

Contract No: WS7579
 Client: eThekweni Water and Sanitation
 Description: Glenwood Waste Water Treatment Works and Catchment
 Project No.: 1208/302

Section 1 : Preliminary & General

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
	SABS 1200A	SECTION 1 : PRELIMINARY & GENERAL FIXED CHARGE ITEMS				
1.1	8.3.1	Contractual requirements	Sum	1		
	8.3.2	Establishment of facilities on site:				
	8.3.2.1	Facilities for Engineer (SABS 1200AB)				
1.2	PSAB 2	Provision of office for the Engineers Representative	Sum	1		
1.3	PSAB 5	Name board (2 No.)	Sum	1		
1.4	PSAB 2.2(e)	Survey equipment and materials	Sum	1		
	8.3.3.2.2	Facilities for Contractor				
1.5		Offices, storage sheds, fencing, etc.	Sum	1		
1.6		Ablution and latrine facilities	Sum	1		
1.7		Water supplies, electric power and communications, dealing with water	Sum	1		
1.8		Tools and equipment	Sum	1		
1.9		Construction plant	Sum	1		
1.10	8.3.3	Other fixed charge obligations	Sum	1		
1.11	8.3.4	Remove all site establishment on completion	Sum	1		
		General Safety, Safety Plan, Monitoring and Review				
1.12	PS.22	The sum shall include all costs necessary in complying with the Occupational Health & Safety Act (1998 as amended) and the Construction Regulation 2014 and the eThekweni Municipality Health & Safety Specifications for initial costs and on-going costs as the works proceed.	Sum	1		
1.13	PS.23	Compliance with Environmental Management Plan (Note: Access plan to be developed in conjunction with the ECO and allowed for in rates)	Sum	1		
1.14	PSA4	Contractor to create access onto work fronts	Sum	1		
	SABS 1200A	TIME RELATED ITEMS				
1.15	8.4.1	Contractual requirements	Weeks	16		
	8.4.2	Operate and maintain facilities on site:				
	8.4.2.1	Facilities for Engineer for duration of contract (SABS 1200AB)				
Section 1 carried forward						

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Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
Section 1 brought forward						
1.16	PSAB.2	Provision of office for the Engineers Representative	Weeks	16		
1.17	PSAB.5	Nameboard (2 No.)	Weeks	16		
1.18	PSAB 2.2(e)	Survey equipment and materials	Weeks	16		
	8.3.3.2.2	Facilities for Contractor for the duration of the contract				
1.19		Office, storage sheds, fencing, etc.	Weeks	16		
1.20		Ablution and latrine facilities	Weeks	16		
1.21		Water supplies, electric power and communications, dealing with water and access	Weeks	16		
1.22		Tools and equipment	Weeks	16		
1.23		Construction plant	Weeks	16		
1.24	8.4.3	Supervision for duration of construction	Weeks	16		
1.25	8.4.4	Company and head office overhead costs	Weeks	16		
1.26	8.4.5	Other time charge related obligations	Weeks	16		
1.27	PS 22	Cost of compliance with Environmental Management Plan	Weeks	16		
		TEMPORARY WORKS				
1.28	8.8.2	Dealing with traffic	Sum	1		
1.29	PS.15	Dealing with water on the Works	Sum	1		
1.30	SABS 1200A	SUMS STATED PROVISIONALLY BY THE ENGINEER				
1.30.1	PS.7	Allow provisional sum for relocation of existing services where ordered by the Engineer	Prov Sum	1		R125 000.00
1.31		Allow provisional sum for repairs to damaged/unknown services which could not have been reasonably foreseen or prevented by the Contractor	Prov Sum	1		R150 000.00
1.32	PSA 4	Allow provisional sum for additional testing where ordered by the Engineer	Prov Sum	1		R50 000.00
1.33	PS.25	Allow provisional sum for Community Liaison Officer	Prov Sum	1		R200 000.00
1.34		Allow provisional sum for geotechnical investigation	Prov Sum	1		R350 000.00
1.35		Allow provisional sum for as-built survey to include line and invert level	Prov Sum	1		R50 000.00
1.36		Allow Provisional sum for crop compensation	Prov Sum	1		R35 000.00
1.37		Contractors mark-up on Item 1.32 only	%			
Section 1 carried forward						

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Section 2: Sewer Gravity Main

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		SECTION 2:				
	SABS 1200DB	Site Clearance				
2.1	8.3.1(a)	Clear vegetation, grass and trees of girth up to 1m and remove, stockpile, maintain/ preserve and reinstate topsoil (150mm deep), unsuitable material to be carted away to a legal dump site. (Note: The Contractor is responsible for providing access to all points along the project route and for ongoing maintenance and stormwater controls. No item has been allowed for this and is to be included in the these rates)	m	499		
2.2	SABS 1200C 8.2.2	Clear trees of girth and designated obstacles over 1,0m up to and including 2,0m and cart away to a legal dumpsite	No.	2		
2.3		Excavation				
	8.3.2(a) PSDB 1	Excavate in all materials by machine for trenches, backfill, compact and dispose of surplus material to a legal dump site, for pipes up to 1050mm in diameter for depth: <ul style="list-style-type: none"> • Rates to include for tunnelling under fences and trees • Rates to include shoring where required by regulation • Rates to include for crossing and adjoining services with due care and attention • Rates to include supporting/bracing of electrical and telephone poles where required • Rates to include for dewatering operations 				
2.3.1		Over Up to and including a) 0,00 2,0m	m	60		
2.3.2		b) 2,0 2,5m	m	10		
2.3.3		c) 2,5 3,0m	m	10		
2.4	8.3.2(b)	Extra over item 3.3 for excavation in intermediate material	m³	440		
2.5	8.3.2(b)	Extra over Item 3.3 for excavation in hard rock by means of blasting	m³	440		
2.6	PSA 4	Extra over Item 3.3 for backfilling with cement stabilised insitu material (4% by mass)	m³	122		
2.7	8.3.2(c)	Excavate unsuitable material from trench bottom and dispose of it to a legal dump site (Prov.)	m³	110		
2.8	PSDB 14	Hand excavate and backfill in all material to prove existing services to a maximum depth of 2,0m (Prov)	m³	50		
Section 2 carried forward						

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Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
Section 2 brought forward						
2.9	PSA 4	Excavate in all materials for chambers/ manholes outside the limits of the trench excavation, backfill, compact and dispose of surplus/unsuitable material to a legal dump site	m ³	11		
2.10	PSA 4	Extra over Item 3.5 above for the transport, handling and placing of rock to enhance soil retention on banks to prevent erosion within a 3km distance	m ³	550		
2.11		EXCAVATION ANCILLARIES				
	SABS 1200LB 8.2.1	Provision of bedding from trench excavations for a Class C bed:				
2.11.1		a) Selected granular material	m ³	32		
2.11.2		b) Selected fill material	m ³	8		
2.12	8.2.2.3	Provision from commercial or off-site sources where ordered by the Engineer (Prov.)				
2.12.1		a) Selected granular material	m ³	620		
2.12.2		b) Selected fill material	m ³	151		
2.12.3		c) 10mm crushed stone	m ³	6		
2.12.4		d) 20mm crushed stone	m ³	6		
2.12.5		e) Supply and lay A2 type bidim in trench 0,8m wide	m	11		
Section 2 carried forward						

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Section 3: Earthworks

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		SECTION 3: EARTHWORKS				
	SABS 1200D					
3.1	8.3.1.1	Clear and strip site	m ²	275		
3.2	8.3.1.2	Remove topsoil to nominal depth 150mm, stockpile and maintain	m ²	275		
3.3	8.3.2	Bulk Excavation				
3.3.1		a) Excavate in all materials and use for embankment or backfill or dispose as ordered to create a working platform for construction access and pipe laying operations	m ³	550		
3.3.2		i) Extra over for intermediate excavation	m ³	275		
3.3.3		ii) Extra over for hard rock excavation	m ³	550		
3.4	PSA 4	Extra over Item 5.3a) above for transport, handling and placing of rock to enhance soil retention on banks to prevent erosion within a 3km distance	m ³	550		
	SANS 1200DM					
3.5	8.3.3 a)	Rip and recompact 150mm existing insitu material compacted to minimum 93% MDD	m ³	35		
3.6	8.3.3	Treatment of road - bed				
3.7		a) Road-bed preparation and compaction to (1) minimum of 93% MDD	m ³	5 800		
3.8	8.3.4	Cut Intermediate material (from within the Westown Precinct)				
3.8.1		a) From Rd Prism to fill Compact to 93% MDD	m ³	93 000		
3.8.2		b) From Site to fill Compact to 93% MDD	m ³	152 000		
3.9	8.3.5	Construct upper and lower selected subgrade 150mm thick compacted to 95% MDD from:-				
3.9.1		(i) G7 upper selected subgrade material from commercial sources	m ³	5 700		
3.9.2		(ii) G9 lower selected subgrade material from commercial sources	m ³	5800		
3.10	8.3.12	Overhaul	m ³ .km	30 000		
	SANS 1200ME	SUBBASE				
3.11	8.3.3	Construct 150mm thick subbase layer using G5 material from commercial sources compacted to 95% MDD	m ³	35		
Section 3 carried forward						

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Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
Section 3 brought forward						
	SANS 1200MF	BASE				
3.12	8.3.3	Construct 100mm thick base layer using G2 material from commercial sources compacted to 102% MDD	m ³	23		
3.12.1		i) from Commercial sources	m ³	11 000		
	8.3.5	Process subbase material by the following processes, as relevant, and use in the subbase				
3.13		a) Stabilization	m ³	11 000		
	8.3.8	Stabilization agent				
3.14		a) Portland cement	t	460		
	8.3.3	Construct 150mm thick layer subbase with G5 material from commercial sources compacted to 97% MDD				
3.15		i) from Commercial sources	m ³	3 000		
	SANS 1200MH	ASPHALT BASE AND SURFACING				
3.16	8.5.1	Apply bitumen MC30 prime coat to new road pavement and black top surface (being reinstated) adjacent to building as directed by Engineer applied at 0,7l/m ²	m ²	231		
3.17	8.5.3	Apply tack coat of 30% stable grade emulsion to existing paved parking area as directed by Engineer applied at 0,5l/m ²	m ²	109		
3.18	8.5.4	Sa-S7 Asphalt mix paved to 25mm thick wearing course spec for mix design level IA compacted to 93% - MAX 96% MVD	t	22		
	SANS 1200DM	EMBANKMENT FILL				
3.19	8.3.5	Construct selected G5 quality from commercial sources for embankment reinstatement compacted in 150mm lifts to 95% MDD, Refer to Section A-A and B-B on dwg No.1208-302-RLA-0001	m ³	257		
	SANS 1200MJ	KERBING				
3.20	8.2.1	Construct Fig 12 precast kerb as per detail on dwg No. 1208-302-RLA and also as directed by Engineer				
3.20.1		a) Straight and curved radii greater than 25m	m	172		
3.20.2		b) Radii less than 25m	m	60		
	SANS 1200A	TEMPORARY WORKS				
3.21	8.8.4	Provision for detection and protection of existing services before and during construction works as directed by the Engineer.	Sum	1		
Section 3 carried forward						

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Section 4: Stormwater

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
		SECTION 4: STORMWATER DRAINAGE				
	SANS 1200DB	EARTHWORKS (Pipe Trenches)				
4.1	8.3.2	Excavate in intermediate material for trenches, shore where required, backfill, compact and dispose of surplus and unsuitable material within the freehaul distance for portal culverts span 750mm, height 600mm, 1.5m deep	m	7.5		
	SANS 1200LE	STORMWATER DRAINAGE PIPES AND STRUCTURES				
4.2	8.2.2 a)	Supply and lay precast portal and rectangular culvert span 750mm, height 600mm, class 175S complete with precast base slab	m	7.5		
4.3	8.2.4 b)	Extra over Item 8.2.2 for skew Cutting end units for culverts on site	No.	2		
4.4		HEADWALLS				
	8.2.7	Construct Type A headwall complete to include all reinforcing and concrete as per ETH Dwg No.38576				
4.4.1		a) Outlet i) 525mm diameter pipe (existing culvert 2)	No	1		
4.4.2		ii) Span 750mm, Height 600mm portal culvert	No	1		
4.4.3		b) Inlet i) 525mm diameter pipe (existing culvert 2)	No	1		
4.4.4		ii) Span 750mm, Height 600mm portal culvert	No	1		
4.5		MANHOLES, CATCHPITS, AND FIELD INLETS				
4.5.1	8.2.8 a)	Construct brick stormwater manhole Type "B" as per ETH Dwg No.38571, 3m to 5m deep.	No	1		
4.5.2	8.2.10 a)	i) Supply and install double spay stormwater inlet Type "D3" on top of manhole Type B as per ETH Dwg No.38572	No	1		
4.5.3		ii) supply and install manhole cover and frame to damaged 1.2m x 1.2m existing manhole cover	No	1		
	SANS 1200ME	SUBBASE				
4.6	8.3.3	Construct 100mm thick subbase layer using G5 material to base of manholes and headwalls from commercial sources compacted to 95% MDD	m ³	5		
Section 4 carried forward						

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Section 4: Stormwater

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
Section 4 brought forward						
	SANS 1200MK	CONCRETE LINED DRAIN				
4.7	8.2.8	Cast insitu concrete (class 25/19) 3m wide Trapezoidal drain. See drawing 1208-302-RLA-0001	m ³	1.1		
4.8	8.2.9 b)	Formwork to cast insitu concrete lined open drains (wooden float) to sides and end slabs (measured on internal face)	m ²	3.5		
4.9	8.2.10	Sealed joints in concrete lined drains	m	35		
4.10	8.2.12	Steel Mesh Fabric REF No.395	m ²	10.5		
		SUBSOIL DRAIN				
	SANS 1200DB	EARTHWORKS (Pipe Trenches)				
4.11	8.3.2	Excavate in depths not exceeding 1m in intermediate material for subsoil trenches, and spoil within freehaul distance	m	45		
		FIN DRAIN				
4.12		Supply and lay complete Fin drain including perforated pipe,membrane and selected granular material as per detail on dwg 1208-302-RLA-0001	m	45		
4.13		Connect Fin drain into existing manhole	No	1		
4.14		Provision of river sand from commercial sources	m ³	4		
4.15		SUPPLY,INSTALL & COMMISSION FLOWMETER(COMPLETE) EASY TREK SPA-590-4 ULTRASONIC LEVEL C/W IP68 ENCLOSURE 2G/GPRS MYCITY LOGGER BOARD	Prov. Sum	1	85000	
4.16		Contractors mark-up on Item 4.15	%	R0.00		
Section 4 carried forward						

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Section 5: Gabions and Pitching

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
5	SABS 1200 DK	SECTION 5: Gabions and Pitching Gabions and Pitching				
5.1	8.2.1 (a)	Surface preparation - cavities filled with excavation material (Prov.) Supply and lay the following:	m ³	70		
5.2	SANS 1200MF 8.3.3 b)	GABIONS BASE Construct base of gabions with 100mm thick G2 material from commercial sources compacted to minimum 98% MDD	m ³	350		
5.3	8.2.2	Gabions: (Prov)				
5.3.1		a) 2 x 1 x 1 m boxes	m ³	250		
5.3.2		b) 3 x 1 x 0.3m mattress	m ³	60		
5.4	8.2.4	Geotextile where ordered by the Engineer ("Kaytech Bidim" Grade A4 or similar approved) (Prov)	m ²	450		
5.5	8.2.5	Supply and construct ordinary stone pitching including preparation and compaction of foundation, placing of 150mm nominal size stones in a 300mm thick grouting layer (Prov)	m ²	550		
5.6	PSDB 5.1.2.3	Erosion Protection Measures				
5.6.1		a) Supply and lay sandbags for steep slope erosion protection. Sandbags to be made from hessian cloth and to be filled with soil from surplus excavation material	No.	22		
5.7	PSZB18	Compliance with Employer's Environmental Management Particular Specification Supply, installation and removal on completion wooden stake, 1,0m high, demarcating the boundary of the working servitude during construction (pegs to be positioned at ±25m intervals along both sides of the working servitude)	m	1100		
5.8		Grassing of temporary topsoil stockpiles				
5.8.1		a) Supply of materials and planting as specified	m ²	5500		
5.8.2		b) Maintenance by watering, weeding and fertilising	m ²	5500		
5.9	PSZC8	Compliance with employer's environmental management particular specification				
5.9.1		Final Grading a) Ripping of compacted and disturbed areas to 150mm depth	m ²	16 500		
Section 5 carried forward						

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Section 5: Gabions and Pitching

Item No	Payment Refers	Description	Unit	Qty	Rate	Amount
Section 5 brought forward						
5.10		Topsoiling				
5.10.1		a) Replacing of topsoil to a depth of 200mm	m ²	16 500		
5.10.2		b) Scarification of replaced topsoil to a depth of 50mm and final hand trimming using spades and rakes	m ²	16 500		
5.10.3		c) Soil testing at an approved facility	Prov Sum	1		
5.10.4		d) Soil improvements prior to vegetation re-establishment (supply, place and mix into soil)				
5.15.1.1		(i) Compost	Ton	3		
5.15.1.2		(ii) PH Rectifiers	Ton	0.50		
5.15.1.3		(iii) Fertiliser (2;3;2)	Ton	1		
5.16		Vegetation re-establishment				
5.16.1		a) Hand-broadcasting with appropriate grass seed mix. (Deemed to be inclusive of soil preparation and improvements, materials and labour as specified in PSZC 5.)	m ²	8 250		
5.16.2		b) Hydroseeding with appropriate grass seed mix. (Deemed to be inclusive of soil preparation and improvements, materials and labour as specified in PSZC 5.)	m ²	8 250		
5.16.3		c) Sprig planting. (Deemed to be inclusive of soil preparation and improvements, materials and labour.)	m ²	3850		
5.16.4		d) Plug planting. (Deemed to be inclusive of soil preparation and improvements, materials and labour.)	m ²	3850		
5.16.5		e) Maintenance. (Deemed to be inclusive of watering, weeding, etc.)	m ²	16 500		
5.17		Landscaping				
		The rate shall include supply of plants and materials, preparation of plant holes, planting and maintenance until established.				
5.17.1		a) Planting of trees in bag sizes:				
5.17.2		(i) up to and including 10 litre	No.	6		
5.17.3		(ii) over 10 litre up to including 20 litre	No.	2		
		(iii) over 20 litre	No.	1		
5.22		b) Planting of shrubs in bag sizes:				
5.22.1		(i) up to and including 10 litre	No.	11		
5.22.2		(ii) over 10 litre up to and including 20 litre	No.	6		
		Fencing				
		Removal of fencing, storage during construction and reinstallation once construction is complete (Prov.)				
5.23		a) Wire fencing up to 1.2m high	m	110		
5.24		b) Razor mesh wire fencing up to 2.4m high	m	55		
Section 5 carried forward						

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Section 5: Gabions and Pitching

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Section 5 brought forward						
5.25		c) Wire mesh fencing up to 2.4m high with electrified strands on top of fence	m	28		
5.26		d) Wooden/fibreglass fencing up to 1.8m high	m	110		
		Supply and installation of new fencing to replace fencing damaged during construction including allowances for support posts at 3m intervals, straining posts and stays (Prov.)				
5.27		a) Four strand barbed wire fencing up to 1.2m high.	m	55		
5.28		b) Razor mesh wire fencing up to 1.8m high	m	22		
5.29		Supply, installation and removal of temporary fencing comprising of 1,2m high bonnox fencing, or similar approved, supported on 1,8m fencing standards at 3m intervals, including straining posts and stays (Prov.)	m	11		
		Alien Plant Control				
5.30		The sum shall cover all costs associated with the removal and control of alien plant species and weeds in areas disturbed by construction activities along the pipeline route, by means of spraying with herbicide or manual removal of alien plant species and weeds (Prov.)	Prov Sum	1		
		Demolish Existing Structures				
5.31		Demolish existing houses and cart away to nearest landfill	m ³	55		
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Summary

SUMMARY		
Section	Description	Amount
1	Preliminary and General	R0.00
2	Site Clearance	R0.00
3	EarthWorks	R0.00
4	Stormwater	R0.00
5	Gabions and Pitching	R0.00
	SUB TOTAL	R0.00
	CONTINGENCIES AT 10% 10%	R0.00
	SUB TOTAL	R0.00
	TOTAL EXCLUDING VAT 15%	R0.00
	VAT @ 15%	R0.00
	TOTAL INCL. VAT	R0.00