana	-
Protea angolensis	-
Pseudolachnostylis maprouneifolia	musolo
Psorospermum febrifuga	kafifi
Psychotria kirkii	-
Senna singueana	musambamfwa
Steganotaenia araliacea	kapolopolo

Strychnos innocua	busuku lutamwa
Strychnos sp.	sansa
Swartzia madagascariensis	ndale
Syzygium guineense macrocarpum	musafwa
Terminalia stenostachya	kalunguti
Turraea nilotica	lunda
Uapaca kirkiana	musuku
Uapaca nitida	-
Uapaca sansibarica	-
Vernonia myriantha	-
Vitex madiensis	-

Subshrubs (annual stems) & herbs (Dicot)

Acalypha allenii	-
Acalypha villicaulis	lwabya
Adenodolichos punctatus	lufuba
Annonia stenophylla nana	-
Aspilia pluriseta	kantemwa
Clematopsis villosa	-
Cryptolepis sp.	lundawapanshi
Cryptosepalum maraviense	mpandala
Cussonia corbusieri	mutaba
Cyphostemma junceum	-
Cyphostemma sp. (5-fol.)	-
Diospyros virgata	mumpobobo
Diplolophium zambesianum	-
Dolichos gululu	kalukumo
Dolichos kilimandscharicus	cibombolwe
Dorstenia benguelensis	mutandangoma
Droogmansia pteropus	mulendeni
Eriosema affine	kapulabalala
Euphorbia sp. (linear leaves)	kantemya
Fadogia cienkowskii	ibushi
Fadogia triphylla	-
Gardenia subacaulus	manceba
Geophila obvalata	manceba
Gnidia sp. 1 (tufted)	-
Indigofera antunesiana	lunda
Indigofera setiflora	-
Indigofera sutherlandioides	-
Indigofera sp., small, prostrate	-
Lannea edulis	kambolya
Launea sp.	-
Ochna leptoclada	iconi
Ochna richardsiae	oconi
Ocimum sp.	kafupa
Protea baumii	mushokoto
Pseudarthria hookeri	kalambatila
Rhus longipes	-
Rourea orientalis	nacisungu
Spermacoce dibrachiata (? Immature)	-
Syzygium guineense huillense	-
Thesium sp.	-
Thunbergia kirkiana	-

Shrubs & herbs (Monocots)

Commelina benghalensis	-
Cyanotis longifolia	-
Eulophia euantha	-
Eulophia sp. (small)	-
Gloriosa superb	-
Nervilia ballii	-
Siphonochilus sp. (narrow lvs.)	mutungulu
Tacca leontopetaloides	kalukumo

Scandents, climbers, creepers

Cucumis hirsutus	-
Dioscorea quartiniana	-
Mucuna (?) sp.	-
?Neonotonia wightii (immature)	kabisha akululu
Rhus magalismontana trifoliolata	-
Rhynchosia hirta	-

Grasses

Brachiaria ?nigropedata	-
Eragrostis racemosa	-

Sedges

Bulbostylis macra	-
Cyperus angolensis	-
Cyperus esculentus	-
Cyperus margaritaceus	-
Lipocarpha chinenensis	-
Scleria bulbifera	-

TERMITE MOUNDS

Larger trees

Acacia sieberiana	mungalunshi
Bridelia macrantha	-
Combretum molle	mulama
Diospyros mespiliformis	mucenja
Ficus sycomorus	mukuyu
Ziziphus mucronata	ngwelulu

Smaller trees & shrubs

Allophylus africanus	-
Diospyros lycioides	-
Diospyros zombensis	-
Dombeya rotundifolia	mukole
Euclea racemosa	-
Feretia aeruginescens	-
Flemingia grahamiana	-
Hibiscus sp.	-
Mystroxylon aethiopicum	-
Oncoba spinosa	nsense
Strychnos potatorum	musangwa

Woody scandents & climbers

Capparis tomentosa	-
Combretum mossambicense	-

Desmodium uncinatum (‘Silverleaf’)	-
Carissa edulis	mukomfwa
Grewia flavescens	mutende
Phyllanthus muellerianus	muyema
Soft woody climbers	
Adenia gummifera	kaminda, ng’ombeyanina
Ampelocissus africanus	-
Rhoicissus trifoliata	-
Thunbergia crispa	musangwa
Herbaceous dicots	
Plumbago amplexicaulis	-
Pouzolzia parasitica	-
Tragia okanyua	mbabango
Herbaceous monocots	
Commelina benghalensis	-
Scadoxus multiflorus	-
DAMBO	
Trees	
Bridelia micrantha	-
Syzygium guineense subsp. guineense	mufinsa
Vitex doniana	mucinka
Shrubs	
Aeschynomene sp.	mupetwalupe
Dissotis princeps	munsonga
Ficus verruculosa	mutombolyo
Herbs	
Cucurbit, unid.	-
Eulophia angolensis	-
Eulophia sp.	-
Haplocarpha scaposa	-
Kniphofia sp.	-
Melanthera sp.	-
Pandiaka carsonii	-
Persicaria decipiens	-
Grasses	
Hyparrhenia diplandra	-
Phragmites mauritianus (reed)	-
Sedges	
Ascolepis protea	-
Cyperus sp.	-
Fimbristylis sp.	-
OTHER GROUPS	
Fungus	
Coprinus sp. (on dung)	-
Lactarius sp. (pale brown)	mukwesonge

Annex 7 Bird Species List From Quarter Degree Square E28° 00", S13° 30"(Covering Parklands and Whispering Hope Farms)

Podicepedidae
1. Little Grebe
Phalacrocoracidae
2. Reed Cormorant
Anhingidae
3. Darter
Pelicanidae
4. Pink-backed Pelican
Ardeidae
5. Little Bittern
6. Common Squacco Heron
Rufour-bellied Heron
7. Cattle Egret
8. Green-backed Heron
9. Black Egret
10. Yellow-billed Egret
11. Great White Egret
12. Purple Heron
13. Grey Heron
14. Goliath Heron
Scopidae
15. Hamerkop
Ciconidae
16. Openbill Stork
17. Abdim's Stork
18. Woolly-necked Stork
19. White Stork
20. Maribou Stork
Balaenicipitidae
-
Threskiornithidae
21. Sacred Ibis
22. Hadeda Ibis
23. Glossy Ibis
Phoenicopteridae
-
Anatidae
24. Fulvous Whistling Duck
25. White-faced Whistling Duck
26. Spur-winged Goose
27. Knob-billed Duck
28. African Pygmy Goose
29. African Black Duck
30. Yellow-billed Duck
31. Red-billed Teal
32. Hottentot Teal
33. Southern Pochard

34. White-backed Duck
Accipiteridae
35. Black-shouldered Kite
36. Black/Yellow-billed Kite
37. Hooded Vulture
38. White-backed Vulture
39. White-headed Vulture
40. Back-breasted Snake Eagle
41. Brown Snake Eagle
42. Western Banded Snake Eagle
43. Bateleur Eagle
44. Gymnogene
45. African Marsh Harrier
46. Dark Chanting Goshawk
47. Black Goshawk
48. Gabar Goshawk
49. Ovambo Sparrowhawk
50. Little Sparrowhawk
51. African Goshawk
52. Shikra/Little Banded Goshawk
53. Lizard Buzzard
54. Common Buzzard
55. Augur Buzzard
56. Wahlberg's Eagle
57. Tawny Eagle
58. African Hawk Eagle
59. Ayer's Hawk Eagle
60. Long-crested Eagle
61. Crowned Eagle
62. Osprey
Sagittaridae
-
Falconidae
63. Lesser Kestrel
64. Dickinson's Kestrel
65. Amur/Eastern Red-footed Falcon
66. European Hobby Falcon
67. African Hobby Falcon
68. Peregrine Falcon
Phasianidae
69. Coqui Francolin
70. Shelley's Francolin
71. Red-necked Francolin
72. Harlequin Quail
73. Blue Quail
Numididae
74. Helmeted Guineafowl

Turnicidae

75. Kurrichane Buttonquail
Rallidae
76. African Water Rail
77. Black Crake
78. Red-chested Flufftail
79. Striped Crake
80. Purple Gallinule
81. Lesser Gallinule
82. Common Moorhen
83. Lesser Moorhen
84. Red-knobbed Coot
Gruidae
-
Heliornithidae
-
Otididae
-
Jacanidae
85. African Jacana
86. Lesser Jacana
Rostratulidae
87. Painted Snipe
Recurvirosteridae
-
Burhinidae
88. Spotted Dikkop
Glareolidae
89. Temminck's Courser
90. Common/Red-winged Pratincole
Charadriidae
91. Three-banded Plover
92. Blacksmith Plover
93. Crowned Plover
Scolopacidae
94. Great Snipe
95. Greenshank
96. Green Sandpiper
97. Wood Sandpiper
98. Common Sandpiper
99. Little Stint
100. Curlew Sandpiper
Laridae
101. Grey-headed Gull
Sternidae
-
Rynchopidae
-

Pteroclididae

-
Columbidae
102. Laughing Dove
103. Cape Turtle Dove
104. Red-eyed Dove
105. Emerald-spotted Wood Dove
106. Blue-spotted Wood Dove
107. Namaqua Dove
108. Green Pigeon
Psittacidae
109. Meyer's Parrot
Musophagidae
110. Scalow's Turaco
111. Lady Ross's Turaco
Cuculidae
112. Red-chested Cuckoo
113. Black Cuckoo
114. European grey Cuckoo
115. African Grey Cuckoo
116. Striped Crested Cuckoo
117. Klaas's Cuckoo
118. Didric Cuckoo
119. African black Coucal
120. Coppery-tailed Coucal
121. Senegal Coucal
122. Burchell's Cuckoo
Tytonidae
123. Barn Owl
Strigidae
124. Spotted Eagle Owl
125. Pearl-spotted Owlet
126. Barred Owlet
127. Wood Owl
Caprimulidae
128. Fiery-necked Nightjar
129. Freckled Rock Nightjar
130. Gaboon Nightjar
131. Pennant-winged Nightjar
Apodidae
132. Bat-like Spinetail
133. African Palm Swift
134. European Swift
135. Little Swift
Coliidae
136. Speckled Nightjar
Trogonidae
137. Narina Trogon

Alcedinidae

138. Half-collared Kingfisher
139. Malachite Kingfisher
140. Pygmy Kingfisher
141. Brown-headed Kingfisher
142. Chestnut-bellied Kingfisher

143. Senegal/Woodland Kingfisher
144. Striped Kingfisher
145. Giant Kingfisher
146. Pied Kingfisher

Meropidae

147. Little Bee-eater
148. White-cheeked Bee-eater
149. Swallow-tailed Bee-eater
150. Blue-cheeked Bee-eater
151. European Bee-eater
152. Southern Carmine Bee-eater

Coraciidae

153. European Roller
154. Lilac-breasted Roller
155. Racket-tailed Roller
156. Purple Roller
157. Broad-billed Roller

Phoeniculidae

158. Red-billed Wood Hoopoe
159. Scimitarbill

Upupidae

160. Hoopoe

Bucerotidae

161. Crowned Hornbill
162. Pale-billed Hornbill
163. Trumpeter Hornbill

Bucorvidae

164. Southern Ground Hornbill

Lybiidae

165. Anchieta's Barbet
166. Yellow-fronted Tinkerbird
167. Golden-rumped Tinkerbird
168. Miombo Pied Barbet
169. Black-collared Barbet
170. Black-backed Barbet
171. Crested Barbet

Indicatoridae

172. Sharp-billed Honeyguide
173. Brown-backed Honeyguide
174. Scaly-throated Honeyguide
175. Greater Honeyguide
176. Lesser Honeyguide
177. Eastern Least Honeyguide

Picidae
178. Bennett's Woodpecker
179. Golden-tailed Woodpecker
180. Lesser-spotted Woodpecker
181. Cardinal Woodpecker
182. Bearded Woodpecker
183. Olive Woodpecker
Eurylaimidae
184. African Broadbill
Pittidae
-
Alaudidae
185. Flappet Lark
186. Dusky Lark
187. Red-capped Lark
Hirundinidae
188. Banded Martin
189. European Sand Martin
190. European Swallow
191. White-throated Swallow
192. Grey-rumped Swallow
193. Red-breasted Swallow
194. Mosque Swallow
195. Lesser-striped Swallow
196. House Martin
197. Black Saw-wing
Motacillidae
198. Yellow Wagtail
199. African Pied Wagtail
200. Richard's Pipit
201. Buffy Pipit
202. Long-billed Pipit
203. Tree Pipit
204. Fullerborn's Longclaw
Campephagidae
205. White-breasted Cuckoo-shrike
206. Purple-throated Cuckoo-shrike
207. Black Cuckoo-shrike
Pycnonotidae
208. Little Greenbul
209. Yellow-bellied Greenbull
210. Terrestrial Bulbul
211. Grey-olive Bulbul
212. Common/Black-eyed Bulbul
Turdidae
213. Miombo Rock Thrush
214. West African Thrush
215. Kurrichane Thrush
216. Groundscraper Thrush

217. Bocage's Robin
218. Heuglin's Robin
219. Central Bearded Scrub Robin
220. White-browed Scrub Robin
221. Stonechat
222. Whinchat
223. Capped Wheatear
224. Familiar Chat
225. Arnot's Chat

Sylviidae

226. Broad-tailed Warbler
227. Little Rush Warbler
228. Evergreen Forest Warbler
229. African Moustached Warbler
230. Sedge Warbler
231. Great Reed Warbler
232. Lesser Swamp Warbler
233. African Yellow Warbler
234. Green-capped Eremomela
235. Black-collared Eremomela
236. Yellow-bellied Eremomela
237. Red-capped Crombec
238. Long-billed Crombec
239. Willow Warbler
240. Laura's Warbler
241. Yellow-bellied Hyliota
242. Southern Hyliota
243. Garden Warbler
244. Common Whitethroat
245. Fan-tailed Cisticola
246. Croaking Cisticola
247. Rattling Cisticola
248. Short-winged Cisticola
249. Neddicky
250. Trilling Cisticola
251. Red-faced Cisticola
252. Chirping Cisticola
253. Tawny-flanked Prinia
254. Yellow-breasted Apalis
255. Grey Apalis
256. Bleating Bush Warbler
257. Miombo Barred Warbler

Muscicapidae

258. Pallid Flycatcher
259. Southern Black Flycatcher
260. Collared Flycatcher
261. Spotted Flycatcher
262. Dusky Flycatcher
263. Ashy Flycatcher

264. Bohm's Flycatcher
265. Lead-coloured Flycatcher
Platysteiridae
266. Chinspot Batis
267. Black-throated Wattle-eye
Monarchidae
268. White-tailed Blue Flycatcher
269. Blue-mantled Fycatcher
270. Paradise Flycatcher
Timaliidae
271. Arrow-marked Babbler
Paridae
272. Miombo Grey Tit
273. White-winged Black Tit
274. Rufous-bellied Tit
Remizidae
275. Grey Penduline Tit
Certhiidae
276. Spotted Creeper
Nectariniidae
277. Violet-backed Sunbird
278. Collared Sunbird
279. Olive Sunbird
280. White-bellied Sunbird
281. Miombo Double-collared Sunbird
282. Shelley's Sunbird
283. Purple-banded Sunbird
284. Coppery Sunbird
Zosteropidae
285. Yellow White-eye
Oriolidae
286. European Golden Oriole
287. African Golden Oriole
288. Eastern Black-headed Oriole
Laniidae
289. Sousa's Shrike
290. Red-backed Shrike
291. Fiscal Shrike
Malaconotidae
292. Brubru
293. Southern Puffback
294. Marsh Tchagra
295. Brown-headed Tchagra
296. Black-crowned Tchagra
297. Tropical Boubou
298. Orange-breasted Bush Shrike
299. Grey-headed Bush Shrike
Prionopidae
300. White Helmet Shrike

301. Retz's Red-billed Helmet Shrike
Dicruridae
302. Square-tailed Drongo
303. Fork-tailed Drongo
Corvidae
304. Pied Crow
305. White-necked Raven
Sternidae
306. Violet-backed Starling
307. Wattled Starling
Buphagidae
-
Passeridae
308. House Sparrow
309. Yellow-throated Petronia
Ploceidae
310. Chestnut-mantled Sparrow-weaver
311. Spectacled Weaver
312. Large Golden Weaver
313. Village Weaver
314. Dark-backed Weaver
315. Red-headed Weaver
316. Red-billed Quelea
317. Black-winged Red Bishop
318. Yellow Bishop
319. Red-shouldered Whydah
320. White-winged Whydah
321. Red-collared Whydah
322. March Whydah
332. Parasitic Weaver
Estraldidae
333. Melba Finch
334. Orange-winged Pytilia
335. Red-throated Twinspot
336. Brown Firefinch
337. Blue-billed Firefinch
338. Black-tailed Grey Waxbill
339. Fawn-breasted Waxbill
340. Common Waxbill
341. Blue Waxbill
342. Bronze Mannikin
343. Red-backed Mannikin
344. Magpie Mannikin
Viduidae
345. Variable Indigobird
346. Pin-tailed Widow
347. Long-tailed Paradise Widow
348. Broad-tailed Paradise Widow
Fringillidae

349. Black-faced Canary
350. Yellow-fronted Canary
351. Bully Canary
352. Black-eared Seedeater
353. Stripe-breasted Seedeater
Emberizidae
Golden-breasted Bunting
354. Cabanis's Bunting

Annex 8 Minutes of Public Meeting Held at Ngambwa Railway Station on 3rd April 2011

Held between 10.30 – 12.00 hours on Sunday 3rd April

Introduction

The facilitators of the meeting, Adam Pope, Clare Barkworth and Nellie Mwale were introduced and the purpose of the meeting by Mr Felix Malama, the Station Master and his secretary, Mr Fleix Masanindo who acted as translator from ChiNyanja and English to ChiBemba. 60 people attended the meeting (40 men and 20 women) and several children from both the Chobe farms and local community. See attendance list. Nellie Mwale translated from English to ChiNyanja.

Presentation of Findings of the Environmental and Social Impact Assessment

The findings of the EIA study of the Whispering Hope and Parklands were presented and a discussion held around each finding. The mitigation measures that are planned by Chobe Agrivision were then presented. The presentation was facilitated using cards arranged in a logical framework (see photo Figure 2).

Figure 1Attendance of over 60 persons

Figure 2 Findings, Negative Impacts and Mitigating Measures presented in logical framework

SOCIAL AND ECONOMIC IMPACTS

Finding 1 High levels of casual migrant and transient labour

Negative Impacts

- Higher prevalence of HIV and AIDS:
- Poor temporary housing
- No job security

Mitigating Measures:

- HIV/AIDS work place programme to be established and run by a full time medical health worker already employed on the farm;
- Improve housing for permanent staff – relocation of Beckett housing compound. Contractor already on site and house construction starts week of 11th April, 2011.
- Permanent contracts offered after assessment of staff to be put in place over next 6 months. Casual labour only employed for specific seasonal and developmental work.

Finding 2 Poor water and sanitation facilities

Negative Impact

- Poor productivity as a result of high levels of sickness and diarrhoeal diseases

Mitigation measures

- Improve water and sanitation on farm;
- New boreholes will be drilled and installation of filters.

- Access to open water areas limited to designated areas for recreation such as fishing, and also for washing

Finding 3 No worker representation on farm

Negative Impact

- Poor productivity and staff morale, no means of discussing grievances.

Mitigation Measure

- Organised body to be established to allow Chobe management representation, worker representation and community representation.

Finding 4 Poor access and availability of health and education facilities

Negative Impact:

- Qualified staff retention poor as they seek better education and health facilities for their families;
- Poor productivity as they seek medical attention far from the work place.

Mitigation Measure

- Improved on-farm health facilities with a basic farm clinic;
- Weekly organized visits to Mkushi Hospital;
- Day care centre established to be run by midwives for pre school children;
- Discussions on-going to establish a community centre and possibility of establishing a primary school.

Finding 5 Poor Emergency preparedness and response strategy

Negative Impact

- Not able to deal with emergency situations;
- Possible high levels of casualties in the event of an emergency.

Mitigation Measure

- Emergency Preparedness strategy put in place which includes training of senior staff, evacuation plan and development of Material Safety data sheet.

ENVIRONMENTAL IMPACTS

Finding 6 Poor health and safety in the work place

Negative Impacts

- Work accidents and chronic ill health

Mitigation Measures :

- Formalize health and safety procedures.
- Provide protective gear;
- Train workers in use of equipment;
- Erect warning signs.

Finding 7 Poor storage, management and disposal of toxic chemical and waste.

Negative Impacts:

- Disrupts aquatic and soil biodiversity,
- Encourages the flow of persistent organic pesticides into surface and groundwater systems; and
- Poses health risks to the local population.

Mitigation Measures :

- Construction of secure well ventilated chemical stores;
- Train staff in management of toxic chemical and solid waste handling and management;
- Maintain a list of banned chemicals; and
- Establish incinerators for incinerating contaminated chemical containers.

Finding 8 Poor air quality and noise pollution

Negative Impact:

- Poor health and reduced productivity of workers.

Mitigation Measures;

- Improved health and safety equipment;
- Use of filtered breathing and noise reduction equipment

Finding 9 Water and Soil pollution from Agricultural Chemicals

Negative Impact

- High costs of wasted chemicals;
- Poor environmental outcomes.

Mitigation Measures:

- Optimise the use of fertilisers
- Zero tillage and other more modern agricultural practices.
- Conservation Acton Plan.

Finding 10 other Environmental Impacts summarised as soil erosion, water quality and climate change.

Mitigation Measures

- Improved land use and farming practices,
- Soil erosion management
- Irrigation management.

Figure 3 High Level of Women's Participation

Attendance List

	Name	Address	Gender
1	Felix Malama (station master)	Ngambwa	Male
2	Maybin Sinkamba	Ngambwa	Male
3	Evareen Chisenga	Ngambwa	Female
4	Doria Mwaba	Ngambwa	Female
5	Rabecar Chinama	Ngambwa	Female
6	Florence Mhlama	Ngambwa	Female
7	Selita Musonda	Ngambwa	Female
8	Justina Kasonka	Chobe	Female
9	Mary Bulabishi	Ngambwa	Female
10	Eunice Phiri	Ngambwa	Female
11	Chali Majori	Ngambwa	Female
12	Briget Chinyinji	Ngambwa	Female
13	Lilien Mwaba	Ngambwa	Female
14	Madeson Kunda	Ngambwa	Female
15	Mary Malama	Ngambwa	Female
16	Precious Malama	Ngambwa	Female
17	Samson Chilime	Chobe	Male
18	Lenady Mukosha	Chobe	Male
19	John Chilopa	Chobe	Male
20	John Mubangan	Chobe	Male
21	Webster Chisenga	Chobe	Male
22	Sefania Chisenga	Ngambwa	Male
23	Joseph Kaseya	Chobe	Male
24	David Chonyinji	Ngambwa	Male
25	C.L Banda	Chobe	Male
26	Fellow Hamatowe	Ngambwa	Male
27	Wiliam Mwanza	Chobe	Male
28	John Sinkala	Ngambwa	Male
29	Amon Lubilo	Ngambwa	Male
30	James Soko	Chobe	Male
31	Green Mumba	Ngambwa	Male
32	Peter Malasha	Ngambwa	Male
33	Chinama Longa	Ngambwa	Male
34	Welingtone Kalusha	Ngambwa	Male
35	Noman Chund	Ngambwa	Male
36	Veriat Phiri	Ngambwa	Male
37	Laban Kabamba	Chobe	Male
38	Maverus Mwelwa	Ngambwa	Male
39	Blenda Chisenga	Ngambwa	Female
40	Luny Kalulisha	Ngambwa	Female
41	Clara Mwelwa	Ngambwa	Female
42	Memory Malama	Ngambwa	Female
43	Welingtone Kalusha	Ngambwa	Male
44	Clever Chalwe	Ngambwa	Male
45	Lastone Kunda	Ngambwa	Male
46	Felix Mwango	Ngambwa	Male

47	Kelys Lubilo	Ngambwa	Male
48	Blety Mwila	Chobe	Male
49	Davis Sikaonga	Ngambwa	Male
50	Reyarb Mwewa	Chobe	Male
51	Charles Chisenga	Chobe	Male
52	Gilbert Kunda	Ngambwa	Male
53	Evaristo Mwaba	Ngambwa	Male
54	Wilan Kabamba	Ngambwa	Male
55	Elvis Musonda	Ngambwa	Male
56	Mwaka Nandiya	Ngambwa	Female
57	Elmedar	Ngambwa	Female
58	Masanindo Malama	Ngambwa	Male
59	Kennedy Mulenda	Ngambwa	Male
60	Darius Shitambuli	Ngambwa	Male