SOFIDEL
Sofidel UK Ltd - Baglan

PERFORMANCE REVIEW FOR SOFIDEL UK BAGLAN 2022

As required by permit condition 4.2.2, a report must be submitted on the performance in 2022. This will take into account energy, water, waste and performance parameters.

ENERGY AND WATER

Sofidel UK Baglan is committed to reducing the amount of energy used on site from both an environmental and financial perspective. Targets are set yearly by the parent company. The consumption is closely monitored to ensure that these targets are met. To calculate the energy used per tonne of paper produced, the production used is based on the BREF definition – 'saleable production after the tissue machine before any rewinding processes and excluding any core'.

Electricity

Year	kwh/tonne
2021	729
2022	789

The electricity consumed per tonne of paper produced increased by 8.2%. The increase in energy consumption per tonne produced in 2022 was due to a several extended shutdowns taking place for maintenance work to be completed.

Gas

Year	Sm^3/tonne
2021	166
2022	167

The gas consumption increased by 0.6%. This was due to extended shutdowns in 2022.

Raw water used

Year	m^3/tonne
2021	4.55
2022	4.52

The overall water consumption decreased by 0.7%.

Effluent water discharged

Year	m^3/tonne
2021	2.19
2022	2.13

The effluent discharged decreased by 2.7%. The discharge is below the yearly average of 3.5-20 m^3/t currently described in the BREF document.

Prepared by K.Mackinnon

PERFORMANCE PARAMETERS EMISSIONS

The average values for these parameters can be seen below along with the average range listed in the BAT.

PARAMETER	SOFIDEL UK BAGLAN AVERAGE VALUES 2021	SOFIDEL UK BAGLAN AVERAGE VALUES 2022	BAT YEARLY AVERAGE kg/T
COD	0.3567 Kg/t	0.4197 Kg/t	0.15-1.5 Kg/t
Suspended Solids	0.0634 Kg/t	0.0575 Kg/t	0.02-0.35 Kg/t
Total Nitrogen	0.0184 Kg/t	0.0142 Kg/t	0.01-0.012 Kg/t
Total Phosphorous	0.007 Kg/t	0.0018 Kg/t	0.03-0.012 Kg/t
Adsorbable organically bound halides (AOX)	0.0003 Kg/t	0.0004 Kg/t	0.05 Kg/t
BOD	0.0178 Kg/t	0.0249 Kg/t	N/A
CO_2	0.3259 t/t	0.3305 t/t	N/A
NO_x	0.0002 t/t	0.0003 t/t	N/A

The values for 2022 are within the recommended yearly averages for the listed parameters and are compliant with the recommended BAT-AELs. The data has been calculated using the BREF definition for production.

The amount of CO_2 emitted in 2022 was 19,242 tonnes. There was a decrease of 7.2% in the actual emissions compared to 20,750 tonnes in 2021. This was due to the paper machine being shutdown for several extended maintenance shutdowns in 2022.

PRIORITY HAZARDOUS SUBSTANCE SCREEN

The annual monitoring was undertaken for Priority Hazardous Substances. All test methods were performed by accredited laboratories. Sample taken 04/10/2022 and report completed 11/11/2022.

Emission Point	Substance / Parameter	Emission Limit Value	Result
W1	Tributyl Tin	No limit set	<0.06 ug/l
W1	Anthracene	No limit set	0.022 ug/l
W1	alpha-Endosulphan	No limit set	<0.01 ug/l
W1	beta-Endosulphan	No limit set	<0.01 ug/l
W1	Brominated diphenyl ether	No limit set	<0.0003 ug/l
W1	C10-C13 Chloroalkanes	No limit set	<0.4 ug/l
W1	Hexachlorobenzene	No limit set	<0.006 ug/l
W1	Hexachlorobutadiene	No limit set	<0.007 ug/l

W1	Hexachloro-cyclohexane	No limit set	<0.006 ug/l
W1	Nonylphenol	No limit set	<0.05 ug/l
W1	Pentachlorobenzene	No limit set	<0.0005 ug/l
W1	Polycyclic aromatic Hydrocarbons (PAHs)	No limit set	0.130 ug/l

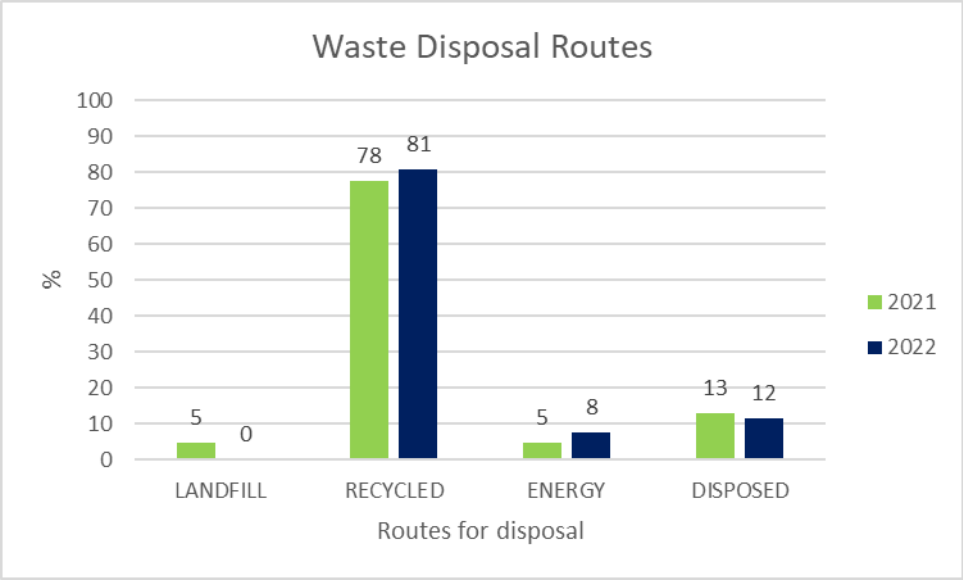
PERMIT BREACHES

8 Schedule 5 notifications have been made to NRW regarding breaches in the BOD limits.
04/05/2022 29 mg/l
11/05/2022 59 mg/l
26/05/2022 34 mg/l
04/10/2022 32 mg/l
11/10/2022 37 mg/l
15/11/2022 29 mg/l
17/11/2022 Sample not received by lab. Picked up by courier as normal and no confirmation given by lab that sample had been received meaning that no analysis was completed for week 45.
13/12/2022 29mg/l

The high BOD results were due to several operational issues at the effluent plant which have been resolved.

WASTE

Sofidel UK Baglan is committed to reducing the amount of waste that goes to landfill and monitors the waste on site closely. Below is a comparison of waste figures for Sofidel Baglan for 2021-2022.



The waste removed from site has been split down into four disposal routes- landfill, recycled, waste to energy and disposed. The landfill waste is composed of hazardous waste which has been removed from site and cannot be recycled, and general waste. The percentage of waste to landfill has decreased in 2022 as a change was made to a new waste contractor mid 2021 who divert the general waste for recycling and waste to energy. Hazardous waste which was taken off site in 2022 was all able to be diverted from landfill.

The recycled waste consists of cardboard, poly, wood, metal, empty IBCs, sludge, and hazardous waste which could be recycled. The waste to energy is a portion of general waste which was sent to energy recovery facility, and ink washings. The disposed waste is the ink and glue washings which are processed at a water treatment site and then discharged to surface water.

Overall, the amount of waste produced on site has increased by 9.1% compared with 2021. There was a 68% increase in the amount of sludge produced in 2022 compared to 2021 due to two shutdowns in August and October which may have contributed to the increase in overall waste production.

Sofidel UK Baglan is committed to continuing to reduce the amount of waste sent to landfill as well as the amount of waste generated on site. We apply the waste hierarchy to all waste streams on site and in 2023 will focus on maintaining recycling and reducing total waste production on site.

ISO 14001 AUDITS

Two ISO 14001 surveillance audits were completed in 2022. There were no non-conformities raised.

ISO 50001 AUDITS

There were no non-conformities raised during the ISO 50001 audit that took place in 2022.

PROJECTS

In 2022, a number of large projects were completed as well as some which will continue into 2023.

- Installation of new drives in converting- **ONGOING**
- Upgrade on boiler to improve efficiency -**COMPLETE**
- Improvements to rainwater harvesting system-**ONGOING INTO 2023**
- ViscoNip/Redry project for the paper machine-**COMPLETE**
- Permit variation-**NOT REQUIRED**

Planned projects for 2023 include those still ongoing from 2022 plus additional projects which include:

- ISO 50001 recertification
- Ongoing projects for the improvement of energy efficiency (e.g. LED lighting)

CONCLUSION

Unfortunately, we were unable to achieve our gas and energy target in 2022 which was set by the Corporate department but aim to rectify this is 2023. New energy, gas and water targets have been set for Sofidel UK Baglan for 2023 and these are linked in with the objectives and targets which are part of our ISO 14001 and ISO 50001 management system. The monitoring data shows that Sofidel UK Baglan emissions are well within the levels set within the BREF document.