

BILL OF QUANTITIES**SECTION 1 PRELIMINARY AND GENERAL****PART AA PRELIMINARIES**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>GENERAL CONDITIONS OF CONTRACT (GCC 2015) READ IN CONJUNCTION WITH THE CONTRACT DATA</u>				
1	GCC 2015	Fixed Charge obligations	sum	1		
2	GCC 2015	Time Related obligations	months	6		
		<u>SANS 1921-1 : GENERAL ENGINEERING AND CONSTRUCTION WORKS READ IN CONJUNCTION WITH THE ASSOCIATED SPECIFICATION DATA IN THE SCOPE OF WORKS</u>				
3	SANS 1921-1	Fixed Charge Items	sum	1		
4	SANS 1921-1	Time Related Items	months	6		
		<u>COMMUNITY LIASON OFFICER</u>				
5	PS.15	Allow for a Community Liason Officer to be appointed	PC Sum	88704	1.00	88 704.00
		Allow for a CLO to be appointed.				
6	Cl.6.6.2	Handling costs in respect of item 5 above. Tenderer to state % markup (Markup =%)	%	88704		
		<u>COMMUNITY AND PUBLIC RELATIONS</u>				
7	PS. 16	Stakeholder Management and Liason	months	6		

TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL

R

PART AB GENERAL SPECIFICATIONS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	AB.4	Contractor's Camp Site / Store Yard	sum	1		
2	AB.5	Notice Board	sum	1		
3	AB.8 AB.8	Cost of samples and Contractor's Preliminary and Site Control Testing	sum	1		
4	AB.7 PS.13	Initial supply of all signs, barricades and delineators	sum	1		
5	AB.7 PS.13	Maintenance of all signs, barricades and delineators	months	6		
6	AB.9 PS.17	Survey for, and Preparation of, 'As-Built' Drawings	sum	1		
7	PS.11	Provision of security on site to guard against any disruption of the works through out the duration of the contract	sum	1		

Flood Damage Remediation: Bhubesi Drive - Inanda Ward 55

PART AB GENERAL SPECIFICATIONS

Item	Clause	Description	Unit	Quantity	Rate	Amount
TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL						R

PART AH OCCUPATIONAL HEALTH and SAFETY

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	AH.14.1 PS. 10	Contractor's initial obligations in respect of the Occupational Health and Safety Act and Construction Regulations	sum	1		
2	AH.14.2 PS. 10	Contractor's time related obligations in respect of the Occupational Health and Safety Act and Construction Regulations	months	6		
3	AH.14.3 PS. 10	Submission of the Health and Safety File	sum	1		
TOTAL CARRIED TO SECTION 1 SUMMARY: PRELIMINARY AND GENERAL						R

Flood Damage Remediation: Bhubesi Drive - Inanda Ward 55

SECTION 2 ROAD COLLAPSE**PART B SITE CLEARANCE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2	General clearance and grubbing in road reserve. Rate to include the removal of debris to tip	m2	200		
2	B.8.5	Removal of damaged wall	m	50		
3	B.8.14	Removal of damaged roadways	m3	20		
4	B.8.16	Removal of kerb to tip	m	50		

TOTAL CARRIED TO SECTION 2 SUMMARY: ROAD COLLAPSE

R

PART C CONCRETE WORK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C.4	Supply and lay terrace blocked retaining wall of size 300. Rate to include all weep holes, excavations, concrete foundations for the wall, sand infill to the blocks and placing of concrete on the top row of the retaining wall.	m2	40		
2	C.4	Supply and lay terrace blocked retaining wall of size 500. Rate to include all weep holes, excavations, concrete foundations for the wall, sand infill to the blocks and placing of concrete on the top row of the retaining wall.	m2	210		
3	C.8.1 C.4	Supply and lay geofabric blanket to be laid behind the wall including 19mm stone and river sand fill.	m2	250		

TOTAL CARRIED TO SECTION 2 SUMMARY: ROAD COLLAPSE

R

PART DA EARTHWORKS : BULK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.3	Excavate soft material and place directly into fill. Rate to include compaction soft material from site to 95% Mod. A.A.S.H.T.O.	m3	10		
2	DA.8.3	Excavate soft material to spoil	m3	5		
3	DA. 8.4 DA.8.5	Import suitable fill material and compact to 95% mod. A.A.S.H.T.O	m3	100		
4	DA.8.9	Formation	m2	50		

TOTAL CARRIED TO SECTION 2 SUMMARY: ROAD COLLAPSE

R

Flood Damage Remediation: Bhubesi Drive - Inanda Ward 55

PART EB GRADED CRUSHED STONE

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EB.8(1) EB1234 EB12345 EB123456	Supply and lay Graded crushed stone, 150 mm G2 material	m3	18.75		
2	EB.8(1) EB1234 EB12345 EB123456	Supply and lay Graded crushed stone, 150 mm G5 material	m3	18.75		
3	EB.8.1	Supply and lay Graded crushed stone, 150 mm G7material	m3	18.75		

TOTAL CARRIED TO SECTION 2 SUMMARY: ROAD COLLAPSE

R

PART ED ROAD ASPHALT

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	ED.8.4	Tack coat	m2	125		
2	ED	Prime Coat 0.6litres/m2	m2	125		
3	EG.8.5 PS. ED. 1	Continuouesly graded asphalt wearing course compacted to 40mm Sa-S10	t	12		

TOTAL CARRIED TO SECTION 2 SUMMARY: ROAD COLLAPSE

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PART EH STEEL GUARDRAILS & CONC. MEDIAN BARRIERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EH.8.1	Anchor blocks. Rate to include all excavation, materials and shuttering	no.	2		
2	EH.8.1	End wings. Rate to include all bolts, nuts and washers and hot-dip galvanising as specified	no.	2		
3	EH.8.1	Precast concrete posts. Rate to include bolt holes, reinforcement, excavation, 50mm concrete binding and compaction of backfill	no.	50		

TOTAL CARRIED TO SECTION 2 SUMMARY: ROAD COLLAPSE

R

PART F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	F.8.6	Gabion boxes for embankment reinforcement: 1000 mm depth. Rate to include excavation, geofabric, wire mesh, stones and backfilling.	m3	150		
2	F.8.3	Grass planting: Cynodon Dactylon	m2	100		

TOTAL CARRIED TO SECTION 2 SUMMARY: ROAD COLLAPSE

R

Flood Damage Remediation: Bhubesi Drive - Inanda Ward 55

SECTION 3 ROAD WASH AWAY**PART B SITE CLEARANCE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2	General clearance and grubbing within a servitude. Rate to include the removal of debris to tip	m2	500		
2	B.8.14	Removal of damaged roadway to tip	m3	20		
3	B.8.10	Removal of underground unreinforced concrete	m3	20		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WASH AWAY

R

PART DA EARTHWORKS : BULK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DA.8.3	Excavate soft material and place directly into fill. Rate to include compaction soft material from site to 95% Mod. A.A.S.H.T.O.	m3	100		
2	DA.8.4	Import suitable fill material and compact to 95% mod. A.A.S.H.T.O	m3	100		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WASH AWAY

R

PART EB GRADED CRUSHED STONE

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EB.8(1) EB1234 EB12345 EB123456	Graded crushed stone, G2 material 150 mm thick	m3	37.5		
2	EB.8(1) EB1234 EB12345 EB123456	Graded crushed stone, G5 material 150 mm thick	m3	37.5		
3	EB.8(1) EB1234 EB12345 EB123456	Graded crushed stone, G7 material 150 mm thick	m3	37.5		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WASH AWAY

R

PART ED ROAD ASPHALT

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	ED	Prime Coat 0.6litres/m2	m2	250		
2	ED.8.4	Tack coat	m2	250		
3	EG.8.5	Continuously graded asphalt wearing course compacted to 40mm Sa-S10	m2	250		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WASH AWAY

R

Flood Damage Remediation: Bhubesi Drive - Inanda Ward 55

PART EF KERBS AND HAUNCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EF.8.1	Supply and lay Fig.6 precast concrete mountable kerb. Kerb to be laid on 350mm x 140mm concrete foundation on grade 20/19MPa	m	50		
2	EF.8.1	Supply and lay Fig. 12 edge restraint precast concrete kerb. Kerb to be laid on grade 20/19 concrete foundation	m	50		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WASH AWAY

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PART EH STEEL GUARDRAILS & CONC. MEDIAN BARRIERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EH.8.1	Supply and construct Straight steel guard rails. Rate to include all bolts and washers and hot-dip galvanising as specified	m	30		
2	EH.8.1	End wings. Rate to include all bolts, nuts and washers and hot-dip galvanising as specified	no.	4		
3	EH.8.1	Precast concrete posts. Rate to include bolt holes, reinforcement, excavation, 50mm concrete binding and compaction of backfill	no.	30		
4	EH.8.1	Anchor blocks. Rate to include all excavation, materials and shuttering	no.	4		

TOTAL CARRIED TO SECTION 3 SUMMARY: ROAD WASH AWAY

R

Flood Damage Remediation: Bhubesi Drive - Inanda Ward 55**SECTION 4 EMBANKMENT COLLAPSE****PART B SITE CLEARANCE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	B.8.2	General clearance and grubbing in road reserve. Rate to include the removal of debris to tip	m2	300		
2	B.8.10	Removal of unreinforced concrete	m3	15		
3	B.8.14	Removal of roadways to tip	m3	10		

TOTAL CARRIED TO SECTION 4 SUMMARY: EMBANKMENT COLLAPSE

R

PART C CONCRETE WORK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C.4	Supply and lay terrace blocked retaining wall of size 300. Rate to include all excavations, concrete foundations for the wall, sand infill to the blocks and placing of concrete on the top row of the retaining wall.	m2	750		
2	C.4	Supply and lay terrace blocked retaining wall of size 500. Rate to include all excavations, concrete foundations for the wall, sand infill to the blocks and placing of concrete on the top row of the retaining wall.	m2	900		
3	C.8.1 C.4	Supply and lay geofabric blanket to be laid behind the wall including 19mm stone and river sand fill.	m2	1350		

TOTAL CARRIED TO SECTION 4 SUMMARY: EMBANKMENT COLLAPSE

R

PART EF KERBS AND HAUNCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EF.8.1	Supply and lay Fig.6 precast concrete mountable kerb. Kerb to be laid on 350mm x 140mm concrete foundation on grade 20/19MPa	m	300		
2	EF.8.1	Supply and lay Fig. 12 edge restraint precast concrete kerb. Kerb to be laid on grade 20/19 concrete foundation	m	300		

TOTAL CARRIED TO SECTION 4 SUMMARY: EMBANKMENT COLLAPSE

R

PART EH STEEL GUARDRAILS & CONC. MEDIAN BARRIERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	EH 8.1	Supply and construct Straight steel guard rails. Rate to include all bolts and washers and hot-dip galvanising as specified	m	300		

Flood Damage Remediation: Bhubesi Drive - Inanda Ward 55

Part Continued **PART** EH STEEL GUARDRAILS & CONC. MEDIAN BARRIERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
2	EH.8.1	End wings. Rate to include all bolts, nuts and washers and hot-dip galvanising as specified	no.	2		
3	EH.8.1	Precast concrete posts. Rate to include bolt holes, reinforcement, excavation, 50mm concrete binding and compaction of backfill	no.	300		
4	EH.8.1	Anchor blocks. Rate to include all excavation, materials and shuttering	no.	2		

TOTAL CARRIED TO SECTION 4 SUMMARY: EMBANKMENT COLLAPSE

R

PART F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	F.8.6	Gabion boxes for embankment reinforcement: 1000 mm depth. Rate to include excavation, geofabric, wire mesh, stones and backfilling.	m3	600		

TOTAL CARRIED TO SECTION 4 SUMMARY: EMBANKMENT COLLAPSE

R

Flood Damage Remediation: Bhubesi Drive - Inanda Ward 55

SECTION 5 SERVICE RELOCATION and REPAIR**PART AB GENERAL SPECIFICATIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS. 2 PS. 6	Electrical services to be relocated, repaired and intallation by an approved eThekwini Electricity sub-contractor and as directed by the engineer on site	PC Sum	50000	1.00	50 000.00
2	Cl. 6.6.2	Handling costs in respect of item 1 above. Tenderer to state % Markup (Markup =%)	%	50000		
3	PS. 2 PS. 3	Water services to be relocated, repaired and intallation by an approved eThekwini Water & Sanitation sub-contractor and as directed by the engineer on site	PC Sum	50000	1.00	50 000.00
4	Cl. 6.6.2	Handling costs in respect of item 3 above. Tenderer to state % Markup (Markup =%)	%	50000		
5	PS. 2 PS.4	Waste water and Stormwater services to be relocated, repaired and intallation by an approved eThekwini Water & Sanitation and RSWM sub-contractor and as directed by the engineer on site	PC Sum	80000	1.00	80 000.00
6	Cl. 6.6.2	Handling costs in respect of item 5 above. Tenderer to state % Markup (Markup =%)	%	80000		
7	DB. 8.19	Prove existing services by hand excavation (provisional), where depth is not exceeding 1.5m	m3	50		

TOTAL CARRIED TO SECTION 5 SUMMARY: SERVICE RELOCATION and REPAIR

R

PART C CONCRETE WORK

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C.8.1	Re-instatement/ reconstruction of the culvert wing walls and base	no.	1		

TOTAL CARRIED TO SECTION 5 SUMMARY: SERVICE RELOCATION and REPAIR

R

PART DB EARTHWORKS FOR PIPE TRENCHES

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	DB.8.5	Excavate and backfill in all material for 600 mm diameter pipe where depth is :- - Over 1,5 m and not exceeding 2,0 m	m	20		
2	DB.8.9	Provision of selected fill for pipe bedding from scheduled excavation in excess of the freehaul distance.	m3	5		

TOTAL CARRIED TO SECTION 5 SUMMARY: SERVICE RELOCATION and REPAIR

R

Flood Damage Remediation: Bhubesi Drive - Inanda Ward 55

PART F PROTECTION WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	F.8.6	Gabion boxes for embankment reinforcement: 1000 mm depth. Rate to include excavation, geofabric, wire mesh, stones and backfilling.	m3	50		
2	F.8.6	Gabion mattresses, 300 mm thick	m3	20		

TOTAL CARRIED TO SECTION 5 SUMMARY: SERVICE RELOCATION and REPAIR

R

PART PG NON PRESSURE PIPELINES and PC CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PG.8.2	600 mm diameter concrete Class 100D	m	20		

TOTAL CARRIED TO SECTION 5 SUMMARY: SERVICE RELOCATION and REPAIR

R

PART PH MANHOLES and APPURTENANT DRAINAGE WORKS

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PH.8.2	Re-instatement of standard precast concrete ring light duty manhole. Type 1 cover and frame - Over 0,0 m and not exceeding 1,5 m	no.	2		

TOTAL CARRIED TO SECTION 5 SUMMARY: SERVICE RELOCATION and REPAIR

R

SUMMARY OF BILL OF QUANTITIES

Section

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2	ROAD COLLAPSE		R	
B	SITE CLEARANCE	R		
C	CONCRETE WORK	R		
DA	EARTHWORKS : BULK	R		
EB	GRADED CRUSHED STONE	R		
ED	ROAD ASPHALT	R		
EH	STEEL GUARDRAILS & CONC. MEDIAN BARRIERS	R		
F	PROTECTION WORKS	R		
3	ROAD WASH AWAY		R	
B	SITE CLEARANCE	R		
DA	EARTHWORKS : BULK	R		
EB	GRADED CRUSHED STONE	R		
ED	ROAD ASPHALT	R		
EF	KERBS AND HAUNCHES	R		
EH	STEEL GUARDRAILS & CONC. MEDIAN BARRIERS	R		
4	EMBANKMENT COLLAPSE		R	
B	SITE CLEARANCE	R		
C	CONCRETE WORK	R		
EF	KERBS AND HAUNCHES	R		
EH	STEEL GUARDRAILS & CONC. MEDIAN BARRIERS	R		
F	PROTECTION WORKS	R		
5	SERVICE RELOCATION and REPAIR		R	
AB	GENERAL SPECIFICATIONS	R		
C	CONCRETE WORK	R		
DB	EARTHWORKS FOR PIPE TRENCHES	R		
F	PROTECTION WORKS	R		
PG	NON PRESSURE PIPELINES and PC CULVERTS	R		
PH	MANHOLES and APPURTENANT DRAINAGE WORKS	R		
SUB TOTAL			R	
ADD VAT (15%) - (only if a registered VAT Vendor)			R	
TOTAL CARRIED TO FORM OF TENDER			R	