

		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG				SECTION 1
ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1	SABS 1200 A	<u>PRELIMINARY AND GENERAL</u>				
1.1	8.3	<u>SCHEDULED FIXED-CHARGE AND VALUE-RELATED ITEMS</u>				
1.1.1	8.3.1	<u>Contractural Requirements, management and supervision</u>	Sum	1		
1.1.2	8.3.2	<u>Establishment of facilities on site</u>	Sum	1		
1.1.2.1	8.3.2.2	<u>Facilities for the Contractor, including below:</u>	Sum	1		
		(a) Office and storage sheds				
		(b) Workshops				
		(c) Ablution and latrine facilities				
		(d) Tools and Equipment				
		(e) Water Supplies, Electric Power and Communication				
		(f) Dealing with water (sub-clause 5.5)				
		(g) Access (sub-clause 5.8)				
1.1.3	8.3.3	<u>Other fixed-charge obligations</u> (including all health and safety requirements)	Sum	1		
1.1.4	8.3.4	<u>Removal of site establishment</u>	Sum	1		
1.2	8.4	<u>SCHEDULED TIME-RELATED ITEMS</u>				
1.2.1	8.4.1	<u>Contractural Requirements, management and supervision</u>	Sum	1		
1.2.2	8.4.2	<u>Operation and maintenance of facilities on the site for the duration of construction period</u>				
1.2.2.1	8.4.2.2	<u>Facilities for the Contractor, including the below:</u>	Sum	1		
		(a) Office and storage sheds				
		(b) Workshops				
		(c) Ablution and latrine facilities				
		(d) Tools and Equipment				
		(e) Water Supplies, Electric Power and Communication				
		(f) Dealing with water (sub-clause 5.5)				
		(g) Access (sub-clause 5.8)				
1.2.5	8.4.5	Other time-related obligations including Contractor's health and safety	Sum	1		
1 - Ps & Gs	SECTION 1 PRELIMINARY AND GENERAL CARRIED TO FORWARD					

		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG				SECTION 1
ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
1 - Ps & Gs	SECTION 1 PRELIMINARY AND GENERAL BROUGHT FORWARD					
1.3	8.5	SUMS STATED PROVISIONALLY BY THE ENGINEER: (a) (i) Remuneration of a Community Liaison Officer at R 7,000.00 per month (b) Overheads, charges and profit on items in (a) above	Prov. Sum %	1.00		
1 - Ps & Gs	TOTAL SECTION 1 PRELIMINARY AND GENERAL CARRIED TO SUMMARY					
		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG				SECTION 2
ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2	SANS 1200DB	IRRIGATION SYSTEM				
2.0		<u>EARTHWORKS (PIPE TRENCHES)</u>				
2.1	8.3	<u>SCHEDULED ITEMS</u>				
2.1.1	8.3.2	<u>Excavation</u> a) <u>Excavate in all materials for trenches for pipes up to 300mm OD, backfill, compact and dispose of surplus/unsuitable material to depths measured to bottom of trench as specified in PSDB 8.2.3 minimum base width 600mm. Excavation depth:</u> i) Over 0,0 m up to 1,0 m	m	3 000		
		b) <u>Extra over item 2.2.1 above for:</u>				
		i) Intermediate excavation	m³	180		
		ii) Hard rock excavation	m³	1		
		c) <u>Excavate and dispose of unsuitable material from trench bottom</u>	m³	1		
2.1.2	8.3.3	<u>Excavation Ancillaries:</u>				
2.1.2.1	8.3.3.1	<u>Make up deficiency in backfill material:</u> a) From other necessary excavations on site b) By importation from designated borrow pits b) By importation from commercial or off-site sources selected by the contractor	m³ m³ m³	1 0.5 1		
2.1.2.2	8.3.3.4	Overhaul a) Limited overhaul (provisional)	m³	835		
2.1.4	8.3.5	<u>Existing Services that intersect or adjoin a pipe trench</u> (a) Services that intersect a trench	No.	10		

	SANS 1200LB	<u>BEDDING (PIPES)</u>				
2.2	8.2	<u>SCHEDULED ITEMS</u>				
2.2.1	8.2.1	<u>Provision of bedding from trench excavations:</u>				
		(a) Selected granular material	m³	475		
		(b) Selected fill material	m³	360		
2.2.2	8.2.2	<u>Supply only of bedding by importation:</u>				
2.2.2.1	8.2.2.3	<u>From commercial sources</u>				
		a) Selected granular material	m³	1		
		b) Selected fill material	m³	1		
2-IS	SECTION 2 - IRRIGATION SYSTEM CARRIED TO FORWARD					
		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG				SECTION 2
ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
2-IS	SECTION 2 - IRRIGATION SYSTEM BROUGHT FORWARD					
	SANS 1200LB	<u>MEDIUM-PRESSURE PIPELINES</u>				
2.3	8.2	<u>SCHEDULED ITEMS</u>				
2.3.1	8.2.1	<u>Supply, Lay, and Bed Pipes Complete with Couplings:</u>				
		<u>uPVC Class 9</u>				
		(a) 20mm dia	m	1100		
		(b) 63mm dia	m	1400		
		<u>STEEL SUPPORTING BAR</u>				
		(c) Angle iron 25x25x5mm	No.	47		
2.3.2	8.2.2	<u>Extra-over 8.2.1 for the Supplying, Laying, and Bedding of Specials Complete with Couplings:</u>				
		<u>uPVC T-PIECES</u>				
		(a) 20x20mm diameter	No.	17		
		(b) 20x63mm diameter	No.	37		
		(c) 63x63mm diameter	No.	2		
		<u>uPVC ELBOWS</u>				
		(d) 20mm diameter 90° bend	No.	94		
2.3.3	8.2.3	<u>Extra-over 8.2.1 for the Supplying, Laying, and Bedding of valves:</u>				
		<u>uPVC VALVES</u>				
		(a) 20mm diameter	No.	47		

	(b) 63mm diameter	No.	47		
	<u>uPVC NON RETURN VALVES</u>				
	(a) 63mm diameter	No.	2		
	<u>uPVC REDUCERS</u>				
	(a) 20X63mm diameter	No.	38		
	Allow a sum of R50 000.00(Fifty Thousand Rands) for fixing of existing sewer, water lines, storm water and any other relevant where necessary	Prov. Sum		R50 000.00	R50 000.00
2-IS	TOTAL SECTION 2 - IRRIGATION SYSTEM CARRIED TO SUMMARY				

		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG				SECTION 3
ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3		<u>PUMP STATION</u>				
3.1		Dismantle and remove existing material for disposal				
3.1.1		a) Old pump	No	2		
3.1.1.1		b) Electrical cables and pipes	Sum			
3.2		<u>MECHANICAL WORKS</u>				
3.2.1		<u>Closed Coupled Centrifugal Pumps</u>				
3.2.1.1		Supply and delivery of closed Coupled centrifugal pump set complete with flanged connection, coupling, base 24,51 l/s head 60m	No	2		
3.2.1.2		Installation test and commission	No	2		
3.2.2		<u>Pipe fittings</u>				
3.2.2.1		Supply and fit pipe and pipe fittings				
		(a) 80mm dia flanged "AVK" wedge gate valve or similar	No	2		
		(b) 80mm dia flanged equal tee pierce 150mm C/F	No	1		
		(c) 80 to 63mm flanged concentric reducer 135mm F/F	No	1		
		(d) 80mm dia flanged steel pipe 90° BEND 150mm C/F	No	1		
		(e) 80mm dia flanged steel pipe 520mm F/F	No	1		
		(f) 63mm dia steel to uPVC flanged adapter	No	2		
		(g) 65mm dia flanged steel pipe 90° bend 150mm C/F	No	2		
		(h) 65mm dia flanged steel pipe 110mm F/F	No	2		
		(i) 65mm dia flanged equal tee pierce 150mm C/F	No	1		
		(j) 65mm dia flanged steel pipe 455mm F/F	No	1		
		(k) 65mm dia flanged steel pipe 210mm F/F	No	2		
		(l) 65mm dia flanged "AVK" wedge gate valve or similar	No	2		

3.3		(m) 63mm dia flanged steel pipe 245mm F/F	No	2		
		(n) 65 T0 63mm flanged concentric reducer 120mm F/F	No	1		
		CONCRETE WORKS				
		(a) 1350x1145x200mm plinth	m ³	0.35		
		(b) Mesh ref 193	m ²	1.71		
		(d) 250micron polythene sheeting	m ²	1.71		
3-PUMP	TOTAL SECTION 3-PUMP STATION CARRIED FORWARD					
		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG				SECTION 3
ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
3-PUMP	SECTION 3 - PUMP STATION BROUGHT FORWARD					R0.00
3.4		STRUCTURAL STEELWORK				
3.4.1		Supply and fabrication of steelwork				
		(a) 230x75 steel parallel channel section	m	14		
		(b) M16 bolts	No.	18		
		(c) M20 bolts	N.o	14		
3-PUMP	TOTAL SECTION 3 - IRRIGATION SYSTEM CARRIED TO SUMMARY					
		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG				SECTION 4
ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
4		Mist Bed				
4.1		MECHANICAL WORKS				
4.1.1		Mist bed - Upgrade of Existing				
		Price is inclusive of removal of existing pipes and installation of new pipes,heat pump and testing.				
4.1.1.1		Mist beds heating system complete	Prov. Sum			R30 000.00
4-MIST	TOTAL SECTION 4- MIST BEDS CARRIED FORWARD					
		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG				SECTION 5
ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5	SANS	NURSERY				

5.0	1200DB	<u>EARTHWORKS (PIPE TRENCHES)</u>				
5.1	8.3	<u>SCHEDULED ITEMS</u>				
5.1.1	8.3.2	<u>Excavation</u>				
		a) <u>Excavate in all materials for trenches for pipes up to 300mm OD, backfill, compact and dispose of surplus/unsuitable material to depths measured to bottom of trench as specified in PSDB 8.2.3 minimum base width 600mm. Excavation depth:</u>				
		i) Over 0,0 m up to 1,0 m	m	120		
		b) <u>Extra over item 2.2.1 above for:</u>				
		i) Intermediate excavation	m³	12		
		c) <u>Excavate and dispose of unsuitable material from trench bottom</u>	m³	9		
5.1.2	8.3.3	<u>Excavation Ancillaries:</u>				
5.1.2.1	8.3.3.1	<u>Make up deficiency in backfill material:</u>				
		a) From other necessary excavations on site	m³	3		
		b) By importation from designated borrow pits	m³	0.5		
		c) By importation from commercial or off-site sources selected by the contractor	m³	6		
5.1.2.3	8.3.3.4	<u>Overhaul</u>				
		a) Limited overhaul (provisional)	m³	9		
	SANS 1200LB	<u>BEDDING (PIPES)</u>				
5.2	8.2	<u>SCHEDULED ITEMS</u>				
5.2.1	8.2.1	<u>Provision of bedding from trench excavations:</u>				
		(a) Selected granular material	m³	15		
		(b) Selected fill material	m³	7		
5.2.2	8.2.2	<u>Supply only of bedding by importation:</u>				
5.2.2.3	8.2.2.3	<u>From commercial sources</u>				
		a) Selected granular material	m³	15		
		b) Selected fill material	m³	7		
5-N	SECTION 5 - NURSERY CARRIED TO FORWARD					R0.00
CONTRACT NUMBER: Q9447-2023		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE KWAZULU-NATAL NATIONAL BOTANICAL GARDEN, PIETERMARITZBURG				SECTION 5
ITEM NO	PAYMENT REFERS TO	DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
5-N	SECTION 5 - NURSERY BROUGHT FORWARD					
	SANS 1200L	<u>MEDIUM-PRESSURE PIPELINES</u>				
5.3	8.2	<u>SCHEDULED ITEMS</u>				

5.3.1	8.2.1	<u>Supply, Lay, and Bed Pipes Complete with Couplings:</u> <u>uPVC Class 9</u> (a) 9mm dia (b) 63mm dia	m m	40 80		
5.3.2	8.2.2	<u>Extra-over 8.2.1 for the Supplying, Laying, and Bedding of Specials Complete with Couplings:</u> <u>uPVC T-PIECES</u> (a) 9x63mm diameter (b) 63x63mm diameter	No. No.	4 3		
5.3.3	8.2.3	<u>Extra-over 8.2.1 for the Supplying, Laying, and Bedding of valves:</u> <u>uPVC Valves</u> (a) 9mm diameter (b) 63mm diameter	No. No.	4 1		
5-N	TOTAL SECTION 5 - NURSERY CARRIED TO SUMMARY					

		CONSTRUCTION FOR PHASE 2 UPGRADE OF EXISTING IRRIGATION SYSTEM AT THE	SUMMARY
		DESCRIPTION	AMOUNT
SECTION	1	PRELIMINARY AND GENERAL	
SECTION	2	IRRIGATION SYSTEM	
SECTION	3	PUMP STATION	
SECTION	4	MIST BEDS	
SECTION	5	NURSERY	
	SUBTOTAL		
	ADD 10% CONTIGENCY		
	TOTAL		
	ADD 15% VAT		
	TOTAL PROJECT CONSTRUCTION COSTS		