

**INFRASTRUCTURE FOR BIODIVERSITY
CONSERVATION IN KIDEPO VALLEY
NATIONAL PARK**

**Construction of Four (04) Low Water Stream
Crossings**

**BIDDING DOCUMENTS
VOLUME 5 OF 6
BILLS OF QUANTITIES**

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**USAID - Infrastructure for Biodiversity Conservation in Kidepo Valley
National Park
CONSTRUCTION OF LOW WATER STREAM CROSSINGS**

DOCUMENTS SUMMARY PAGE

<u>VOL NO.</u>	<u>DESCRIPTION</u>	<u>PAGE No..</u>
Vol 1 of 4	Bidding Procedures SBD Comprising:- Bidding Procedures Employer's Requirements Conditions of Contract Contract Forms	
Vol 2 of 4	Bills of Quantities ; Comprising:- Grand Summary Preliminaries Kalabe Kidepo river Kurao Tongobore Lopiripir Nakao Day Works	 G.S 1 Bill No. 1 Bill No. 2 Bill No. 3 Bill No. 4 Bill No. 5 Bill No. 6 Bill No. 7 Bill No. 8
Vol 3 of 4	Specifications; Comprising:- Specifications for the Works	
Vol 4 of 4	Drawings; Comprising:- Refer to Drawing Schedule Vol. 4	

LOW WATER STREAM CROSSINGS

GRAND SUMMARY

BIODIVERSITY INFRASTRUCTURE IN KIDEPO VALLEY NATIONAL PARK

UGANDA WILDLIFE AUTHORITY- SIX LOW WATER STREAM CROSSINGS

LWSC - GENERAL SUMMARY

	AMOUNT	Units	TOTAL AMOUNT (Ugx)
BILL No. 1 : PRELIMINARIES			-
BILL No. 2 : KALABE			-
BILL No. 3 : NA			-
			-
BILL No. 4 : KURAO			-
BILL No. 5 : TONGOBORE			-
BILL No. 6 : LOPIRIPIR			-
BILL No. 7 : NA			-
BILL No. 8 : DAYWORKS			-
SUB-TOTAL 1			-
ADD PROVISIONAL SUM FOR CONTINGENCY (5%)			-
SUB - TOTAL 2			-
			-
GRAND TOTAL			-

**LOW WATER STREAM
CROSSINGS**

PRELIMINARIES

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY
NATIONAL PARK**

BILL NO. 1 PRELIMINARIES

Item	Description	Unit	Qty	Rate	Amount
11.01	<p>DEFINITION AND TERMS</p> <p>Preamble: These Preliminaries shall apply to all Volumes of tender and Contract Documents for the project and supplement specification</p> <p>Names of Parties</p> <p>The following parties wherever they occur shall be interpreted as here under:</p> <p>(i) The Word "Employer" shall be held to mean: Uganda Wildlife Authority</p> <p>(ii) The "Project Manager" for the purposes of this Contract shall be held to mean:: Uganda Wildlife Authority</p> <p>(iii) The "Contractor" shall mean: The person or persons partnership, firm or company, whose tender for this work (i.e. the work described in and/or preferred to in Bills of Quantities) has been accepted and shall include the legal successors in title to such person or persons, partnership, firm or company but not (except with consent of the Employer) any assignee(s).</p> <p>(iv) The "Funder" shall be held to mean: United States Agency for International Development (USAID)</p> <p>(v) The "Quality Assurance Consultant" shall mean: MBW Consulting Ltd.</p> <p>Meaning and Abbreviations</p> <p>(viii) "Ditto" shall have the same meaning as "As before".</p> <p>(ix) "CM" or M³ shall mean Cubic Metres</p> <p>(x) "SM" or M² shall mean Square Metres</p> <p>(xi) "LM" or M shall mean Linear Metres</p> <p>(xii) "NO." shall mean Number</p> <p>(xiii) "Prs" shall mean Pairs</p> <p>(xiv) "mm" shall mean Millimetres</p> <p>(xv) "KG" shall mean Kilograms(s)</p> <p>(xv) "MTH" or "mth" shall mean Month(s)</p> <p>(xix) "Approx." shall mean Approximately</p> <p>(xx) "U.S." shall mean United States of America</p> <p>(xxi) "E.U." shall mean European Union</p>				

Item	Description	Unit	Qty	Rate	Amount
12	GENERAL REQUIREMENTS AND PROVISIONS				
12.01	Tenderer to Visit the Site The Contractor will be required to visit the site before tendering. Permission to view the site may be obtained upon application to the Project Manager. The Contractor shall therefore be deemed to have visited the site and satisfied himself as to: -	Item	1		
(a)	The nature of the site				
(b)	The amount of rubbish or debris to be cleared away before commencement.				
(c)	The nature of the soil to be excavated and location of the dumping site.				
(d)	The nature, proximity of adjoining property, structures, buildings and services to be protected and/or diverted.				
(f)	The nature of existing structures to be retained or demolished				
(g)	The erection and siting of all temporary structures, plant and materials necessary for executing the Works.				
(h)	The existence of adequate supplies of labour, plant and local materials.				
(i)	The requirements for the protection of the environment.				
(j)	The Contractor is to satisfy himself as to any difficulties that the Site may present to make all necessary inquiries to any point which in his opinion requires further elucidation as no claim for lack of information will be accepted.				
12.03	Maintenance of existing road				
(a)	Contractor to maintain existing road	month	12		
(b)	Additional grading of existing road and temporary bypass roads as instructed by the Engineer	km	0.4		
	CONTRACTOR'S ESTABLISHMENT ON SITE AND GENERAL OBLIGATIONS				
13.01	Contractor's Preliminary and General Obligations Note: The sum of Items 13.01(a) + 13.01 (b) must not exceed 15% of the Total Tender Sum				
(a)	Fixed obligations (including but not limited to all insurances, sign boards, hoarding)	L.S.	1		
(b)	Time-related obligations (including but not limited to security, water, electricity, internet, telephone, site administration site meetings, sanitation, material storage)	month	6		
13.02	Provide, erect, and remove after use, temporary information boards	no.	6		

Item	Description	Unit	Qty	Rate	Amount
	ENGINEER'S ACCOMMODATION AND ATTENDANCE UPON ENGINEER AND HIS/HER SITE PERSONNEL				
14.02	Office for the Engineer				
(a)	Provide fully furnished and equipped office for the Engineer	no.	2		
(b)	Maintain and pay all rents and municipal services for office	mth	6		
14.05	Four wheel drive station wagons for the Engineer				
(a)	Operate and maintain vehicles for the engineer	no.	1		
14.09	Laboratory equipment for the Engineer				
	Allow for expenses in connection with the testing of materials as required by the Project Manager including the supply and preparation of materials to be tested, the cost of materials and their packing and conveyance to the nearest approved testing laboratory.				
(c)	Allow for making all necessary concrete test cubes and testing at an approved laboratory. One copy of the test cube report shall be forwarded direct to the Project Manager by the Laboratory officials. An accurate record of all test cubes taken and crushed must be kept on site and the Contractor will only be reimbursed for successful tests upon the production of Laboratory Certificates.	L.S.	1		-
	Accommodation Of Traffic				
15.01	Accommodation of traffic on existing road				
(a)	Provision of Traffic Management and Control Signs	No.	5		
	ENVIRONMENTAL PROTECTION AND WASTE DISPOSAL				
17.01	Environmental action plan, decommissioning plans and reporting	L.S.	1		

Item	Description	Unit	Qty	Rate	Amount
18.01	OCCUPATIONAL HEALTH AND SAFETY, HIV/AIDS, COVID 19 AND GENDER				
	HIV/AIDS and STD prevention and counselling				
	(a) Information, education and consultation campaigns including regular distribution of condoms to workforce	mth	6		
	(b) Provide, maintain and operate STD and HIV/AIDS clinic or make alternative arrangements with existing local clinic	mth	6		
(c) Provision of safety clothing and equipment for the workforce	mth	6			
(d) Allow for routine sensitization of all worker and personnel on prevention of the spread of COVID 19. Provide all Personal Protective equipment and safety gear for all workers on the sites to prevent the Spread of COVID19. Maintaining of SOPs guidelines from MoH.	L.S.	1			
TOTAL OF BILL NO 1 CARRIED TO GRAND SUMMARY					-

LOW WATER STREAM CROSSINGS

KALABE LWSC

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY
NATIONAL PARK**

BILL No. 2 KALABE LWSC

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 2100: DRAINS ON 300M ROAD LENGTH BEFORE AND AFTER THE DRIFT				
21.01	Excavation for open drains:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	up to 1.5 m	m ³	360		
(b)	Extra over sub-Item 21.03(a) for excavation in rock as defined in Clause 3603, irrespective of depth:	m ³	50		
21.02	Clearing and shaping existing drains:	m ³	600		
	SECTION 2200: PREFABRICATED CULVERTS				
22.01	Excavation:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	Up to 1.5 m	m ³	40		
(ii)	Exceeding 1.5 m and up to 3.0 m	m ³	5		
(b)	Extra over sub-Item 22.01(a) for excavation in rock as defined in Clause 3603, irrespective of depth (Provisional)	m ³	5		
22.02	Backfilling:				
(a)	Using excavated material	m ³	18		
(b)	Using imported selected material	m ³	35		
22.03	Concrete pipe culverts:				
(a)	On Class A bedding (type & diameter indicated)				
(a)(i)	Precast 600mm diameter	m	16		
22.07	Cast in-situ concrete and formwork:				
(a)	Class 15/40 concrete in Class A culvert bedding, screeds, haunching and encasing for pipes, including formwork	m ³	6		
(c)	Class 25/20 concrete in inlet and outlet structures, catchpits, manholes, thrust and anchor blocks, excluding formwork but including Class U2 surface finish	m ³	8		
(d)	Formwork to concrete under sub item 22.07(c) above (class of finish indicated)				
(d)(ii)	Class F2	m ²	65		
22.1	Steel reinforcement:				
(b)	High-tensile steel bars	kg	950		

Item	Description	Unit	Quantity	Rate	Amount
SECTION 2500: PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION					
25.01	Stone pitching:				
(b)	Grouted stone pitching, 1:3 cement sand mortar				
(i)	200mm	m ²	78		
SECTION 2600: GABIONS					
26.02	Surface preparation for bedding the gabions	m ²	715		
26.03	Gabions:				
(a)	Galvanised gabion boxes filled with appropriet rockfill (dimensions of box and mesh size indicated)				
(i)	2m x 1m x 0.5m, 80mm x 100mm mesh	m ³	410		
(c)	Galvanised gabion mattresses (dimensions of mattress, mesh size indicated)				
(c)(i)	3m x 2m x 0.3m, Mattress	m ³	40		
COLLECTION TO SUMMARY					-
SECTION 3200: REMOVAL OF EXISTING STRUCTURES					
32.01	Removal of existing structures:				
(b)	Removal/demolition of reinforced concrete in drifts, box culverts, rockfill and slabs including headwalls, wingwalls and apron and arrange as fill material and store on site to be re-used as directed	m ³	108		
SECTION 3600: EARTHWORKS FOR ROAD SECTIONS 300M TO AND FROM DRIFT					
36.01	Excavations:				
(a)	Excavation of Road Formation to spoil	m ³	380		
(b)	Excavation in sandy soil for river training	m ³	8,800		
(c)	Rock excavation	m ³	30		
36.02	Fill and improved subgrade layers				
(a)	Approved gravel quality material in fill layers in road formation including hauling, placing, watering in embarkments and lowspots to create a level road	m ³	2,000		
COLLECTION TO SUMMARY					-

Item	Description	Unit	Quantity	Rate	Amount
SECTION 5400: ROAD SIGNS					
54.01	GRP Road signs on steel posts				
(a)	Road signs on single post, plate area "A"				
(i)	A ≤ 0.5m ²	No.	4		
(ii)	A > 0.5m ²	No.	4		
56.04	Grassing				
(a)	Plant approved paspalum grassing using cuttings, sods or seeds in the areas prepared for grassing including watering planted grass twice a day with adequate amounts; sprays water until the grass has achieved an acceptable cover (meaning not less than 75% of the area grassed shall be covered with grass and no bare patches exceeding 0.25m ² per square meter shall occur) including providing loam soil and manure	m ²	60		
COLLECTION TO SUMMARY					-
SECTION 6100: FOUNDATIONS FOR DRIFT					
61.02	Excavation:				
(a)	Common excavation in soft material situated within the following successive depth ranges including river training of total 400m on either side of the road:				
(i)	0 m up to 2 m	m ³	780		
(b)	Extra-over sub-Item 61.02(a) for excavation in rock irrespective of depth	m ³	40		
61.04	Backfill to excavations utilising:				
(a)	Material from the excavations	m ³	390		
61.05	Foundation fill consisting of:				
(a)	Rock fill in foundations	m ³	160		
(b)	Compacted granular material	m ³	32		
(c)	Sand blinding	m ³	6		
GEO GRIDS AND FABRICS.					
(a)	Secugrid 80/20 R6 to engineers detail	m ²	30		
DAMP PROOF COURSES					
(b)	1000 Gauge polythene sheeting laid on blinded hardcore	m ²	360		

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH				
62.01	Formwork to provide surface finish Class F1 to concealed surfaces to:				
(a)	Beams	m ²	80		
(b)	Culvert walls	m ²	125		
(c)	Soffit of suspended culvert slab	m ²	36		
(d)	Sides of pillars	m ²	52		
	SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES				
63.01	High Yield Steel reinforcement for:				
(a)	Beams and culvert				
(i)	T10	Kg	3150		
(ii)	T12	Kg	1,920		
(iii)	T16	Kg	6,170		
(b)	Rigid Pavement				
(ii)	welded steel fabric(A252 Fabric Mesh reinforcement weighing 3.95 kg. per square meter fixed in slab)	Kg	640		
	SECTION 6400: CONCRETE FOR STRUCTURES				
64.01	Cast in situ concrete Class 30 in				
(a)	Culvert	m ³	35		
(b)	Beams	m ³	12		
(c)	Pavement Slab	m ³	30		
(d)	Pillars	m ³	9		
(e)	Splash apron	m ³	15		
64.02	Cast in situ concrete Class 15 in				
(a)	Blinding	m ³	5		
6600	No-Fines Concrete; Joints; Bearings; Parapets And Drainage For Structures				
B66.05	Expansion joints				
(a)	Elastomeric strip sealant expansion joints 20mm thick 200mm wide masterflex pg or approved water proof sealant on top of and including filler styro foam	m	16		
66.14	Dowel bars				
(a)	20mm diameter x 400mm long smooth round dowel bar, with the end of the bars be coated wit a bond breaker to enable free movement, waterproof cap and approved shealth	no.	54		
	COLLECTION TO SUMMARY				
					-

UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY
NATIONAL PARK

SUMMARY KALABE LWSC

ITEM	DESCRIPTION	AMOUNT (Ugx)
A	DRAINAGE	-
B	EARTHWORKS AND PAVEMENTS	-
C	AUXILLARY WORK	-
D	STRUCTURES (DRIFT)	-
	TOTAL CARRIED TO GENERAL SUMMARY	-

LOW WATER STREAM CROSSINGS

KURAO LWSC

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY
NATIONAL PARK**

BILL No. 4 KURAO LWSC

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 2100: DRAINS ON 300M ROAD LENGTH BEFORE AND AFTER THE DRIFT				
21.01	Excavation for open drains:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	up to 1.5 m	m ³	360		
(b)	Extra over sub-Item 21.03(a) for excavation in rock as defined in Clause 3603, irrespective of depth:	m ³	50		
21.02	Clearing and shaping existing drains:	m ³	600		
	SECTION 2200: PREFABRICATED CULVERTS				
22.01	Excavation:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	Up to 1.5 m	m ³	15		
(ii)	Exceeding 1.5 m and up to 3.0 m	m ³	5		
(b)	Extra over sub-Item 22.01(a) for excavation in rock as defined in Clause 3603, irrespective of depth (Provisional)	m ³	5		
22.02	Backfilling:				
(a)	Using excavated material	m ³	5		
(b)	Using imported selected material	m ³	12		
22.03	Concrete pipe culverts:				
(a)	On Class A bedding (type and diameter indicated)				
(a)(i)	Precast 600mm diameter	m	6		
22.07	Cast in-situ concrete and formwork:				
(a)	Class 15/40 concrete in Class A culvert bedding, screeds, haunching and encasing for pipes, including formwork	m ³	2		
(c)	Class 25/20 concrete in inlet and outlet structures, catchpits, manholes, thrust and anchor blocks, excluding formwork but including Class U2 surface finish	m ³	4		
(d)	Formwork to concrete under sub item 22.07(c) above (class of finish indicated)				
(d)(ii)	Class F2	m ²	24		
22.1	Steel reinforcement:				
(b)	High-tensile steel bars	kg	600		

Item	Description	Unit	Quantity	Rate	Amount
SECTION 2500: PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION					
25.01	Stone pitching:				
(b)	Grouted stone pitching, 1:3 cement sand mortar				
(i)	200mm	m ²	60		
SECTION 2600: GABIONS					
26.02	Surface preparation for bedding the gabions	m ²	240		
26.03	Gabions:				
(a)	Galvanised gabion boxes filled with appropriet rockfill (dimensions of box and mesh size indicated)				
(i)	2m x 1m x 0.5m, 80mm x 100mm mesh	m ³	150		
(c)	Galvanised gabion mattresses (dimensions of mattress, mesh size indicated)				
(c)(i)	3m x 2m x 0.3m, Mattress	m ³	50		
COLLECTION TO SUMMARY					-
SECTION 3200: REMOVAL OF EXISTING STRUCTURES					
32.01	Removal of existing structures:				
(b)	Removal/demolition of reinforced concrete in drifts, box culverts and slabs including headwalls, wingwalls and apron and arrange as fill material and store on site to be re-used as directed	m ³	80		
SECTION 3600: EARTHWORKS FOR ROAD SECTIONS 300M TO AND FROM DRIFT					
36.01	Excavations:				
(a)	Common excavation of Road Formation to fill	m ³	1,200		
(b)	Excavation in sandy soil for river training (Provisional Item)	m ³	360		
(c)	Rock excavation	m ³	60		
36.02	Fill and improved subgrade layers				
(a)	Approved gravel quality material in fill layers in road formation	m ³	580		

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 3700: PAVEMENT LAYERS OF NATURAL GRAVEL MATERIALS				
37.03	Natural gravel for gravel wearing course and unpaved shoulders:				
(b)	Natural gravel class 30 used for gravel wearing course	m ³	100		
	COLLECTION TO SUMMARY				-
	SECTION 5400: ROAD SIGNS				
54.01	GRP Road signs on steel posts				
(a)	Road signs on single post, plate area "A"				
(i)	A ≤ 0.5m ²	No.	4		
(ii)	A > 0.5m ²	No.	4		
56.04	Grassing				
(a)	Plant approved paspalum grassing using cuttings, sods or seeds in the areas prepared for grassing including watering planted grass twice a day with adequate amounts; sprays water until the grass has achieved an acceptable cover (meaning not less than 75% of the area grassed shall be covered with grass and no bare patches exceeding 0.25m ² per square meter shall occur) including providing loam soil and manure	m ²	50		
	COLLECTION TO SUMMARY				-
	SECTION 6100: FOUNDATIONS FOR DRIFT				
61.02	Excavation:				
(a)	Common excavation in soft material situated within the following successive depth ranges including river training of total 400m on either side of the road:				
(i)	0 m up to 2 m	m ³	180		
(b)	Extra-over sub-Item 61.02(a) for excavation in rock irrespective of depth	m ³	100		
61.04	Backfill to excavations utilising:				
(a)	Material from the excavations				
(b)	Imported material	m ³	40		
(c)	Sand blinding	m ³	5		
	GEO GRIDS AND FABRICS.				
(a)	Secugrid 80/20 R6 to engineers detail	m ²	50		
	DAMP PROOF COURSES				
(b)	1000 Gauge polythene sheeting laid on blinded hardcore	m ²	80		
61.05	Foundation fill consisting of:				
(a)	Rock fill	m ³	100		

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH				
62.01	Formwork to provide surface finish Class F1 to concealed surfaces to:				
(a)	Beams	m ²	38		
(b)	Pavement Slab	m ²	12		
(c)	Sides of pillars	m ²	40		
	SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES				
63.01	High Yield Steel reinforcement for:				
(a)	Beams				
(i)	T10	Kg	2,060		
(ii)	T12	Kg	1,040		
(iii)	T16	Kg	1,040		
(b)	Rigid Pavement				
(ii)	welded steel fabric(A252 Fabric Mesh reinforcement weighing 3.95 kg. per square meter fixed in slab)	Kg	480		
	SECTION 6400: CONCRETE FOR STRUCTURES				
64.01	Cast in situ concrete Class 30 in				
(a)	Beams	m ³	10		
(b)	Pavement Slab	m ³	20		
(c)	Pillars	m ³	6		
6600	No-Fines Concrete; Joints; Bearings; Parapets And Drainage For Structures				
B66.05	Expansion joints				
(a)	Elastomeric strip sealant expansion joints 20mm thick 200mm wide masterflex pg or approved water proof sealant on top of and including filler styro foam	m	16		
66.14	Dowel bars				
(a)	20mm diameter x 400mm long smooth round dowel bar, with the end of the bars be coated wit a bond breaker to enable free movement, waterproof cap and approved shealth	no.	54		
	COLLECTION TO SUMMARY				
					-

UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO
VALLEY NATIONAL PARK

SUMMARY KURAO LWSC

ITEM	DESCRIPTION	AMOUNT (Ugx)
A	DRAINAGE	-
B	EARTHWORKS AND PAVEMENTS	-
C	AUXILLARY WORK	-
D	STRUCTURES (DRIFT)	-
	TOTAL CARRIED TO GENERAL SUMMARY	-

**LOW WATER STREAM
CROSSINGS**

TONGOBORE LWSC

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY
NATIONAL PARK**

BILL No. 5 TONGOBORE LWSC

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 2100: DRAINS ON 300M ROAD LENGTH BEFORE AND AFTER THE DRIFT				
21.01	Excavation for open drains:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	up to 1.5 m	m ³	360		
(b)	Extra over sub-Item 21.03(a) for excavation in rock as defined in Clause 3603, irrespective of depth:	m ³	50		
21.02	Clearing and shaping existing drains:	m ³	600		
	SECTION 2500: PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION				
25.01	Stone pitching:				
(b)	Grouted stone pitching, 1:3 cement sand mortar				
(i)	200mm	m ²	45		
	SECTION 2600: GABIONS				
26.02	Surface preparation for bedding the gabions	m ²	180		
26.03	Gabions:				
(a)	Galvanised gabion boxes filled with appropriet rockfill (dimensions of box and mesh size indicated)				
(i)	2m x 1m x .5m mesh	m ³	66		
(c)	Galvanised gabion mattresses (dimensions of mattress, mesh size indicated)				
(c)(i)	3m x 2m x 0.3m, Mattress	m ³	40		
	COLLECTION TO SUMMARY				-
	SECTION 3200: REMOVAL OF EXISTING STRUCTURES				
32.01	Removal of existing structures:				
(b)	Removal/demolition of reinforced concrete in drifts, box culverts, rockfill and slabs including headwalls, wingwalls and apron and arrange as fill material and store on site to be re-used as directed	m ³	160		

Item	Description	Unit	Quantity	Rate	Amount
SECTION 3600: EARTHWORKS FOR ROAD SECTIONS 300M TO AND FROM DRIFT					
36.01	Excavations:				
(a)	Common excavation of Road Formation to spoil (Provisional Item)	m ³	440		
(b)	Excavation in sandy soil for river training (Provisional Item)	m ³	44		
(c)	Rock excavation	m ³	60		
36.02	Fill and improved subgrade layers				
(a)	Approved gravel quality material in fill layers in road formation	m ³	1,000		
SECTION 3700: PAVEMENT LAYERS OF NATURAL GRAVEL MATERIALS					
37.03	Natural gravel for gravel wearing course and unpaved shoulders:				
(b)	Natural gravel class 30 in gravel wearing course	m ³	30		
COLLECTION TO SUMMARY					
SECTION 5400: ROAD SIGNS					
54.01	GRP Road signs on steel posts				
(a)	Road signs on single post, plate area "A"				
(i)	A ≤ 0.5m ²	No.	4		
(ii)	A > 0.5m ²	No.	4		
56.04	Grassing				
(a)	Plant approved paspalum grassing using cuttings, sods or seeds in the areas prepared for grassing including watering planted grass twice a day with adequate amounts; sprays water until the grass has achieved an acceptable cover (meaning not less than 75% of the area grassed shall be covered with grass and no bare patches exceeding 0.25m ² per square meter shall occur) including providing loam soil and manure	m ²	200		
COLLECTION TO SUMMARY					
					-
					-

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 6100: FOUNDATIONS FOR DRIFT				
61.02	Excavation:				
(a)	Common excavation in soft material situated within the following successive depth ranges including river training of total 400m on either side of the road:				
(i)	0 m up to 2 m	m ³	300		
(b)	Extra-over sub-Item 61.02(a) for excavation in rock irrespective of depth	m ³	80		
61.04	Backfill to excavations utilising:				
(a)	Material from the excavations				
(b)	Imported material	m ³	70		
(c)	Sand blinding	m ³	3		
	GEO GRIDS AND FABRICS.				
(a)	Secugrid 80/20 R6 to engineers detail	m ²	40		
	DAMP PROOF COURSES				
(b)	1000 Gauge polythene sheeting laid on blinded hardcore	m ²	55		
61.05	Foundation fill consisting of:				
(a)	Rock fill	m ³	70		
	SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH				
62.01	Formwork to provide surface finish Class F1 to concealed surfaces to:				
(a)	Beams	m ²	25		
(b)	Pavement Slab	m ²	8		
(c)	Sides of pillars	m ²	30		
	SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES				
63.01	High Yield Steel reinforcement for:				
(a)	Beams				
(i)	T10	Kg	620		
(ii)	T12	Kg	700		
(iii)	T16	Kg	1080		
(b)	Rigid Pavement				
(i)	T12	Kg	260		
(ii)	welded steel fabric(A252) Fabric Mesh reinforcement weighing 3.95 kg. per square meter fixed in slab)	Kg	200		

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 6400: CONCRETE FOR STRUCTURES				
64.01	Cast in situ concrete Class 30 in				
(a)	Beams	m ³	9		
(b)	Pavement Slab	m ³	16		
(c)	Pillars	m ³	5		
6600	No-Fines Concrete; Joints; Bearings; Parapets And Drainage For Structures				
B66.05	Expansion joints				
(a)	Elastomeric strip sealant expansion joints 20mm thick 200mm wide masterflex pg or approved water proof sealant on top of and including filler styro foam	m	8		
66.14	Dowel bars				
(a)	20mm diameter x 400mm long smooth round dowel bar, with the end of the bars be coated wit a bond breaker to enable free movement, waterproof cap and approved shealth	no.	24		
	COLLECTION TO SUMMARY				
					-

UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY
NATIONAL PARK

SUMMARY TONGOBORE LWSC

ITEM	DESCRIPTION	AMOUNT (Ugx)
A	DRAINAGE	-
B	EARTHWORKS AND PAVEMENTS	-
C	AUXILLARY WORK	-
D	STRUCTURES (DRIFT)	-
	TOTAL CARRIED TO GENERAL SUMMARY	-

**LOW WATER STREAM
CROSSINGS**

LOPIRIPIR LWSC

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY
NATIONAL PARK**

BILL No. 6 LOPIRIPIR LWSC

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 2100: DRAINS ON 300M ROAD LENGTH BEFORE AND AFTER THE DRIFT				
21.01	Excavation for open drains:				
(a)	Excavating soft material situated within the following depth ranges below the surface level:				
(i)	up to 1.5 m	m ³	360		
(b)	Extra over sub-Item 21.03(a) for excavation in rock as defined in Clause 3603, irrespective of depth:	m ³	50		
21.02	Clearing and shaping existing drains:	m ³	600		
	SECTION 2500: PITCHING, STONEMWORK AND PROTECTION AGAINST EROSION				
25.01	Stone pitching:				
(b)	Grouted stone pitching, 1:3 cement sand mortar				
(i)	200mm	m ²	100		
	SECTION 2600: GABIONS				
26.02	Surface preparation for bedding the gabions	m ²	240		
26.03	Gabions:				
(a)	Galvanised gabion boxes filled with appropriet rockfill (dimensions of box and mesh size indicated)				
(i)	2m x 1m x .5m mesh	m ³	98		
(c)	Galvanised gabion mattresses (dimensions of mattress, mesh size indicated)				
(c)(i)	3m x 2m x 0.3m, Mattress	m ³	98		
	COLLECTION TO SUMMARY				-
	SECTION 3200: REMOVAL OF EXISTING STRUCTURES				
32.01	Removal of existing structures:				
(b)	Removal/demoition of reinforced concrete in drifts, box culverts, rockfill and slabs including headwalls, wingwalls and apron and arrange as fill material and store on site to be re-used as directed	m ³	160		

Item	Description	Unit	Quantity	Rate	Amount
	SECTION 3600: EARTHWORKS FOR ROAD SECTIONS 300M TO AND FROM DRIFT				
36.01	Excavations:				
(a)	Common excavation of Road Formation to spoil (Provisional Item)	m ³	170		
(b)	Excavation in sandy soil for river training (Provisional Item)	m ³	17		
(c)	Rock excavation	m ³	50		
36.02	Fill and improved subgrade layers				
(a)	Approved gravel quality material in fill layers in road formation	m ³	800		
	SECTION 3700: PAVEMENT LAYERS OF NATURAL GRAVEL MATERIALS				
37.03	Natural gravel for gravel wearing course and unpaved shoulders:				
(b)	Natural gravel class 15 used for gravel wearing course	m ³	15		
	COLLECTION TO SUMMARY				-
	SECTION 5400: ROAD SIGNS				
54.01	GRP Road signs on steel posts				
(a)	Road signs on single post, plate area "A"				
(i)	A ≤ 0.5m ²	No.	4		
(ii)	A > 0.5m ²	No.	4		
56.04	Grassing; as described in the other sites				
(a)	Plant approved paspalum grassing using cuttings, sods or seeds in the areas prepared for grassing including watering planted grass twice a day with adequate amounts; sprays water until an acceptable cover as described before	m ²	90		
	COLLECTION TO SUMMARY				-
	SECTION 6100: FOUNDATIONS FOR DRIFT				
61.02	Excavation:				
(a)	Common excavation in soft material situated within the following successive depth ranges including river training of total 400m either side				
(i)	0 m up to 2 m	m ³	320		
(b)	Extra-over sub-Item 61.02(a) for excavation in rock irrespective of depth	m ³	32		
61.04	Backfill to excavations utilising:				
(a)	Material from the excavations	m ³	50		
(b)	Imported material	m ³	72		
(c)	Sand blinding	m ³	8		

Item	Description	Unit	Quantity	Rate	Amount
	GEO GRIDS AND FABRICS.				
(a)	Secugrid 80/20 R6 to engineers detail	m ²	90		
	DAMP PROOF COURSES				
(b)	1000 Gauge polythene sheeting laid on blinded hardcore	m ²	110		
61.05	Foundation fill consisting of:				
(a)	Rock fill	m ³	160		
	SECTION 6200: FALSEWORK, FORMWORK AND CONCRETE FINISH				
62.01	Formwork to provide surface finish Class F1 to concealed surfaces to:				
(a)	Beams	m ²	51		
(b)	Pavement Slab	m ²	16		
(c)	Sides of pillars	m ²	58		
	SECTION 6300: STEEL REINFORCEMENT FOR STRUCTURES				
63.01	High Yield Steel reinforcement for:				
(a)	Beams				
(i)	T10	Kg	3200		
(ii)	T12	Kg	1,600		
(iii)	T16	Kg	1,570		
(b)	Rigid Pavement				
(ii)	welded steel fabric(A252) Fabric Mesh reinforcement weighing 3.95 kg. per square meter fixed in slab)	Kg	780		
	SECTION 6400: CONCRETE FOR STRUCTURES				
64.01	Cast in situ concrete Class 30 in				
(a)	Beams	m ³	16		
(b)	Pavement Slab	m ³	32		
(c)	Pillars	m ³	10		
6600	No-Fines Concrete; Joints; Bearings; Parapets And Drainage For Structures				
B66.05	Expansion joints				
(a)	Elastomeric strip sealant expansion joints 20mm thick 200mm wide masterflex pg or approved water proof sealant on top of and including filler styro foam	m	24		
66.14	Dowel bars				
(a)	20mm diameter x 400mm long smooth round dowel bar, with the end of the bars be coated wit a bond breaker to enable free movement, waterproof cap and approved shealth	no.	80		
	COLLECTION TO SUMMARY				
					-

UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO VALLEY
NATIONAL PARK

SUMMARY LOPIRIPIR LWSC

ITEM	DESCRIPTION	AMOUNT (Ugx)
A	DRAINAGE	-
B	EARTHWORKS AND PAVEMENTS	-
C	AUXILLARY WORK	-
D	STRUCTURES (DRIFT)	-
	TOTAL CARRIED TO GENERAL SUMMARY	-

**LOW WATER STREAM
CROSSINGS**

DAY WORKS

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO
VALLEY NATIONAL PARK**

BILL No. 8 DAY WORKS (ALL PROVISIONAL)

Item	Description	Unit	Quantity	Rate	Amount (Ugx)
SECTION 8100 : LABOUR					
81.01	Unskilled labour	hour (hr)	500		-
81.02	Skilled labour	hour (hr)	250		-
81.03	Headman	hour (hr)	50		-
81.04	Foreman	hour (hr)	50		-
81.05	Engineer	hour (hr)	50		-
81.06	Site Manager	hour (hr)	50		-
81.07	Driver heavy	hour (hr)	100		-
81.08	Driver Light	hour (hr)	100		-
81.09	Plant Operator H/D	hour (hr)	100		-
81.10	Plant operator LH/D	hour (hr)	100		-
81.11	Land surveyor	hour (hr)	100		-
81.13	Mason	hour (hr)	50		-
81.14	Carpenter	hour (hr)	50		-
SECTION 8200 : MATERIALS					
82.01	Diesel (gas oil)	litre (l)	200		-
82.02	Petrol	litre (l)	200		-
82.03	Coarse crushed aggregate	tonne (t)	20		-
82.04	Fine aggregate (sand)	tonne (t)	20		-
82.05	Ordinary Portland Cement	tonne (t)	5		-
82.06	Mild steel reinforcement	tonne (t)	2		-
82.07	High yield stress steel bars	tonne (t)	2		-
82.08	Timbering for trenches	m ²	50		-
82.09	Formwork	m ²	50		-
82.10	Road Paint	litre (l)	100		-
82.11	Granular material	m ³	100		-
82.15	Lubricant	kg	25		-
82.16	Lime	tonne (t)	2		-

**UGANDA WILDLIFE AUTHORITY- LOW WATER STREAM CROSSINGS IN KIDEPO
VALLEY NATIONAL PARK**

BILL No. 8 DAY WORKS (ALL PROVISIONAL)

Item	Description	Unit	Quantity	Rate	Amount (Ugx)
SECTION 8300 : EQUIPMENT					
83.01	D4 Dozer or equivalent with blade and ripper	hour (hr)	25		-
83.02	D8 Dozer or equivalent with blade and ripper	hour (hr)	25		-
83.03	Wheeled excavator, bucket capacity under 1 m ³	hour (hr)	25		-
83.04	Track Loader, 3-4 m ³ bucket capacity	hour (hr)	25		-
83.05	Wheeled excavator, bucket capacity 1-2 m ³	hour (hr)	25		-
83.06	Backhoe loader	hour (hr)	25		-
83.07	5t tipper lorry	hour (hr)	25		-
83.08	9t tipper lorry	hour (hr)	25		-
83.09	Dump Truck	hour (hr)	50		-
83.11	5-6t drawn vibrating roller and tractor	hour (hr)	20		-
83.12	10-12t smooth wheeled roller	hour (hr)	20		-
83.14	Pneumatic roller, 5,000 kg per tyre when fully ballasted	hour (hr)	20		-
83.15	Vibrating plate compactor	hour (hr)	20		-
83.16	Self-propelled water tanker min. 14,000 ltr. with pick-up pump	hour (hr)	20		-
83.17	Compressor 120 l/m complete with all tools	hour (hr)	20		-
83.18	Generator 15 kW	hour (hr)	20		-
83.19	Generator 150 kW	hour (hr)	20		-
83.20	Rock drill	hour (hr)	20		-
83.21	Concrete mixer up to 400 litres	hour (hr)	40		-
83.22	Concrete mixing plant, complete 1.0m ³ or above	hour (hr)	20		-
83.26	Pick-up truck	hour (hr)	40		-
Carried Forward to Summary					-