Rafik El - Khoury & Partners
Consulting — Engineers

REPUBLIC OF LEBANON
COUNCIL FOR DEVELOPMENT AND RECONSTRUCTION

Lebanon Emergency Assistance Project (LEAP) – P509428
Component 2 – Rapid Recovery of Public Lifeline Services and Public Critical Infrastructure

BILL OF QUANTITIES

Restoration of Water Sector Services – Pilot Zone Villages

Burj Qalaouiyeh · Froun · Ghandouriyeh · Qalaouiyeh · Srifa · Zawtar al-Gharbiyeh

October 2026

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General Summary

Preamble

1. Scope

This Bill of Quantities covers the emergency restoration of the water sector assets damaged by the war in six pilot-zone villages of the Lebanon Emergency Assistance Project: Burj Qalaouiyeh, Froun, Ghandouriyeh, Qalaouiyeh, Srifa and Zawtar al-Gharbiyeh. The six villages form a single Contract. Bill № 1 carries the General Requirements for the whole of the Contract, and Bills № 2 to № 7 carry the Works of each village in turn.

2. General Requirements

The General Requirements are priced once, in Bill № 1, and are not repeated in the village Bills. Items priced once for the Contract are given in section 1.01. Items required in every village are given in section 1.02, where the quantity against each item is the number of villages covered by the Contract and the rate tendered is the rate for one village; that rate will be applied to each village in which the Works are executed and the quantity adjusted if the number of villages changes.

3. Documents

This Bill of Quantities is to be read in conjunction with the Conditions of Contract, the Technical Specifications (VOLUME 2 - LEAP Water Technical Specifications) . Where an item is derived from the LEAP Water Bill of Quantities for the Restoration of the Water Sector Services, the specification clauses applicable to that item apply without change.

4. Method of measurement

Quantities are measured net from the works as executed unless otherwise stated. Linear items are measured along their centre line; areas are measured on the face of the finished work; volumes are measured net of voids exceeding 0.10 m^3. No allowance is made for waste, laps, or working space, all of which are deemed included in the rates.

5. Rates

The rates entered against each item shall be deemed to include for the supply of all labour, materials, plant, transport, temporary works, testing, supervision, overheads, profit, and everything necessary for the complete execution and maintenance of the work described, whether expressly mentioned or not. Rates shall be entered in United States Dollars. Value Added Tax is not applicable.

6. Provisional quantities

Items whose description is followed by the words 'Provisional quantity, subject to remeasurement' carry a quantity estimated from a rapid visual damage assessment and not from a measured survey. The Contractor shall price these items at the rates he would apply to the measured work. The quantities will be remeasured on site and the Contract Price adjusted accordingly at the rates tendered.

7. Provisional Sums

Provisional Sums are included for works which cannot be defined until the detailed damage survey and measurement are complete. They shall be expended in whole or in part only as directed by the Engineer, and any unexpended balance shall be deducted from the Contract Price. The Contractor shall make no claim in respect of an unexpended Provisional Sum.

8. Existing assets

The Works are to existing assets of the South Lebanon Water Establishment which remain in service or are to be returned to service. The Contractor shall satisfy himself as to the condition and extent of the existing works before tendering. Structural assessment items are included in the Bills; the repair quantities that follow those items are provisional and will be fixed by the Engineer on the results of the assessments.

Preamble

9. Access and security

All six villages lie within areas subject to army demining and access control at the time of the damage assessment. Access shall be coordinated through the Employer, the municipality concerned and the Lebanese Army. The Contractor shall allow in his rates and in the General Requirements of Bill № 1 for the delays and restrictions arising.

10. Maintenance of supply

The water supply to consumers shall be maintained throughout the Works so far as is practicable. Any interruption shall be agreed in advance with the South Lebanon Water Establishment and the municipality, and the provision for temporary supply is included in the General Requirements of Bill № 1.

11. Omissions

Any item left unpriced by the Contractor shall be deemed to be covered by the other rates and prices in the Bills, and no separate payment shall be made for it.

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1	**GENERAL REQUIREMENTS - ALL SIX VILLAGES**				
	General Requirements applicable to the whole of the Contract and to each of the six villages covered by it: Burj Qalaouiyeh, Froun, Ghandouriyeh, Qalaouiyeh, Srifa and Zawtar al-Gharbiyeh, whose Works are given in Bills № 2 to № 7. The items of this Bill are priced once and are not repeated in the village Bills. This Bill is to be read with the Preamble.				
1.01	**Contract Preliminaries** These General Requirements apply to the whole of the Contract, which covers the six villages of Bills № 2 to № 7. The items of this section are priced once for the Contract. The Contractor shall price each item; any item left unpriced shall be deemed to be included elsewhere in these Bills.				
	Preliminaries for the whole of the Contract				
1.01.1	Provide the following insurances from an approved insurance company, all as detailed in the Conditions of Contract: Professional Indemnity Insurance; Contractor's All Risk Insurance; Plant and Equipment Insurance; Workmen Compensation Insurance; and Third Party Insurance. Rate or Lump Sum in Words:	L.S	1		
1.01.2	Prepare and submit to the Engineer for approval a detailed Programme for the construction showing the proposed order and method of executing the Works across the six villages, the sequence and duration of the work in each village, and update and resubmit the Programme at the intervals required by the Conditions of Contract. Rate or Lump Sum in Words:	L.S	1		
1.01.3	Health, safety and environmental management for the whole of the Contract, complete including the Contractor's safety plan, personal protective equipment, first aid and emergency arrangements, unexploded ordnance awareness and reporting procedures, dust and noise control, and the management and disposal of waste arising from the Works. Rate or Lump Sum in Words:	L.S	1		
1.02	**Village Preliminaries**				
	Total of page 1 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	The items of this section are required in each village in which the Works are executed. The quantity against each item is the number of villages covered by the Contract. The rate tendered shall be the rate for one village, and shall be applied to each village in which the Works are executed; the quantity will be adjusted if the number of villages changes.				
	Preliminaries required in each of the six villages				
1.02.1	Mobilisation to a village and demobilisation from it on completion, complete including transport of plant, equipment and materials to and from the village, and clearing the site of all temporary works on completion. The rate shall be applied to each village in which the Works are executed. Rate or Lump Sum in Words:	No.	6		
1.02.2	Site establishment in a village, complete including the Contractor's offices, stores and compound, temporary fencing, water and power supplies for the Works, welfare facilities, and maintenance and removal of the same on completion. The rate shall be applied to each village in which the Works are executed. Rate or Lump Sum in Words:	No.	1		
1.02.3	Temporary works, traffic management and safety measures in a village, complete including diversions, signage, barriers, lighting, pedestrian and vehicular access to properties, and all measures necessary to maintain access during the Works. The rate shall be applied to each village in which the Works are executed. Rate or Lump Sum in Words:	No.	6		
1.02.4	Provision for maintaining a water supply to consumers in a village during the Works, complete including temporary connections, temporary pipework, tankering where directed by the Engineer, and removal of the same on completion. The rate shall be applied to each village in which the Works are executed. Rate or Lump Sum in Words:	No.	6		
1.02.5	Setting out and survey of the Works in a village, complete including establishment of survey control, recording of the existing condition before the Works commence, progressive recording of buried works before backfilling, and the preparation and submission of as-built drawings in hard copy and in electronic format. The rate shall be applied to each village in which the Works are executed. Rate or Lump Sum in Words:	No.	6		
	Total of page 2 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
1.03	**Provisional Sums** The following Provisional Sums are included for works which cannot be defined until the detailed damage survey and measurement are complete. They shall be expended in whole or in part only as directed by the Engineer, and any unexpended balance shall be deducted from the Contract Price.				
	Provisional Sums				
1.03.1	Provisional Sum for additional works to the water assets of the six villages covered by the Contract arising from the detailed damage survey and measurement, to be expended in whole or in part only as directed by the Engineer. Amount to be inserted by the Engineer. Provisional Sum in Figures:	P.S	1	24,000.00	24,000.00
	Total of page 3 carried to Collection				**24,000.00**

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	COLLECTION				
Page 1	……				
Page 2	……				
Page 3	……				24,000.00
TOTAL OF BILL No 1 - GENERAL REQUIREMENTS carried to the General Summary		……			**24,000.00**

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2	**BURJ QALAOUIYEH - EMERGENCY RESTORATION OF THE WATER SECTOR** Village of Burj Qalaouiyeh - Caza of Bint Jbeil. Restoration of the water sector assets damaged by the war, as recorded in the Preliminary Rapid Damage Assessment of 17 Aug 2026. The General Requirements applicable to this village are priced once for the Contract under Bill № 1 and are not repeated here. This Bill is to be read with the Preamble, which defines the method of measurement, what the rates are deemed to include, and the treatment of provisional quantities and Provisional Sums.				
2.01	**Water Distribution Networks** Breaking out and reinstatement of existing surfaces, trench excavation and backfilling, supply, installation, connection and testing of pipes, bedding and surround, thrust blocks, valve chambers and pressure testing of the water distribution and transmission networks, complete including all fittings and accessories, connection to the existing network, reservoir and pumping station, chlorination, disinfection and water quality testing, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Distribution Network (S2-4)				
2.01.1	Breaking out and reinstatement of existing surfaces for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,400		
2.01.2	Trench excavation and backfilling for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,400		
2.01.3	Supply, installation, connection and testing of water pipes, as existing (SLWE approved) complete including all fittings and accessories; pipe diameter and material to be confirmed at work stage. (Provisional quantity, subject to remeasurement and to confirmation of the network design.) Rate or Lump Sum in Words:	lm	2,400		
2.01.4	Sand material for pipe bedding and cover for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,400		
	Total of page 1 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2.01.5	Provide water pressure test of existing pipeline system complete including submitting the method statement to the Engineer for approval prior to starting of the water pressure test, all necessary equipment, pipe fittings & accessories (bends, tees, reducers, adaptors, universal/stepped couplings, blank flanges, end caps, etc.), civil works, supports, pipeline disconnection and reconnection, submitting the test result to the Engineer including showing the defected and damaged parts of the pipeline system and propose method of remedy /reinstatement /repair, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional, if and as necessary) Rate or Lump Sum in Words:	Unit	1		
	Water House Connections				
2.01.6	Supply and installation of a customer smart flow meter at the property connection, complete including all necessary fittings, valves and accessories, connection to the distribution network and to the customer's internal plumbing, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	100		
2.01.7	Cast-in-place reinforced concrete encasement to the following pipes, using Ordinary Portland Cement to ASTM C150, type II, 25 MPa, compressive strength of 6 inches cylinders at 28 days complete including all necessary formwork, reinforcement, accessories and all other related works, all as specified, to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	50		
2.01.8	Reinforced concrete thrust blocks, 25 MPa (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m^3	5		
2.01.9	Reinforced concrete valve chambers, internal size 1200x1000 mm, with heavy duty ductile iron covers and frames, clear opening size 600 mm diameter, chamber depth up to 2.5 m. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
	Total of page 2 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2.02	**Civil Works** Supply and install the following civil works complete including all necessary earthworks, plain concrete and reinforced concrete works, structural repair works, waterproofing, blockwork, joinery, plastering, painting and finishes, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Elevated Water Tank, 280 m³ (S2-2)				
2.02.1	Detailed structural assessment of an existing reinforced concrete water structure, complete including condition survey, non-destructive testing, concrete core sampling and laboratory testing, reinforcement cover survey, structural analysis, and a report setting out the repair scope and methodology submitted to the Engineer for approval before any repair works commence. Rate or Lump Sum in Words:	L.S	1		
2.02.2	Structural repair to damaged reinforced concrete, complete including removal of loose, cracked and spalled concrete by mechanical means, cleaning and preparation of the exposed reinforcement, application of an approved anti-corrosion coating to the reinforcement, application of a bonding agent, and reinstatement of the concrete cover in polymer-modified cementitious repair mortar finished flush with the adjoining surfaces, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	L.S	1		
2.02.3	Crack treatment to reinforced concrete, complete including routing out of the crack, surface sealing, supply and installation of injection ports, low-pressure injection with an approved two-component epoxy resin, removal of the ports and making good of the treated surface, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	L.S	1		
2.02.4	Internal re-lining of potable water storage tanks with an approved potable-water-grade coating system, complete including emptying and cleaning of the tank, surface preparation by grit blasting or equivalent, primer and finish coats applied to the manufacturer's specification, and disinfection and bacteriological testing before the tank is returned to service, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	L.S	1		
	Total of page 3 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2.02.5	Waterproofing system to roof surfaces complete including surface preparation, cement sand mortar beveled corners 50x50mm fillet, bituminous primer, two layers of 4mm thick SBS polymer modified bitumen membrane to roof and dressing up 200 mm high against walls, aluminum flashing with anchors and mastic sealants, and all necessary accessories. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	L.S	1		
	Water Well Compound (S2-3)				
2.02.6	Supply and erection of galvanized chain-link perimeter fencing, 2.00 m high, complete including galvanized posts and straining posts at maximum 3.00 m centres, concrete foundations, straining wires, barbed wire topping and a double-leaf galvanized steel access gate, and removal and disposal of the existing damaged fencing, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	110		
2.03	**Electro-Mechanical Works** Supply and install the following electro-mechanical works complete including all necessary pipework, valves, instrumentation, pumps, motors, drives, control panels, cabling, earthing, accessories, testing and commissioning, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Distribution Line (S2-4)				
2.03.1	Supply and install Ductile Iron Gate Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
2.03.2	Supply and install Bronze Gate Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
2.03.3	Supply and install Butterfly Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
	Total of page 4 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2.03.4	Supply and install Supply Check Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
2.03.5	Supply and install Supply Globe Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
2.03.6	Supply and install Air Release Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
2.03.7	Supply and install Pressure Regulating Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
2.03.8	Supply and install Washout Valve Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
2.04	**Solar System** Supply and install the following solar system works complete including all necessary components, equipment, cabling, devices, accessories, testing and commissioning, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Pumping Station Solar Photovoltaic Array (S2-5)				
2.04.1	Supply and installation of replacement photovoltaic modules matching the rating of the existing modules of the array on an existing mounting structure, complete including removal and disposal of the damaged modules, DC cabling, connectors, earthing, string testing and recommissioning of the array, and all other related works, all as specified and to the satisfaction of the Engineer. Rate or Lump Sum in Words:	№	130		
	Well Solar Array (S2-1)				
	Total of page 5 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
2.04.2	Supply and installation of replacement photovoltaic modules of not less than 545 Wp or as existing on an existing mounting structure, complete including removal and disposal of the damaged modules, DC cabling, connectors, earthing, string testing and recommissioning of the array, and all other related works, all as specified and to the satisfaction of the Engineer.	№	40		
	Rate or Lump Sum in Words:				
	Total of page 6 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)

COLLECTION

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Page 6 ……

TOTAL OF BILL No 2 - BURJ QALAOUIYEH carried to the General Summary ……

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3	**FROUN - EMERGENCY RESTORATION OF THE WATER SECTOR**				
	Village of Froun - Caza of Bint Jbeil. Restoration of the water sector assets damaged by the war, as recorded in the Preliminary Rapid Damage Assessment of 10-11 Aug 2026. The General Requirements applicable to this village are priced once for the Contract under Bill № 1 and are not repeated here. This Bill is to be read with the Preamble, which defines the method of measurement, what the rates are deemed to include, and the treatment of provisional quantities and Provisional Sums.				
3.01	**Water Distribution Networks** Breaking out and reinstatement of existing surfaces, trench excavation and backfilling, supply, installation, connection and testing of pipes, bedding and surround, thrust blocks, valve chambers and pressure testing of the water distribution and transmission networks, complete including all fittings and accessories, connection to the existing network, reservoir and pumping station, chlorination, disinfection and water quality testing, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Distribution Network (S2-6)				
3.01.1	Breaking out and reinstatement of existing surfaces for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,400		
3.01.2	Trench excavation and backfilling for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,400		
3.01.3	Supply, installation, connection and testing of water pipes, as existing (SLWE approved) complete including all fittings and accessories; pipe diameter and material to be confirmed at work stage. (Provisional quantity, subject to remeasurement and to confirmation of the network design.) Rate or Lump Sum in Words:	lm	2,400		
3.01.4	Sand material for pipe bedding and cover for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,400		
	Total of page 1 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.01.5	Provide water pressure test of existing pipeline system complete including submitting the method statement to the Engineer for approval prior to starting of the water pressure test, all necessary equipment, pipe fittings & accessories (bends, tees, reducers, adaptors, universal/stepped couplings, blank flanges, end caps, etc.), civil works, supports, pipeline disconnection and reconnection, submitting the test result to the Engineer including showing the defected and damaged parts of the pipeline system and propose method of remedy /reinstatement /repair, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional, if and as necessary) Rate or Lump Sum in Words:	Unit	1		
	Water House Connections				
3.01.6	Supply and installation of a customer smart flow meter at the property connection, complete including all necessary fittings, valves and accessories, connection to the distribution network and to the customer's internal plumbing, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	100		
3.01.7	Cast-in-place reinforced concrete encasement to the following pipes, using Ordinary Portland Cement to ASTM C150, type II, 25 MPa, compressive strength of 6 inches cylinders at 28 days complete including all necessary formwork, reinforcement, accessories and all other related works, all as specified, to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	50		
3.01.8	Reinforced concrete thrust blocks, 25 MPa (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m^3	5		
3.01.9	Reinforced concrete valve chambers, internal size 1200x1000 mm, with heavy duty ductile iron covers and frames, clear opening size 600 mm diameter, chamber depth up to 2.5 m. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
	Total of page 2 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.02	**Civil Works** Supply and install the following civil works complete including all necessary earthworks, plain concrete and reinforced concrete works, structural repair works, waterproofing, blockwork, joinery, plastering, painting and finishes, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Pumping Station (S2-1)				
3.02.1	150 mm thick walls in hollow concrete blocks including all necessary reinforced concrete stiffening columns and tie beams for masonry, and lintels, jambs & sills for door and window openings. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	25		
3.02.2	Painted steel structure and painted steel fabrication (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	Lm	20		
3.02.3	20 mm thick cement sand plaster to external surfaces including scaffolding and protection mesh. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	120		
3.02.4	Painting to façade and external surfaces including one coat of primer, one coat of exterior elastic putty and two finishing coats of an approved acrylate polymer weather, water and UV resistant paint. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	120		
3.02.5	Glazed aluminum windows. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	6		
3.02.6	Lighting installations including testing & commissioning Rate or Lump Sum in Words:	L.S	1		
	Water Treatment and Booster Station (S2-4)				
	Total of page 3 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.02.7	Clearing out of an existing building interior, complete including removal of broken glass, fallen plaster, stone and other debris from floors, ledges and installed equipment, protection of the plant during the operation, cleaning down of all surfaces, and disposal of the resulting materials to approved dumping areas outside the site, and all other related works, all as specified and to the satisfaction of the Engineer. Rate or Lump Sum in Words:	m²	25		
3.02.8	Crack treatment to reinforced concrete, complete including routing out of the crack, surface sealing, supply and installation of injection ports, low-pressure injection with an approved two-component epoxy resin, removal of the ports and making good of the treated surface, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	45		
3.02.9	Structural repair to damaged reinforced concrete, complete including removal of loose, cracked and spalled concrete by mechanical means, cleaning and preparation of the exposed reinforcement, application of an approved anti-corrosion coating to the reinforcement, application of a bonding agent, and reinstatement of the concrete cover in polymer-modified cementitious repair mortar finished flush with the adjoining surfaces, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	30		
3.02.10	15mm thick cement sand plaster to internal surfaces (Provisional Rate or Lump Sum in Words:	m²	85		
3.02.11	Painting to internal surfaces including one under coat, three coats of putty and two finishing coats of an approved washable emulsion paint. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	85		
	Drinking-Water Storage Tank 'Froun 1', 300 m³ (S2-3)				
3.02.12	Detailed structural assessment of an existing reinforced concrete Rate or Lump Sum in Words:	L.S	1		
	Total of page 4 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.02.13	Internal re-lining of potable water storage tanks with an approved potable-water-grade coating system, complete including emptying and cleaning of the tank, surface preparation by grit blasting or equivalent, primer and finish coats applied to the manufacturer's specification, and disinfection and bacteriological testing before the tank is returned to service, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.)	m²	205		
	Rate or Lump Sum in Words:				
3.03.1	Supply and installation of a diesel fuel storage tank of 2,000 litres capacity, complete including bund, supports, fill and draw-off connections, level gauge, vent, isolation valves, interconnecting pipework to the generator set, and removal and disposal of the existing damaged tank, and all other related works, all as specified and to the satisfaction of the Engineer.	№	2		
	Rate or Lump Sum in Words:				
	Distribution Line (S2-6)				
3.03.1	Supply and install Ductile Iron Gate Valve as existing (SLWE Rate or Lump Sum in Words:	№	5		
3.03.2	Supply and install Bronze Gate Valve as existing (SLWE Rate or Lump Sum in Words:	№	5		
3.03.3	Supply and install Butterfly Valve as existing (SLWE approved) Rate or Lump Sum in Words:	№	5		
3.03.4	Supply and install Supply Check Valve as existing (SLWE Rate or Lump Sum in Words:	№	5		
3.03.5	Supply and install Supply Globe Valve as existing (SLWE Rate or Lump Sum in Words:	№	5		
	Total of page 5 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.03.6	Supply and install Air Release Valve as existing (SLWE Rate or Lump Sum in Words:	№	5		
3.03.7	Supply and install Pressure Regulating Valve as existing (SLWE Rate or Lump Sum in Words:	№	5		
3.03.8	Supply and install Washout Valve Valve as existing (SLWE Rate or Lump Sum in Words:	№	5		
3.03.9	Diesel generator package set with enclosure, rated 350 KVA power (Provisional item, to be executed in whole or in part only as directed by the Engineer.) Rate or Lump Sum in Words:	Set	1		
3.04	**Solar System** Supply and install the following solar system works complete including all necessary components, equipment, cabling, devices, accessories, testing and commissioning, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Well and Pumping Station Solar Array (S2-2)				
3.04.1	Supply and installation of replacement photovoltaic modules of not less than 545 Wp or as existing on an existing mounting structure, complete including removal and disposal of the damaged modules, DC cabling, connectors, earthing, string testing and recommissioning of the array, and all other related works, all as specified and to the satisfaction of the Engineer. Rate or Lump Sum in Words:	№	333		
3.04.2	Repair of an existing photovoltaic mounting structure and panel canopy, complete including straightening or replacement of distorted purlins, rails and supports, replacement of damaged fixings, re-levelling of the structure, and corrosion protection to all repaired steelwork, and all other related works, all as specified and to the satisfaction of the Engineer. Rate or Lump Sum in Words:	L.S	1		
	Treatment Station Photovoltaic System (S2-5)				
	Total of page 6 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
3.04.5	Supply and installation of replacement photovoltaic modules of not less than 615 Wp or as existing on an existing mounting structure, complete including removal and disposal of the damaged modules, DC cabling, connectors, earthing, string testing and recommissioning of the array, and all other related works, all as specified and to the satisfaction of the Engineer.	№	10		
	Rate or Lump Sum in Words:				
	Total of page 7 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)

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TOTAL OF BILL No 3 - FROUN carried to the General Summary ……

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4	**GHANDOURIYEH - EMERGENCY RESTORATION OF THE WATER SECTOR** Village of Ghandouriyeh - Caza of Bint Jbeil. Restoration of the water sector assets damaged by the war, as recorded in the Preliminary Rapid Damage Assessment of 17 Aug 2026. The General Requirements applicable to this village are priced once for the Contract under Bill № 1 and are not repeated here. This Bill is to be read with the Preamble, which defines the method of measurement, what the rates are deemed to include, and the treatment of provisional quantities and Provisional Sums.				
4.01	**Water Distribution Networks** Breaking out and reinstatement of existing surfaces, trench excavation and backfilling, supply, installation, connection and testing of pipes, bedding and surround, thrust blocks, valve chambers and pressure testing of the water distribution and transmission networks, complete including all fittings and accessories, connection to the existing network, reservoir and pumping station, chlorination, disinfection and water quality testing, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Distribution Network (S2-5)				
4.01.1	Breaking out and reinstatement of existing surfaces for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	4,650		
4.01.2	Trench excavation and backfilling for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	4,650		
4.01.3	Supply, installation, connection and testing of water pipes, as existing (SLWE approved) complete including all fittings and accessories; pipe diameter and material to be confirmed at work stage. (Provisional quantity, subject to remeasurement and to confirmation of the network design.) Rate or Lump Sum in Words:	lm	4,650		
4.01.4	Sand material for pipe bedding and cover for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	4,650		
	Total of page 1 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4.01.5	Provide water pressure test of existing pipeline system complete including submitting the method statement to the Engineer for approval prior to starting of the water pressure test, all necessary equipment, pipe fittings & accessories (bends, tees, reducers, adaptors, universal/stepped couplings, blank flanges, end caps, etc.), civil works, supports, pipeline disconnection and reconnection, submitting the test result to the Engineer including showing the defected and damaged parts of the pipeline system and propose method of remedy /reinstatement /repair, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional, if and as necessary)	Unit	1		
	Rate or Lump Sum in Words:				
	Water House Connections				
4.01.6	Supply and installation of a customer smart flow meter at the property connection, complete including all necessary fittings, valves and accessories, connection to the distribution network and to the customer's internal plumbing, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.)	№	100		
	Rate or Lump Sum in Words:				
4.01.7	Cast-in-place reinforced concrete encasement to the following pipes, using Ordinary Portland Cement to ASTM C150, type II, 25 MPa, compressive strength of 6 inches cylinders at 28 days complete including all necessary formwork, reinforcement, accessories and all other related works, all as specified, to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.)	lm	50		
	Rate or Lump Sum in Words:				
4.01.8	Reinforced concrete thrust blocks, 25 MPa (Provisional quantity, subject to remeasurement.)	m³	5		
	Rate or Lump Sum in Words:				
4.01.9	Reinforced concrete valve chambers, internal size 1200x1000 mm, with heavy duty ductile iron covers and frames, clear opening size 600 mm diameter, chamber depth up to 2.5 m. (Provisional quantity, subject to remeasurement.)	№	5		
	Rate or Lump Sum in Words:				
4.02	**Civil Works** Supply and install the following civil works complete including all necessary earthworks, plain concrete and reinforced concrete works, structural repair works, waterproofing, blockwork, joinery, plastering, painting and finishes, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Total of page 2 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	Elevated Water Reservoir, 150 m³ (S2-1)				
4.02.1	Detailed structural assessment of an existing reinforced concrete water structure, complete including condition survey, non-destructive testing, concrete core sampling and laboratory testing, reinforcement cover survey, structural analysis, and a report setting out the repair scope and methodology submitted to the Engineer for approval before any repair works commence. Rate or Lump Sum in Words:	L.S	1		
4.02.2	Structural repair to damaged reinforced concrete, complete including removal of loose, cracked and spalled concrete by mechanical means, cleaning and preparation of the exposed reinforcement, application of an approved anti-corrosion coating to the reinforcement, application of a bonding agent, and reinstatement of the concrete cover in polymer-modified cementitious repair mortar finished flush with the adjoining surfaces, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	L.S	1		
4.02.3	Crack treatment to reinforced concrete, complete including routing out of the crack, surface sealing, supply and installation of injection ports, low-pressure injection with an approved two-component epoxy resin, removal of the ports and making good of the treated surface, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	L.S	1		
	Water Treatment Filter Room (S2-3)				
4.02.4	Painted steel doors. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	2		
4.02.5	Painted steel windows. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	2		
	Village Well Compound (S2-2.3)				
4.02.7	Cast-in-place plain concrete for blinding, any thickness (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m³	4		
	Total of page 3 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4.02.8	Supply and erection of galvanized chain-link perimeter fencing, 2.00 m high, complete including galvanized posts and straining posts at maximum 3.00 m centres, concrete foundations, straining wires, barbed wire topping and a double-leaf galvanized steel access gate, and removal and disposal of the existing damaged fencing, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	120		
4.03	**Electro-Mechanical Works** Supply and install the following electro-mechanical works complete including all necessary pipework, valves, instrumentation, pumps, motors, drives, control panels, cabling, earthing, accessories, testing and commissioning, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Distribution Line (S2-5)				
4.03.1	Supply and install Ductile Iron Gate Valve as existing (SLWE approved) Rate or Lump Sum in Words:	№	5		
4.03.2	Supply and install Bronze Gate Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
4.03.3	Supply and install Butterfly Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
4.03.4	Supply and install Supply Check Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
4.03.5	Supply and install Supply Globe Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
4.03.6	Supply and install Air Release Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
4.03.7	Supply and install Pressure Regulating Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
4.03.8	Supply and install Washout Valve Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
	Village Well - Wellhead and Pumping Equipment (S2-2.2)				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4.03.9	Submersible pump, Size 8", Flow 30/72 m3/h, Head 319/111 m Rate or Lump Sum in Words:	№	1		
	Total of page 4 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
4.03.10	Submersible motor, Size 8", Power 64 HP Rate or Lump Sum in Words:	№	1		
4.03.11	4 inch rising pipe (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	39		
4.03.12	Supply of electrical power cables - 3*70 mm2 NYY with 2 layers of isolation (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	Lm	250		
4.03.13	VFD, Power 55 kW Rate or Lump Sum in Words:	№	1		
4.03.14	Sine wave Filter, Rating current 110A Rate or Lump Sum in Words:	№	1		
4.03.15	Ductile iron gate valve, PN 40 bars DN 100 mm Rate or Lump Sum in Words:	№	2		
4.03.16	Supply check valve, PN40, DN 100 mm. Rate or Lump Sum in Words:	№	1		
4.03.17	Electromagnetic flow meter, PN40, DN 100 mm. Rate or Lump Sum in Words:	№	1		
4.03.18	Pressure gauge with isolation valve Rate or Lump Sum in Words:	№	1		
	Standby Generation for the Pumping System (S2-4)				
4.03.19	Diesel generator package set with enclosure, rated 100 KVA power (Provisional item, to be executed in whole or in part only as directed by the Engineer.) Rate or Lump Sum in Words:	Set	1		
	Total of page 5 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)

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TOTAL OF BILL No 4 - GHANDOURIYEH carried to the General Summary ……

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5	**QALAOUIYEH - EMERGENCY RESTORATION OF THE WATER SECTOR** Village of Qalaouiyeh - Caza of Bint Jbeil. Restoration of the water sector assets damaged by the war, as recorded in the Preliminary Rapid Damage Assessment of 17 Aug 2026. The General Requirements applicable to this village are priced once for the Contract under Bill № 1 and are not repeated here. This Bill is to be read with the Preamble, which defines the method of measurement, what the rates are deemed to include, and the treatment of provisional quantities and Provisional Sums.				
5.01	**Water Distribution Networks** Breaking out and reinstatement of existing surfaces, trench excavation and backfilling, supply, installation, connection and testing of pipes, bedding and surround, thrust blocks, valve chambers and pressure testing of the water distribution and transmission networks, complete including all fittings and accessories, connection to the existing network, reservoir and pumping station, chlorination, disinfection and water quality testing, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Distribution Network (S2-6)				
5.01.1	Breaking out and reinstatement of existing surfaces for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,000		
5.01.2	Trench excavation and backfilling for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,000		
5.01.3	Supply, installation, connection and testing of water pipes, as existing (SLWE approved) complete including all fittings and accessories; pipe diameter and material to be confirmed at work stage. (Provisional quantity, subject to remeasurement and to confirmation of the network design.) Rate or Lump Sum in Words:	lm	2,000		
5.01.4	Sand material for pipe bedding and cover for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,000		
	Total of page 1 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.01.5	Provide water pressure test of existing pipeline system complete including submitting the method statement to the Engineer for approval prior to starting of the water pressure test, all necessary equipment, pipe fittings & accessories (bends, tees, reducers, adaptors, universal/stepped couplings, blank flanges, end caps, etc.), civil works, supports, pipeline disconnection and reconnection, submitting the test result to the Engineer including showing the defected and damaged parts of the pipeline system and propose method of remedy /reinstatement /repair, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional, if and as necessary) Rate or Lump Sum in Words:	Unit	1		
	Water House Connections				
5.01.6	Supply and installation of a customer smart flow meter at the property connection, complete including all necessary fittings, valves and accessories, connection to the distribution network and to the customer's internal plumbing, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	100		
5.01.7	Cast-in-place reinforced concrete encasement to the following pipes, using Ordinary Portland Cement to ASTM C150, type II, 25 MPa, compressive strength of 6 inches cylinders at 28 days complete including all necessary formwork, reinforcement, accessories and all other related works, all as specified, to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	40		
5.01.8	Reinforced concrete thrust blocks, 25 MPa (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m^3	4		
5.01.9	Reinforced concrete valve chambers, internal size 1200x1000 mm, with heavy duty ductile iron covers and frames, clear opening size 600 mm diameter, chamber depth up to 2.5 m. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	4		
5.02	**Civil Works**				
	Total of page 2 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	Supply and install the following civil works complete including all necessary earthworks, plain concrete and reinforced concrete works, structural repair works, waterproofing, blockwork, joinery, plastering, painting and finishes, and all other related works, all as specified, and to the satisfaction of the Engineer.				
	Elevated Water Tank 'Qalawiyeh 1', 180 m³ (S2-4)				
5.02.1	Detailed structural assessment of an existing reinforced concrete water structure, complete including condition survey, non-destructive testing, concrete core sampling and laboratory testing, reinforcement cover survey, structural analysis, and a report setting out the repair scope and methodology submitted to the Engineer for approval before any repair works commence. Rate or Lump Sum in Words:	L.S	1		
5.02.2	Structural repair to damaged reinforced concrete, complete including removal of loose, cracked and spalled concrete by mechanical means, cleaning and preparation of the exposed reinforcement, application of an approved anti-corrosion coating to the reinforcement, application of a bonding agent, and reinstatement of the concrete cover in polymer-modified cementitious repair mortar finished flush with the adjoining surfaces, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	L.S	1		
5.02.3	Crack treatment to reinforced concrete, complete including routing out of the crack, surface sealing, supply and installation of injection ports, low-pressure injection with an approved two-component epoxy resin, removal of the ports and making good of the treated surface, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	40		
5.02.4	Waterproofing system to roof surfaces complete including surface preparation, cement sand mortar beveled corners 50x50mm fillet, bituminous primer, two layers of 4mm thick SBS polymer modified bitumen membrane to roof and dressing up 200 mm high against walls, aluminum flashing with anchors and mastic sealants, and all necessary accessories. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	45		
	Total of page 3 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	Water Pumping Station (S2-5)				
5.02.5	15mm thick cement sand plaster to internal surfaces (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	75		
5.02.6	Painting to internal surfaces including one under coat, three coats of putty and two finishing coats of an approved washable emulsion paint. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	75		
5.02.7	Glazed aluminum windows. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	4		
5.02.8	Lighting installations including testing & commissioning Rate or Lump Sum in Words:	L.S	1		
5.03	**Electro-Mechanical Works** Supply and install the following electro-mechanical works complete including all necessary pipework, valves, instrumentation, pumps, motors, drives, control panels, cabling, earthing, accessories, testing and commissioning, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Distribution Line (S2-6)				
5.03.1	Supply and install Ductile Iron Gate Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	4		
5.03.2	Supply and install Bronze Gate Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	4		
5.03.3	Supply and install Butterfly Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	4		

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
5.03.4	Supply and install Supply Check Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.)	№	4		
	Total of page 4 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	Rate or Lump Sum in Words:				
5.03.5	Supply and install Supply Globe Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	4		
5.03.6	Supply and install Air Release Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	4		
5.03.7	Supply and install Pressure Regulating Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	4		
5.03.8	Supply and install Washout Valve Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	4		
	Water Pumping Station (S2-5)				
5.03.9	Overhaul and re-installation of an existing pump set, complete including dismantling, removal to the workshop, inspection, replacement of bearings, seals and worn components, balancing, reassembly, re-setting on the repaired base frame, re-alignment with the drive unit, reconnection of the delivery pipework and valves, and testing and recommissioning, and all other related works, all as specified and to the satisfaction of the Engineer. Rate or Lump Sum in Words:	№	1		
5.03.10	Ductile iron gate valve, PN 16 bars DN 100 mm (Provisional Rate or Lump Sum in Words:	№	2		
5.03.11	Supply check valve, PN16, DN 100 mm. (Provisional item, to be executed in whole or in part only as directed by the Engineer.) Rate or Lump Sum in Words:	№	1		
5.04	**Solar System** **Total of page 5 carried to Collection**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	Supply and install the following solar system works complete including all necessary components, equipment, cabling, devices, accessories, testing and commissioning, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Well Solar Array (S2-1)				
5.04.1	Supply and installation of replacement photovoltaic modules of not less than 545 Wp or as existing on an existing mounting structure, complete including removal and disposal of the damaged modules, DC cabling, connectors, earthing, string testing and recommissioning of the array, and all other related works, all as specified and to the satisfaction of the Engineer.	№	20		
	Rate or Lump Sum in Words:				
	Sub-Network Pump Rooftop Solar Array (S2-3)				
5.04.2	Supply and installation of replacement photovoltaic modules of not less than 545 Wp or as existing on an existing mounting structure, complete including removal and disposal of the damaged modules, DC cabling, connectors, earthing, string testing and recommissioning of the array, and all other related works, all as specified and to the satisfaction of the Engineer.	№	7		
	Rate or Lump Sum in Words:				
	Total of page 6 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)

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TOTAL OF BILL No 5 - QALAOUIYEH carried to the General Summary ……

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6	**SRIFA - EMERGENCY RESTORATION OF THE WATER SECTOR** Village of Srifa - Caza of Sour (Tyr). Restoration of the water sector assets damaged by the war, as recorded in the Preliminary Rapid Damage Assessment of 12 Aug 2026. The General Requirements applicable to this village are priced once for the Contract under Bill № 1 and are not repeated here. This Bill is to be read with the Preamble, which defines the method of measurement, what the rates are deemed to include, and the treatment of provisional quantities and Provisional Sums.				
6.01	**Water Distribution Networks** Breaking out and reinstatement of existing surfaces, trench excavation and backfilling, supply, installation, connection and testing of pipes, bedding and surround, thrust blocks, valve chambers and pressure testing of the water distribution and transmission networks, complete including all fittings and accessories, connection to the existing network, reservoir and pumping station, chlorination, disinfection and water quality testing, and all other related works, all as specified, to the satisfaction of the Engineer.				
6.01.1	Breaking out and reinstatement of existing surfaces for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,500		
6.01.2	Trench excavation and backfilling for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,500		
6.01.3	Supply, installation, connection and testing of water pipes, as existing (SLWE approved) complete including all fittings and accessories; pipe diameter and material to be confirmed at work stage. (Provisional quantity, subject to remeasurement and to confirmation of the network design.) Rate or Lump Sum in Words:	lm	2,500		
6.01.4	Sand material for pipe bedding and cover for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	2,500		
	Total of page 1 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6.01.5	Provide water pressure test of existing pipeline system complete including submitting the method statement to the Engineer for approval prior to starting of the water pressure test, all necessary equipment, pipe fittings & accessories (bends, tees, reducers, adaptors, universal/stepped couplings, blank flanges, end caps, etc.), civil works, supports, pipeline disconnection and reconnection, submitting the test result to the Engineer including showing the defected and damaged parts of the pipeline system and propose method of remedy /reinstatement /repair, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional, if and as necessary) Rate or Lump Sum in Words:	Unit	1		
	Water House Connections				
6.01.6	Supply and installation of a customer smart flow meter at the property connection, complete including all necessary fittings, valves and accessories, connection to the distribution network and to the customer's internal plumbing, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	100		
6.01.7	Cast-in-place reinforced concrete encasement to the following pipes, using Ordinary Portland Cement to ASTM C150, type II, 25 MPa, compressive strength of 6 inches cylinders at 28 days complete including all necessary formwork, reinforcement, accessories and all other related works, all as specified, to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	50		
6.01.8	Reinforced concrete thrust blocks, 25 MPa (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m^3	5		
6.01.9	Reinforced concrete valve chambers, internal size 1200x1000 mm, with heavy duty ductile iron covers and frames, clear opening size 600 mm diameter, chamber depth up to 2.5 m. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
6.02	**Civil Works** **Total of page 2 carried to Collection**				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
	Supply and install the following civil works complete including all necessary earthworks, plain concrete and reinforced concrete works, structural repair works, waterproofing, blockwork, joinery, plastering, painting and finishes, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Drinking-Water Storage Tank, 300 m³ (S2-2 / S2-4)				
6.02.1	Detailed structural assessment of an existing reinforced concrete Rate or Lump Sum in Words:	L.S	1		
6.02.2	Crack treatment to reinforced concrete, complete including routing Rate or Lump Sum in Words:	lm	35		
6.02.3	Structural repair to damaged reinforced concrete, complete including removal of loose, cracked and spalled concrete by mechanical means, cleaning and preparation of the exposed reinforcement, application of an approved anti-corrosion coating to the reinforcement, application of a bonding agent, and reinstatement of the concrete cover in polymer-modified cementitious repair mortar finished flush with the adjoining surfaces, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	20		
6.03	**Electro-Mechanical Works** Supply and install the following electro-mechanical works complete including all necessary pipework, valves, instrumentation, pumps, motors, drives, control panels, cabling, earthing, accessories, testing and commissioning, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Distribution Line (S2-6)				
6.03.1	Supply and install Ductile Iron Gate Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
	Total of page 3 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
6.03.2	Supply and install Bronze Gate Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
6.03.3	Supply and install Butterfly Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
6.03.4	Supply and install Supply Check Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
6.03.5	Supply and install Supply Globe Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
6.03.6	Supply and install Air Release Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
6.03.7	Supply and install Pressure Regulating Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
6.03.8	Supply and install Washout Valve Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	5		
	Total of page 4 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)

COLLECTION

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TOTAL OF BILL No 6 - SRIFA carried to the General Summary ……

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7	**ZAWTAR AL-GHARBIYEH - EMERGENCY RESTORATION OF THE WATER SECTOR** Village of Zawtar al-Gharbiyeh - ACS code 71364 - Caza of Nabatieh. Restoration of the water sector assets damaged by the war, as recorded in the Preliminary Rapid Damage Assessment of 25 / 27 Jul 2026. The General Requirements applicable to this village are priced once for the Contract under Bill № 1 and are not repeated here. This Bill is to be read with the Preamble, which defines the method of measurement, what the rates are deemed to include, and the treatment of provisional quantities and Provisional Sums.				
7.01	**Water Ttansmission & Distribution Networks** **Transmission Line (S2-4a)** Breaking out and reinstatement of existing surfaces, trench excavation and backfilling, supply, installation, connection and testing of pipes, bedding and surround, thrust blocks, valve chambers and pressure testing of the water distribution and transmission networks, complete including all fittings and accessories, connection to the existing network, reservoir and pumping station, chlorination, disinfection and water quality testing, and all other related works, all as specified, to the satisfaction of the Engineer.				
7.01.1a	Breaking out and reinstatement of existing surfaces for water pipes, Rate or Lump Sum in Words:	lm	900		
7.01.2a	Trench excavation and backfilling for water pipes, any diameter. Rate or Lump Sum in Words:	lm	900		
7.01.3a	Supply, installation, connection and testing of spiral welded Carbon steel pipes, Grade not less than X52, with a wall thickness of 8.7 mm and an operating pressure of 55 bars or as existing (SLWE approved), complete including welding of pipes, all fittings and accessories; pipe diameter and material to be confirmed at detailed design stage. (Provisional quantity, subject to remeasurement and to confirmation of the network design.) Rate or Lump Sum in Words:	lm	900		
7.01.4a	Sand material for pipe bedding and cover for water pipes, any diameter. Rate or Lump Sum in Words:	lm	900		
	Total of page 1 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7.01.5a	Provide water pressure test of existing pipeline system complete including submitting the method statement to the Engineer for approval prior to starting of the water pressure test, all necessary equipment, pipe fittings & accessories (bends, tees, reducers, adaptors, universal/stepped couplings, blank flanges, end caps, etc.), civil works, supports, pipeline disconnection and reconnection, submitting the test result to the Engineer including showing the defected and damaged parts of the pipeline system and propose method of remedy /reinstatement /repair, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional, if and as necessary) Rate or Lump Sum in Words:	Unit	1		
	Water House Connections				
7.01.6a	Not Applicable				
7.01.7a	Cast-in-place reinforced concrete encasement to the following pipes, using Ordinary Portland Cement to ASTM C150, type II, 25 MPa, compressive strength of 6 inches cylinders at 28 days complete including all necessary formwork, reinforcement, accessories and all other related works, all as specified, to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	200		
7.01.8a	Reinforced concrete thrust blocks, 25 MPa (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m³	25		
7.01.9a	Reinforced concrete valve chambers, internal size 1200x1000 mm, with heavy duty ductile iron covers and frames, clear opening size 600 mm diameter, chamber depth up to 2.5 m. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	2		
	Distribution Network (S2-4b) Breaking out and reinstatement of existing surfaces, trench excavation and backfilling, supply, installation, connection and testing of pipes, bedding and surround, thrust blocks, valve chambers and pressure testing of the water distribution and transmission networks, complete including all fittings and accessories, connection to the existing network, reservoir and pumping station, chlorination, disinfection and water quality testing, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Total of page 2 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7.01.1b	Breaking out and reinstatement of existing surfaces for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	5,000		
7.01.2b	Trench excavation and backfilling for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	5,000		
7.01.3b	Supply, installation, connection and testing of water pipes, as existing (SLWE approved) complete including all fittings and accessories; pipe diameter and material to be confirmed at work stage. (Provisional quantity, subject to remeasurement and to confirmation of the network design.) Rate or Lump Sum in Words:	lm	5,000		
7.01.4b	Sand material for pipe bedding and cover for water pipes, any diameter. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	5,000		
7.01.5b	Provide water pressure test of existing pipeline system complete including submitting the method statement to the Engineer for approval prior to starting of the water pressure test, all necessary equipment, pipe fittings & accessories (bends, tees, reducers, adaptors, universal/stepped couplings, blank flanges, end caps, etc.), civil works, supports, pipeline disconnection and reconnection, submitting the test result to the Engineer including showing the defected and damaged parts of the pipeline system and propose method of remedy /reinstatement /repair, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional, if and as necessary) Rate or Lump Sum in Words:	Unit	1		
	Water House Connections				
7.01.6b	Supply and installation of a customer smart flow meter at the property connection, complete including all necessary fittings, valves and accessories, connection to the distribution network and to the customer's internal plumbing, and all other related works, all as specified and to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	100		
	Total of page 3 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7.01.7b	Cast-in-place reinforced concrete encasement to the following pipes, using Ordinary Portland Cement to ASTM C150, type II, 25 MPa, compressive strength of 6 inches cylinders at 28 days complete including all necessary formwork, reinforcement, accessories and all other related works, all as specified, to the satisfaction of the Engineer. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	lm	100		
7.01.8b	Reinforced concrete thrust blocks, 25 MPa (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m³	10		
7.01.9b	Reinforced concrete valve chambers, internal size 1200x1000 mm, with heavy duty ductile iron covers and frames, clear opening size 600 mm diameter, chamber depth up to 2.5 m. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	10		
7.02	**Civil Works**				
	Pumping and Booster Station (S2-2)				
7.02.5	Painting to internal surfaces including one under coat, three coats of putty and two finishing coats of an approved washable emulsion paint. (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	m²	95		
7.03	**Electro-Mechanical Works** Supply and install the following electro-mechanical works complete including all necessary pipework, valves, instrumentation, pumps, motors, drives, control panels, cabling, earthing, accessories, testing and commissioning, and all other related works, all as specified, to the satisfaction of the Engineer.				
	Transmission Line (S2-4a)				
7.03.6a	Supply and install Air Release Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	2		
	Total of page 4 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)
7.03.9a	Supply and install surge vessel according to the study results with all necessary accessories (Provisional item, to be executed in whole or in part only as directed by the Engineer.) Rate or Lump Sum in Words:	LS	1		
	Distribution Line (S2-4b)				
7.03.1b	Supply and install Ductile Iron Gate Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	10		
7.03.2b	Supply and install Bronze Gate Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	10		
7.03.3b	Supply and install Butterfly Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	10		
7.03.4b	Supply and install Supply Check Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	10		
7.03.5b	Supply and install Supply Globe Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	10		
7.03.6b	Supply and install Air Release Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	10		
7.03.7b	Supply and install Pressure Regulating Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	10		
7.03.8b	Supply and install Washout Valve Valve as existing (SLWE approved) (Provisional quantity, subject to remeasurement.) Rate or Lump Sum in Words:	№	10		
	Total of page 5 carried to Collection				

Item	Description	Unit	Estimated Quantity	Unit Rate (US $)	Amount (US $)

COLLECTION

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Page 3 ……
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Page 5 ……

TOTAL OF BILL No 7 - ZAWTAR AL-GHARBIYEH carried to the General Summary ……

General Summary

Description	**Amount (US $)**
Bill № 1: General Requirements …….	24,000.00
Bill № 2: Burj Qalaouiyeh …….	
Bill № 3: Froun …….	
Bill № 4: Ghandouriyeh …….	
Bill № 5: Qalaouiyeh …….	
Bill № 6: Srifa …….	
Bill № 7: Zawtar al-Gharbiyeh …….	
TOTAL AMOUNT OF TENDER (VAT not applicable) ……	**24,000.00**

Total Amount of Tender in Words:

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