



Riesling House, Dorpstraat, Vineyards Office Estate 99 Jip De Jager Drive, Bellville, 7530

11 March 2023

The Municipali Manager Garden Route District Municipality 54 York Street **GEORGE** 6529

# REPORT: GARDEN ROUTE DISTRICT MUNICIPALITY REVISED DETERMINATION OF COST RECOVERING TARIFFS FOR BUDGET PURPOSES APPLICABLE TO THE PARTICIPATING MUNICIPALITIES

Our report and findings are for the exclusive use of duly authorised representatives of the Municipality and Municipalities who are to the Regional Landfil Site. No other party is entitled to rely on any of the views expressed in the report.

Mubesko Africa will not accept any responsibility to any other party to whom our report may be disclosed or disseminated.

We applied reasonable care and skill in rendering the services. However, the procedures undertaken by us in performing this work did not constitute an examination in accordance with South African Auditing Standards.

Yours sind elv

**Nico de Kock CA(SA)** Managing Director Mubesko Africa (Pty) Ltd



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# 1. INTRODUCTION

MUBESKO AFRICA was appointed in terms of the Garden Route District Municipality Tender GRDM 30/21-22 to provide the municipality with accounting support to revise the previous February 2021 interim tariff determination document compiled by Mubesko Africa.

The Chief Financial Officer instructed Mubesko to do a revised cost recovery calculation to determine tariffs after the construction phase of the project was allocated to a successful bidder and that reliable construction cost is now available as a result of the offered bidding price.

The emphasis of these tariffs is to give a more reliable indication to the participating municipalities to serve as a basis for assisting them in preparing their 2023/24 MTREF budgets.

# 2. DISCLAIMER

This report is neither a legal interpretation nor a statement of Mubesko Africa (Pty) Ltd policies.

The information, amounts and recommendations revealed and disclosed in this document are based on documentation and orally conveyed information received from senior management of the municipality and Zutari, the appointed consultant engineer for this project, as well as operating cost information gathered from municipalities operating existing landfill sites which are more or less equal in size.

Calculations presented are interim calculations and estimations and are, for this reason, no warranty of any kind regarding the information's accuracy, adequacy, validity, reliability or completeness.

To the maximum extent permitted by applicable law, Mubesko Africa (Pty) Ltd shall not be liable for any direct, indirect, incidental, consequential or punitive damages or any loss of profits or revenues, whether incurred directly or indirectly, goodwill or other intangible losses resulting from the content of this report.

For planning purposes and in the context of the instruction to determine interim tariffs to be used by the participating B- Municipalities for their budget purposes, it is believed, however, that the calculations and estimations used to determine the interim tariffs would suffice the decision-makers need for information to make an informed decision and would not negatively influence the integrity and correctness of this report.

# 3. PURPOSE

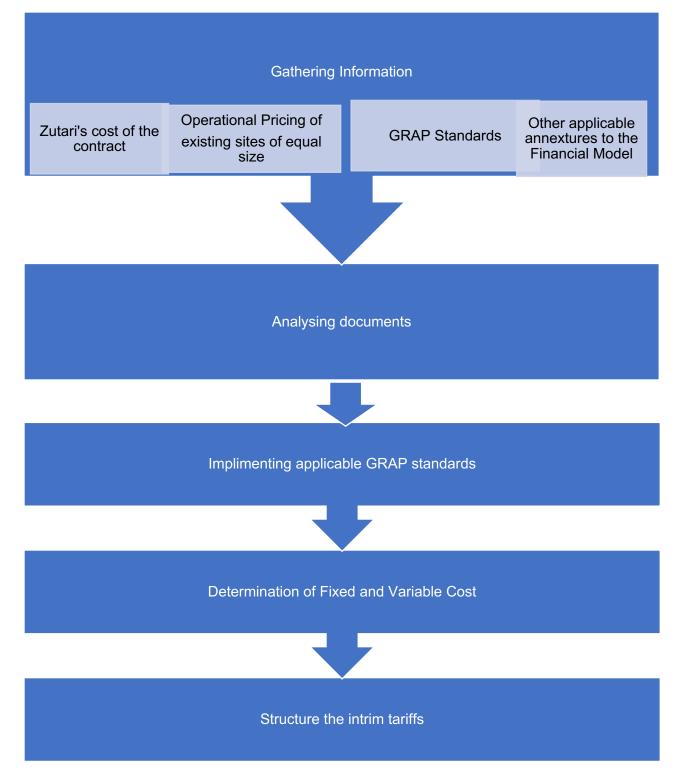
This report's purpose is to provide the following outcomes:

- Indicate the cost as reflected in the contract cost structure of the allocated successful tenderer for the construction phase as presented by Zutari.
- In addition to the construction cost, make provision for the operational cost based on the estimation of available equal in size landfill sites which are already operational.
- Include the GRAP 19 and iGRAP 2 principles to recover the cost of the future rehabilitation of the landfill site when reaching the end of its useful life.
- Determine the 10% administration fee for delivering the service by the Garden Route District Municipality, which must be included in the tariff structure.



- Indicate the impact of the provisions and reserves.
- Indicate the pro-rata allocation per B Municipality of the tariffs based on historical tonnage waste generated per individual Municipality.

# 4. METHODOLOGY FOLLOWED





The emphasis of the analysis is solely to determine interim tariffs based on the information and calculations received from Zutari, the operational cost of existing operational landfill sites in use, and making provision for compulsory GRAP standards.

Therefore, it must be noted that the result of this interim tariff structure is **temporally** in nature and would only **be applicable and fixed for the first year since operations have commenced**.

After a year of operations, a history of the actual cost would then be available, with which more accurate and reliable numbers make it possible to determine reliable long-term **future tariffs, which would be revised annually**.

#### 5. FINANCIAL MODEL

#### 5.1 Borrowing cost

According to the Engineer's report, the landfill cell is designed with a capacity to be of service for 25 years. (4 cells of 25 hectares in size with a capacity to be filled 12 meters in height), at an all-inclusive price of R261 083 596.31.

The Garden Route District Municipality embarked on a procurement process to obtain borrowing to finance the facility's construction. After an intensive tender adjudication process and after a meeting with all the participating municipalities to analyse and determine the best and most appropriate tendered loan option, the meeting collectively decided unanimously that the preferred option of the tenders offered would be clearly the 10-year loan with an all-in floating rate of 6.89% offered by Standard Bank. The floating rate offered reads as follows:

#### 7. INTEREST

7.1 The Loan Facility shall bear interest at a variable rate of 2.01 % (two-point zero one percent) above the 3-month JIBAR rate per annum. This rate is the indicative rate as per our proposal dated 21 June 2022 and subject to change on the date of first drawdown of the Loan Facility. The final interest rate will be determined on the date of draw down and advised by the Bank to the Borrower in writing on the date of the date of first drawdown of the Loan Facility or as soon as practically possible thereafter.

Since the municipalities preferred the floating rate option, it could have an impact on the future cost-recovering tariff to be charged, which include the cost of the loan, because Section 28 (6) of the Municipal Financial Management Act clearly stipulates that tariffs may not be increased during a financial year once the tariff was determined in terms of the approved budget. Therefore, this burden must be clarified with the participating municipalities how future possible interest rate increases and decreases would be recovered and or refunded should rate changes occur.

The current three months JIBAR rate (The SARB is the administrator of the Johannesburg Interbank Average Rate (**Jibar**), which is widely used as a reference rate) is 7.47% at present. Unfortunately, the interest rates hike due to inflation pressure caused the original rate of 6.89% to increase materially and is the current floating rate to calculate the borrowing cost (interest and redemption) 7.47% + 2.01% = 9.48%. This is now 3.41% higher than the 6.89% initially tendered offer.

Broadly, economist predicts that the higher interest rates have reached their peak and that rates could be expected to follow a downward trend soon.



For calculation purposes, the CAPEX amount of R261 083 596 at a current borrowing rate of 9.48% is increased with .25% and .50% and decreased with .25%, .50% and 1.00%, respectively, to discount upward or downward further future rate adjustments and is the annual borrowing cost for ten years as follows::

6.89% = R36 983 643.26

9.48% = R41 545 623.99

9.23% = R41 094 851.86

8.98% = R40 646 263.02

8.48% = R39 755 699.70

9.73% = R41 998 563.22

9.98% = R42 453 653.29

#### 5.2 Operating cost

It is agreed between the parties that the operation of the landfill site would be outsourced after the completion of the construction phase.

Therefore, the cost of operating the landfill site can only be accurately determined after a procurement process, and a service provider is appointed.

As an interim measurement, the running operating cost of existing landfill sites of comparable size has been obtained.

The latest tenderd operational cost estimation from a specialist amounting to an annual amount of R6 660 000, which is based on the 2021/22 latest tender prices for a totally outsourced service. If the amount is adjusted for inflation for 2022/23 with 6% and 2023/24, and 7%, respectively, the amount escalates to R7 485 720.

This amount, however, does not include chipping and crushing at this stage.

Should the municipalities, however, be in favour of not providing this service themselves, the comprehensive (inclusive of all the applicable equipment) cost for chipping and crushing is R140 per ton of rubble and R500 per ton of garden refuse, respectively. Therefore, based on the estimated tonnage used in the previous Private Party calculations, chipping (7146 ton @ R500 ton) = R3 573 000 and crushing (13 764 @ R140 ton) = R1 925 960 must be added to the R7 485 720, which result then to a total amount of R12 984 680 per annum. This total cost reflects the current cost structure of similar projects.



# Alternative 1 from a specialist (without chipping and crushing)

Total	R7 485 720
Waste management	R7 485 720
Crushing	-
Chipping	-

# Alternative 2 from a specialist (with chipping and crushing)

Total	R12 983 7200
Waste Management	R7 485 720
Crushing	R1 925 000
Chipping	R 3 573 000

# 5.3 **Provision for rehabilitation**

In terms of the General Recognised Accounting standards (GRAP 19), provision for rehabilitation must be accounted for. This, together with conditions in terms of the Water Act and Conservation Act, implies that rehabilitation is a compulsory statutory responsibility of the municipality.

According to the Zutari report, the landfill site would cover an area of 25 hectares on a slope of 1:4, with the result that an area of 208 0000  $m^2$  would give a useful life of 25 years, after which the site has to be rehabilitated. According to the latest rehabilitation cost per  $m^2$ , the present cost of rehabilitation would amount to approximately R72 million.

When escalating with 5% per annum for inflation adjustments, the future amount would amount to R243.8 million.



Annual Inflation			5%	
Period in years			25	
Present Value			R72 000 000.00	
Future Value			R243 817 555.74	
Year	Inflation Increase	Future Value		
		R72 000 000.00		
1	R3 600 000.00	R75 600 000.00		
2	R3 780 000.00	R79 380 000.00		
3	R3 969 000.00	R83 349 000.00		
4	R4 167 450.00	R87 516 450.00		
5	R4 375 822.50	R91 892 272.50		
6	R4 594 613.63	R96 486 886.13		
7	R4 824 344.31	R101 311 230.43		
8	R5 065 561.52	R106 376 791.95		
9	R5 318 839.60	R111 695 631.55		
10	R5 584 781.58	R117 280 413.13		
11	R5 864 020.66	R123 144 433.78		
12	R6 157 221.69	R129 301 655.47		
13	R6 465 082.77	R135 766 738.25		
14	R6 788 336.91	R142 555 075.16		
15	R7 127 753.76	R149 682 828.92		
16	R7 484 141.45	R157 166 970.36		
17	R7 858 348.52	R165 025 318.88		
18	R8 251 265.94	R173 276 584.83		
19	R8 663 829.24	R181 940 414.07		
20	R9 097 020.70	R191 037 434.77		
21	R9 551 871.74	R200 589 306.51		
22	R10 029 465.33	R210 618 771.83		
23	R10 530 938.59	R221 149 710.43		
24	R11 057 485.52	R232 207 195.95		
25	R11 610 359.80	R243 817 555.74		

Therefore, the future responsibility to rehabilitate the landfill site is a compulsory annual cost and not just an accounting provision and has to be included in the cost structure to be recovered from tariffs.

The wonder of compound interest, when applied, a discounted amount of R20 091 299 invested in a 10.5 % Government bond for 25 years would yield the needed future R243 817 555.



Discounted Provis	sion of the Future inflation adjusted Re	habilitation Cost :		R20 091 299.2
Year	Bond Rate	Future discounted value of Provision	Annual increase in the Provision = Annual contribution to Provision	
	· · · · · · · · · · · · · · · · · · ·			
1	10.50%	R22 200 885.69	R2 109 586.42	
2	10.50%	R24 531 978.69	R2 331 093.00	
3	10.50%	R27 107 836.45	R2 575 857.76	
4	10.50%	R29 954 159.27	R2 846 322.83	
5	10.50%	R33 099 346.00	R3 145 186.72	
6	10.50%	R36 574 777.33	R3 475 431.33	
7	10.50%	R40 415 128.95	R3 840 351.62	
8	10.50%	R44 658 717.49	R4 243 588.54	
9	10.50%	R49 347 882.82	R4 689 165.34	
10	10.50%	R54 529 410.52	R5 181 527.70	
11	10.50%	R60 254 998.62	R5 725 588.10	
12	10.50%	R66 581 773.48	R6 326 774.86	
13	10.50%	R73 572 859.70	R6 991 086.22	
14	10.50%	R81 298 009.96	R7 725 150.27	
15	10.50%	R89 834 301.01	R8 536 291.05	
16	10.50%	R99 266 902.62	R9 432 601.61	
17	10.50%	R109 689 927.39	R10 423 024.77	
18	10.50%	R121 207 369.77	R11 517 442.38	
19	10.50%	R133 934 143.59	R12 726 773.83	
20	10.50%	R147 997 228.67	R14 063 085.08	
21	10.50%	R163 536 937.68	R15 539 709.01	
22	10.50%	R180 708 316.14	R17 171 378.46	
23	10.50%	R199 682 689.33	R18 974 373.19	
24	10.50%	R220 649 371.71	R20 966 682.38	
25	10.50%	R243 817 555.74	R23 168 184.03	

However, a much more affordable option is determining which amount must be invested annually to yield R243 817 555. For this reason, an investment in a sinking fund would be a more appropriate option.

The amount to be invested annually to get a return of an accumulated R243 .8 million after 25 years, amounting to R3 854 604.

Interest Rate			7%	
Period in years			25	
Future Value			R243 800 000.00	
Annual payment			R3 854 604.10	
Year	Interest	Capital		Amount
1		R3 854 604.10		R3 854 604.10
2	R269 822.29	R3 854 604.10		R7 979 030.48
3	R558 532.13	R3 854 604.10		R12 392 166.72
4	R867 451.67	R3 854 604.10		R17 114 222.48
5	R1 197 995.57	R3 854 604.10		R22 166 822.16
6	R1 551 677.55	R3 854 604.10		R27 573 103.81
7	R1 930 117.27	R3 854 604.10		R33 357 825.17
8	R2 335 047.76	R3 854 604.10		R39 547 477.03
9	R2 768 323.39	R3 854 604.10		R46 170 404.52
10	R3 231 928.32	R3 854 604.10		R53 256 936.94
11	R3 727 985.59	R3 854 604.10		R60 839 526.62
12	R4 258 766.86	R3 854 604.10		R68 952 897.58
13	R4 826 702.83	R3 854 604.10	· · · · · · ·	R77 634 204.51
14	R5 434 394.32	R3 854 604.10		R86 923 202.93
15	R6 084 624.20	R3 854 604.10	· · · · · · ·	R96 862 431.23
16	R6 780 370.19	R3 854 604.10		R107 497 405.51
17	R7 524 818.39	R3 854 604.10		R118 876 828.00
18	R8 321 377.96	R3 854 604.10		R131 052 810.06
19	R9 173 696.70	R3 854 604.10		R144 081 110.86
20	R10 085 677.76	R3 854 604.10		R158 021 392.72
21	R11 061 497.49	R3 854 604.10		R172 937 494.31
22	R12 105 624.60	R3 854 604.10		R188 897 723.01
23	R13 222 840.61	R3 854 604.10		R205 975 167.71
24	R14 418 261.74	R3 854 604.10		R224 248 033.55
25	R15 697 362.35	R3 854 604.10		R243 800 000.00

This substantial saving results from the effect of the time value of money in the sense that the investment interest rate must be higher than the inflation rate adjustments.

In this calculation, an investment rate of 2% above inflation was used (inflation of 5% and investment interest rate of 7%). This is related to the current market values.

# 5.4 Administrative Fee

The levying of an administrative fee is justified to be levied when the municipality is the developer of the project and not just an add-on to an account payable to a third party.

It could be argued that the risk management responsibility has shifted from the participating municipalities to the Garden Route District Municipality in terms of public accountability, insurance etc. and would then be a responsibility of the municipality when the site is operational. (the insurance of the operations and equipment shall be the responsibility of the contractor to whom the function is allocated and discounted in full in the contract price for delivering the service)

A 10% administrative fee is applicable as instructed by Senior Management.



Below in section 6 is the calculated estimated breakdown per participating B-Municipality, which includes all the above items to cover the cost of constructing and operating the proposed Landfill Site.

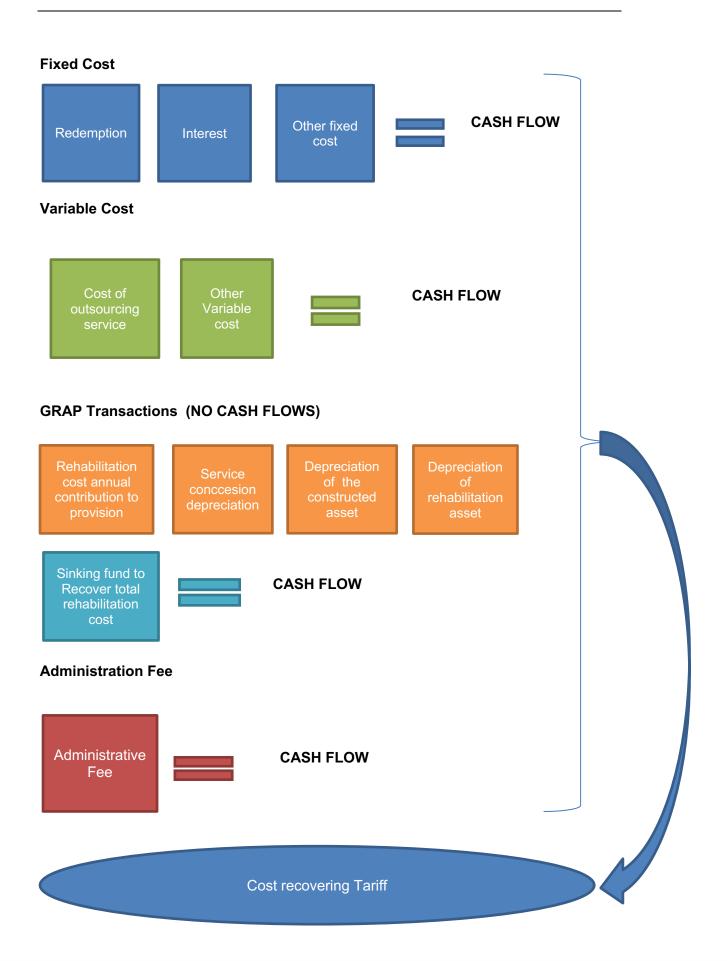
# 6. STRUCTURE OF THE INTERIM TARIFF

The combined structure, which includes the separable figures, is reflected in the below table.

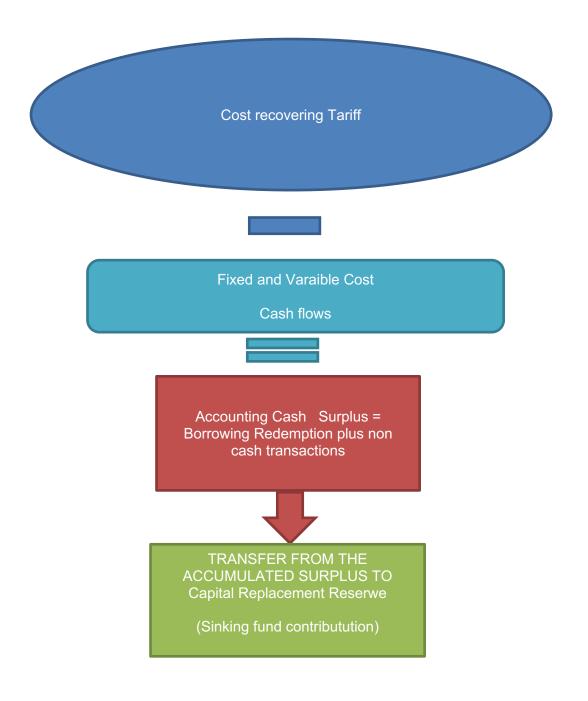
The accounting figures for non-cash transactions are excluded, and the redemption cost and Rehabilitation cost sinking fund contributions are included.

The redemption portion of the loan repayments and the rehabilitation sinking fund included in the cost structure to determine the total cost recovery would result at year-end a cash surplus that would be equal to the redemption portions and the rehabilitation sinking fund. It is illustrated as follows:











# The cost recovering summary to be recovered from the B Municipalities is as follows First calculation excluding chipping and crushing

			0.00/10				
		Present rate = 9.48% ( 3 months JIBAR plus 2.01 %)					
Description			Total	Mossel Bay	George	Knysna	Bitou
Monthly ton			7565	2507			809
	inage % split		100%	33%	42%	14%	11%
			ION BASED ON CAPE				
	Includes all	inclusive cor	struction cost plus pr	roffessional fees (e	excl VAT)		
	ste and Hazar	dous Waste					
(9.48% borro	owing rate)		R41 545 623.26				R4 442 882.91
Chipping			-	-	-	-	-
Crushing Sub Total A			-	-		- R6 008 051.80	- R4 442 882.91
SUD TOLALA			R41 545 623.26	R13 767 994.38	R17 326 694.17	K0 000 051.00	R4 442 002.9
			VARIABLE PORTION	RELATED TO OPER	ATIONS		
			ESTIMATED COST B	ASED ON CURRENT	OPERATIONAL SIT	ES OF APPROXIMA	ATLY EQUAL SIZE
General Was Annual total	ste and Hazar cost	dous Waste.	R7 485 720.00	R2 480 727.04	R3 121 936.10	R1 082 535.05	R800 521.81
Chipping			R0.00	-	-	-	-
Crushing			R0.00	-	-	-	-
Sub Total B			R7 485 720.00	R2 480 727.04	R3 121 936.10	R1 082 535.05	R800 521.81
				RE	HABILITATION COS	Т	
			ANNUAL AMOUNT	TO BE INVESTED IN	I A SINKING FUND	YIELDING THE FUT	URE AMOUNT
Annual cost			R3 854 604.00	R1 277 394.87	R1 607 571.13	R557 427.20	R412 210.79
Sub Total C			R3 854 604.00	R1 277 394.87	R1 607 571.13	R557 427.20	R412 210.79
Sub Total A+	-B+C		R52 885 947.26	R17 526 116.30	R22 056 201.40	R7 648 014.05	R5 655 615.51
GRDM 10% A	Annual Admir	n Fee	R5 288 594.73	R1 752 611.63	R2 205 620.14	R764 801.41	R565 561.55
Total excl VA	AT		R58 174 541.99	R19 278 727.93	R24 261 821.54	R8 412 815.46	R6 221 177.06
			R8 726 181.30	R2 891 809.19	R3 639 273.23	R1 261 922.32	R933 176.56
VAT				1			
VAT Total Incl VA			R66 900 723.28	R22 170 537.11	R27 901 094.77	R9 674 737.78	R7 154 353.62



# The second calculation includes chipping and crushing

		prrowing 10 years				
	Present r	ate = 9.48% ( 3 mo	onths JIBAR plu	is 2.01 %)		
Description		Total	Mossel Bay	George	Knysna	Bitou
Monthly tonnage s	olit	7565	2507	3155	1094	809
Monthly tonnage %	split	100%	33%	42%	14%	11%
			x of D261 092 506			
Includ		FION BASED ON CAPE		excl VAT)		
				-		
General Waste and (9.48% borrowing r		R41 545 623.26	R13 767 994.38	R17 326 694.17	R6 008 051.80	R4 442 882.91
Chipping	,	-	-	-	-	-
Crushing		-	-	-	-	-
Sub Total A		R41 545 623.26	R13 767 994.38	R17 326 694.17	R6 008 051.80	R4 442 882.91
				ATIONS		
		VARIABLE PORTION				
		ESTIMATED COST BA	ASED ON CORRENT	OPERATIONAL ST		ATLY EQUAL SIZE
General Waste and	Hazardous Waste					
Annual total cost		R7 485 720.00	R2 480 727.04	R3 121 936.10	R1 082 535.05	R800 521.81
Chipping		R3 573 000.00	R1 184 072.84	R1 490 127.56	R516 703.50	R382 096.10
Crushing		R1 925 000.00	R637 934.57	R802 825.51	R278 380.70	R205 859.22
Sub Total B		R12 983 720.00	R4 302 734.44	R5 414 889.17	R1 877 619.26	R1 388 477.13
		REHABILITATION COST				
		ANNUAL AMOUNT	TO BE INVESTED IN	A SINKING FUND	YIELDING THE FUT	URE AMOUNT
Annual cost		R3 854 604.00	R1 277 394.87	R1 607 571.13	R557 427.20	R412 210.79
Sub Total C		R3 854 604.00	R1 277 394.87	R1 607 571.13	R557 427.20	R412 210.79
Sub Total A+B+C		R58 383 947.26	R19 348 123.70	R24 349 154.48	R8 443 098.26	R6 243 570.83
GRDM 10% Annual	Admin Fee	R5 838 394.73	R1 934 812.37	R2 434 915.45	R844 309.83	R624 357.08
Total excl VAT		R64 222 341.99	R21 282 936.07	R26 784 069.92	R9 287 408.08	R6 867 927.91
VAT		R9 633 351.30	R3 192 440.41	R4 017 610.49	R1 393 111.21	R1 030 189.19
Total Annual Co	st (Incl.)/AT)	D72 055 602 20	D24 475 276 40	D20 804 C00 44	D10 600 540 20	07 000 447 40
i otai Annual Co	ose (IIICI VAI)	R73 855 693.28	R24 475 376.48	R30 801 680.41	R10 680 519.29	R7 898 117.10



# 7. CONCLUSION

The annual cost recovering tariff (excluding VAT), (including chipping and crushing)) as per participating municipality for the interim period is as follows:

Mosselbay	R21 282 936.07
George	R26 784 069.92
Knysna	R9 287 408.08
Bitou	R6 867 927.91
<b>-</b>	

The annual cost recovering tariff (excluding VAT), (excluding chipping and crushing)) as per participating municipality for the interim period, is as follows:

Mosselbay	R19 278 727.93
George	R24 261 821.54
Knysna	R8 412 815.46
Bitou	R6 221 177.06