

## APPENDIX B2: CERTIFICATE OF SATISFACTORY EXECUTION –WORKS ONLY

<b>ACTIVITY</b> <i>(Title of Applicant Activity)</i>	<b>Works Contractor, Designer, PSDP &amp; PSCS</b>		
<b>SITE</b> <b>Construction contract:</b> <i>(Title &amp; brief description)</i>	<p><b>Cheekpoint Sewerage Scheme</b></p> <p>Glan Agua Ltd. acted as Works Contractor, Designer, PSDP &amp; PSCS for the provision of the contract. Glan Agua are responsible for the mechanical, electrical &amp; civil design along with construction, installation, commissioning and wet &amp; dry testing of all elements. The main aspects of the works are as described below;</p> <ul style="list-style-type: none"> <li>• Design &amp; construction of a Wastewater treatment plant (WWTP) and associated 400mm diameter outfall for treated effluent to the River Suir.</li> <li>• A submersible pumping station, 100mm diameter rising main to the treatment plant and 350mm diameter storm overflow outfall to the River Suir.</li> <li>• 450mm, 400mm, 375mm, 300mm, 250mm and 225mm diameter combined foul and storm drainage network in the village. This network will pick up the existing sewers in the village.</li> <li>• Decommissioning of the existing septic tanks located at the Mount, the Crossroads and in private gardens (5no.)</li> <li>• Immediate connection of approximately 39 private premises to the new collection system.</li> <li>• Provision of 150mm connection pipework to approximately 57 property boundaries to cater for future connections.</li> <li>• Working in Tidal conditions when installing a 450mm diameter HPPE outfall pipe to sea for approximately 150 metres.</li> </ul> 		
Site location:	Cheekpoint Co. Waterford		
Proportion of project undertaken by Applicant:	100%	Tender entity ( <i>Sole trader/ Joint Venture</i> ):	Glan Agua Ltd.
<b>VALUE</b> Construction contract value at award stage (including cost of services where applicable):	€2,296,348.92	Construction contract value at completion (including cost of services where applicable):	€2,296,348.92
<b>GENERAL INFO</b> Role of Company in delivery of	<a href="#">Project Details</a>		

Project:

The Cheekpoint WWTP is a Package type plant design. The packaged plant is based on modular systems comprising of:

- Mechanical Preliminary Treatment.
- Hydraulic Flow Control.
- Preliminary Settlement.
- Biological Reactor based on Submerged Aeration Filtration (SAF).
- Final Clarification in the Lamella type Clarifier.

Disinfection via UV treatment unit as per Foreshore License requirements



The Cheekpoint sewage treatment is to treat the domestic wastewater to the effluent standard quality as follows:

Effluent Standard Requirements				
Parameter	Units	Discharge Standard	Compliance	Upper Tier
BOD <sub>5</sub>	mg/l	25	95%	50
BOD <sub>5</sub>	kg/d	9	Maximum	-
COD	mg/l	125	95%	250
SS	mg/l	35	95%	105
Faecal Coliforms	fc/100 ml	250	Geometric Mean	-
Faecal Coliforms	fc/100 ml	1000	95%	-

**Preliminary Treatment:**

Raised Inlet works comprising of the following elements;

- Screen/bypass screen,
- Grit trap
- Flow measurement.

Population Equivalent (PE):	750
Design Flow (DWF):	2.0 l/s; including infiltration

Flow max. (3 DWF):

6.0 l/s; including infiltration



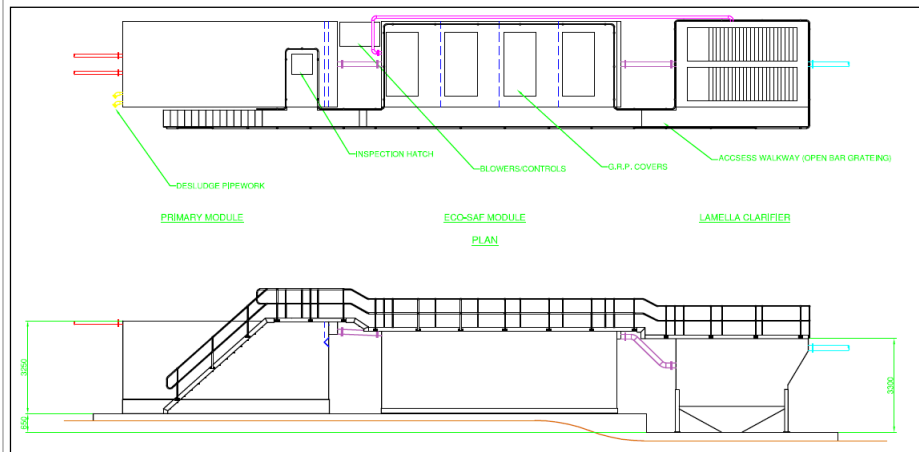
### Primary Treatment:

The wastewater treatment process for Cheekpoint WWTP is based on a Submerged Aerated Filter process.

The treatment plant is of a modular package type.

This particular type of plant was selected for the following reasons:

- Predictable performance
- Lower operation and maintenance costs
- No interruption to process
- Better whole life cost
- Easy installation



The SAF Package Treatment Plant Layout and Section.

The proposed system comprises the following treatment units:

Primary Settlement/ Balancing Tank – where larger solids settle into the bottom of the primary tank and are removed periodically as sludge.

### Secondary Treatment:

Secondary Treatment – Eco-SAF Module – the essential biological stage where bacterial microorganisms are cultivated and activity consumes the suspended organic material found in the decanted liquid from the primary process. The bottom of this module is furnished with the Fine-bubble Aeration System distributing oxygen required by heterotrophic bacteria to grow. Oxygen level is controlled by Dissolved Oxygen probe installed inside of the tank and the speed

	<p>and frequency of Air blowers.</p> <p>The Eco-SAF module is divided into 4 no. cells, each furnished with fully submerged blocs of plastic media which have a substantial area for microorganism growth.</p> <p><b><u>Tertiary Treatment:</u></b></p> <p>Final Settlement – Lamella Clarifier – where remaining solids (Humus) are settled out of the biological treated effluent and returned to the Primary Settlement/Balancing Tank. This Clarifier is furnished with Lamella pack of media increasing its active area and therefore improving settling ability.</p> <p><b><u>Civil Elements:</u></b></p> <p>The Project consisted of the following Principle items:</p> <ul style="list-style-type: none"> <li>• Construct marine outfall from pumping station</li> <li>• Construct pumping station</li> <li>• Construct pipeline collection network</li> <li>• Construct access road to WWTP site</li> <li>• Construct marine outfall from WWTP site</li> <li>• Raise level of WWTP site</li> <li>• Construct WWTP</li> <li>• Installation of box Culvert 2.8m x 1.8m x 4m long 4no.</li> <li>• Installation of Safety barrier 100m.</li> </ul> <p><b><u>Health &amp; Safety Aspects of the Contract</u></b></p> <ul style="list-style-type: none"> <li>• Traffic Management</li> <li>• Access and Egress</li> <li>• Compressed Air Power Tools</li> <li>• Concrete</li> <li>• Electrical Safety, Cables and Leads, Plugs and Sockets</li> <li>• Entry into Confined Spaces</li> <li>• Excavations</li> <li>• Liquefied Petroleum Gas</li> <li>• Manual Handling and Lifting</li> <li>• Moving Parts and Machinery</li> <li>• Noise</li> <li>• Overhead Electricity Cables</li> <li>• Plant &amp; Transport on Site</li> <li>• Roadworks</li> <li>• Site Tidiness</li> <li>• Slips, Trips and Falls</li> <li>• Unauthorized persons on site.</li> <li>• Underground Services</li> <li>• Use of Tools and Equipment</li> <li>• Vibration</li> <li>• Weils Disease</li> <li>• Works on or adjacent to Water</li> </ul>	
<p>Name &amp; address of Contracting Authority responsible for the project:</p>	<p>John Leonard, Executive Engineer, Water Services Waterford County Council, Civic Offices, Dungarvan, Co. Waterford.</p>	
<p>Contracting Authority contact name:</p>	<p>Mr. John Leonard</p>	<p>Phone no.: (058) 22000</p>
<p><b>OTHER INFORMATION</b></p>		

Other information required is listed below (where applicable)

**CONTRACTOR'S  
NAME:**

Glan Agua Ltd.