



APPENDIX B2: CERTIFICATE OF SATISFACTORY EXECUTION –WORKS ONLY

<p>ACTIVITY (Title of Applicant Activity)</p>	<p>Mechanical & Electrical Contractor</p>		
<p>SITE Construction contract: (Title & brief description)</p>	<p>Coill Dubh WWTP Energy Efficiency</p> <p>Glan Agua Ltd. was awarded the Mechanical and Electrical contract for Coill Dubh WWTP Energy Efficiency Upgrade. The appointment consisted of the supply, installation, programming and commissioning of 4no variable speed drives and 2no. high efficiency 30kw motors. In addition 4no starter sections in the existing panel were refurbished with all redundant equipment removed. The variable speed drives were installed to improve the WWTP efficiency, performance and flexibility. The variable speed drives were installed on the inlet pumps and the air blowers. The existing motors on the blowers were also replaced with new high efficiency models. The WWTP total energy costs for the plant were reduced by 15% as a direct result of the improvements introduced under this contract. All works were successfully carried out on a live plant without any disruption to service. The current capacity of the WWTP is 1167PE and it is designed for a capacity of 2000PE.</p> 		
<p>Site location:</p>	<p>Coill Dubh, Co. Kildare.</p>		
<p>Proportion of Project undertaken by the Applicant</p>	<p>100%</p>	<p>Tender entity (Sole trader/ Joint Venture):</p>	<p>Sole Trader</p>
<p>VALUE Construction contract value at award stage including cost of services where applicable:</p>	<p>€18,700</p>	<p>Construction contract value at completion (including cost of services where applicable:</p>	<p>€18,700</p>
<p>GENERAL INFO Role of Company in delivery of Service:</p>	<p>Scope of Works</p> <ul style="list-style-type: none"> • Supply, install and commission 4 no VSD's (2no Inlet pumps and 2no Air Blowers) • Replace 2no 30kw air blower motors with high efficiency models. • Refurbish 4no panel starter sections to remove redundant equipment now obsolete due to VSD installation. • Install local lockable isolators for air blowers. • Programming of Inlet Pump VSD's for anti-blocking sequence. • Programming of Air Blower VSD's for timed automatic high and low speed functionality. • Working on live plant with no disruption to service. 		

- Acted as Works Contractor, PSCS of the project.



Inlet Pumps – Works Description

The inlet pumps VSD's supplied were IP 22 and panel mounted with remote keypads mounted on the door of the existing panel for ease of operation. This allows the drives to be monitored and operated without opening the panel doors. There are several benefits with the installation of VSD's on the inlet pumps including; balancing plant flow through-out day, improved energy efficiency, programmable for anti-blocking sequence and motor reversible function.

The drives were provided with a logic stick to allowing ladder logic to be programmed in the drives directly. The drives were programmed with an anti-blocking sequence enabling the pumps to run at full speed for the first 30 seconds of operation before settling at the pre set required speed, both set points were operator adjustable on the remote keypad. The drives can be manually controlled from the remote keypad including a manual reversing button for each drive enabling the operator to attempt to clear blockages without lifting the pumps.

Air Blowers – Works Description

The existing process control system required the two fixed speed 30kw air blowers to run in parallel 24/7. The introduction of VSD's had the following benefits; improved efficiency with operator selected speed set points, timed automatic speed adjustment and DO control ready allowing for future proposed control system modification. The air blowers 30kw VSD's were wall mounted IP54 versions which offers greater protection and mitigated the need for significant panel modifications for the installation. The drives are programmable and were programmed to run with two speed settings on an automatic timed sequence with each speed set point running for a set time before switching. Both the speed set points and the running time were operator adjustable from the VSD keypad for each drive. The initial low and high speed set points were 35hz and 42hz with a 30min running time for each speed setting.



Each air blower was provided with a lockable local isolator for maintenance.

In addition each air blower's 30kw motor was nearing the end of its design life and were replaced with new high efficiency models to further improve plant efficiency.



Health & Safety Apects of the Contract

- Electrical hazards
- Lifting Operations
- Vibration, Noise and Dust
- Working with hazardous materials / live sewers

Name & address of Contracting Authority responsible for the project:

Kildare County Council,
Áras Cill Dara,
Devoy Park,
Naas,
Co. Kildare.

Contracting Authority contact name:

Joe Keane

Phone no.:

00353 45 980364

OTHER INFORMATION

Provider of Mechanical & Electrical and Installation: Glan Agua Ltd.
Project Supervisor (Construction Stage): Glan Agua Ltd.

CONTRACTORS NAME:

Glan Agua Ltd.