

Annual Environmental Performance Report 2022

This Annual Environmental performance report has been prepared to meet the reporting requirements of permit condition 4.2.2. Permit condition 4.2.2 reads;

A report or reports on the performance of the activities over the previous year shall be submitted to Natural Resources Wales by 31 January (or other date agreed in writing by Natural Resources Wales) each year.

The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data.

Table 1 provides the annual averages of the site effluent discharge. All the listed parameters are tested in-house, including suspended solids. Welsh Water also carry out testing on our discharge on a twice monthly basis. Their analysis determines the suspended solids from the discharge leaving site.

With effect from 13th December 2022 Dwr Cymru Welsh Water amended the maximum quantity of trade effluent discharge allowed from our site. It was increased from 80 to 120 cubic meters. The consent limits for the discharge parameters were also amended as stated in Table 1 below.

Table 1

Parameter	Consent Limits mg/l (up to 12/12/2022)	Consent Limits mg/l (from 13/12/2022)	Annual Averages
COD (5)	17000	8500	1058 mg/l
Suspended Solids	3000	1500	270 mg/l
Sulphate	1000	500	205 mg/l
Copper	2.0	1.0	0.22 mg/l
Lead		2.0	0.34 mg/l
Nickel		1.0	0.20 mg/l
Zinc		2.0	0.30 mg/l
Ammonia	250	125	40.58 mg/l
pH	6 to 11	6 to 11	7.56

Although Table 1 shows that we were within consent limits for the year 2022, there were a few anomalies in the DCWW testing as follows:

- 6th September 2022 – PH was slightly under lower limit at 5.9. This went back to normal in the following month.
- 28th October 2022 – Ammonia was over limit at 288 mg/l
9th November 2022 – Ammonia was over limit at 207 mg/l
These were attributed to an aeration pump fault and came back down to normal levels once rectified.
- 17th November 2022 – Zinc was over limit at 2.3 mg/l and Lead was over limit at 3.2 mg/l
The only explanation we could identify as a possible cause was that we had carried out tank cleaning and desludging, potentially not leaving sufficient time for the tanks to settle before reinstating the plant. This has been noted

and going forward we will allow more time before reinstatement of the plant after any work is carried out. This was discussed with DCWW as a potential cause and agreed that increased monitoring will be carried out on reinstatement of plant.

Table 2 below provides the annual performance for water & energy consumption for the site. Site usage of energy increased in 2022 from 11.3 MWh the previous year to 50.09 MWh. Although our target each year is to reduce overall usage by 5%, the increase has come from increased usage of the biomass boiler which was out of action for much of the year prior, as well as the installation of a new wash plant which has been going through commissioning throughout 2022.

We are in the process of looking at alternative sources of energy including installation of solar panels, which is set to happen by the end of Quarter 1 2023.

Table 2

Performance Parameters		
Parameter	Frequency of Assessment	Consumption
Water Usage	Annually	360 m ³
Energy Usage	Annually	50.09 MWh

Table 3 below provides the annual discharge volumes split into quarters. The discharge is monitored by a flow meter installed on site. The Flow Meter is approved by SIRA and is regularly inspected and calibrated. The last inspection was in June 2022.

The flow is within the discharge consent volumes as provided by DWR Cymru Welsh Water.

Table 3

Discharge Volume	
Quarter 1	1,671 m ³
Quarter 2	3,065 m ³
Quarter 3	3,456 m ³
Quarter 4	2,696 m ³
Total	10,888 m³

The discharge volume has increased from the previous year when we discharged a total of 8559 m³. The total raw materials used also increased in 2022 from 9429.52 tonnes the previous year to 13,883.84 tonnes. This can be attributed to increase in tankering work carried out, as well as commissioning of the wash plant.

Fugitive and static emissions are monitored throughout the year. There have been no environmental incidents or complaints over the past 12 months.

We recognise the environmental impact of our business and are dedicated to protecting our local and global environment through responsible management.