

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI AVAH THE MALDIVES**

**Bill 1 - Preliminaries and General Requirements**

ITEM	DESCRIPTION	QTY	UNIT	UNIT RATE	TOTAL
				USD	USD
1	<b>General</b>  The Contractor shall allow here for all costs for mobilization as a lumpsum amount, or in a breakup provided by the contractor, for all items in this contract which includes the requirements as set in contract documents and drawings including any regulatory requirements to complete the works				
1.1	Expenditure incurred for Mobilization of machinery and equipment	Item	LS		-
1.2	Expenditure incurred in complying with the clauses in section 01450 : Quality Control	Item	LS		-
1.3	Expenditure incurred in complying with the clauses in section 01500 : Construction Facilities & Temporary Controls	Item	LS		-
1.4	Expenditure incurred in complying with the clauses in section 01720 : Field Engineering	Item	LS		-
1.5	Provision and erection of notice boards 6 ft x 6 ft size including cost and conveyance of material, labour charges etc.	2	No		-
1.6	Allow sum for environmental monitoring during construction phase as required in the approved EIA	Item	LS		-
1.7	Expenditure incurred for Demobilisation of machinery and equipment	Item	LS		-
	<b>Total for Preliminaries &amp; General Requirements Carried to GENERAL SUMMARY</b>				-

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI AVAH THE MALDIVES**

<b>Bill 2- M. KOLHUFUSHI ISLAND</b>					
<b>ITEM REF.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
				<b>USD</b>	<b>USD</b>
<b>2.1</b>	<b>Site Clearance</b> Site clearance for the harbour works, protection of existing plants, services and utilities, making good the surfaces at the end of the work	Item	LS		
2.1.2	Demolition of existing Quay wall and revetment structures and depositing the material for reuse for the contract scope and carting away the remaining materials to any acceptable locations as directed by the Engineer.	m	603		
<b>2.2</b>	<b>Dredging harbour basin to -3.00 level</b> Inclusive of dredging below quay walls and harbour area to a depth of MSL-3.00m and to the required shape as specified and shown on drawings and depositing the dredged material for reuse for the contract scope and carting away the remaining materials to any acceptable locations as directed by the Engineer. 2m clearance from the proposed breakwater edge/ dredge limit and a slope of 1:1.5 at the dredged cut has to be maintained.	m3	20,110		
<b>2.3</b>	<b>BREAK WATERS, EXISTING DEBRIS - Construction inclusive of all materials and workmanship as shown in the drawings.</b>				
2.3.1	<u>Breakwater Core</u> : Geotextile sand containers filled with acceptable sand filling material as per specification including placing in layers, on lines and levels as shown in Drawings.	m3	1,658		
2.3.2	Geotextile as per specification over the core of breakwater including proper overlaps as per manufacturers instruction, material, labour and equipment costs etc. complete.	m2	6,319		
2.3.3	<u>Armour Layer</u> : Rock boulders W800 Armour rocks in two layers, laid to the slopes defined in drawings and to lines and levels indicated including making good the top surface as walkway.	m3	5,870		
<b>2.4</b>	<b>REVTMENT - Construction inclusive of all materials and workmanship as shown in the drawings</b>				
2.4.1	Geotextile as per specification for the revetments over the slope including proper overlaps as per manufacturers instruction, material, labour and equipment costs etc. complete.	m2	1,525		
2.4.2	<u>Armour layer</u> : Using coral boulders available at site as debris of existing breakwater/ quay wall structures used as revetment laid to line, levels and slope as per specifications and as shown on drawings.	m3	1,031		
<b>PAGE TOTAL</b>					

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI AVAH THE MALDIVES**

<b>Bill 2- M. KOLHUFUSHI ISLAND</b>					
<b>ITEM REF.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
				<b>USD</b>	<b>USD</b>
<b>2.5</b>	<b>QUAY WALL</b>				
2.5.1	Supply and install precast Quay walls up to MSL-3.00m with marine proof adhesives to lines and levels shown in drawings including the cost of transportation of all materials, tools and installation at site with all workmanship necessary interlocks & the like complete in all respect.	m	259		
2.5.2	Cast in Situ concrete in Quay wall to grades, levels and areas as indicated in the drawing including RCC topping, construction of steps with handrails, reveals for anchor hooks and finishing the works to smooth finish as specified and shown on drawings	m	259		
2.5.3	Anchorage - Supply and fix 38mm dia , Mild steel tie rods with tar coating and 1000x250x1000mm size concrete block at every 4 meters interval along the quay wall with necessary anchorage etc complete.	No	70		
2.5.4	Supply & fix SS mooring hooks 20mm diameter for Quay Wall as specified and shown on drawings.	No	31		
2.5.5	Backfilling behind Quay walls with dredged materials or other suitable material in layers to confirm proper consolidation and laid with care to existing quay wall including the cost of equipment, labor etc necessary meeting all the contract requirements and as specified and shown on drawings	m3	9,249		
<b>2.6</b>	<b>OTHERS</b>				
2.6.1	Allow sum for Costal Polyform Type A5 Mooring Bouys tied to a concrete block by 4m long nylon rope and epoxy coated hook in the harbour basin including concrete works as specified and shown on drawings.	No	12		
2.6.2	Allow sum for Supply and Fixing of Solar Powered Navigation Beacons having a minimum nominal light range of 2 nautical miles, over breakwater heads as shown on drawings including concrete works , finishes and complete the work as per the specifications.	No	2		
2.6.3	Allow sum for Supply and Fixing of Solar Powered Navigation Beacons having a minimum nominal light range of 2 nautical miles, at entrance channel reef bed as shown on drawings including concrete works , finishes and complete the work as per the specifications.	No	10		
	<b>PAGE TOTAL</b>				

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI AVAH THE MALDIVES**

<b>Bill 2- M. KOLHUFUSHI ISLAND</b>					
<b>ITEM REF.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
				<b>USD</b>	<b>USD</b>
	<u>Bill Collection</u> Page 2 Page 3				
	<b>Total of M. KOLHUFUSHI Works</b>				
	<b>Carried over to SUMMARY PAGE</b>				

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI AVAH THE MALDIVES**

<b>Bill 3- L. GAN THUNDI AVAH</b>					
<b>ITEM REF.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
				<b>USD</b>	<b>USD</b>
<b>3.1</b>	<b>Site Clearance</b>				
3.1.1	Site clearance for the harbour works, protection of existing plants, services and utilities and making good the surfaces at the end of the work	Item	LS		
3.1.2	Demolition of existing sand cement bag Quay wall structures and depositing the material for reuse for the contract scope and carting away the remaining materials to any acceptable locations as directed by the Engineer.	m	87		
3.1.3	Demolition of existing breakwater structures and depositing the material for reuse for the contract scope and carting away the remaining materials to acceptable locations as directed by the Engineer.	m	160		
<b>3.2</b>	<b>Dredging harbour basin to -3.00 level</b>				
	Inclusive of dredging below quay walls and harbour area to a depth of MSL-3.00m and to the required shape as specified and shown on drawings and depositing the dredged material for reuse for the contract scope and carting away the remaining materials to any acceptable locations as directed by the Engineer. 2m clearance from the proposed breakwater edge and a slope of 1:1.5 at the dredged cut has to be maintained.	m3	40,744		
<b>3.3</b>	<b>BREAK WATERS - Construction inclusive of all materials and workmanship as shown in the drawings</b>				
3.3.1	<u>Breakwater Core</u> :Core of the breakwater with rock boulders W 400, including placing in layers, on lines and levels as shown in Drawings.	m3	2,223		
3.3.2	<u>Armour Layer</u> : Rock boulders W800 Armour rocks in two layers, laid to the slopes defined in drawings and to lines and levels indicated including making good the top surface as walkway.	m3	4,141		
<b>3.4</b>	<b>REVTMENTS - Construction inclusive of all materials and workmanship as shown in the drawings</b>				
3.4.1	Geotextile for revetments as per specification, including proper overlaps as per manufacturers instruction, material, lanour and equipment costs etc. complete.	m2	242		
3.4.2	<u>Armour Layer</u> : Rock boulders W600 Armour rocks in two layers for revetments, laid to the slopes defined in drawings and to lines and levels indicated including making good the top surface as walkway.	m3	190		
<b>3.5</b>	<b>GROINS - Construction inclusive of all materials and workmanship as shown in the drawings</b>				
3.5.1	<u>Core of Groin</u> :Core of the Groin with debris of Quay wall and breakwater, including placing in layers, on lines and levels as shown in Drawings.	m3	621		
3.5.2	<u>Armour Layer</u> : Rock boulders W800 Armour rocks in two layers for revetments, laid to the slopes defined in drawings and to lines and levels indicated including making good the top surface.	m3	1,500		
	<b>PAGE TOTAL</b>				

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI AVAH THE MALDIVES**

<b>Bill 3- L. GAN THUNDI AVAH</b>					
<b>ITEM REF.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
				<b>USD</b>	<b>USD</b>
<b>3.6</b>	<b>QUAY WALL</b>				
3.6.1	Supply and install precast Quay walls up to MSL-3.00m with marine proof adhesives to lines and levels shown in drawings including the cost of transportation of all materials, tools and installation at site with all workmanship necessary interlocks & the like complete in all respect.	m	325		
3.6.2	Cast in Situ concrete in Quay wall to grades, levels and areas as indicated in the drawing including RCC topping, construction of steps with handrails, reveals for anchor hooks and finishing the works to smooth finish as specified and shown on drawings	m	325		
3.6.3	Anchorage - Supply and fix 38mm dia , Mild steel tie rods with tar coating and 1000x250x1000mm size concrete block at every 4 meters interval along the quay wall with necessary anchorage etc complete.	No	81		
3.6.4	Supply & fix SS mooring hooks 20mm diameter for Quay Wall as specified and shown on drawings.	No	41		
3.6.5	Backfilling behind Quay walls with dredged materials or other suitable material in layers to confirm proper consolidation and laid with care to existing quay wall including the cost of equipment, labor etc necessary meeting all the contract requirements and as specified and shown on drawings	m3	7,599		
<b>3.7</b>	<b>OTHERS</b>				
3.7.1	Allow sum for Costal Polyform Type A5 Mooring Bouys tied to a concrete block by 4m long nylon rope and epoxy coated hook in the harbour basin including concrete works as specified and shown on drawings.	No	12		
3.7.2	<u>Ramp for Landing Crafts</u> :Construction of 9m x 6m, 200mm thick concrete floor with necessary slope and side retaining walls as shown on drawings for Loading/Unloading areas as specified.	m2	54		
3.7.3	Cope Edge Protector for protecting the concrete edge of Ramp for Landing crafts made of S355JR hot dip galvanized steel and painted to 3 layer paint systems including the cost of cast in anchor bars welded to the cope edge protectors, S355JR. Galvanized and all costs of labour, equipments etc complete all as per the details shown on drawings and specifications.	LS	1		
3.7.4	Allow sum for Supply and Fixing of Solar Powered Navigation Beacons having a minimum nominal light range of 2 nautical miles, over breakwater heads as shown on drawings including concrete works , finishes and complete the work as per the specifications.	No	1		
3.7.5	Allow sum for Supply and Fixing of Solar Powered Navigation Beacons having a minimum nominal light range of 2 nautical miles, at entrance channel reef bed as shown on drawings including concrete works , finishes and complete the work as per the specifications.	No	3		
	<b>PAGE TOTAL</b>				

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI AVAH THE MALDIVES**

<b>Bill 3- L. GAN THUNDI AVAH</b>					
<b>ITEM REF.</b>	<b>ITEM DESCRIPTION</b>	<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
				<b>USD</b>	<b>USD</b>
	<u>Bill Collection</u> Page 5 Page 6				
	<b>Total of L. GAN THUNDI AVAH Works</b>				
	<b>Carried over to SUMMARY PAGE</b>				

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI  
AVAH THE MALDIVES**

<b>Bill 4 - Schedule of Daywork Rates</b>					
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT RATE</b>	<b>TOTAL</b>
				<b>USD</b>	<b>USD</b>
<b>4</b>	<b>DAY WORKS</b>				
<b>4.1</b>	<b>GENERAL PRINCIPLES</b>				
A	In accordance with General Conditions of Contract, certain works may be executed on day works In such a case the works must be ordered in writing by the Engineer and they will be administered strictly in accordance with the above clause.				
B	The signature of the Engineer on Day work Records will be for record purposes only and the Engineer reserves the right to measure and value any works for which day work records may have been kept.				
C	The Contractor will be paid for day works carried out during the course of the Contract while other operations are in progress by him. Profits & overheads will be stated as a percentage addition in the item provided for the same at the end of the Labor, Material, and Plant sections of the Day works Section.				
D	Time engaged in the actual works will be allowed. In the event of labor or plant having been brought to the site specially for the item of Day works then a reasonable allowance will be made for travelling time. This allowance for travelling time will be agreed before the day work item is executed.				
E	The percentage for profit and overheads will include for the use and waste of hand tools & of all non-mechanical plant, stagings, scaffolding, tarpaulins, use of electric light, power and water for the works, and all special inducements for working in Maldives. Unless specifically authorized in writing by the Engineer, non-productive overtime or special rates for overtime will not be admissible. The cost of all  supervisory staff, including engineer foreman, clerks, appliance are to be included in the percentage addition for profit and overheads.				
	<b>PAGE TOTAL</b>				-

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI  
AVAH THE MALDIVES**

<b>Bill 4 - Schedule of Daywork Rates</b>					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL
				USD	USD
<b>4.2</b>	<b>LABOUR RATES</b>				
A	The day work rates agreed for labor shall be the net amount payable  Allow the Provisional Sum of USD 30,000.00 (United States Dollar Thirty Thousand only)  labor in Day work				<b>30,000.00</b>
B	Allowance to be added for overhead and profits.... %				
C	Tenderers are required to insert hereunder a list of operatives together with their net hourly rates to be used in calculating the cost of work executed on a day work basis :-  <u>Operative Rate per hour</u> Operator Driver Welder Mason Barbender Carpenter Skilled Worker Semi skilled Worker		<u>Hourly Rate</u>		
<b>4.3</b>	<b>MATERIAL RATES</b>				
	The day work rates agreed for labour shall be the net amount payable				
D	Materials used on day work will be as specified for the Works. The rates shall be the lowest current net manufacturers C.I.F. price, plus a reasonable allowance for customs, port handling charges, delivery to site and storing and protection  Allow the Provisional Sum of USD 30,000.00 (United States Dollar Thirty Thousand only) for materials in Day work				<b>30,000.00</b>
E	Allowance to be added for overhead and profits.....%				
	<b>PAGE TOTAL</b>				<b>60,000.00</b>

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI  
AVAH THE MALDIVES**

<b>Bill 4 - Schedule of Daywork Rates</b>					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL
				USD	USD
<b>4.4</b>	<b>PLANT AND RATES</b>				
A	<p>The definition of hire terms will be as follows:-</p> <p>1) Hourly hire - Any hour of any period less than eight (8) hours.</p> <p>2) Daily hire - An eight (8) hour day.</p> <p>Should more than eight (8) hours be worked consecutively (excluding normal breaks, etc.) for excess hours will be paid for as a direct proportion of the daily hire rate.</p>				
B	<p>Plant hire rates are to include for drivers, attendants, operators, maintenance in proper working order at all times, attendance in starting up and shutting down, refueling and all fuel and power, oils, greases, and cleaning materials, replacement and/or sharpening of tools and all other ancillary items including consumable spares.</p> <p>Note: Payment will not be made for mechanics on maintenance time.</p>				
C	<p>Allow the Provisional Sum of USD 40,000.00 (United States Dollar Fourty Thousand only) for Plant in Day work</p>				<b>40,000.00</b>
D	<p>Allowance to be added for overhead and profits.... %</p>				
E	<p>Tenderers are required to insert hereunder a list of plant together with hourly and daily hire rates to be used in calculating the cost of work executed on a day work basis :-</p> <p>Plant                      Hourly Rate    Daily Rate</p>				
	<b>PAGE TOTAL</b>				<b>40,000.00</b>

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI  
AVAH THE MALDIVES**

<b>Bill 4 - Schedule of Daywork Rates</b>					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL
				USD	USD
	<u>Bill Collection</u>				
	Page 8				-
	Page 9				60,000.00
	Page 10				40,000.00
	<b>Total of DAY WORKS</b> Carried over to SUMMARY PAGE				<b>100,000.00</b>

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI  
AVAH THE MALDIVES**

<b>Bill 5 - TENDERERS, ADJUSTMENT SCHEDULE</b>					
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT RATE</b>	<b>TOTAL</b>
				<b>USD</b>	<b>USD</b>
	<b>TENDERERS ADJUSTMENT</b>				
A	The accuracy of the quantities given in this Bills of Quantities is not guaranteed and the Contractor should satisfy himself as to their accuracy				
B	Any adjustments that he may consider necessary should be written below and on similar continuation sheets if required, and the net amount of the adjustments is to be carried to the Summary .				
	<b><u>ADDITIONS</u></b> -				
	1				
	2				
	3				
	4				
	5				
	6				
	<b><u>OMISSIONS</u></b> -				
	1				
	2				
	3				
	4				
	<b>PAGE TOTAL</b>				<b>NIL</b>

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN THUNDI  
AVAH THE MALDIVES**

<b>Bill 5 - TENDERERS, ADJUSTMENT SCHEDULE</b>					
<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT RATE</b>	<b>TOTAL</b>
				<b>USD</b>	<b>USD</b>
	<u>Bill Collection</u>  Page 12				NIL
	<b>Total of TENDERERS' ADJUSTMENT</b> <b>Carried over to SUMMARY PAGE</b>				<b>NIL</b>

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF M. KOLHUFUSHI AND L GAN  
THUNDI AVAH THE MALDIVES**

**GENERAL SUMMARY**

BILL NO	CONTENTS	PAGE NO	BOQ CONTRACT TOTAL
			USD
1	PRELIMINARIES & GENERAL REQUIREMENTS	1	-
2	M. KOLHUFUSHI ISLAND WORKS	4	0.00
2	L. GAN THUNDI AVAH WORKS	7	-
3	DAY WORKS	11	100,000.00
4	TENDERERS' ADJUSTMENT	13	NIL
<b>TOTAL</b>		<b>USD</b>	<b>100,000.00</b>
Tenderers Final Discount		USD	NIL
<b>GRAND TOTAL, CARRIED TO FORM OF TENDER</b>		<b>USD</b>	<b>100,000.00</b>
<b>Signature of the Tenderer :</b>		<b>Date :</b>	