

C2.2: BILL OF QUANTITIES

The Bill of Quantities follows and comprises of 19 pages. The pages are numbered BoQ 67 to BoQ 86

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INYANGA - WARD 45 GRAVEL TO SURFACE

C.2.2.2 : BILL OF QUANTITIES**SECTION 1** PRELIMINARY AND GENERAL ITEMS**PART 0102** C1.2 GENERAL REQUIREMENTS AND PROVISIONS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Environmental Management</u>				
1	C1.2.1.1	Monitoring of compliance with and reporting on the EMP	months	4		
		<u>Programming and Reporting</u>				
2	C1.2.2.4	Submission of a Full Contract Programme	Lump sum	1		
		<u>Other Documentation</u>				
3	C1.2.2.6	Preparation and submission of all information and reports specified in the Contract Documentation, including reporting on local labour	months	4		
		<u>Stakeholder Management & Liaison (CLO)</u>				
4	C1.2.4 (COTO) C1.2.3	Stakeholder Management and Liaison (CLO)	months	4		
		<u>Health and Safety</u>				
5	C1.2.5.1	Health and safety plan	Lump sum	1		
6	C1.2.5.2	Implementation of health and safety plan	months	4		
7	PS.10	Survey and Setting out	PC Sum	27000	1.00	27,000.00

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART 0103 C1.3 CONTRACTOR'S SITE ESTABLISHMENT AND

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>The Contractor's General Obligations</u>				
1	C1.3.1.1	Fixed obligations	Lump sum	100000		
2	C1.3.1.3 PS.11	Time-related obligations	months	4		
3	PS.17	Submission of As-Built Data	sum	1		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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INYANGA - WARD 45 GRAVEL TO SURFACE**SECTION 2 SITE CLEARANCE****PART 0106 C1.6 CLEARING AND GRUBBING**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C1.6.1.1	<u>Clearing</u> Clearing with machines and some hand labour where necessary	ha	0.2		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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INYANGA - WARD 45 GRAVEL TO SURFACE
SECTION 3 SERVICES
PART 023A C2.3A WET SERVICES - SEWERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Raising and lowering existing sewer manholes</u>				
1	C2.3.9.1(a)	Raising manholes: (a) Sewer Concrete Ring manhole (Drawing ref 38570) - 1m Height	no	3		
2	C2.3.9.2(a)	Lowering manholes:(a) Sewer Concrete Ring manhole (Drawing ref 38570) - 1m Height	no	2		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES
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PART 023B C2.3B WET SERVICES - WATER MAINS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Supply and lay water mains complete with couplings:</u>				
1	C2.3.21.1(a)	State for each water main the pipe material type, class, coupling type and the class of bedding etc.(a) State diameter(RiderMain)	m	400		
		<u>Extra over item C2.3.21 for supplying and fixing water main valves:</u>				
2	C2.3.23.1(a)	State for each water main valve the type, class etc.(a) State diameter	no	4		
		<u>Excavation for Water Mains</u>				
3	C3.2.1.1(a)	Excavation for culvert structures: in all material situated within the following depth ranges below the surface level:(a) 0 m to 1,5 m	m3	365		
		<u>Backfilling For Water Mains</u>				
4	C3.2.2.2(a)	Backfilling: Using imported selected material:(a) From commercial sources (State type)	m3	365		
		<u>Bedding for water mains (Class B and C) and fill blanket compacted to 90 % of MDD (100 % for sand):</u>				
5	C2.3.29.1(e)	Bedding using selected granular material: (e) From commercial sources - Clean Course River Sand	m3	145		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES
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INYANGA - WARD 45 GRAVEL TO SURFACE**SECTION 4 KERBING****PART 0303 C3.3 CONCRETE KERBING AND CHANNELING**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C3.3.2.1,	<u>Kerb and Channel / Fillet for Roadway</u> Prefabricated kerbing channelling cast in-situ channeling / fillet: Type B Barrier Kerb, fig. 6 with cast insitu channel / fillet, as per Drawing 38577 (Inclusive of transition kerbs)	m	710		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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INYANGA - WARD 45 GRAVEL TO SURFACE**SECTION 5 DRAINAGE****PART 0302 C3.2 CULVERTS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Excavation:</u> <u>Pipes, Manholes, Inlets and Headwalls</u>				
1	C3.2.1.1(a)	Excavation for culvert structures: in all material situated within the following depth ranges below the surface level:(a) 0 m to 1,5 m	m3	75		
2	C3.2.1.1(b)	Excavation for culvert structures: in all material situated within the following depth ranges below the surface level:(b) Exceeding 1,5 m and up to 3,0 m	m3	375		
3	C3.2.1.1(c)	Excavation for culvert structures: in all material situated within the following depth ranges below the surface level:(c) Exceeding 3,0 m and up to 4,5 m	m3	4		
		<u>Backfilling</u> <u>Pipes, Manholes, Inlets and Headwalls</u>				
4	C3.2.2.2(a)	Backfilling: Using imported selected material:(a) From commercial sources (State type)	m3	120		
		<u>Concrete Pipes: Spigot and Socket Type</u>				
5	C3.2.3.2	Concrete pipe culverts: Spigot and Socket: On Class B bedding (450mm diameter concrete Class 100D)	m	225		
		<u>Manholes and Inlets</u>				
6	C3.2.15.2	Manholes Type A with heavy duty concrete cover : Depth : Exceeding 1,5m and up to 2,5m	no	4		
7	C3.2.15.2	Manholes Type A with heavy duty concrete cover : Depth : Exceeding 2,5m and up to 3,5m	no	1		
8	C3.2.15.2	Inlet Type S2, heavy duty concrete cover: Depth : Exceeding 1,5m and up to 2,5m	no	7		
9	C3.2.15.2	Inlet Type S2, heavy duty concrete cover: Depth : Exceeding 2,5m and up to 3,5m	no	1		
10	C3.2.15.2	Inlet Type D3, heavy duty concrete cover: Depth : Exceeding 1,5m and up to 2,5m	no	2		
11	C3.2.15.2	Filled Inlet, heavy duty concrete cover: Depth : Exceeding 1,5m and up to 2,5m	no	1		

Part Continued on next page

INYANGA - WARD 45 GRAVEL TO SURFACEPart Continued **PART** 0302 C3.2 CULVERTS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Headwalls</u>				
12	C3.2.9	Inlets and outlets to culverts: Headwalls, Type A, for 450mm and 600mm pipes	no	2		
		<u>Compaction</u>				
13	C3.2.24.1	Compaction of bedding for inlets, outlets, manholes and catchpits: Preparation and compaction of in situ bedding material to 90 % of MDD (depth 150mm)	m3	80		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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INYANGA - WARD 45 GRAVEL TO SURFACE**SECTION 6 EARTHWORKS****PART 0402 C4.2 CUT MATERIALS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Excavation to Stockpile or Fill</u>				
1	C4.2.3.1	Excavating of materials in cuttings for use in the works, material obtained from: Soft excavation	m3	305		
2	C1.7.1.1	Loading from stockpile using machines and some hand labour where necessary	m3	130		
		<u>Removal of Unsuitable (Undercut)</u>				
3	C4.2.7.1	Removal of unsuitable stable cut material to spoil: In layer thicknesses of 200 mm and less	m3	355		
		<u>Designated excavations</u>				
4	C4.2.5.1	Excavating of materials in designated excavations, material obtained from:Soft excavation	m3	125		
		<u>Spoil</u>				
5	C4.2.9.1	Excavate material to spoil in sites designated by the Contractor, material obtained from:Soft excavation, overburden and unsuitable material	m3	130		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART 0403 C4.3 EXISTING ROAD MATERIALS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Saw-cut</u>				
1	C4.3.4.1(a)	Saw-cutting existing materials within the following average depth ranges: Asphalt: (a) Up to 50 mm	m	15		
2	C4.3.9.4	Excavating material by using conventional road construction equipment: Natural gravel and sand materials	m3	205		
3	C4.3.15.4	Stockpiling of road layer materials: Natural gravel material	m3	205		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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INYANGA - WARD 45 GRAVEL TO SURFACE**PART 0404 C4.4 COMMERCIAL MATERIALS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C4.4.2.1(g)	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers: Pavement layer material: Type G7	m3	710		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

R**PART 0502 C5.2 FILL**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C5.2.2.1(b)	Fill construction: Normal fill material (G7) in compacted layer thicknesses of 200 mm and less: (b) Compacted to 93 % of MDD	m3	710		
2	C5.2.2.1(b)	Fill construction: Normal fill material (Recovered Gravel) Compacted to 93 % of MDD	m3	205		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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INYANGA - WARD 45 GRAVEL TO SURFACE

SECTION 7 LAYERWORKS AND SURFACING**PART 0404 C4.4 COMMERCIAL MATERIALS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Import Layerworks</u>				
1	C4.4.2.1(d)	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers: Pavement layer material: Type G4	m3	345		
2	C4.4.2.1(g)	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers Pavement layer material: Type G7	m3	1055		
		<u>Sidewalks</u>				
3	C4.4.2.1(e)	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers:(for sidewalk) Pavement layer material: Type G4	m3	45		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART 0501 C5.1 ROADBED

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C5.1.1.2	Roadbed construction and compaction to 95 % of MDD	m3	1950		
2	C5.1.5.1	In-place treatment of roadbed in hard material: by ripping	m3	295		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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PART 0503 C5.3 ROAD PAVEMENT LAYERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Processing and Compaction</u>				
1	C5.3.2.1(k)	Construction of layers: Upper subbase (G4) layer compacted to 98 % of MDD	m3	345		
2	C5.3.2.1 (c)	Construction of layers: Upper selected subgrade (G7) layer compacted to 95 % of MDD	m3	1055		
		<u>Sidewalk</u>				
3	C5.3.2.1(m)	Construction of layers: Sidewalk selected layer (G4) compacted to 98 % of MDD	m3	45		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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INYANGA - WARD 45 GRAVEL TO SURFACE

PART 0901 C9.1 ASPHALT LAYERS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Asphalt Surface</u>				
1	PS.C9.1.5.1(e)	New construction (paver laid) (a) Stone skeletal mix - continuously graded (SA-S14) (40mm layer)	t	240		
2	C8.1.1.2	Prime coat: MC -30 cut-back bitumen. 0.6l/m2	l	1735		
		<u>Bond Coat (Tack)</u>				
3	C9.1.3.1	Application of bond coat: Stable –grade 30 % net bitumen emulsion as specified. Applied with a calibrated distributor	l	870		
		<u>Sidewalk / Median Surface</u>				
4	C9.1.5.1 (e)	New construction Sidewalks (a) Stone skeletal mix – continuously graded (SA-S7) (25mm layer)	m2	430		

TOTAL CARRIED TO C.2.2.3 : SUMMARY OF BILL OF QUANTITIES

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INYANGA - WARD 45 GRAVEL TO SURFACE**C.2.2.3 : SUMMARY OF BILL OF QUANTITIES****Section****1 PRELIMINARY AND GENERAL ITEMS****R** _____

0102 C1.2 GENERAL REQUIREMENTS AND PROVISIONS

R _____

0103 C1.3 CONTRACTOR'S SITE ESTABLISHMENT AND

R _____

2 SITE CLEARANCE**R** _____

0106 C1.6 CLEARING AND GRUBBING

R _____

3 SERVICES**R** _____

023A C2.3A WET SERVICES - SEWERS

R _____

023B C2.3B WET SERVICES - WATER MAINS

R _____

4 KERBING**R** _____

0303 C3.3 CONCRETE KERBING AND CHANNELING

R _____

5 DRAINAGE**R** _____

0302 C3.2 CULVERTS

R _____

6 EARTHWORKS**R** _____

0402 C4.2 CUT MATERIALS

R _____

0403 C4.3 EXISTING ROAD MATERIALS

R _____

0404 C4.4 COMMERCIAL MATERIALS

R _____

0502 C5.2 FILL

R _____

7 LAYERWORKS AND SURFACING**R** _____

0404 C4.4 COMMERCIAL MATERIALS

R _____

0501 C5.1 ROADBED

R _____

0503 C5.3 ROAD PAVEMENT LAYERS

R _____

0901 C9.1 ASPHALT LAYERS

R _____

SUB TOTAL**R** _____

ADD VAT (15%) - (only if a registered VAT Vendor)

R _____**TOTAL CARRIED TO FORM OF OFFER AND ACCEPTANCE (C.1.1)****R** _____