

Integral Laboratories (Pty) Ltd, No. 1 Zandwyk Park, Old Paarl Road (R101), Paarl, 7646

T0417

Tel: 021 871 1109

Fax: 086 635 8874

CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela WTW Raw
Lab Number	S67009

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	15.90	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	3.65	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	6.00	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	6.13	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	<0.10	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	<5	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	0.89	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	6.98	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	36.70	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	5.94	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	Not Done	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/10/01 09:23:07AM

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Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela WTW Final
Lab Number	S67010

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	27.50	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	8.74	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	9.09	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	0.20	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	<5	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.13	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	8.83	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	54.70	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	4.92	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	8.00	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	22.00	2013/10/01 09:23:07AM

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Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela Town Clinic
Lab Number	S67011

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	74.40	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	44.50	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	33.40	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	0.18	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	5.00	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.91	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	7.95	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	0.10	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	202.00	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	2.03	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	76.00	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	1.00	2013/10/01 09:23:07AM

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Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela Township Clinic
Lab Number	S67012

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	77.00	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	43.20	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	32.00	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	0.23	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	31.00	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	11.40	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.25	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	8.17	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	0.10	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	195.00	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	2.59	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	31.00	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	3.00	2013/10/01 09:23:07AM

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Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela House 1316
Lab Number	S67013

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	113.00	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	65.18	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	50.10	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	0.22	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	7.00	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	16.10	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	2.95	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	8.05	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	0.10	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	301.00	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	1.99	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	No Growth	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:23:07AM

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Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela Jinah Park
Lab Number	S67014

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	80.20	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	44.70	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	34.60	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	0.24	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	<5	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	12.00	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.55	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	8.09	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	205.00	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	3.59	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	32.00	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:23:07AM

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Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela Radium Reservoir
Lab Number	S67015

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	218.00	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	255.00	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	97.60	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	<0.10	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	<5	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	15.20	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	7.43	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	585.00	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	6.72	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	1.00	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:23:07AM

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Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela Radium Clinic
Lab Number	S67016

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	230.00	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	267.00	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	97.30	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	<0.10	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	7.00	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	13.90	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	7.40	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	581.00	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	19.80	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	27.00	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	201.00	2013/10/01 09:23:07AM

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CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela Pienaar Clinic
Lab Number	S67017

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	104.00	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	53.70	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	47.00	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	<0.10	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	<5	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	10.50	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	2.36	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	8.01	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	0.10	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	280.00	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	2.33	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	98.00	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:23:07AM

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Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela Rapotokwana BH
Lab Number	S67018

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	131.00	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	74.40	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	38.50	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	<0.10	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	<5	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.43	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	8.02	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	236.00	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	6.40	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	2.00	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:23:07AM

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Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela WTW BH
Lab Number	S67019

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Alkalinity - Total	M7 - Total Alkalinity	mg/L as CaCO ₃	78.40	2013/09/13 08:52:11AM
Calcium Hardness	*NSA	mg/L as CaCO ₃	42.50	2013/10/01 10:20:41AM
Colour	*Spectroquant Pharo	Pt-Co-true	<1	2013/09/10 04:33:47PM
Conductivity	M4 - Electrical Conductivity	mS/m	32.60	2013/09/11 10:41:53AM
Fluoride	*Merck Test Kit	mg/L	0.16	2013/09/12 10:14:28AM
Iron	*ICP-AES (dissolved - value)	µg/L	35.00	2013/09/12 09:42:06AM
Manganese	*ICP-AES (dissolved - value)	µg/L	<10	2013/09/09 12:45:30PM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	1.64	2013/09/12 04:08:28PM
Odour	*NSA		No Odour	2013/09/10 01:14:37PM
pH	M6 - pH at 25°C	pH units	8.16	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/10/01 09:49:08AM
Total Dissolved Solids	*NSA	mg/L	195.00	2013/09/12 04:37:26PM
Turbidity	*HACH Turbidity Meter	NTU	2.42	2013/09/13 11:39:25AM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:37:23AM
Heterotrophic Plate Count	**Mpumamanzi Lab	cfu's/1ml	17.00	2013/10/01 10:29:27AM
Total Coliforms	**Mpumamanzi Lab	cfu's/100ml	No Growth	2013/10/01 09:23:07AM

Integral Laboratories (Pty) Ltd, No. 1 Zandwyk Park, Old Paarl Road (R101), Paarl, 7646

T0417

Tel: 021 871 1109

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CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela WTTW Raw Sewage
Lab Number	S67020

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	1.28	2013/09/12 04:30:50PM
COD - Unfiltered	M2 - COD	mg/L	348.00	2013/09/10 10:16:25AM
Conductivity	M4 - Electrical Conductivity	mS/m	112.00	2013/09/11 10:41:53AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	0.97	2013/09/12 04:08:28PM
Orthophosphate (PO ₄ -P)	*Merck Test Kit	mg/L	32.90	2013/09/09 04:41:24PM
pH	M6 - pH at 25°C	pH units	7.07	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/10/01 12:10:23PM
Total Suspended Solids	M8 - Suspended Solids	mg/L	302.00	2013/09/06 03:47:04PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/10/01 12:03:40PM

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CERTIFICATE OF ANALYSIS

Company Bela Bela Municipality **Service Request Number** SR25970

Customer Address Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480 **Date of Certificate:** 1/10/2013

Contact Person Archie Magana

Date of Sampling 29/8/2013

Date of Receival at Lab 30/8/2013

Sample Description	Bela Bela WTTWW Final Sewage
Lab Number	S67021

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	27.20	2013/09/12 04:30:50PM
COD - Unfiltered	M2 - COD	mg/L	84.00	2013/09/10 10:16:25AM
Conductivity	M4 - Electrical Conductivity	mS/m	94.80	2013/09/11 10:41:53AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	9.25	2013/09/12 04:08:28PM
Orthophosphate (PO ₄ -P)	*Merck Test Kit	mg/L	20.40	2013/09/09 04:41:24PM
pH	M6 - pH at 25°C	pH units	7.41	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	<0.1	2013/10/01 09:49:08AM
Total Suspended Solids	M8 - Suspended Solids	mg/L	20.00	2013/09/06 03:47:04PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	201.00	2013/10/01 09:37:23AM

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CERTIFICATE OF ANALYSIS

Company Bela Bela Municipality **Service Request Number** SR25970

Customer Address Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480 **Date of Certificate:** 1/10/2013

Contact Person Archie Magana

Date of Sampling 29/8/2013

Date of Reveal at Lab 30/8/2013

Sample Description	Bela Bela Radium Raw Sewage
Lab Number	S67022

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	42.50	2013/09/12 04:30:50PM
COD - Unfiltered	M2 - COD	mg/L	167.00	2013/09/10 10:16:25AM
Conductivity	M4 - Electrical Conductivity	mS/m	148.00	2013/09/11 10:41:53AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	0.65	2013/09/12 04:08:28PM
Orthophosphate (PO ₄ -P)	*Merck Test Kit	mg/L	21.30	2013/09/09 04:41:24PM
pH	M6 - pH at 25°C	pH units	7.46	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/10/01 12:05:52PM
Total Suspended Solids	M8 - Suspended Solids	mg/L	584.00	2013/09/06 03:47:04PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/10/01 12:03:40PM

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CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela Radium Final Sewage
Lab Number	S67023

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	46.30	2013/09/12 04:30:50PM
COD - Unfiltered	M2 - COD	mg/L	161.00	2013/09/10 10:16:25AM
Conductivity	M4 - Electrical Conductivity	mS/m	156.00	2013/09/11 10:41:53AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	0.62	2013/09/12 04:08:28PM
Orthophosphate (PO ₄ -P)	*Merck Test Kit	mg/L	14.40	2013/09/09 04:41:24PM
pH	M6 - pH at 25°C	pH units	7.88	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/10/01 12:05:52PM
Total Suspended Solids	M8 - Suspended Solids	mg/L	220.00	2013/09/06 03:47:04PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	201.00	2013/10/01 12:03:40PM

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CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Sample Description	Bela Bela Pienaar Raw Sewage
Lab Number	S67024

Parameters	Method	Unit	Results	Date
Chemical Parameters				
Ammonia (NH ₄ -N)	M1 - Ammonia	mg/L	2.26	2013/09/12 04:30:50PM
COD - Unfiltered	M2 - COD	mg/L	464.00	2013/09/10 10:16:25AM
Conductivity	M4 - Electrical Conductivity	mS/m	96.20	2013/09/11 10:41:53AM
Nitrate (NO ₃ -N)	M5 - Nitrate	mg/L	0.78	2013/09/12 04:08:28PM
Orthophosphate (PO ₄ -P)	*Merck Test Kit	mg/L	21.20	2013/09/09 04:41:24PM
pH	M6 - pH at 25°C	pH units	7.27	2013/09/13 09:05:52AM
Residual chlorine	**Mpumamanzi Lab	mg/L	Not Done	2013/10/01 12:05:52PM
Total Suspended Solids	M8 - Suspended Solids	mg/L	172.00	2013/09/06 03:47:04PM
Microbiological Parameters				
E. Coli	**Mpumamanzi Lab	cfu's/100ml	Not Done	2013/10/01 12:03:40PM

CERTIFICATE OF ANALYSIS

Company	Bela Bela Municipality	Service Request Number	SR25970
Customer Address	Private Bag X 1609, Bela Bela, Limpopo, Bela Bela, Limpopo, South Africa, 0480	Date of Certificate:	1/10/2013
Contact Person	Archie Magana		
Date of Sampling	29/8/2013		
Date of Reveal at Lab	30/8/2013		

Authorised By:



N Africa

Technical Signatory



S Salie

Management Signatory

(Signature/s authorised signatories)

All results have been reviewed and authorised by a technical signatory

1. Sampling is outside the laboratory's scope of accreditation, where applicable free and total chlorine results are supplied by the sampling officer.
2. This report shall not be reproduced except in full, without written approval from the laboratory.
3. Results reflected on this report relate only to the items as received and analysed.
4. Uncertainty of measurement for accredited analysis will be provided on request
5. Reports can be emailed, but the laboratory will not be responsible for changes to emailed reports.
6. Parameters indicated by an * are not accredited.
7. Parameters indicated by ** are outsourced.
8. ICP results reported as 'Dissolved' - sample has been filtered using a 0.45 µm filter.
9. The following abbreviations are applicable:
 - NS - Not Settling
 - ND -Not Detected
 - NG - No Growth
10. Where applicable, limits reflected are based on SANS 241-2011 and General Effluent Standards.
11. Time stamps reflect time of analysis completion and final capturing of analytical results.

Certificate Number: SR25970

Ammended: Y/N