



Mallow Business and Technology Park,
Quartermtown,
Mallow.,
Co.Cork

04/04/23

Dear Sir/Madam,

Please see below attached quotation for the emergency works (as per Automation Engineer's report on last page of this document) carried out on at the Cliffs of Moher Plant 3/06/2022 – 05/06/2022 and the following Wednesday 08/06/2022. The Quote includes the cost of all associated parts and labour (i.e Automation Engineer and Electricians)

Item	Quantity	Price Each
Parts:		
Milltronics Controller	8	
Cable Connector Stips 10sq	10	
Cable Joints	4	
Flow Meter Head and Card	1	
Conntactors	2	
Overloads	2	
Unitronics DI PO AI Card	6	
Screen Cable	30m	
Permeate Actuated Valves	2	
MH-310-701G 3/2 1/4" solenoid spring return valve and Fittings	2	
Sub Total		€20 027.68
Labour:		
Automation Engineer	26hrs	
Electrician	26hrs	
Electricians Mate	18Hrs	
Sub Total		€4320

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	Total Ex VAT	€24 347.68
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I trust this is to your satisfaction and we look forward to your reply.

Best Regards,

Name Redacted
Asset Maintenance Manager
E: Email redacted
T: Mobile phone number Redacted

Automation Engineer's Report

After arrival to site I found that the plant was down and only being ran manually on hand by the operator. Further to investigation I found that the auto for the plant control was not operational due to no 24vdc power. Every instrument visually looked like it was working from looking at the instrument local displays but the signals that are needed from each instrument to control the plant on auto had been blown (mA outputs). These tell the local PLC on site (this is the main control unit for the plant) what state all the levels, motor conditions and flows are so as to be able to carry out the process. Also there are cards in the PLC that read this information which also work on the 24vdc supply which were blown. I found that the 24vdc power supply was damaged. This was damaged due to a spike in voltage which carried down through the 24vdc network damaging the ancillary equipment on site. We changed out the PLC cards and the level / flow instruments and re-programmed. When leaving site the plant was operational on auto again with all signals reading on the PLC.



Rethinking Water

Mallow Business and Technology Park,
Quartermtown,
Mallow.,
Co.Cork

21/11/22

Dear Sir/Madam,

Please see below attached quotation for the installation of Remote access controller for the Cliffs of Moher plant. Unit to allow automation engineer to dial in remotely to make changes also allows for resetting of pumps remotely. This Unit is standard on all sites now. Included in the quotation is a Scada Engineer for 1 day for installation. This would have a reduced downtime drastically for the recent plat failure.

Item	Quantity	Price Each
BB/LR2B712022 (Unit to allow automation engineer to dial in remotely to make changes.) (also allows for resetting of pumps remotely)(This Unit is standard on all sites now)	1	€720
Scada Engineer	8HRS	€720
	Total	€1440

I trust this is to your satisfaction and we look forward to your reply.

Best Regards,

Name redacted
Asset Maintenance Manager

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E: [Email redacted](#)
T: Mobile phone number
redacted



Rethinking Water

Mallow Business and Technology Park,
Quartern town,
Mallow.,
Co.Cork

22/11/22

Dear Sir/Madam,

Please see below attached quotation for the installation of Anoxic Mixer for the Cliffs of Moher plant. This is to allow for adequate mixing and greatly reduce MLSS settlement within the anoxic tank. Included in the quotation is fitter and an electrician ½ day for installation.

Item	Quantity	Price Each
HOMA Submersible Mixer 50Hz	1	€1347.56
Fitter and Electrician €45p/h each	4 HRS	€ 360
	Total	€ 1,707.56

I trust this is to your satisfaction and we look forward to your reply.

Best Regards,

Name Redacted

Area Supervisor

E: [Email redacted](#)

T: mobile phone redacted

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