

Miletus Consulting (Pty) Ltd

Consulting Civil & Structural Engineers and Project Managers
Dienjeneri Tse Eletsang le Balaodi Ba Diprojeke

P O Box 800

HARRISMITH

9880

Tel : 058 623 1078

Fax : 058 623 1070

e-mail : admin@miletus.co.za

Your ref. no.

REI/ZON

Our ref. no.

H600/awl/01

Date

2014-01-29

Derick Peacock & Associates
Town & Regional Planners
P O Box 11352
SILVER LAKES
0054

Attention : Mr D Peacock

Sir

RIETVLEY LAND USE APPLICATION : WATER SUPPLY : BOREHOLE AND WATER QUALITY TESTS RESULTS

Please find attached the results of draw-down tests of the 3 boreholes identified for the supply of potable water on the proposed Rietvley development.

The tests were conducted under our instructions during December 2013 and January 2014. In general the delivery of each of the 3 boreholes is considered to be adequate for the proposed development.

We also attach the results of drinking water analyses tests for each of the boreholes. The results confirm that the quality of the water is suitable for the proposed development.

We remain available for any enquiries.

Yours sincerely

Miletus Consulting (Pty) Ltd

per

A W LATEGAN (Pr Eng)

SCALE 1:25000



G NORTH POINT

WITKLIPPE

9

8

R4

BOREHOLE 1
24°08'31" S
31°18'13" E

RIETVLEY HOUSE DAM

RIETVLEY HOUSE

BOREHOLE 3
24°08'47" S
31°18'05" E

RIETVLEY AIRSTRIP



C LOOKOUT POINT



ROOIBOK PAN

BOREHOLE 4
24°09'50" S
31°17'43" E

TANKEE DAM

BIG DAM

44
43

53

4

8



DRINKWATERONTLEDINGSRESULTATE DRINKINGWATER ANALYSIS RESULTS

Laboratoriumnommer: 4816 Ontvangs datum: 27.01.14
Laboratorynumber : Date received :
Naam : Ndlopfu Private Game Reserve Monster : Rietvley Borehole no. 1
Name : Sample :

Elemente	Chemiese simbool Chemical symbol	*AML *RML	*MTL *MAL	Resultate Results	Eenheid Units	Elements
Bakteriologiese vereistes			Bacteriological requirements			
Totale Kolivorme		0	5	59.1	per 100ml	Total coliforms
E.Coli		0	0	0	per 100ml	E.Coli

Beskrywing van afkortings/Description of abbreviations

AML - Aanbevole Maksimum Limiet
MTL - Maksimum Toelaatbare Limiet

RML - Recommended Maximum Limit
MAL - Maximum Allowable Limit

Kommentaar/Remarks:

There should be no E.Coli in the water if it is to be used for drinking. E.Coli is present in the human digestive tract and thus comes forth in human waste.

Coliforms come from plant and animal waste (eg. Water plants,alge,fish,frogs,etc.) A low number won't make you sick, boil water if too high. A high number may cause diarrhoea. The addition of chlorine or boiling the water should kill off any Coliforms.

According to the bacteriological analysis this water contains Coliforms and is clear of E.Coli.

Namens Direkteur



DRINKWATERONTLEDINGSRESULTATE DRINKINGWATER ANALYSIS RESULTS

Laboratoriumnommer: 4817 Ontvangs datum: 27.01.14
Laboratorynumber : Date received :
Naam : Ndlopfu Private Game Reserve Monster : Rietvley Borehole no. 4
Name : Sample :

Elemente	Chemiese simbool Chemical symbol	*AML *RML	*MTL *MAL	Resultate Results	Eenheid Units	Elements
Bakteriologiese vereistes			Bacteriological requirements			
Totale Kolivorme		0	5	44.1	per 100ml	Total coliforms
E.Coli		0	0	0	per 100ml	E.Coli

Beskrywing van afkortings/Description of abbreviations

AML - Aanbevole Maksimum Limiet
MTL - Maksimum Toelaatbare Limiet

RML - Recommended Maximum Limit
MAL - Maximum Allowable Limit

Kommentaar/Remarks:

There should be no E.Coli in the water if it is to be used for drinking. E.Coli is present in the human digestive tract and thus comes forth in human waste.

Coliforms come from plant and animal waste (eg. Water plants,alge,fish,frogs,etc.) A low number won't make you sick, boil water if too high. A high number may cause diarrhoea. The addition of chlorine or boiling the water should kill off any Coliforms.

According to the bacteriological analysis this water contains Coliforms and is clear of E.Coli.

Namens Direkteur

RIETVLEY BOREHOLE TEST RESULTS

January 2014

BOREHOLE NO. 1 (RIETVLEY DAM)

DESCRIPTION	SOLAR PUMP
SOLAR PANELS	GRUNDFOS GF 80
PUMP	GRUNDFOS SQF 2.5
MOTOR	GRUNDFOS MSF3
PIPE	32mm CLASS 10 HDPE PIPE
DROP CABLE	2.5mm 4-CORE
CONTROLLER	GRUNDFOS SWITCH BOX
TOTAL DEPTH	73m
PUMP SET AT	47m
STATIC WATER LEVEL	39m
DYNAMIC WATER LEVEL	43m

NOTES :

PUMP STARTED WITH UNRESTRICTED FLOW AND TESTED AT 2 300ℓ/h

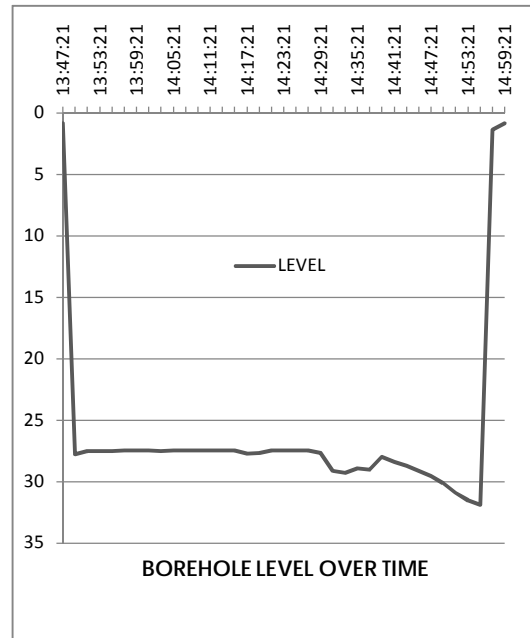
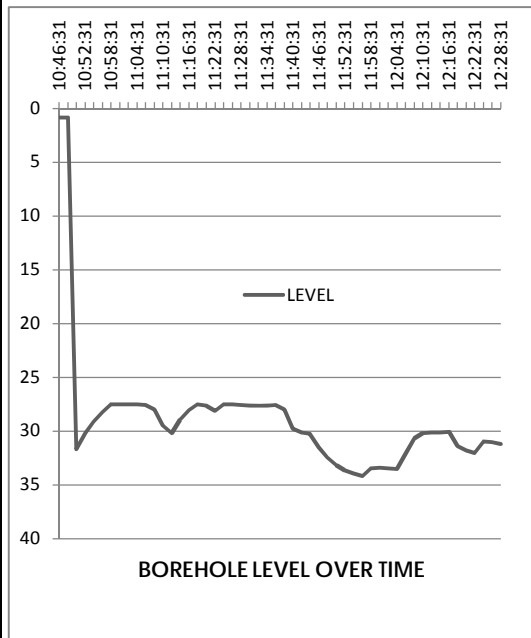
FLOW REDUCED TO 1 900ℓ/h AFTER 30min DRY RUN

WATER LEVEL AND FLOW MONITORED

BALL VALVE INSTALLED TO REDUCE WATER FLOW

FLOW REDUCED ACCORDING TO WATER LEVEL BY CLOSING VALVE

MAX LONG TERM CAPACITY OF BOREHOLE 1 800L/HOUR



RIETVLEY BOREHOLE TEST RESULTS

January 2014

BOREHOLE NO. 2 (STANDBY DIESEL UNIT)

DESCRIPTION	ELECTRICAL SUBMERSIBLE PUMP
PUMP	J-CLASS 3515/11
MOTOR	FRANKLIN 1.1kW 230V
PIPE	32mm CLASS 10 HDPE PIPE
DROP CABLE	2.5mm 4-CORE
CONTROLLER	1.1kW 230V FRANKLIN CONTROL BOX
TOTAL DEPTH	50.5m
PUMP SET AT	44m
STATIC WATER LEVEL	34.5m
DYNAMIC WATER LEVEL	35m

NOTES :

PUMP STARTED WITH UNRESTRICTED FLOW AND TESTED AT 3 100ℓ/h

FLOW REDUCED TO 2900ℓ/h AFTER 30 min

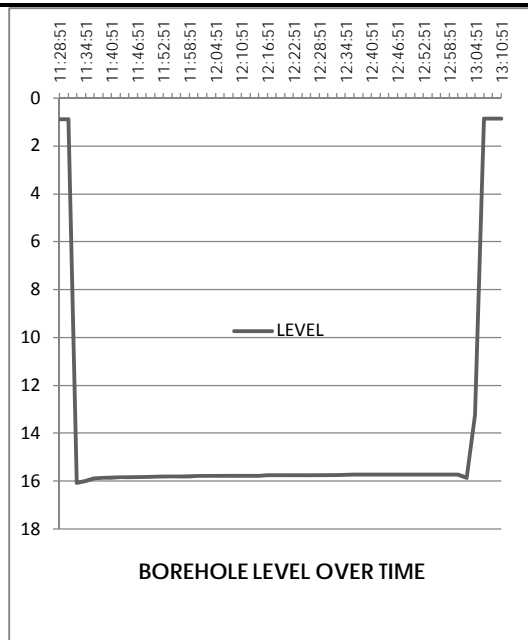
WATER LEVEL AND FLOW MONITORED

BALL VALVE INSTALLED TO REDUCE WATER FLOW

FLOW REDUCED ACCORDING TO WATER LEVEL BY CLOSING VALVE

MAX LONG TERM CAPACITY OF BOREHOLE 2 700ℓ/h

PUMP DELIVERS 3200ℓ/h AT 60m AND 2500ℓ/h AT 85m



RIETVLEY BOREHOLE TEST RESULTS

January 2014

BOREHOLE NO. 4 (ROOIBOK PAN)

DESCRIPTION	SOLAR PUMP
SOLAR PANELS	GRUNDFOS GF 80
PUMP	GRUNDFOS SQF 2.5
MOTOR	GRUNDFOS MSF3
PIPE	32mm CLASS 10 HDPE PIPE
DROP CABLE	2.5mm 4-CORE
CONTROLLER	GRUNDFOS SWITCH BOX
TOTAL DEPTH	38.5m
PUMP SET AT	32.5m
PUMP SET AT	32.5m
STATIC WATER LEVEL	14.5m
DYNAMIC WATER LEVEL	21m

NOTES :

PUMP CONNECTED TO AC 230V AND MAX FLOW TESTED

PUMP STARTED WITH UNRESTRICTED FLOW AND TESTED AT 2 300ℓ/h

WATER LEVEL AND FLOW MONITORED

BALL VALVE INSTALLED TO REDUCE FLOW

FLOW REDUCED ACCORDING TO WATER LEVEL BY CLOSING VALVE

MAX LONG TERM CAPACITY OF BOREHOLE 2 000ℓ/h

EXISTING PUMP DELIVERS A MAX OF 1 800ℓ/h ON SOLAR

