



the porto protocol

WASTE WATER TREATMENT PLANT

CASA RELVAS

ABSTRACT

Being in a dry region such as Alentejo, water management is one of the main concerns of Casa Relvas.

After implementing measures that allowed us to reduce the amount of water used per bottle produced to 1.5L, we had the opportunity to develop with Águas do Centro Alentejo a water recycling project.

This project had two phases of implementation:

- The first one was continuous. Included the installation of flow meters at various production points to evaluate the water consumption and the implementation of strategies aimed at reducing the use of water as well as its reuse before it reaches the (Waste Water Treatment Plant) WWTP;
- The second one was to use the water from São Miguel de Machede Municipal Wastewater Treatment Plant to irrigate the vineyards at Herdade da Pimenta, which had the following trial period.

SUSTAINABLE TARGET

Water Recycling

REASON WHY

Water recycling to irrigation use. Because water is scarce in Alentejo and in years of drought the water reserves at Herdade da Pimenta cannot fully support a good irrigation in the vineyards.

START DATE

01/09/2017

END DATE

30/03/2018



COMPANY SUMMARY

Casa Relvas is a family company based and managed in Alentejo. For 5 generations the Relvas Family has cultivated over 1300 ha in the region: 350 ha of vineyards, 350 ha of olive groves and 900 ha of forest.

Casa Relvas is today one of the main wine producers in Alentejo exporting more than 5M bottles of wine to the 5 continents.

WEBSITE

<https://casarelvas.pt/>



the porto protocol

PARTNERS

Águas de Portugal

DESCRIPTION & STRATEGIES

In our WWTP, to do the initial treatment, before sending the effluent to the municipal outfall that will take it to the São Miguel WWTP, we have the following processes:

- Elevation of the effluent;
- Refine the pH;
- Equalization;
- Primary decanters;
- Biological reactor;
- Secondary decanter;
- Sludge thickener

Basically, this Water Waste Treatment Plant has a biological treatment process. There are several phases of treatment in order to homogenize the effluent and create constant and favorable conditions of nutrition, pH and organic matter for the microorganisms responsible for decomposing and treating the effluent.

Casa Relvas WWTP receives between 30 to 60 cubic meters of effluent, performs a first treatment that allows transforming the industrial effluent into domestic effluent. Afterwards, it is rejected in a municipal branch line that gathers both the effluent from our WWTP and the one from Aldeia de São Miguel de Machede.

This effluent is channeled to the municipal WWTP operated by Águas de Portugal, which treats it so that it can be discharged into the hydric environment.

Given the proximity of the Herdade da Pimenta water reserves and the WWTP, we decided to receive the water in the water reserve first and then use it for irrigation of the vineyards.

ACHIEVEMENTS SO FAR

Reuse of about 80 cubic meters per day to irrigate the vineyards.

LESSONS LEARNED

na



the porto protocol

NEXT STEPS

Officialize and effectively operationalize the reuse of water from the WWTP

POTENTIAL FOR REPLICATION

Whenever there is storage capacity and purposes for reusing this type of water.