

WATER RETICULATION FOR MALOKONGSKOP

Numbers Sheet Name	Numbers Table Name	Excel Worksheet Name
Annex Cover XXX Village	Table 1	Annex Cover XXX Village
Sched1 P&G	Table 1	Sched1 P&G
Sched2 Site Clearance	Table 1	Sched2 Site Clearance
Sched3 Wat Earthworks	Table 1	Sched3 Wat Earthworks
Sched4 Wat Pipeworks	Table 1	Sched4 Wat Pipeworks
Summary	Table 1	Summary
Flexible (2)	Table 1	Flexible (2)
Flexible Bulk Steel	Table 1	Flexible Bulk Steel
Flexible	Table 1	Flexible
Sched5 Reservoir,Tanks & Buildi	Table 1	Sched5 Reservoir,Tanks & Buildi

SCHEDULE 1: PRELIMINARY & GENERAL

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
1	SANS 2001A	SCHEDULE 1: PRELIMINARY & GENERAL				
1,1	8,3	FIXED-CHARGE ITEMS				
1.1.1	8.3.1	1. Contractual requirements	Sum	1		
	8.3.2	2. Establishment of facilities on the site:				
1.1.2	PSA 8.3.2.2	1) Facilities for the Engineer				
		a. Name Boards	No	1		
		b. Furnished Office(No.2)	Sum	1		
		c. Latrine facilities	Sum	1		
		d. Covered carport	Sum	1		
		e. Survey instruments(1 no)	Sum	1		
	PSA 8.3.2.2	2) Facilities for the Contractor				
		a. Offices and storage sheds	Sum	1		
		b. Workshops	Sum	1		
		c. Ablution and latrine facilities	Sum	1		
		d. Tools and equipment	Sum	1		
		e. Water supplies and electric power and communications	Sum	1		
		f. Security of works	Sum	1		
1.1.3	8.3.3	Other fixed-charge obligations	Sum	1		
1.1.4	8.3.4	Removal of site establishment	Sum	1		
1.1.5		Locating existing services	PC Sum	1	100000,00	100 000,00
1.1.6		Provision for reinstating of existing fences	PC Sum	1	65 000,00	65 000,00

**TOTAL CARRIED FORWARD
BROUGHT FORWARD**

1,2	8,4	TIME-RELATED ITEMS			
1.2.1	8.4.2	Operation and maintenance of facilities on site for the duration of construction			
1.2.1.1	8.4.2.2	2) Facilities for Contractor for construction duration, except where otherwise stated			
		a. Offices and storage sheds	Month	12	
		b. Workshops	Month	12	
		c. Ablution and latrine facilities	Month	12	
		d. Tools and equipment	Month	12	
1.2.2	8.4.3	Supervision for the duration of construction	Month	12	
1.2.3	8.4.4	Company and head office overhead costs for the duration of the Contract	Month	12	
TOTAL CARRIED FORWARD					-
BROUGHT FORWARD					-
1.2.6	PS7	Allow for compliance with all aspects of the OH&S Spec including: risk assessment; provision of the safety plan; appoint safety officer; safety training (induction) of workforce and notification(s) to the Department of Labour	Month	12	
1.2.7	PS8	Allow for compliance with all aspects of the Environment Management Plan	Month	12	
	PS 12	2) Training of Workers			
		a. Training allowance paid to targeted labour in terms of formal training	PC Sum	1	30 000,00
		b. Overheads, charges and profit on (a) above	%	10%	3 000,00
		c. Transportation and communication of workers for training where it is not possible to undertake the training in close proximity to the site	PC Sum	1	35 000,00
		d. Overheads, charges and profit on (c) above	%	10%	3 500,00
TOTAL CARRIED FORWARD					
BROUGHT FORWARD					

3) Relocation of services

a. Relocation of essential services to be done by administering authority if required	PC Sum	1		35 000,00
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b. Overheads, charges and profit on (a) above	%		10%	3 500,00
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4) Community Liaison Officer

a. Allow for work done by community liaison officer	Month	12		
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b. Overheads, charges and profit on (a) above	%		10%	0,00
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**TOTAL CARRIED FORWARD
BROUGHT FORWARD**

1,4

8,7

DAY WORKS**Note:** To be executed on instruction of the Engineer only

1. Labour

a. Skilled	hr	Rate Only
b. Semi-skilled	hr	Rate Only
c. Unskilled	hr	Rate Only
d. Armed guard	Man-days	Rate Only

2. Plant Hire (Work rates on site)

Tipper trucks

a. Capacity 6 m3 (small)	hr	Rate Only
b. Capacity 10m3 (medium)	hr	Rate Only
c. Capacity 12m3 (large)	hr	Rate Only

Flat bed trucks

d. Capacity 3 tonne (small)	hr	Rate Only
e. Capacity 5 tonne (medium)	hr	Rate Only
f. Capacity 10 tonne (large)	hr	Rate Only

3. LDVs

a. Capacity 1 tonne	km	Rate Only
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4. Water tankers

a. Capacity 6 000 litres (small)	hr	Rate Only
b. Capacity 9 000 litres (medium)	hr	Rate Only
c. Capacity 15 000 litres (large)	hr	Rate Only

5. Excavators

Crawler excavators

a. 20 tonne	hr	Rate Only
b. 30 tonne	hr	Rate Only

TOTAL CARRIED FORWARD
BROUGHT FORWARD

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6. TLBs		
Tractor Loader Backhoe		
a. 2 x 4	hr	Rate Only
b. 4 x 4	hr	Rate Only
7. Rollers		
Walk behind vibrating rollers		
a. Model BW 61 (small)	hr	Rate Only
b. Model BW 76 (medium)	hr	Rate Only
c. Model BW 90 (large)	hr	Rate Only
8. Compactors		
	hr	Rate Only
9. Compressors		
Portable diesel compressors		
a. Small	hr	Rate Only
b. Medium	hr	Rate Only
c. Large	hr	Rate Only
10. Water pumps		
Portable water pumps		
a. Small	hr	Rate Only
b. Medium	hr	Rate Only
c. Large	hr	Rate Only

**TOTAL CARRIED FORWARD TO SUMMARY
BROUGHT FORWARD**

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Rate Only

Rate Only

Rate Only

Rate Only

Rate Only

Rate Only

Rate Only

Rate Only

Rate Only

Rate Only

Rate Only

Rate Only

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TOTAL CARRIED FORWARD TO SUMMARY

		SCHEDULE 2:		SITE CLEARANCE			
Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)	
2	SANS PSC 2001 C	SCHEDULE 2: SITE CLEARANCE					
2,1	8.2.1	Clear and grub 1.0m wide street strip for pipe in road reserve.	m	0			
2,2	8.2.2	Remove and grub large trees, and tree stumps of girth:					
		a. Over 1m and up to and including 2m	No	12			
		b. Over 2m and up to and including 3m	No	12			

TOTAL CARRIED FORWARD TO SUMMARY

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SCHEDULE 3:**WATER SUPPLY - EARTHWORKS**

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
3	SANS	SCHEDULE 3: WATER SUPPLY - EARTHWORKS				
3,1	2001DB	EXCAVATIONS				
	PSDB 8.3.2	Excavate in all materials for trenches, backfill, compact for trenches, and dispose of excess material				
		a) For base width up to 1000mm, Excavation depth over and up to:				
		1) 0.0 m to 1.5 m	m	0		
		2) 1.5 m to 2 m	m	0	94,90	Rate Only
3,2	8.3.2	Extra-over items 3.1 for				
		1. Intermediate excavation	m³	0		
		2. Hard rock excavation	m³	0		
3,3	8.3.2	Excavate and dispose of unsuitable material from trench bottom (Provisional)	m³	700		
3,4	8.3.3	EXCAVATION ANCILLARIES				
3,5	8.3.3.3	Compaction in road reserves	m³	400		
3,6	8.3.5	Existing services that intersect or adjoin a pipe trench				
		a. Services that intersect a trench	No.	80		
		b. Services that adjoin a trench	m	1 800		
	SANS 2001LB	BEDDING				
3,7	8.2.1	Provision of bedding from trench excavation				
		a. Selected granular	m³	0		
		b. Selected fill	m³	0		
3,8	8.2.2	Provision of bedding from commercial source				
		a. Selected granular	m³	0	300,00	Rate Only
		b. Selected fill	m³	0	500,00	Rate Only
3,9	8.2.4	Encasing of pipes in concrete (20MPa)	m³	11		

TOTAL CARRIED FORWARD TO SUMMARY

SCHEDULE 4: WATER SUPPLY - PIPEWORKS

Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
4	SANS	SCHEDULE 4: WATER SUPPLY - PIPEWORKS				
4,1	2001L	PIPES				
4.1.1	8.2.1a	Supply, handle, lay, bed in flexible pipe bedding and test uPVC class 9 pipes complete with spigot and socket joints to				
		1. 63 mm diameter	m	9089		
		2. 75 mm diameter	m	1285		
		3. 90 mm diameter	m	1180		
		4. 110 mm diameter	m	0		Rate Only
4,2	8.2.2	SPECIALS AND FITTINGS				
		Extra-over item 4.1 for supplying, handling, laying, bedding, jointing and testing of the following fittings				
4.2.1		Bends				
		11.25 degree bends				
		1. 63 mm diameter	No	43		
		2. 75 mm diameter	No	46		
		3. 90 mm diameter	No	18		
		4. 110 mm diameter	No	9		
		22.5 degree bends				
		1. 63 mm diameter	No	63		
		2. 75 mm diameter	No	8		
		3. 90 mm diameter	No	17		
		4. 110 mm diameter	No	9		
		45 degree bends				
		1. 63 mm diameter	No	48		
		2. 75 mm diameter	No	7		
		3. 90 mm diameter	No	11		
		4. 110 mm diameter	No	16		

TOTAL CARRIED FORWARD

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BROUGHT FORWARD

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	90 degree bends		
	1. 63 mm diameter	No	32
	2. 75 mm diameter	No	7
	3. 90 mm diameter	No	6
	4. 110 mm diameter	No	4
4.2.2	Cast Iron Tees		
	1. 75 X 63 mm diameter	No	4
	2. 90 X 63 mm diameter	No	45
	3. 110 X 63 mm diameter	No	34
	4. 110 X 75 mm diameter	No	1
	5. 110 X 90 mm diameter	No	5
4.2.3	Cast Iron Equal Tees		
	1. 63 mm diameter	No	54
	2. 75 mm diameter	No	6
	3. 90 mm diameter	No	13
4.2.4	Flange adaptors		
	1. 63 mm diameter	No	13
	2. 75 mm diameter	No	2
	3. 90 mm diameter	No	3
	4. 110 mm diameter	No	1
4.2.5	Reducers		
	1. 75 X 63 mm diameter	No	4
	2. 90 X 63 mm diameter	No	24
	3. 90 X 75 mm diameter	No	1
	4. 110 X 63 mm diameter	No	16
	5. 110 X 75 mm diameter	No	1

TOTAL CARRIED FORWARD

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BROUGHT FORWARD

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		6. 110 X 90 mm diameter	No	18
4.2.6		Cast Iron End Caps		
		1. 63 mm diameter	No	17
4,3	PSL3.10	Isolating valves		
	PSL 3.10.2	Extra-over item 4.1 for the supplying, installing cutting in and testing flanged Class 12 clockwise closing non rising spindle resilient seal gate valves , as per drawing.		
		1. 63 mm diameter	No	24
		2. 75 mm diameter	No	1
		3. 90 mm diameter	No	1
		4. 110 mm diameter	No	6
4,4	PSL3.10	Water Meter		
		Kent Helix H4000 woltmann-type flanged water meter or similar approved as per drawing , for pipe diameters:		
		1. 63 mm diameter	No	18
		2. 75 mm diameter	No	1
		3. 90 mm diameter	No	1
		4. 110 mm diameter	No	6
4,5	PSL5.6	CHAMBERS		
		Construct valve chambers complete with step irons, cover and frames, as per drawing	No.	7
		4. Backfill chambers using selected fill	m³	85
4,6		SUNDRIES		
4.6.1	8.2.11	Thrust blocks and pedestals class 25/19 concrete, as per drawing	m³	18,0
4,7		Pipe Markers Supply and install precast concrete pipeline markers, as per drawing	No	8

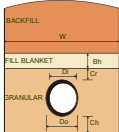
TOTAL CARRIED FORWARD TO SUMMARY

SUMMARY OF BILL OF QUANTITIES

SCHEDULE	DESCRIPTION		AMOUNT (R)
SCHEDULE 1:	PRELIMINARY AND GENERAL	R	-
SCHEDULE 2:	SITE CLEARANCE	R	-
SCHEDULE 3:	WATER SUPPLY - EARTHWORKS	R	-
SCHEDULE 4:	WATER SUPPLY - PIPEWORKS	R	-
Sub-total 1		R	-
Contingencies (15%)		R	-
Sub-total 3		R	-
VAT @ 15%		R	-
TOTAL		R	-

Bedding volume calculation

110 Diameter Flexible pipe		
Project Name	ASG	
Project number	0000	
Outside diam. Di =	0.075	m
Inside diam. Di =	0.071	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.275	m
Fill Blanket height, Bb =	0.200	m
Width, W =	1.000	m
Fill Blanket area, Ba =	0.135	m²
Granular area, Ca =	0.181	m²



Bedding volume calculation

160 Diameter Flexible pipe		
Project Name	ASG	
Project number	0000	
Outside diam. Di =	0.160	m
Inside diam. Di =	0.154	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.200	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.760	m
Fill Blanket area, Ba =	0.152	m²
Granular area, Ca =	0.203	m²

Bedding volume calculation

200 Diam Flexible pipe		
Project Name	ASG	
Project number	0000	
Outside diam. Di =	0.200	m
Inside diam. Di =	0.192	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.400	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.800	m
Fill Blanket area, Ba =	0.160	m²
Granular area, Ca =	0.209	m²

Bedding volume calculation

250 Diameter Flexible pipe		
Project Name	ASG	
Project number	0000	
Outside diam. Di =	0.250	m
Inside diam. Di =	0.240	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.400	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.800	m
Fill Blanket area, Ba =	0.170	m²
Granular area, Ca =	0.133	m²

Bedding volume calculation

315 Diameter Flexible pipe		
Project Name	ASG	
Project number	0000	
Outside diam. Di =	0.315	m
Inside diam. Di =	0.303	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.515	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.915	m
Fill Blanket area, Ba =	0.183	m²
Granular area, Ca =	0.280	m²

Bedding volume calculation

355 Diameter Flexible pipe		
Project Name	ASG	
Project number	0000	
Outside diam. Di =	0.355	m
Inside diam. Di =	0.341	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.505	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.905	m
Fill Blanket area, Ba =	0.199	m²
Granular area, Ca =	0.431	m²

Bedding volume calculation

400 Diameter Flexible pipe		
Project Name	ASG	
Project number	0000	
Outside diam. Di =	0.400	m
Inside diam. Di =	0.394	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.600	m
Fill Blanket height, Bb =	0.200	m
Width, W =	1.000	m
Fill Blanket area, Ba =	0.200	m²
Granular area, Ca =	0.474	m²

Excavation Volume to Pipe Invert

Pipe diameter	Length	Area depth	Width	Volume	Linear Measurements
mm	m	m	m	m³	
75	3,207.81	0.075	0.68	2,233	2071.810
90	0.00	0.090	0.68	0	2167
110	1,000.00	0.110	0.68	1,409	1000.000
160	0.00	0.160	0.76	0	Hand (m)
200	0.00	0.200	0.76	0	Hand (m)
250	0.00	0.250	0.80	0	Machine
300	0.00	0.300	0.80	0	2,500
350	0.00	0.350	0.80	0	1,000
400	0.00	0.400	0.80	0	0
450	0.00	0.450	0.80	0	0
500	0.00	0.500	0.80	0	Hand (m)
Sub-Totals	5,122		3,762	4,326	
Site clearance*	5,122				3210

Excavation Volume of Trench Bottom

Pipe diameter	Length	Area depth	Width	Volume	Volumetric Measurements
mm	m	m	m	m³	%
75	3,207.81	0.100	0.68	216	Hand m³ 63%
90	0.00	0.120	0.68	0	0
110	1,000.00	0.130	0.68	130	Intermediate 25%
160	0.00	0.160	0.76	0	0
200	0.00	0.200	0.76	0	0
250	0.00	0.250	0.80	0	0
300	0.00	0.300	0.80	0	0
350	0.00	0.350	0.80	0	0
400	0.00	0.400	0.80	0	0
450	0.00	0.450	0.80	0	0
500	0.00	0.500	0.80	0	0
Sub-Totals	5,127.81		346	398	Total Hand & Machine 4724

Total Trench Excavation Volume

Excavation Volume to Pipe Invert	4,326
Excavation Volume of Trench Bottom	398
Total	4,724

Division of Granular & Fill Volume

Pipe diameter	Length	Granular area	Granular volume	Pipe volume	Total Granular Volume	Fill area	Fill volume	Total Fill Volume
mm	m	m²	m³	m³	m³	m²	m³	m³
75	3,207.81	0.181	807	14	781	0.160	112	893
90	0.00	0.203	0	0	0	0.160	0	0
110	1,000.00	0.203	880	18	822	0.160	167	323
160	0.00	0.203	0	0	0	0.160	0	0
200	0.00	0.203	0	0	0	0.160	0	0
250	0.00	0.203	0	0	0	0.160	0	0
300	0.00	0.203	0	0	0	0.160	0	0
350	0.00	0.203	0	0	0	0.160	0	0
400	0.00	0.203	0	0	0	0.160	0	0
450	0.00	0.203	0	0	0	0.160	0	0
500	0.00	0.203	0	0	0	0.160	0	0
Sub-Totals		%	1,227	32	1,374	%	819	942

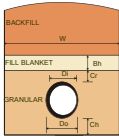
From trench excavations	65%	788	0	917	65%	533	813
From borrow pit	0%	0	0	0	0%	0	0
Imported commercially	35%	429	0	454	35%	287	338
Totals	1	1,227	0	1,411	1	819	942

Excavation and Bedding Ancillaries

Intermediate	%	m³	m³
Hard rock	25%	1,082	1,244
% Current Stone or Unavailable Material	25%	99	114
Total required backfill		2,408	
Total available backfill		99	
Backfill Deficiency		1,462	
Total Unavailable Material		1,177	

Bedding volume calculation

110 Diameter Flexible pipe		
Project Name	ABP	
Project number	0000	
Outside diam. Di =	0.275	m
Inside diam. Di =	0.271	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.275	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.100	m
Fill Blanket area, Ba =	0.125	m²
Granular area, Ca =	0.181	m²

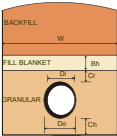


Excavation Volume to Pipe Invert

Pipe diameter	Length	Ave depth	Width	Volume	Total Volume	Linear Measurements
mm	m	m	m	m³	m³	
75	0.00	1,075	0.68	0	0.00	Hand excav
90	0.00	1,050	0.76	0	0.00	Soft (m)
110	40.00	1,110	0.68	30	36.47	Intermediate (m)
180	20.00	1,100	0.76	16	20.28	Hard (m)
200	0.00	1,200	0.76	0	0.00	
250	0.00	1,200	0.80	0	0.00	Machine
300	0.00	1,200	0.80	0	0.00	250m
350	0.00	1,200	0.85	0	0.00	40m
400	0.00	1,200	0.85	0	0.00	100%
450	0.00	1,200	0.85	0	0.00	100%
500	0.00	1,200	0.85	0	0.00	100%
550	0.00	1,200	0.85	0	0.00	100%
600	0.00	1,200	0.85	0	0.00	100%
650	0.00	1,200	0.85	0	0.00	100%
700	0.00	1,200	0.85	0	0.00	100%
750	0.00	1,200	0.85	0	0.00	100%
800	0.00	1,200	0.85	0	0.00	100%
850	0.00	1,200	0.85	0	0.00	100%
900	0.00	1,200	0.85	0	0.00	100%
950	0.00	1,200	0.85	0	0.00	100%
1000	0.00	1,200	0.85	0	0.00	100%
1050	0.00	1,200	0.85	0	0.00	100%
1100	0.00	1,200	0.85	0	0.00	100%
1150	0.00	1,200	0.85	0	0.00	100%
1200	0.00	1,200	0.85	0	0.00	100%
1250	0.00	1,200	0.85	0	0.00	100%
1300	0.00	1,200	0.85	0	0.00	100%
1350	0.00	1,200	0.85	0	0.00	100%
1400	0.00	1,200	0.85	0	0.00	100%
1450	0.00	1,200	0.85	0	0.00	100%
1500	0.00	1,200	0.85	0	0.00	100%
1550	0.00	1,200	0.85	0	0.00	100%
1600	0.00	1,200	0.85	0	0.00	100%
1650	0.00	1,200	0.85	0	0.00	100%
1700	0.00	1,200	0.85	0	0.00	100%
1750	0.00	1,200	0.85	0	0.00	100%
1800	0.00	1,200	0.85	0	0.00	100%
1850	0.00	1,200	0.85	0	0.00	100%
1900	0.00	1,200	0.85	0	0.00	100%
1950	0.00	1,200	0.85	0	0.00	100%
2000	0.00	1,200	0.85	0	0.00	100%
2050	0.00	1,200	0.85	0	0.00	100%
2100	0.00	1,200	0.85	0	0.00	100%
2150	0.00	1,200	0.85	0	0.00	100%
2200	0.00	1,200	0.85	0	0.00	100%
2250	0.00	1,200	0.85	0	0.00	100%
2300	0.00	1,200	0.85	0	0.00	100%
2350	0.00	1,200	0.85	0	0.00	100%
2400	0.00	1,200	0.85	0	0.00	100%
2450	0.00	1,200	0.85	0	0.00	100%
2500	0.00	1,200	0.85	0	0.00	100%
2550	0.00	1,200	0.85	0	0.00	100%
2600	0.00	1,200	0.85	0	0.00	100%
2650	0.00	1,200	0.85	0	0.00	100%
2700	0.00	1,200	0.85	0	0.00	100%
2750	0.00	1,200	0.85	0	0.00	100%
2800	0.00	1,200	0.85	0	0.00	100%
2850	0.00	1,200	0.85	0	0.00	100%
2900	0.00	1,200	0.85	0	0.00	100%
2950	0.00	1,200	0.85	0	0.00	100%
3000	0.00	1,200	0.85	0	0.00	100%
3050	0.00	1,200	0.85	0	0.00	100%
3100	0.00	1,200	0.85	0	0.00	100%
3150	0.00	1,200	0.85	0	0.00	100%
3200	0.00	1,200	0.85	0	0.00	100%
3250	0.00	1,200	0.85	0	0.00	100%
3300	0.00	1,200	0.85	0	0.00	100%
3350	0.00	1,200	0.85	0	0.00	100%
3400	0.00	1,200	0.85	0	0.00	100%
3450	0.00	1,200	0.85	0	0.00	100%
3500	0.00	1,200	0.85	0	0.00	100%
3550	0.00	1,200	0.85	0	0.00	100%
3600	0.00	1,200	0.85	0	0.00	100%
3650	0.00	1,200	0.85	0	0.00	100%
3700	0.00	1,200	0.85	0	0.00	100%
3750	0.00	1,200	0.85	0	0.00	100%
3800	0.00	1,200	0.85	0	0.00	100%
3850	0.00	1,200	0.85	0	0.00	100%
3900	0.00	1,200	0.85	0	0.00	100%
3950	0.00	1,200	0.85	0	0.00	100%
4000	0.00	1,200	0.85	0	0.00	100%
4050	0.00	1,200	0.85	0	0.00	100%
4100	0.00	1,200	0.85	0	0.00	100%
4150	0.00	1,200	0.85	0	0.00	100%
4200	0.00	1,200	0.85	0	0.00	100%
4250	0.00	1,200	0.85	0	0.00	100%
4300	0.00	1,200	0.85	0	0.00	100%
4350	0.00	1,200	0.85	0	0.00	100%
4400	0.00	1,200	0.85	0	0.00	100%
4450	0.00	1,200	0.85	0	0.00	100%
4500	0.00	1,200	0.85	0	0.00	100%
4550	0.00	1,200	0.85	0	0.00	100%
4600	0.00	1,200	0.85	0	0.00	100%
4650	0.00	1,200	0.85	0	0.00	100%
4700	0.00	1,200	0.85	0	0.00	100%
4750	0.00	1,200	0.85	0	0.00	100%
4800	0.00	1,200	0.85	0	0.00	100%
4850	0.00	1,200	0.85	0	0.00	100%
4900	0.00	1,200	0.85	0	0.00	100%
4950	0.00	1,200	0.85	0	0.00	100%
5000	0.00	1,200	0.85	0	0.00	100%
5050	0.00	1,200	0.85	0	0.00	100%
5100	0.00	1,200	0.85	0	0.00	100%
5150	0.00	1,200	0.85	0	0.00	100%
5200	0.00	1,200	0.85	0	0.00	100%
5250	0.00	1,200	0.85	0	0.00	100%
5300	0.00	1,200	0.85	0	0.00	100%
5350	0.00	1,200	0.85	0	0.00	100%
5400	0.00	1,200	0.85	0	0.00	100%
5450	0.00	1,200	0.85	0	0.00	100%
5500	0.00	1,200	0.85	0	0.00	100%
5550	0.00	1,200	0.85	0	0.00	100%
5600	0.00	1,200	0.85	0	0.00	100%
5650	0.00	1,200	0.85	0	0.00	100%
5700	0.00	1,200	0.85	0	0.00	100%
5750	0.00	1,200	0.85	0	0.00	100%
5800	0.00	1,200	0.85	0	0.00	100%
5850	0.00	1,200	0.85	0	0.00	100%
5900	0.00	1,200	0.85	0	0.00	100%
5950	0.00	1,200	0.85	0	0.00	100%
6000	0.00	1,200	0.85	0	0.00	100%
6050	0.00	1,200	0.85	0	0.00	100%
6100	0.00	1,200	0.85	0	0.00	100%
6150	0.00	1,200	0.85	0	0.00	100%
6200	0.00	1,200	0.85	0	0.00	100%
6250	0.00	1,200	0.85	0	0.00	100%
6300	0.00	1,200	0.85	0	0.00	100%
6350	0.00	1,200	0.85	0	0.00	100%
6400	0.00	1,200	0.85	0	0.00	100%
6450	0.00	1,200	0.85	0	0.00	100%
6500	0.00	1,200	0.85	0	0.00	100%
6550	0.00	1,200	0.85	0	0.00	100%
6600	0.00	1,200	0.85	0	0.00	100%
6650	0.00	1,200	0.85	0	0.00	100%
6700	0.00	1,200	0.85	0	0.00	100%
6750	0.00	1,200	0.85	0	0.00	100%
6800	0.00	1,200	0.85	0	0.00	100%
6850	0.00	1,200	0.85	0	0.00	100%
6900	0.00	1,200	0.85	0	0.00	100%
6950	0.00	1,200	0.85	0	0.00	100%
7000	0.00	1,200	0.85	0	0.00	100%
7050	0.00	1,200	0.85	0	0.00	100%
7100	0.00	1,200	0.85	0	0.00	100%
7150	0.00	1,200	0.85	0	0.00	100%
7200	0.00	1,200	0.85	0	0.00	100%
7250	0.00	1,200	0.85	0	0.00	100%
7300	0.00	1,200	0.85	0	0.00	100%
7350	0.00	1,200	0.85	0	0.00	100%
7400	0.00	1,200	0.85	0	0.00	100%
7450	0.00	1,200	0.85	0	0.00	100%
7500	0.00	1,200	0.85	0	0.00	100%
7550	0.00	1,200	0.85	0	0.00	100%
7600	0.00	1,200	0.85	0	0.00	100%
7650	0.00	1,200	0.85	0	0.00	100%
7700	0.00	1,200	0.85	0	0.00	100%
7750	0.00	1,200	0.85	0	0.00	100%
7800	0.00	1,200	0.85	0	0.00	100%
7850	0.00	1,200	0.85	0	0.00	100%
7900	0.00	1,200	0.85	0	0.00	100%
7950	0.00	1,200	0.85	0	0.00	100%
8000	0.00	1,200	0.85	0	0.00	100%
8050	0.00	1,200	0.85	0	0.00	100%
8100	0.00	1,200	0.85	0	0.00	100%
8150	0.00	1,200	0.85	0	0.00	100%
8200	0.00	1,200	0.85	0	0.00	100%
8250	0.00	1,200	0.85	0	0.00	100%
8300	0.00	1,200	0.85	0	0.00	100%
8350	0.00	1,200	0.85	0	0.00	100%
8400	0.00	1,200	0.85	0	0.00	100%
8450	0.00	1,200	0.85	0	0.00	100%
8500	0.00	1,200	0.85	0	0.00	100%
8550	0.00	1,200	0.85	0	0.00	100%
8600	0.00	1,200	0.85	0	0.00	100%
8650	0.00	1,200	0.85	0	0.00	100%
8700	0.00	1,200	0.85	0	0.00	100%
8750	0.00	1,200	0.85	0	0.00	100%
8800	0.00	1,200	0.85	0	0.00	100%
8850	0.00	1,200	0.85	0	0.00	100%
8900	0.00	1,200	0.85	0	0.00	100%
8950	0.00	1,200	0.85	0	0.00	100%
9000	0.00	1,200	0.85	0	0.00	100%
9050	0.00	1,200	0.85	0	0.00	100%
9100	0.00	1,200	0.85	0	0.00	100%
9150	0.00	1,200	0.85	0	0.00	100%
9200	0.00	1,200	0.85	0	0.00	100%
9250	0.00	1,200	0.85	0	0.00	100%
9300	0.00	1,200	0.85	0	0.00	100%
9350	0.00	1,200	0.85	0	0.00	100%
9400	0.00	1,200	0.85	0	0.00	100%
9450	0.00	1,200	0.85	0	0.00	100%
9500	0.00	1,200	0.85	0	0.00	100%
9550	0.00	1,200	0.85	0	0.00	100%
9600	0.00	1,20				

Bedding volume calculation

110 Diameter Flexible pipe		
Project Name	AGS	0000
Project number	0075	m
Outside diam. Di =	0.271	m
Inside diam. Di =	0.271	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.275	m
Fill Blanket height, Bb =	0.200	m
Width, W =	1.000	m
Fill Blanket area, Ba =	0.135	m²
Granular area, Ca =	0.181	m²



Bedding volume calculation

160 Diameter Flexible pipe		
Project Name	AGS	0000
Project number	0.160	m
Outside diam. Di =	0.160	m
Inside diam. Di =	0.154	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.200	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.760	m
Fill Blanket area, Ba =	0.152	m²
Granular area, Ca =	0.203	m²

Bedding volume calculation

200 Diam Flexible pipe		
Project Name	AGS	0000
Project number	0.200	m
Outside diam. Di =	0.200	m
Inside diam. Di =	0.192	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.400	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.800	m
Fill Blanket area, Ba =	0.160	m²
Granular area, Ca =	0.209	m²

Bedding volume calculation

250 Diameter Flexible pipe		
Project Name	AGS	0000
Project number	0.250	m
Outside diam. Di =	0.250	m
Inside diam. Di =	0.240	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.400	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.800	m
Fill Blanket area, Ba =	0.170	m²
Granular area, Ca =	0.133	m²

Bedding volume calculation

315 Diameter Flexible pipe		
Project Name	AGS	0000
Project number	0.315	m
Outside diam. Di =	0.315	m
Inside diam. Di =	0.303	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.515	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.915	m
Fill Blanket area, Ba =	0.183	m²
Granular area, Ca =	0.280	m²

Bedding volume calculation

355 Diameter Flexible pipe		
Project Name	AGS	0000
Project number	0.355	m
Outside diam. Di =	0.355	m
Inside diam. Di =	0.341	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.505	m
Fill Blanket height, Bb =	0.200	m
Width, W =	0.905	m
Fill Blanket area, Ba =	0.199	m²
Granular area, Ca =	0.431	m²

Bedding volume calculation

400 Diameter Flexible pipe		
Project Name	AGS	0000
Project number	0.400	m
Outside diam. Di =	0.400	m
Inside diam. Di =	0.394	m
Contingency measurement	15	%
Granular support height, Ch =	0.100	m
Granular roof height, Cr =	0.100	m
Granular total height, Ct =	0.600	m
Fill Blanket height, Bb =	0.200	m
Width, W =	1.000	m
Fill Blanket area, Ba =	0.200	m²
Granular area, Ca =	0.474	m²

Excavation Volume to Pipe Invert

Pipe diameter	Length	Ave depth	Width	Volume	Total Volume	Linear Measurements
mm	m	m	m	m³	m³	
75	3.201,81	0,1075	0,688	2.233	207,61	Hand entry: 3201,610
90	0,00	0,100	0,688	0	0,00	Intermediate (m)
110	1.043,26	0,110	0,688	1.381	1580,32	Hand (m)
160	0,00	0,100	0,776	0	0,00	Intermediate (m)
200	0,00	0,100	0,776	0	0,00	Hand (m)
250	0,00	0,100	0,800	0	0,00	Intermediate (m)
300	0,00	0,100	0,800	0	0,00	Hand (m)
350	0,00	0,100	0,800	0	0,00	Intermediate (m)
400	0,00	0,100	0,800	0	0,00	Hand (m)
450	0,00	0,100	0,800	0	0,00	Intermediate (m)
500	0,00	0,100	0,800	0	0,00	Hand (m)
550	0,00	0,100	0,800	0	0,00	Intermediate (m)
600	0,00	0,100	0,800	0	0,00	Hand (m)
650	0,00	0,100	0,800	0	0,00	Intermediate (m)
700	0,00	0,100	0,800	0	0,00	Hand (m)
750	0,00	0,100	0,800	0	0,00	Intermediate (m)
800	0,00	0,100	0,800	0	0,00	Hand (m)
850	0,00	0,100	0,800	0	0,00	Intermediate (m)
900	0,00	0,100	0,800	0	0,00	Hand (m)
950	0,00	0,100	0,800	0	0,00	Intermediate (m)
1000	0,00	0,100	0,800	0	0,00	Hand (m)
1050	0,00	0,100	0,800	0	0,00	Intermediate (m)
1100	0,00	0,100	0,800	0	0,00	Hand (m)
1150	0,00	0,100	0,800	0	0,00	Intermediate (m)
1200	0,00	0,100	0,800	0	0,00	Hand (m)
1250	0,00	0,100	0,800	0	0,00	Intermediate (m)
1300	0,00	0,100	0,800	0	0,00	Hand (m)
1350	0,00	0,100	0,800	0	0,00	Intermediate (m)
1400	0,00	0,100	0,800	0	0,00	Hand (m)
1450	0,00	0,100	0,800	0	0,00	Intermediate (m)
1500	0,00	0,100	0,800	0	0,00	Hand (m)
1550	0,00	0,100	0,800	0	0,00	Intermediate (m)
1600	0,00	0,100	0,800	0	0,00	Hand (m)
1650	0,00	0,100	0,800	0	0,00	Intermediate (m)
1700	0,00	0,100	0,800	0	0,00	Hand (m)
1750	0,00	0,100	0,800	0	0,00	Intermediate (m)
1800	0,00	0,100	0,800	0	0,00	Hand (m)
1850	0,00	0,100	0,800	0	0,00	Intermediate (m)
1900	0,00	0,100	0,800	0	0,00	Hand (m)
1950	0,00	0,100	0,800	0	0,00	Intermediate (m)
2000	0,00	0,100	0,800	0	0,00	Hand (m)
2050	0,00	0,100	0,800	0	0,00	Intermediate (m)
2100	0,00	0,100	0,800	0	0,00	Hand (m)
2150	0,00	0,100	0,800	0	0,00	Intermediate (m)
2200	0,00	0,100	0,800	0	0,00	Hand (m)
2250	0,00	0,100	0,800	0	0,00	Intermediate (m)
2300	0,00	0,100	0,800	0	0,00	Hand (m)
2350	0,00	0,100	0,800	0	0,00	Intermediate (m)
2400	0,00	0,100	0,800	0	0,00	Hand (m)
2450	0,00	0,100	0,800	0	0,00	Intermediate (m)
2500	0,00	0,100	0,800	0	0,00	Hand (m)
2550	0,00	0,100	0,800	0	0,00	Intermediate (m)
2600	0,00	0,100	0,800	0	0,00	Hand (m)
2650	0,00	0,100	0,800	0	0,00	Intermediate (m)
2700	0,00	0,100	0,800	0	0,00	Hand (m)
2750	0,00	0,100	0,800	0	0,00	Intermediate (m)
2800	0,00	0,100	0,800	0	0,00	Hand (m)
2850	0,00	0,100	0,800	0	0,00	Intermediate (m)
2900	0,00	0,100	0,800	0	0,00	Hand (m)
2950	0,00	0,100	0,800	0	0,00	Intermediate (m)
3000	0,00	0,100	0,800	0	0,00	Hand (m)
3050	0,00	0,100	0,800	0	0,00	Intermediate (m)
3100	0,00	0,100	0,800	0	0,00	Hand (m)
3150	0,00	0,100	0,800	0	0,00	Intermediate (m)
3200	0,00	0,100	0,800	0	0,00	Hand (m)
3250	0,00	0,100	0,800	0	0,00	Intermediate (m)
3300	0,00	0,100	0,800	0	0,00	Hand (m)
3350	0,00	0,100	0,800	0	0,00	Intermediate (m)
3400	0,00	0,100	0,800	0	0,00	Hand (m)
3450	0,00	0,100	0,800	0	0,00	Intermediate (m)
3500	0,00	0,100	0,800	0	0,00	Hand (m)
3550	0,00	0,100	0,800	0	0,00	Intermediate (m)
3600	0,00	0,100	0,800	0	0,00	Hand (m)
3650	0,00	0,100	0,800	0	0,00	Intermediate (m)
3700	0,00	0,100	0,800	0	0,00	Hand (m)
3750	0,00	0,100	0,800	0	0,00	Intermediate (m)
3800	0,00	0,100	0,800	0	0,00	Hand (m)
3850	0,00	0,100	0,800	0	0,00	Intermediate (m)
3900	0,00	0,100	0,800	0	0,00	Hand (m)
3950	0,00	0,100	0,800	0	0,00	Intermediate (m)
4000	0,00	0,100	0,800	0	0,00	Hand (m)
4050	0,00	0,100	0,800	0	0,00	Intermediate (m)
4100	0,00	0,100	0,800	0	0,00	Hand (m)
4150	0,00	0,100	0,800	0	0,00	Intermediate (m)
4200	0,00	0,100	0,800	0	0,00	Hand (m)
4250	0,00	0,100	0,800	0	0,00	Intermediate (m)
4300	0,00	0,100	0,800	0	0,00	Hand (m)
4350	0,00	0,100	0,800	0	0,00	Intermediate (m)
4400	0,00	0,100	0,800	0	0,00	Hand (m)
4450	0,00	0,100	0,800	0	0,00	Intermediate (m)
4500	0,00	0,100	0,800	0	0,00	Hand (m)
4550	0,00	0,100	0,800	0	0,00	Intermediate (m)
4600	0,00	0,100	0,800	0	0,00	Hand (m)
4650	0,00	0,100	0,800	0	0,00	Intermediate (m)
4700	0,00	0,100	0,800	0	0,00	Hand (m)
4750	0,00	0,100	0,800	0	0,00	Intermediate (m)
4800	0,00	0,100	0,800	0	0,00	Hand (m)
4850	0,00	0,100	0,800	0	0,00	Intermediate (m)
4900	0,00	0,100	0,800	0	0,00	Hand (m)
4950	0,00	0,100	0,800	0	0,00	Intermediate (m)
5000	0,00	0,100	0,800	0	0,00	Hand (m)
5050	0,00	0,100	0,800	0	0,00	Intermediate (m)
5100	0,00	0,100	0,800	0	0,00	Hand (m)
5150	0,00	0,100	0,800	0	0,00	Intermediate (m)
5200	0,00	0,100	0,800	0	0,00	Hand (m)
5250	0,00	0,100	0,800	0	0,00	Intermediate (m)
5300	0,00	0,100	0,800	0	0,00	Hand (m)
5350	0,00	0,100	0,800	0	0,00	Intermediate (m)
5400	0,00	0,100	0,800	0	0,00	Hand (m)
5450	0,00	0,100	0,800	0	0,00	Intermediate (m)
5500	0,00	0,100	0,800	0	0,00	Hand (m)
5550	0,00	0,100	0,800	0	0,00	Intermediate (m)
5600	0,00	0,100	0,800	0	0,00	Hand (m)
5650	0,00	0,100	0,800	0	0,00	Intermediate (m)
5700	0,00	0,100	0,800	0	0,00	Hand (m)
5750	0,00	0,100	0,800	0	0,00	Intermediate (m)
5800	0,00	0,100	0,800	0	0,00	Hand (m)
5850	0,00	0,100	0,800	0	0,00	Intermediate (m)
5900	0,00	0,100	0,800	0	0,00	Hand (m)
5950	0,00	0,100	0,800	0	0,00	Intermediate (m)
6000	0,00	0,100	0,800	0	0,00	Hand (m)
6050	0,00	0,100	0,800	0	0,00	Intermediate (m)
6100	0,00	0,100	0,800	0	0,00	Hand (m)
6150	0,00	0,100	0,800	0	0,00	Intermediate (m)
6200	0,00	0,100	0,800	0	0,00	Hand (m)
6250	0,00	0,100	0,800	0	0,00	Intermediate (m)
6300	0,00	0,100	0,800	0	0,00	Hand (m)
6350	0,00	0,100	0,800	0	0,00	Intermediate (m)
6400	0,00	0,100	0,800	0	0,00	Hand (m)
6450	0,00	0,100	0,800	0	0,00	Intermediate (m)
6500	0,00	0,100	0,800	0	0,00	Hand (m)
6550	0,00	0,100	0,800	0	0,00	Intermediate (m)
6600	0,00	0,100	0,800	0	0,00	Hand (m)
6650	0,00	0,100	0,800	0	0,00	Intermediate (m)
6700	0,00	0,100	0,800	0	0,00	Hand (m)
6750	0,00	0,100	0,800	0	0,00	Intermediate (m)
6800	0,00	0,100	0,800	0	0,00	Hand (m)
6850	0,00	0,100	0,800	0	0,00	Intermediate (m)
6900	0,00	0,100	0,800	0	0,00	Hand (m)
6950	0,00	0,100	0,800	0	0,00	Intermediate (m)
7000	0,00	0,100	0,800	0	0,00	Hand (m)
7050	0,00	0,100	0,800	0	0,00	Intermediate (m)
7100	0,00	0,100	0,800	0	0,00	Hand (m)
7150	0,00	0,100	0,800	0	0,00	Intermediate (m)
7200	0,00	0,100	0,800	0	0,00	Hand (m)
7250	0,00	0,100	0,800	0	0,00	Intermediate (m)
7300	0,00	0,100	0,800	0	0,00	Hand (m)
7350	0,00	0,100	0,800	0	0,00	Intermediate (m)
7400	0,00	0,100	0,800	0	0,00	Hand (m)
7450	0,00	0,100	0,800	0	0,00	Intermediate (m)
7500	0,00	0,100	0,800	0	0,00	Hand (m)
7550	0,00	0,100	0,800	0	0,00	Intermediate (m)
7600	0,00	0,100	0,800	0	0,00	Hand (m)
7650	0,00	0,100	0,800	0	0,00	Intermediate (m)
7700	0,00	0,100	0,800	0	0,00	Hand (m)
7750	0,00	0,100	0,800	0	0,00	Intermediate (m)
7800	0,00	0,100	0,800	0	0,00	Hand (m)
7850	0,00	0,100	0,800	0	0,00	Intermediate (m)
7900	0,00	0,100	0,800	0	0,00	Hand (m)
7950	0,00	0,100	0,800	0	0,00	Intermediate (m)
8000	0,00	0,100	0,800	0	0,00	Hand (m)
8050	0,00	0,100	0,800	0	0,00	Intermediate (m)
8100	0,00	0,100	0,800	0	0,00	Hand (m)
8150	0,00	0,100	0,800	0	0,00	Intermediate (m)
8200	0,00	0,100	0,800	0	0,00	Hand (m)
8250	0,00	0,100	0,800	0	0,00	Intermediate (m)
8300	0,00	0,100	0,800	0	0,00	Hand (m)
8350	0,00	0,100	0,800	0	0,00	Intermediate (m)
8400	0,00	0,100	0,800	0	0,00	Hand (m)
8450	0,00	0,100	0,800	0	0,00	Intermediate (m)
8500	0,00	0,100	0,800	0	0,00	Hand (m)
8550	0,00	0,100	0,800	0	0,00	Intermediate (m)
8600	0,00	0,100	0,800	0	0,00	Hand (m)
8650	0,00	0,100	0,800	0	0,00	Intermediate (m)
8700	0,00	0,100	0,800	0	0,00	Hand (m)
8750	0,00	0,100	0,800	0	0,00	Intermediate (m)
8800	0,00	0,100	0,800	0	0,00	Hand (m)
8850	0,00	0,100	0,800	0	0,00	Intermediate (m)
8900	0,00	0,100	0,800	0	0,00	Hand (m)
8950	0,00	0,100	0,800	0	0,00	Intermediate (m)
9000	0,00	0,100	0,800	0	0,00	Hand (m)
9050	0,00	0,100	0,800	0	0,00	Intermediate (m)
9100	0,00	0,100	0,800	0	0,00	Hand (m)
9150	0,00	0,100	0,800	0	0,00	Intermediate (m)
9200	0,00	0,100	0,800	0	0,00	Hand (m)
9250	0,00	0,100	0,800	0	0,00	Intermediate (m)
9300	0,00	0,100	0,800	0	0,00	Hand (m)
9350	0,00	0,100	0,800	0	0,00	Intermediate (m)
9400	0,00	0,100	0,800	0	0,00	Hand (m)

SCHEDULE 6:			RESERVOIRS, TANKS, BUILDINGS AND FENCE			
Item	Payment Reference	Description	Unit	Qty	Rate (R)	Amount (R)
6	SANS	SCHEDULE 6: RESERVOIRS, TANKS, BUILDINGS AND FENCE				
6,2	PSJ	ABECO PRESSED RECTANGULAR STEEL ELEVATED TANK, OR SIMILAR APPROVED - 305 KL				
6.2.1		Supply, install Abeco type 305 kl capacity rectangular pressed steel Tank with a 9m high stand including a walkway and landing platforms.	No.	1	1 394 540,00	1 394 540,00
6.2.2		MSV Model 2020S 2 piece full bore ball valve, 316 stainless steel body and ball, PTFE seats and seals, flanged and drilled, or similar approved for pipe diameter 100mm	No.	1	43 334,10	43 334,10
6.2.3		Provision of overflow GMS drain 150mm diameter pipe	m	1	521,57	521,57
6.2.4		FOUNDATION REINFORCEMENT DETAILS:				
6.2.4.1		Mild steel bars: R8	kg	N/A		
6.2.4.2		High tensile bars: Y12	kg	825	10,92	9 009,00
		Y16	kg	1425	10,92	15 561,00
6.2.5		FOUNDATION CONCRETE DETAILS:				
6.2.5.1		Grade 25/19 Concrete	m³	20	3 000,00	60 000,00
6.2.6		Excavations and formwork preparations for the reservoir platform	Prov Sum	1	75 000,00	75 000,00
6,3	PSK	PUMPHOUSE CONSTRUCTION				
6.3.1		Supply and construct pump house complete with all accessories as shown on the drawing	No.	1	110 000,00	110 000,00
6,4	PSL	CONCRETE PALISADE FENCING				
6.4.1		Supply and erect 2.4 m high concrete palisade fence with razor wire on top and 4m wide gate comprising of 2 x 2m leaves per set, complete with all accessories.	m	250	1 047,01	261 751,75
6,5	PSM	PRESSURE REDUCING VALVE(FLOW CONTROL VALVE)				
		1. Flanged 100mm diameter PN 16 pressure reducing valve including valve chamber, complete with pressure gauges, anticavitation upstream pressure up to 10 bars, adjustable downstream set range between 1 - 5 bars "CLA VAL" type, or similar as shown on the drawing	No.	1	69 001,60	69 001,60
TOTAL CARRIED FORWARD TO SUMMARY						2 038 719,02