

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 1 - Preliminaries and General Requirements

ITEM	DESCRIPTION	QTY	UNIT	UNIT RATE	TOTAL
				USD	USD
1	General 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		-
	Total for Preliminaries & General Requirements Carried to GENERAL SUMMARY				-

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 2- N.VELIDHOO ISLAND					
ITEM REF.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
				USD	USD
2.1	Site Clearance				
2.1.1	Site clearance for the harbour works, protection of existing plants, services and utilities including demolition of existing T jetty., making good the surfaces at the end of the work	Item	LS		
2.1.2	Demolition of existing Quay wall structures and depositing the debris to acceptable locations as directed by the Engineer.	M	295.00		
2.1.3	Demolition of existing breakwater structures and depositing the debris to acceptable locations as directed by the Engineer.	Item	LS		
2.1.4	Demolition of existing timber jetty and depositing the debris to acceptable locations as directed by the Engineer.	Item	LS		
2.2	Dredging harbour basin to -3.00m levels				
	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.	m ³	55,068		
2.3	BREAK WATERS - Construction inclusive of all materials and workmanship as shown in the drawings				
2.3.1	<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.	m ³	1,162		
2.3.2	<u>Breakwater Core</u> : Core of the breakwater with dredged soil filling on lines and levels as shown in Drawings.	m ³	1,750		
2.3.3	<u>Geotextile</u> for breakwater as per specification, including proper overlaps as per manufacturers instruction, material, labour and equipment costs etc. complete.	m2	3,230		
2.3.4	<u>Armour Layer</u> : Rock boulders W400 Armour rocks in two layers, laid to the slopes defined in drawings and to lines and levels indicated including making good the top surface.	m ³	572		
	PAGE TOTAL				

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Bill 2- N.VELIDHOO ISLAND					
ITEM REF.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
				USD	USD
2.3.5	<u>Armour Layer:</u> Rock boulders W600 Armour rocks in two layers, laid to the slopes defined in drawings and to lines and levels indicated including making good the top surface.	m ³	695		
2.3.6	<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.	m ³	2,250		
2.3.7	<u>Armour Layer:</u> Rock boulders W 1- 2 Tons Armour rocks in two layers, laid to the slopes defined in drawings and to lines and levels indicated including making good the top surface.	m ³	1,498		
2.4	REVETMENT USING CORAL DEBRIS- Construction inclusive of all materials and workmanship as shown in the drawings				
2.4.1	Geotextile as per specification, including proper overlaps as per manufacturers instruction, material, labour and equipment costs etc. complete.	m ²	1,136		
2.4.2	Armour layer: Using coral boulders available at site from debris of existing breakwater/ quay wall structures used as revetment laid to line, levels and slope as per specifications and as shown on drawings.	M	140		
2.5	QUAY WALL				
2.5.1	Supply and fix precast Quay walls with transportation of all materials, tools and installation at site with all workmanship including with marine proof adhesives to lines and levels as shown in drawings including necessary interlocks & the like complete in all respect.	m	337		
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	337		
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.	84		
	PAGE TOTAL				

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 2- N.VELIDHOO ISLAND					
ITEM REF.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
				USD	USD
2.5.4	Supply & fix SS mooring hooks 20mm diameter for Quay Wall as specifed and shown on drawings.	No.	42		
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	m ³	2,861		
2.6	CONCRETE CAISSON WALLS				
2.6.1	Supply and install precast concrete walls installed up to MSL-3.00m with marine proof adhesives to lines and levels including necessary interlocks & the like and including the cost of top beams at every 4m spacing etc complete in all respect.	m	150		
2.6.2	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	150		
2.6.3	Supply & fix SS mooring hooks 25mm diameter at 8m spacing for caisson Wall as specifed and shown on drawings.	No.	19		
2.6.4	Backfilling behind caisson walls with dredged materials or other suitable material in layers to confirm proper consolidation and laid with care including the cost of equipment, labor etc necessary meeting all the contract requirements and as specified and shown on drawings	m ³	2,150		
2.6.5	Construction of concrete walkway above soil filling behind the caissons 100mm thick, 2.75m width including the cost of 50mm thick pcc below the top course, all materials, labour, equipement etc complete as per lines and levels shown on drawings.	m ²	413		
2.7	OTHERS				
2.7.1	<u>Mooring buoys:</u> 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 specifed and shown on drawings.	No.	32		
	PAGE TOTAL				

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 2- N.VELIDHOO ISLAND					
ITEM REF.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
				USD	USD
2.7.2	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.	4		
2.7.3	Construction of a bridge 3m wide, connecting the revetment and breakwater as per the lines and levels shown on drawings including the cost of concrete paving at entry and exit, cost of material, labour, equipment etc complete in all respect.	LS	1		
	PAGE TOTAL				

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 2- N.VELIDHOO ISLAND					
ITEM REF.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
				USD	USD
	<u>Bill Collection</u> Page 2 Page 3 Page 4 Page 5				
	Total of N. VELIDHOO Works				
	Carried over to SUMMARY PAGE				

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 3- R. INNAMAADHOO

ITEM REF.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
				USD	USD
3.1	Site Clearance				
3.1.1	Site clearance for the harbour works, protection of existing plants, services and utilities including demolition of existing T jetty., making good the surfaces at the end of the work	Item	LS		
3.1.2	Demolition of existing Quay wall structures and depositing the debris to acceptable locations as directed by the Engineer.	m	246		
3.1.3	Demolition of existing breakwater structures and depositing the debris to acceptable locations as directed by the Engineer.	m	151		
3.2	Dredging harbour basin to -3.00 level				
	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.	m ³	20,077		
3.3	BREAKWATER - Construction inclusive of all materials and workmanship as shown in the drawings				
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.	m ³	2,202		
3.3.2	<u>Armour Layer</u> : Rock boulders W1200 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.	m ³	5,125		
3.4	QUAY WALL				
	Inclusive of precast RCC units and cast in situ PCC as shown in the drawings and specifications with transportation of all materials, tools and installation at site with all workmanship including Anti Corrosive Bitumen Protection Up to 300mm Above M.S.L.				
3.4.1	Supply and install precast Quay walls up to MSL-3.00m with marine proof adhesives to lines and levels including necessary interlocks & the like complete in all respect.	m	304		
3.4.2	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	304		
3.4.3	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.	76		
	PAGE TOTAL				

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 3- R. INNAMAADHOO

ITEM REF.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
				USD	USD
3.4.4	Anchorage - Supply and fix 38mm dia , Mild steel tie rods with tar coating and 500x750x250 mm size concrete block at every 4 meters interval along the quay wall cast in situ part with necessary anchorage etc complete.	No.	75		
3.4.5	Supply & fix SS mooring hooks 20mm diameter for Quay Wall as specified and shown on drawings.	No.	56		
3.4.6	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	m ³	2,324		
3.5	OTHERS				
3.5.1	<u>Mooring buoys/ Marker buoys:</u> 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.	13		
3.5.2	<u>Fish Landing Slab:</u> Construction of 8m x 6m, 200mm thick concrete floor with necessary drainage, slope and side retaining walls as shown on drawings for fish landing areas as specified and shown on drawings.	m ²	48		
3.5.3	<u>Navigation beacons:</u> 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		
	PAGE TOTAL				

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 3- R. INNAMAADHOO

ITEM REF.	ITEM DESCRIPTION	UNIT	QUANTITY	RATE	AMOUNT
				USD	USD
	<u>Bill Collection</u> Page 7 Page 8				
	Total of R. INNAMAADHOO Works Carried over to SUMMARY PAGE				

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 4 - Schedule of Daywork Rates					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL
				USD	USD
4	DAY WORKS				
4.1	GENERAL PRINCIPLES				
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.				
	PAGE TOTAL				-

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 4 - Schedule of Daywork Rates					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL
				USD	USD
4.2	LABOUR RATES				
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				30,000.00
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>		
4.3	MATERIAL RATES				
	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				30,000.00
E	Allowance to be added for overhead and profits.....%				
	PAGE TOTAL				60,000.00

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 4 - Schedule of Daywork Rates					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL
				USD	USD
4.4	PLANT AND RATES				
A	The definition of hire terms will be as follows:- 1) Hourly hire - Any hour of any period less than eight (8) hours. 2) Daily hire - An eight (8) hour day. 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.				
B	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. Note: Payment will not be made for mechanics on maintenance time.				
C	Allow the Provisional Sum of USD 40,000.00 (United States Dollar Fourty Thousand only) for Plant in Day work				40,000.00
D	Allowance to be added for overhead and profits.... %				
E	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 :- Plant Hourly Rate Daily Rate				
	PAGE TOTAL				40,000.00

RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO, THE MALDIVES

Bill 4 - Schedule of Daywork Rates					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL
				USD	USD
	<u>Bill Collection</u>				
	Page 10				-
	Page 11				60,000.00
	Page 12				40,000.00
	Total of DAY WORKS Carried over to SUMMARY PAGE				100,000.00

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO,
THE MALDIVES**

Bill 5 - TENDERERS, ADJUSTMENT SCHEDULE					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL
				USD	USD
5	TENDERERS ADJUSTMENT				
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 .				
	<u>ADDITIONS</u> -				
	1				
	2				
	3				
	4				
	5				
	6				
	<u>OMISSIONS</u> -				
	1				
	2				
	3				
	4				
	PAGE TOTAL				NIL

**RECONSTRUCTION OF HARBORS PHASE 2- IN THE ISLANDS OF N. VELIDHOO AND R. INNAMAADHOO,
THE MALDIVES**

Bill 5 - TENDERERS, ADJUSTMENT SCHEDULE					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT RATE	TOTAL
				USD	USD
	<u>Bill Collection</u> Page 15				NIL
	Total of TENDERERS' ADJUSTMENT Carried over to SUMMARY PAGE				NIL

GENERAL SUMMARY			
BILL NO	CONTENTS	PAGE NO	BOQ CONTRACT TOTAL
			USD
1	PRELIMINARIES & GENERAL REQUIREMENTS	3	-
2	N. VELIDHOO ISLAND WORKS	7	-
3	R. INNAMAADHOO ISLAND WORKS	10	-
4	DAY WORKS	14	100,000.00
5	TENDERERS' ADJUSTMENT	16	NIL
TOTAL		USD	100,000.00
Tenderers Final Discount		USD	NIL
GRAND TOTAL, CARRIED TO FORM OF TENDER		USD	100,000.00
<p>Signature of the Tenderer : _____ Date : _____</p>			