

**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 \_\_\_\_\_

0104 C1.4 FACILITIES FOR THE ENGINEER

R \_\_\_\_\_

0105 C1.5 ACCOMMODATION OF TRAFFIC

R \_\_\_\_\_

**2 SITE CLEARANCE**

**R** \_\_\_\_\_

0106 C1.6 CLEARING AND GRUBBING

R \_\_\_\_\_

0107 C1.7 LOADING AND HAULING

R \_\_\_\_\_

**3 SERVICES**

**R** \_\_\_\_\_

0201 C2.1 GEN REQMENTS AND TRENCHING SERVICE

R \_\_\_\_\_

**4 DRAINAGE**

**R** \_\_\_\_\_

0303 C3.3 CONCRETE KERBING AND CHANNELING

R \_\_\_\_\_

**5 EARTHWORKS**

**R** \_\_\_\_\_

0402 C4.2 CUT MATERIALS

R \_\_\_\_\_

0404 C4.4 COMMERCIAL MATERIALS

R \_\_\_\_\_

0502 C5.2 FILL

R \_\_\_\_\_

**6 LAYERWORKS**

**R** \_\_\_\_\_

0501 C5.1 ROADBED

R \_\_\_\_\_

0503 C5.3 ROAD PAVEMENT LAYERS

R \_\_\_\_\_

0901 C9.1 ASPHALT LAYERS

R \_\_\_\_\_

**7 RETAINING WALLS**

**R** \_\_\_\_\_

1206 C12.6 MECH STABILISED FILL AND GABIONS

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** \_\_\_\_\_

---

**C.2.2.1 : INDEX TO BILL OF QUANTITIES**

<b><u>SECTION 1</u></b>	<b>PRELIMINARY AND GENERAL ITEMS</b>
<b>PART 0102</b>	<b>C1.2 GENERAL REQUIREMENTS AND PROVISIONS</b>
<b>PART 0103</b>	<b>C1.3 CONTRACTOR'S SITE ESTABLISHMENT AND</b>
<b>PART 0104</b>	<b>C1.4 FACILITIES FOR THE ENGINEER</b>
<b>PART 0105</b>	<b>C1.5 ACCOMMODATION OF TRAFFIC</b>
<b><u>SECTION 2</u></b>	<b>SITE CLEARANCE</b>
<b>PART 0106</b>	<b>C1.6 CLEARING AND GRUBBING</b>
<b>PART 0107</b>	<b>C1.7 LOADING AND HAULING</b>
<b><u>SECTION 3</u></b>	<b>SERVICES</b>
<b>PART 0201</b>	<b>C2.1 GEN REQMENTS AND TRENCHING SERVICE</b>
<b><u>SECTION 4</u></b>	<b>DRAINAGE</b>
<b>PART 0303</b>	<b>C3.3 CONCRETE KERBING AND CHANNELING</b>
<b><u>SECTION 5</u></b>	<b>EARTHWORKS</b>
<b>PART 0402</b>	<b>C4.2 CUT MATERIALS</b>
<b>PART 0404</b>	<b>C4.4 COMMERCIAL MATERIALS</b>
<b>PART 0502</b>	<b>C5.2 FILL</b>
<b><u>SECTION 6</u></b>	<b>LAYERWORKS</b>
<b>PART 0501</b>	<b>C5.1 ROADBED</b>
<b>PART 0503</b>	<b>C5.3 ROAD PAVEMENT LAYERS</b>
<b>PART 0901</b>	<b>C9.1 ASPHALT LAYERS</b>
<b><u>SECTION 7</u></b>	<b>RETAINING WALLS</b>
<b>PART 1206</b>	<b>C12.6 MECH STABILISED FILL AND GABIONS</b>

## UPGRADE OF TRK 95006 FROM GRAVEL TO ASPHALT IN WARD 04, FREDVILLE AREA - OUTER WEST

**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
		<b><u>Environmental Management</u></b>				
1	C1.2.1.1 PS.C1.2.1.1	Monitoring of compliance with and reporting on the EMP	months	3		
2	C1.2.1.2 PS.C1.2.1.2	Dedicated environmental officer	months	3		
		<b><u>Programming and Reporting</u></b>				
3	C1.2.2.1 PS.1.1 PS.C1.2.2.1	Submission of a Scheme 1 Initial Programme	Lump sum	1		
4	C1.2.2.2 PS.C1.2.2.2	Reviewing and updating a Scheme 1 programme every month	months	3		
		<b><u>Other Documentation</u></b>				
5	C1.2.2.6	Preparation and submission of all information and reports specified in the Contract Documentation	months	3		
		<b><u>Routine road maintenance of existing public roads within the Site of the Works or other public roads outside the Site of the Works which are used as detours</u></b>				
6	C1.2.3.1	Grass cutting	ha	0.05		
7	C1.2.3.4	Collection of rubbish / litter	km	0.33		
		<b><u>Stakeholder Management &amp; Liaison</u></b>				
8	C1.2.4 PS.20	Stakeholder Management and Liaison	months	3		
		<b><u>Health and Safety</u></b>				
9	C1.2.5.1 PS.10	Health and safety plan	Lump sum	1		
10	C1.2.5.2 PS.10	Implementation of health and safety plan	months	3		
11	C1.2.6.1	Work adjacent to properties:Survey of adjacent properties	no	9		
12	C1.2.6.2	Preventive and/or mitigation measures	PC Sum	10000	1.00	10,000.00
13	C1.2.6.3	Handling cost, profit and all other charges in respect of item C1.2.6.2	%	10000		
		<b><u>Community Liaison Officer</u></b>				
14	PS.20	Allow for CLO to be appointed	PC Sum	56000	1.00	56,000.00
15	PS.20	Handling costs and profit in respect of PS.12	%	56000		

Part Continued on next page

## UPGRADE OF TRK 95006 FROM GRAVEL TO ASPHALT IN WARD 04, FREDVILLE AREA - OUTER WEST

Part Continued PART 0102 C1.2 GENERAL REQUIREMENTS AND PROVISIONS

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Additional Security</u>				
16	PS.11	Provision of security on site to guard against any disruption of the works throughout the duration of the contract	months	3		

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

R

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 PS.C1.3.1	Fixed obligations	Lump sum	1		
2	C1.3.1.2 PS.C1.3.1	Value-related obligations	Lump sum	1		
3	C1.3.1.3 PS.C1.3.1	Time-related obligations	months	3		
4	C1.3.2 PS.C1.3.2	Contract sign boards (as per drawing)	no.	1		
5	PS.16	Submission of As-Built Data	sum	1		

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

R

PART 0104 C1.4 FACILITIES FOR THE ENGINEER

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	PS.17	Allowance for Photographs every month digital	PC Sum	8000	1.00	8,000.00
2	PS.17	Handling costs and profit in respect to item above	%	8000		
3	PS.18	Allowance for additional survey required by Engineer	PC Sum	10000	1.00	10,000.00
4	PS.18	Handling costs in respect to item above	%	10000		
5	PS.19	Allowance for Laboratory Acceptance testing as required by Engineer	PC Sum	10000	1.00	10,000.00
6	PS.19	Handling costs in respect to item above	%	10000		

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

R

PART 0105 C1.5 ACCOMMODATION OF TRAFFIC

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C1.5.1.1 PS.1.3	Accommodation of pedestrian and non-motorised traffic	months	3		
2	C1.5.2 PS.1.3	Accommodation of vehicular traffic	months	3		

Part Continued on next page

## UPGRADE OF TRK 95006 FROM GRAVEL TO ASPHALT IN WARD 04, FREDVILLE AREA - OUTER WEST

Part Continued PART 0105 C1.5 ACCOMMODATION OF TRAFFIC

Item	Clause	Description	Unit	Quantity	Rate	Amount
<u>Temporary Traffic Control Facilities</u>						
3	C1.5.7.1(b)	Delineators including mounting bases and ballast: Single sided, reversible left or right (1200m x 250)	no	15		
4	C1.5.7.5 (c)	(c)Illuminated road sign – R & TR series (900)	no	6		
5	C1.5.7.3	Flagmen	man-day	100		
6	C1.5.7.4	Traffic controllers	man-day	60		
7	C1.5.8	Traffic safety officer	months	3		
<u>Provision of Safety Equipment for Visitors</u>						
8	C1.5.11.1	Provision of reflective safety vests for visitors	no	2		
9	C1.5.11.2	Provision of hard hats for visitors	no	2		
<u>Traffic Safety Officer: Penalties</u>						
10	A1.5.3.7 PS.1.4	(a) Fixed Penalty per occurrence, R2000 per day	RateOnly	0		RATE ONLY
11	A1.5.3.7 PS.1.4	(b) Time-Related Penalty, R1000 per hour	RateOnly	0		RATE ONLY

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

R

**UPGRADE OF TRK 95006 FROM GRAVEL TO ASPHALT IN WARD 04, FREDVILLE AREA - OUTER WEST**

**SECTION 2 SITE CLEARANCE**

**PART 0106 C1.6 CLEARING AND GRUBBING**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Clearing</u>				
1	C1.6.1.1	Clearing with machines and some hand labour where necessary	ha	0.25		
2	C1.6.1.2	Clearing with hand labour only when labour enhanced work is specified	ha	0.06		
		<u>Grubbing</u>				
3	C1.6.2.1	Grubbing with machines and some hand labour where necessary	ha	0.25		
4	C1.6.2.2	Grubbing with hand labour when labour enhancement work is specified or it is not practical to use a machine	ha	0.06		

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

R

**PART 0107 C1.7 LOADING AND HAULING**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Hauling material for use in the works</u>				
1	C1.7.2.1(a)	Hauling:Hauling material for use in the Works and off-loading it on the site of the Works:(a) Soil, gravel, crushed stone and pavement layer material	m3 * km	810		
		<u>Hauling material to spoil</u>				
2	C1.7.2.2(a)	Hauling material to spoil and off-loading it at a designated spoil area:(a) Cleared and grubbed material (organic matter and all other unsuitable or waste material)	m3	50		

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

R

## UPGRADE OF TRK 95006 FROM GRAVEL TO ASPHALT IN WARD 04, FREDVILLE AREA - OUTER WEST

**SECTION 3 SERVICES****PART 0201 C2.1 GEN REQMENTS AND TRENCHING SERVICE**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Location, Identification, Protection and Relocation of Existing Services</u>				
1	C2.1.1.1	Contractor's obligation	Lump sum	1		
		<u>Relocation of Services by Others:</u>				
		<u>Water</u>				
2	C2.1.1.2 PS.3	Permanent services relocation or protection work by others: Water	PC Sum	70000	1.00	70,000.00
3	C2.1.1.3 PS.3	Handling costs and profit in respect of item C2.1.1.2 above	%	70000		
		<u>Electricity</u>				
4	C2.1.1.2 PS.3	Permanent services relocation or protection work by others: Electricity	PC Sum	40000	1.00	40,000.00
5	C2.1.1.3 PS.3	Handling costs and profit in respect of item C2.1.1.2 above	%	40000		
		<u>Proving By Hand</u>				
6	C2.1.2.5 PS.2.2	Using hand excavation to locate, expose and verify services, Depth of 0.0m to 1.5m. (Prov)	m3	5		
7	C2.1.7.1	Extra over item for excavating in hard material irrespective of depth	m2	5		
8	C2.1.11 (a)	Backfilling of trenches: Backfill compacted to 93% (100% for sand) of MDD (areas subject to traffic loads) using material: (a) from excavated trench material	m3	5		
9	C2.1.11 (b)	Backfilling of trenches: Backfill compacted to 93% (100% for sand) of MDD (areas subject to traffic loads) using material: (b) from other excavations onsite	m3	5		
10	C2.1.19.1	Dealing with surface water	Lump sum	1		
11	C2.1.19.2	Dealing with subsurface water	Lump sum	1		

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

R

UPGRADE OF TRK 95006 FROM GRAVEL TO ASPHALT IN WARD 04, FREDVILLE AREA - OUTER WEST

**SECTION 4 DRAINAGE**

**PART 0303 C3.3 CONCRETE KERBING AND CHANNELING**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C3.3.2.1, PS.C3.3.2.1	<u>Sidewalk Edge Restraint</u> Prefabricated kerbing (edge restraint, Figure 12 kerb including 100mm x 100mm haunching)	m	660		

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

R

**UPGRADE OF TRK 95006 FROM GRAVEL TO ASPHALT IN WARD 04, FREDVILLE AREA - OUTER WEST**

**SECTION 5 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 PS.C4.2	Excavating of materials in cuttings for use in the works, material obtained from: Soft excavation	m3	230		
2	C4.2.4.1 PS.C4.2	Excavating of materials in box cuts for use in the works, material obtained from: Soft excavation	m3	750		
		<u>Removal of Unsuitable: Bulk Excavation</u>				
3	C4.2.7.1	Removal of unsuitable stable cut material to spoil: In layer thicknesses of 200 mm and less	m3	55		
		<u>Excavation to Spoil</u>				
4	C4.2.9.1 PS.C4.2	Excavate material to spoil in sites designated by the Contractor, material obtained from: Soft excavation, overburden and unsuitable material	m3	5		
5	C4.2.12.1(a)	Finishing the side slopes of Cuttings: (a) In soft material	m2	96		

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

R

**PART 0404 C4.4 COMMERCIAL MATERIALS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C4.4.2.1(b)	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers: Pavement layer material:Type G2	m3	250		
2	C4.4.2.1(f)	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers: Pavement layer material:Type G5	m3	250		
3	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	275		

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 (G9) in compacted layer thicknesses of 200 mm and less: (b) Compacted to 93 % of MDD	m3	65		

Part Continued on next page

UPGRADE OF TRK 95006 FROM GRAVEL TO ASPHALT IN WARD 04, FREDVILLE AREA - OUTER WESTPart Continued PART 0502 C5.2 FILL

Item	Clause	Description	Unit	Quantity	Rate	Amount
2	C5.2.3	Side-cut to fill compacted to 93 % of MDD in compacted layer thicknesses of 200 mm and less	m3	5		
3	C5.2.11.1	Finishing-off fill slopes	m2	60		

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

R

## UPGRADE OF TRK 95006 FROM GRAVEL TO ASPHALT IN WARD 04, FREDVILLE AREA - OUTER WEST

**SECTION 6 LAYERWORKS****PART 0501 C5.1 ROADBED**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C5.1.1.2	Roadbed construction and compaction roadbed to 95 % of MDD	m3	250		
		<u>Removal of unsuitable:Undercut</u>				
2	C5.1.4.1(a)	Removal of unsuitable material to spoil: In layer thicknesses of 200 mm and less(a) Stable material	m3	165		
3	C5.1.4.2(a)	Removal of unsuitable material to spoil: In layer thicknesses exceeding 200 mm(a) Stable material	m3	10		

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

R

**PART 0503 C5.3 ROAD PAVEMENT LAYERS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
1	C5.3.1	Compiling and implementing M&U plans for the construction of all the pavement layers.	no	1		
		<u>Processing and Compaction</u>				
2	C5.3.2.1(k)	Construction of layers: Upper subbase (G2) layer compacted to 98 % of MDD	m3	250		
3	C5.3.2.1(a)	Construction of layers: Upper selected subgrade layer (G5) compacted to 95 % of MDD	m3	250		
4	C5.3.2.1(b)	Construction of layers: Upper selected subgrade layer (G7) compacted to 95 % of MDD	m3	250		

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

R

**PART 0901 C9.1 ASPHALT LAYERS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Bond Coat (Tack)</u>				
1	C9.1.3.1	Application of bond coat:Stable grade 30% net bitumen emulsion as specified. Applied with a calibrated distributor	l	1320		
2	C8.1.1.2	Prime coat: MC -30 cut-back bitumen. 0.8l/m2	l	1320		
		<u>Asphalt Surface</u>				
3	C9.1.5.1(e) PS.C9.1	New construction (paver laid) (a) Stone skeletal mix – continuously graded (SA-S14) (40mm layer)	m2	1650		

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

R

**SECTION 7 RETAINING WALLS****PART 1206 C12.6 MECH STABILISED FILL AND GABIONS**

Item	Clause	Description	Unit	Quantity	Rate	Amount
		<u>Segmented Block walls (Geolock or similar approved)</u>				
1	C12.6.2	Excavation for wall base foundation	m3	5		
2	C12.6.3	Concrete for wall base foundation (25/26)	m3	2		
3	C12.6.7	Metallic reinforcing mesh (Mesh Ref.245)	m2	6		
4	C12.6.12.2	Facings (Geolock wall as per drawing for wall 0-2m): For concrete block wall facing	m2	24		
5	C12.6.11	Backfill (compacted to 95%MDD)	m3	5		
6	C12.6.3	Concrete for wall Top blocks of wall (25/26)	m3	5		

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

**R**