

SECTION J: ADDENDUMS

8.1 ADDENDUM A – BIO Atlas Species Report

8.2 ADDENDUM B – Matrix for Suitability Requirements

GOURITS RIVER CATCHMENT AREA: SUITABILITY ZONING REQUIREMENTS

MACRO SCALE

	AGRICULTURE	CONSERVATION	BUILT-UP	RECREATION
ZONING ELEMENTS				
LAND COVER				
Bare rock and soil		X		
Built-up land: commercial			X	
Built-up land: residential			X	
Cultivated grass	X			X
Cultivated land: commercial	X			
Degraded: shrubland and low fynbos		X		
Degraded: thicket and bushland		X		
Exotic Plantations	X		X	
Grassland		X		X
Indigenous forest		X		
Mines and Quarries			X	
Shrubland/fynbos		X		X
Thicket and Bushland		X		X
SOILPOTENTIAL				
No dominant class		X	X	X
Not suitable for agriculture or commercial forestry; suitable for conservation, recreation or water conservation		X		X
Soils highly suited for arable agriculture where climate permits	X			
Soils not suitable for arable agriculture, suitable for forestry or grazing where climate permits		X		
Soils of intermediate suitability for arable agriculture where climate permits	X			
HYDROLOGY				
Dry pan		X		
Non-perennial		X		
Perennial	X	X		X
Wetland		X		X
HERITAGE				
Buffelspoort		X		X
Rietvlei		X		X
Tierberg		X		X

	AGRICULTURE	CONSERVATION	BUILT-UP	RECREATION
ESTUARY				
Blinde Rivier		X		X
Gourits		X		X
Hartenbos		X		X
Kafferkuils		X		X
BROAD TERRAIN MORPHOLOGY				
Dune hills and lowlands	X	X		X
Escarpments		X		X
Extremely irregular plains		X		X
High mountains		X		X
Lowlands with hills	X	X	X	X
Lowlands with parallel hills	X	X	X	X
Moderately undulating plains	X	X	X	X
Mountains and lowlands				X
Parallel hills and lowlands	X	X	X	X
Plains		X	X	X
Slightly irregular plains		X		
Undulating hills		X		
LANDUSE				
Commercial / industrial			X	
Conservation		X		X
Cultivated land	X			
Forestry	X	X		
Mining			X	
Residential			X	
RIVER BUFFER ZONE				X
FLORA AND FAUNA				
Acmedania agrillophila, Agathosma species, leopard and fish		X		X
Afromontaine forest		X		X
Indigenous forest		X		X

	HIKING	WALKING	CLIMBING	CAMPING	SWIMMING	CANOEING	GAME LODGE	ADVENTURE CAMPS	VIEWING	SCENIC DRIVES	CYCLING	PARAGLIDING
BROAD TERRAIN MORPHOLOGY												
Dune hills and lowlands												
Escarpments	X	X	X					X	X	X		X
Extremely irregular plains		X		X				X			X	
High mountains	X	X	X	X				X	X	X		X
Lowlands with hills											X	
Lowlands with parallel hills							X				X	
Moderately undulating plains											X	
Mountains and lowlands	X	X		X			X	X	X	X		X
Parallel hills and lowlands	X	X										
Plains				X			X		X	X	X	
Slightly irregular plains												
Undulating hills											X	
LAND COVER												
Bare rock and soil												
Built-up land: commercial												
Built-up land: residential											X	
Cultivated grass												
Cultivated land: commercial									X	X	X	
Degraded: shrubland and low fynbos												
Degraded: thicket and bushland												
Exotic Plantations	X	X		X				X				
Grassland	X	X		X			X	X			X	
Indigenous forest	X	X		X			X	X	X	X	X	
Mines and Quarries												
Shrubland/fynbos	X	X		X			X	X	X	X	X	
Thicket and Bushland	X	X		X			X	X	X	X	X	

	HIKING	WALKING	CLIMBING	CAMPING	SWIMMING	CANOEING	GAME LODGE	ADVENTURE CAMPS	VIEWING	SCENIC DRIVES	CYCLING	PARAGLIDING
NATURAL FEATURES AND PHENOMENON'S												
Buffelskloof gorge	X	X	X					X	X	X		
Calitzdorp Spa	X											
Congo caves												
Meiringspoort gorge												
Rust en Vrede waterfall												
Scenic beach - Stilbaai												
Sleeping beauty Mountain peak												
Towerkop peak		X	X					X	X	X		
FLORA AND FAUNA												
Acmedania agrillophila, Agathosma species, leopard and fish							X	X	X	X		
Afromontaine forest								X	X	X		
Indigenous forest	X	X		X			X	X	X	X		
HYDROLOGY												
Dry pan	X											
Non-perennial	X											
Perennial	X	X		X	X	X	X	X	X	X	X	
Wetland	X	X			X	X		X	X	X		
ESTUARY												
Blinde Rivier												
Gourits	X	X			X	X	X	X	X	X		
Hartenbos												
Kafferkuils												
HERITAGE												
Buffelspoort	X	X							X	X		
Rietvlei												
Tierberg												
ARCHITECTURAL TOWN									X	X		
MONUMENTS AND MUSEUMS									X	X		

8.3 ADDENDUM C – Risk Assessment

RISK IDENTIFICATION AND ASSESSMENT

The assessment of the risks during the development of the Gourits River Catchment Area is divided into the 3 phases of the project namely Predevelopment, Construction and Operations and Maintenance.

Table 9 is the key that describes the symbols used in the process of analysing the risks.

Table 10: Symbols of Risk Analysis

Consequence Measure	C	Probability Measure	P	Risk Category	RF
Catastrophic	5	Likely	5	High	15-25
Major	4	Moderate	4	Medium	7-14
Moderate	3	Unlikely	3	Low	2-6
Minor	2	Rare	2		
Insignificant	1				

Table 11: Risk Analysis

DESCRIPTION	Risk Assessment C	Control Assessment P	Risk Factor RF	Assurance Priority
Pre-development Phase				
Licences	4	2	8	MEDIUM
Contractual misinterpretation	4	2	8	MEDIUM
Misunderstanding	4	2	8	MEDIUM
Legislation	4	4	16	HIGH
Size of the project	2	2	4	LOW
Feasibility	4	4	16	HIGH
Rezoning	3	4	12	MEDIUM
Construction Phase				
Legislation	2	2	4	LOW
Non-performance	3	4	12	MEDIUM
Poor quality	4	3	12	MEDIUM
Pollution	3	5	15	HIGH
Erosion	4	4	16	HIGH
Safety	3	2	6	LOW
Control	3	2	6	LOW
Materials availability	2	2	4	LOW
Operations and Maintenance Phase				
Contractual	4	4	16	HIGH
Change in technology	1	2	2	LOW

RISK MITIGATION

Pre-development Phase:

Legislation:

A comprehensive legislative study must be done in all aspects of the framework to ensure that all the relevant legislature is covered.

Feasibility:

A comprehensive feasibility study of each development must be done to ensure that each development is a success. The framework give just an overall possibilities view of each area.

Construction Phase:

Pollution:

The impact of pollution in this area will be significant and a pollution control system must be put into place.

Erosion:

Erosion must be prevented at all costs. Full erosion control programme must be drawn up.

Operations and Maintenance Phase:

Contractual:

A detailed contract for the operational and maintenance phase must be drawn up to ensure continual performance of the contractor.

8.4 ADDENDUM D – Project Analysis

**KANNALAND TOURISM NODE
ZONE 2 RECREATIONAL PARK**

SCHEDULE OF ACCOMMODATION

NO	SPACE DESCRIPTION	QUANTITY	AREA (TOTAL) m²	RATE PER SQ.M	TOTAL COST R
1	Parking Areas	2	6230	R 67	419,092
2	Road	1	4290	R 83	357,057
3	Paved Walkways	2	6825	R 67	459,118
4	Gravel Walkways	2	13000	R 10	130,000
5	Lawn Walkways	3	6500	R 10	65,000
6	Lawn	1	46475	R 4	185,900
7	Curio Shop	1	105	R 4,344	456,120
8	Administration Building	1	105	R 4,344	456,120
9	Lookout Point	1	100	R 3,200	320,000
10	Ablution Facilities	5	90	R 4,267	384,021
11	Swimming Pools	2			116,058
12	Pump Room	1			59,734
13	Play equipment	8			18,674
14	Restaurant	1	256	R 4,830	1,236,480
TOTAL			83976	R 1,930	4,663,374

PROJECT BUDGETING AND CASH FLOW

PROJECT ANALYSIS

AREA OF PROJECT	83976
ESTIMATED COST PER M.SQ	R 1,929.70
ESTIMATED BUILDING COST	R 4,663,373.95
PROFESSIONAL FEES	R 363,743.17
ESTIMATED DISEMBURSEMENT COSTS	R 109,122.95

SUBDIVISION OF FEE FOR VARIOUS STAGES OF WORK

STAGE	STAGE DESCRIPTION	%	FEE/STAGE	COST PER MAN HOUR	AVAIL	USED	% USED	REMAINING	NO OF PER	HOURS DURATION	WEEKS DURATION
1	Master Planning	5%	R 18,187.16	R 179.00	102		0%	1	1	102	2.54
2	Sketch Plans	35%	R 127,310.11	R 104.00	1,224		0%	62	2	612	15.30
3	Documentation	30%	R 109,122.95	R 104.00	1,049		0%	53	2	525	13.12
4	Supervision	30%	R 109,122.95	R 104.00	1,049		0%	53	1	1,049	26.23
TOTAL			R 363,743.17		3,424	0	0%	169		2,288	57.19

OFFICE CASH FLOW

NOVEMBER 2003 TO OCTOBER 2004

PROJECT DESCRIPTION	BUILDING COST	FEES AND DISBURSEMENTS			NOVEMBER		DECEMBER		JANUARY		
		Budget	Receive	Remain	Fee	Disb	Fee	Disb	Fee	Disb	
Recreational Park	R 4,663,374	Fees	R 363,743	R 0	R 363,743			R 18,187		R 31,828	
		Disb	R 109,123	R 0	R 109,123		R 9,094		R 9,094		R 9,094
TOTAL DISBURSEMENTS	R 0					R 9,094		R 9,094		R 9,094	
TOTAL FEES	R 0		R 363,743					R 18,187		R 31,828	
OVERHEADS					R 18,187		R 18,187		R 18,187		
BALANCE					-R 18,187		R 0		R 13,641		

FEBRUARY		MARCH		APRIL		MAY		JUNE	
Fee	Disb	Fee	Disb	Fee	Disb	Fee	Disb	Fee	Disb
R 31,828		R 31,828		R 31,828		R 36,374		R 36,374	
	R 9,094		R 9,094		R 9,094		R 9,094		R 9,094
	R 9,094		R 9,094		R 9,094		R 9,094		R 9,094
R 31,828		R 31,828		R 31,828		R 36,374		R 36,374	
R 18,187		R 18,187		R 18,187		R 18,187		R 18,187	
R 13,641		R 13,641		R 13,641		R 18,187		R 18,187	

JULY		AUGUST		SEPTEMBER		OCTOBER		TOTAL REMAINING		
Fee	Disb	Fee	Disb	Fee	Disb	Fee	Disb	Check	Fee	Disb
R 36,374	R 9,094	R 36,374	R 9,094	R 36,374	R 9,094	R 36,374	R 9,094		R 363,743	R 109,123
	R 9,094		R 9,094		R 9,094		R 9,094			
R 36,374		R 36,374		R 36,374		R 36,374		R 195,511		
R 18,187		R 18,187		R 18,187		R 18,187		R 127,310		
R 18,187		R 18,187		R 18,187		R 18,187		R 68,201		