



Environmental Performance Report Bridgend Paper Mill 2020

Reporting Condition 4.2.2

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Permit Number: EP3738NG



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1.0 Introduction

The production of this report is a requirement of the Mill's EPR Permit section 4.2.2.

The aim of this document is to provide a summary report of Bridgend Paper Mill's performance for the calendar year 2020.

The report identifies performance parameters, emissions to air and water, waste disposal, water consumption and energy use information.

2.0 Summary

2020 continued to be dominated by Wepa's management team seeking to align the site with the other 13 mills in their European organisation. There has been considerable investment in people, equipment and infrastructure as the mill not only optimises the existing equipment but prepares for the proposed major capital investment planned for the next 4 years, with approval having been granted for the installation of a new paper machine with works commencing in Q4 2020. The new paper machine (namely Naptune) is due to begin operations in Q1 2022 with up to an additional 75,000 tonnes being produced.

Specifically, 2020 was a challenging year because of the global pandemic however the demand for hygiene products has been little effected throughout this period. Paper reel outputs from Jupiter machine have been sustained whilst achieving cost reduction with better use of chemical packages and pulp changes.

Logistics have continued importing paper reels from other Wepa plants. Jumbo paper reels have been transported by ship to Swansea docks and transported to the mill from dockside warehouses. This has eliminated the large number of European lorries arriving at the mill often in convoy, which caused problems in offloading and storage.

Converting outputs have been consistent all year and with the new Neptune machine being introduced will result in the site becoming self-sufficient with little to no reliance on outside sources of parent reels.

General environmental performance from the site has been maintained throughout 2020 with no breaches of consent limits with data showing a performance well below those limits.

There were no Schedule 5 notifications issued during the year:

The site was audited against its ISO 14001 environmental management system during the year and received an external verification audit for the Greenhouse Gas (GHG) permit. No significant non-conformances were raised against these requirements.



3.0 Performance Parameters

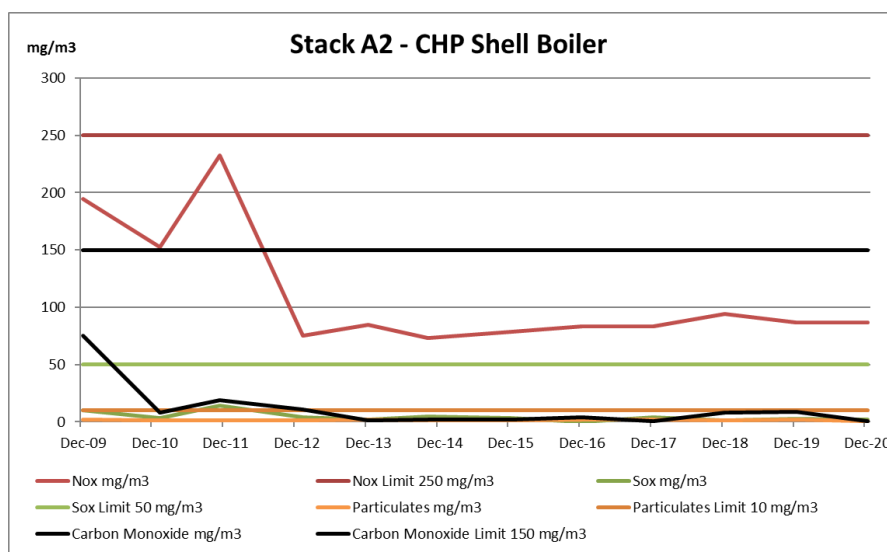
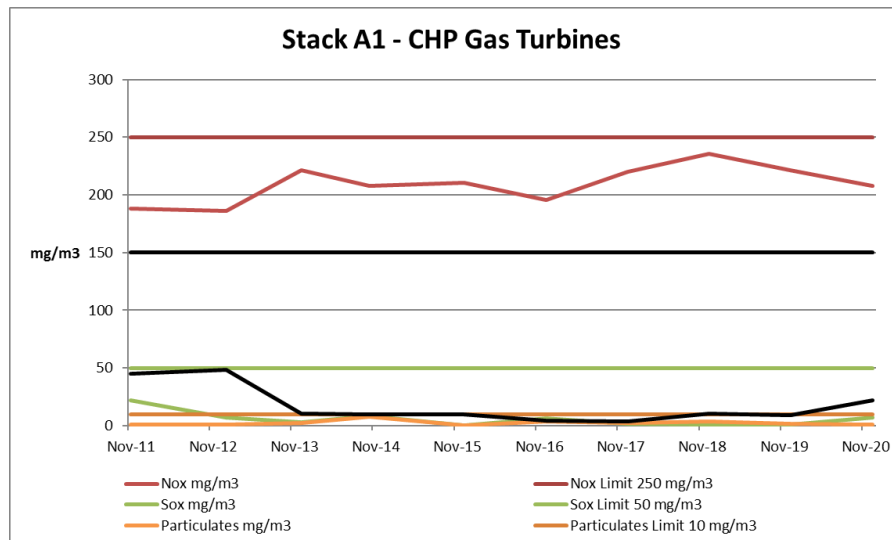
The quarterly returns for the performance parameters remained stable for all parameters throughout 2020.

Parameter	Unit	Q1 2020	Q2 2020	Q3 2020	Q4 2020
Nox/ADT	Tonnes/ADT	0.003	0.003	0.003	0.003
CO ₂ /ADT	Tonnes/ADT	0.884	0.852	0.888	1.005
BOD/ADT	kg/ADT	0.028	0.012	0.014	0.007
Suspended Solids/ADT	kg/ADT	0.125	0.063	0.114	0.092
Nitrogen nutrient (N) / ADT	kg/ADT	0.035	0.084	0.061	0.048
Phosphorus nutrient (P) / ADT	kg/ADT	0.004	0.007	0.008	0.004
COD / ADT	kg/ADT	0.488	0.246	0.302	0.363
AOX / ADT	kg/ADT	0.005	0.002	0.005	0.004



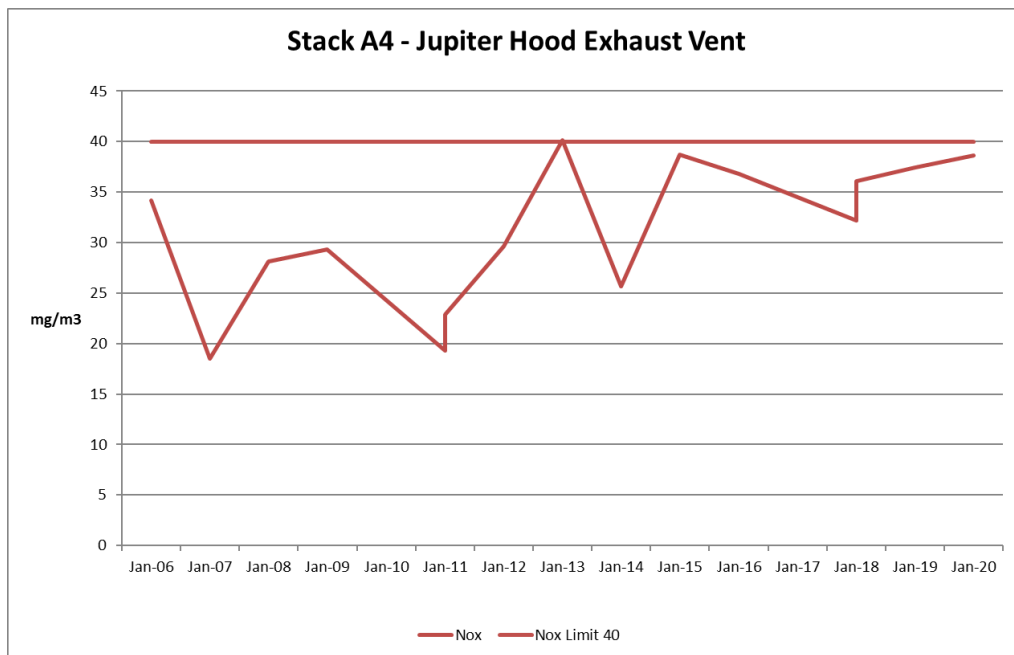
4.0 Emissions to Air

Annual emissions test results for Stack A1 (HRSG 1 & HRSG 2), which is contained within the CHP plant on site, were below permit limits as per previous years testing. All parameters for the CHP shell boiler (Stack A2) remain stable.





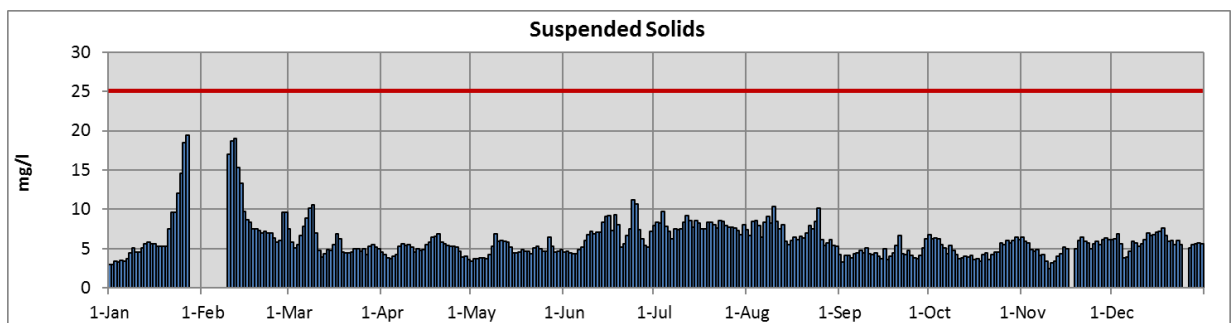
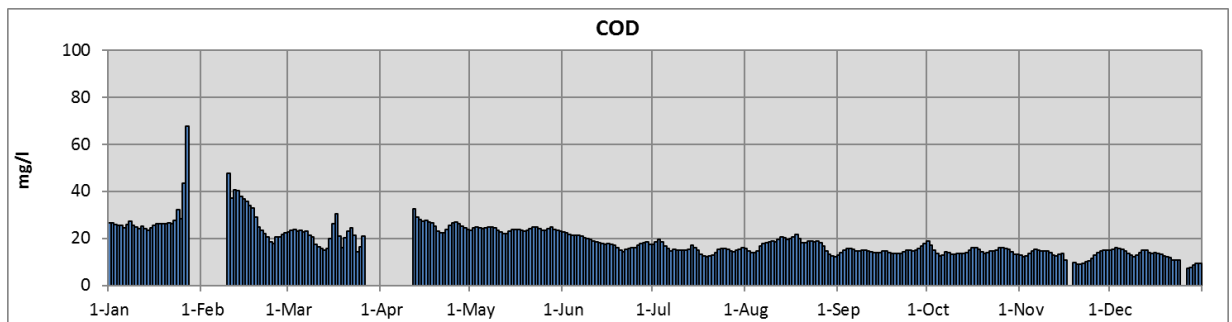
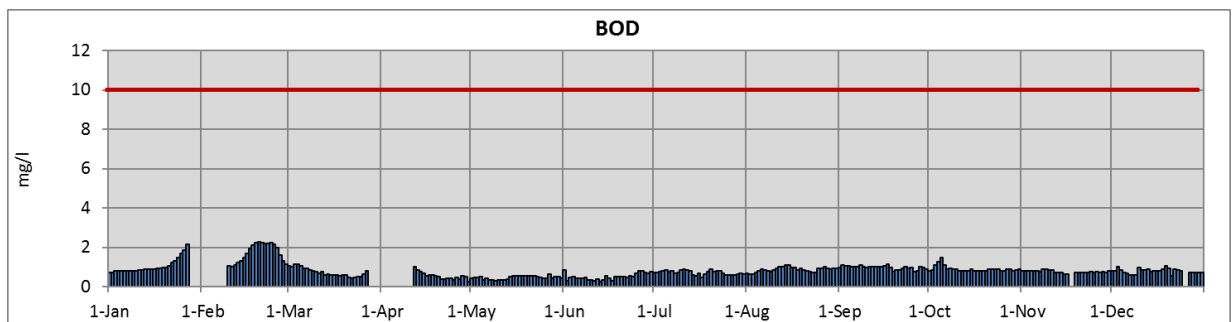
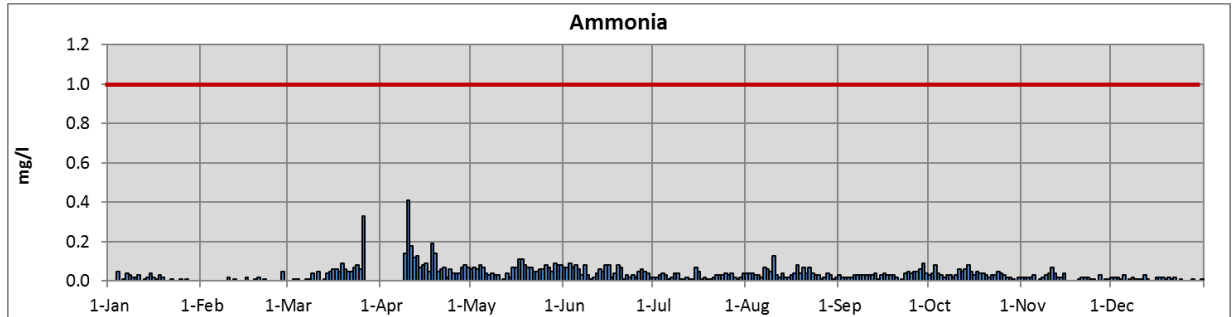
The NO_x emissions test result for Stack A4 (Jupiter Hood Exhaust Vent) was below the consent limit at 38.6mg/m³.





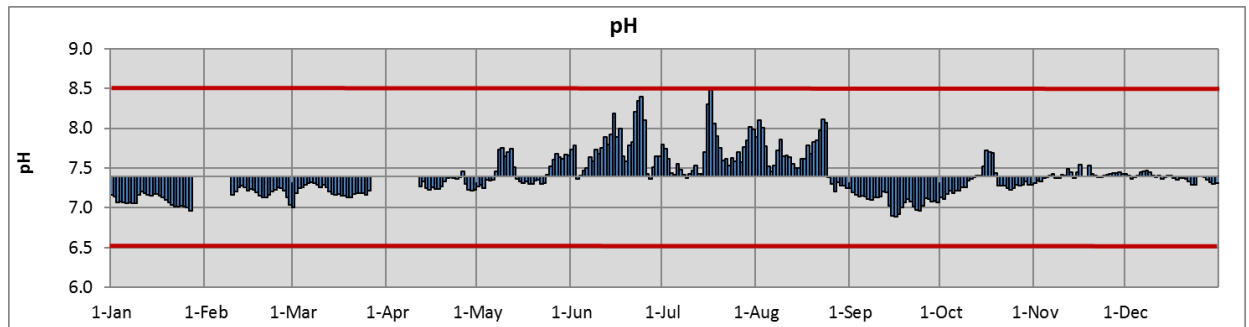
5.0 Emissions to Water

Emissions to water results for 2020 were all compliant with parameters being well below permit limits. This is evident in the graphs below:

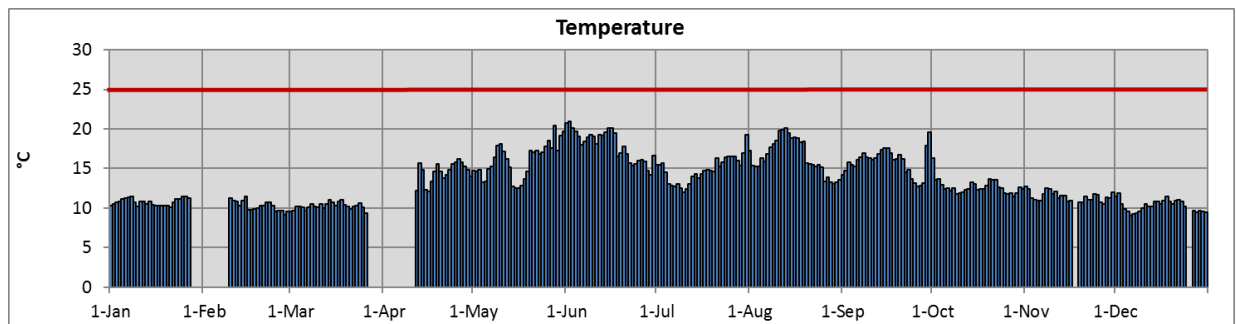




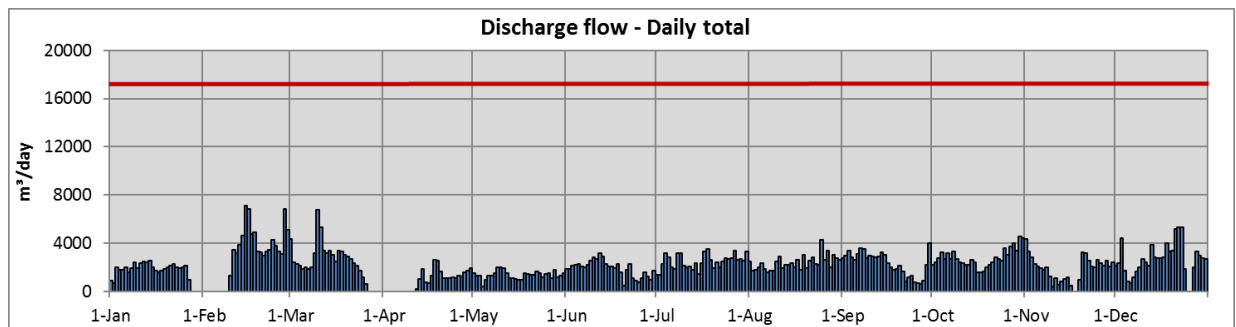
The pH of the effluent discharge to the River Llynfi was within the permit limits for 2020, as is shown in the graph below:



The discharge temperature has consistently been below the permit limit of 25°C.



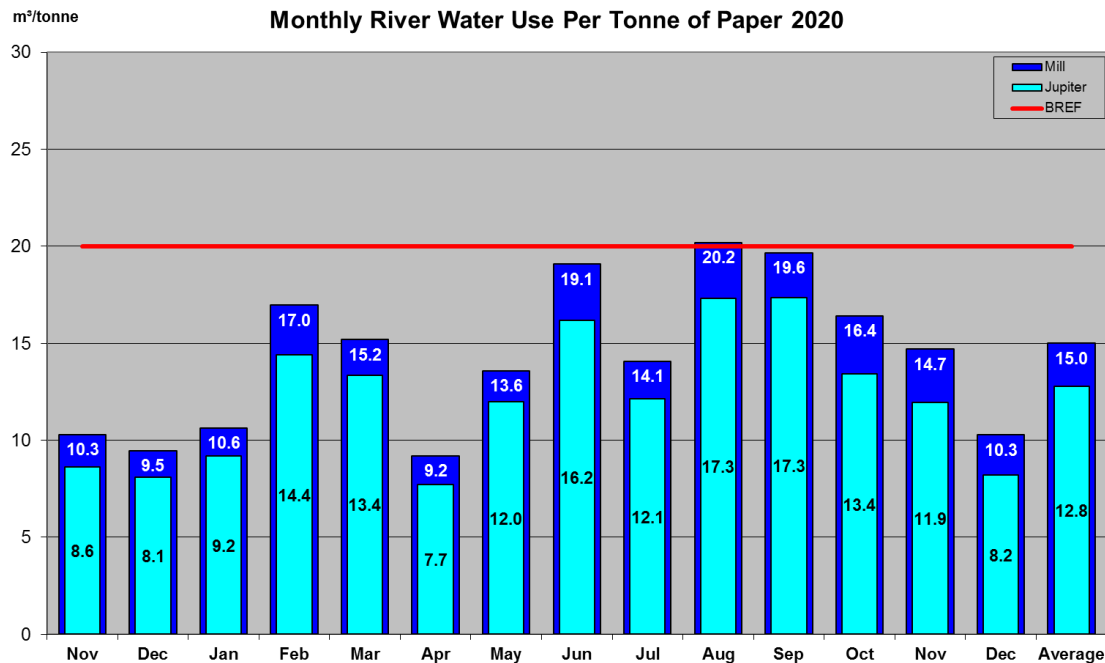
The daily effluent volumes discharged in 2020 were significantly below the permit limit of 17,500m³ per day and apart from the odd spike, typically less than 8000m³ per day.



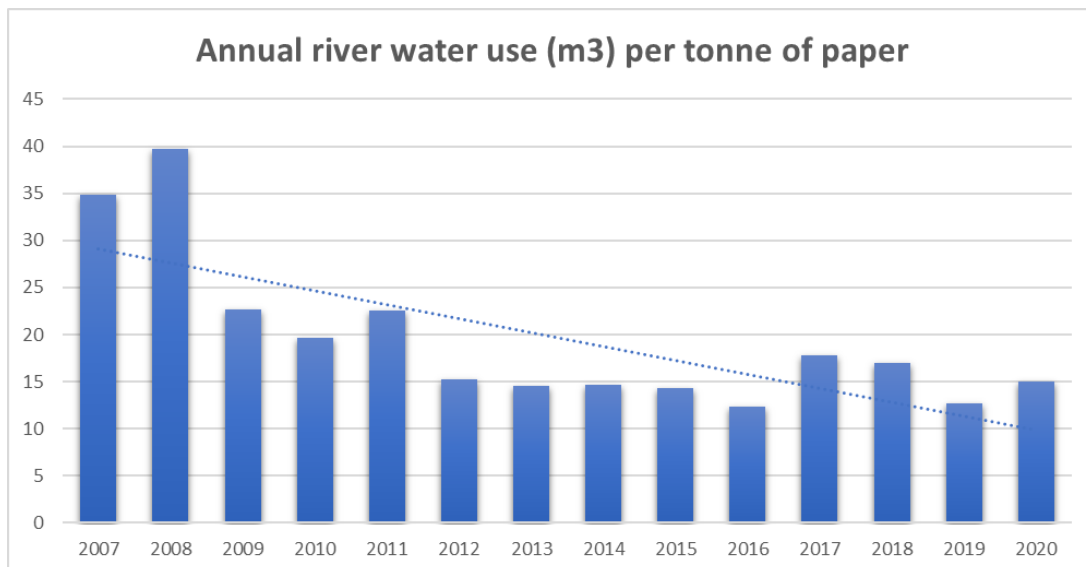


WATER USE CHARTS

The trend in water use per air-dried tonne of paper (ADT) was consistently below the revised 2014 BREF target of 20m³/ADT, with the exception of August which was on the border of the target.

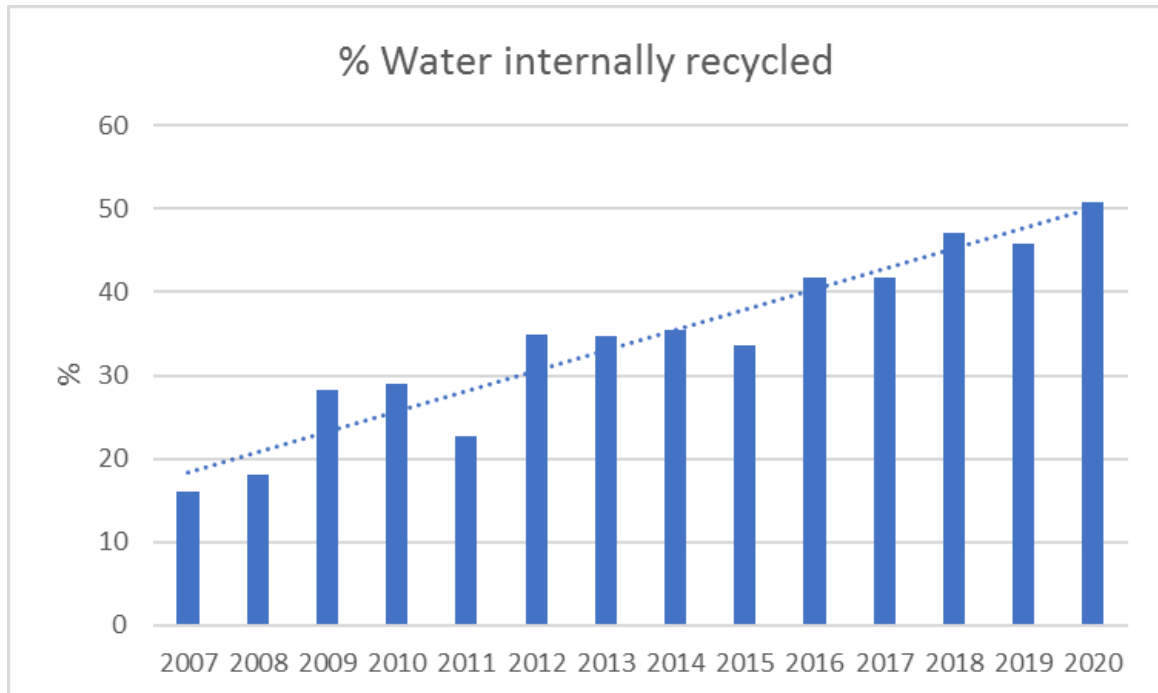


Historic trend demonstrates a downward curve, as can be seen from the graph below despite a slight upward movement in 2017 during commissioning on the new water plant.



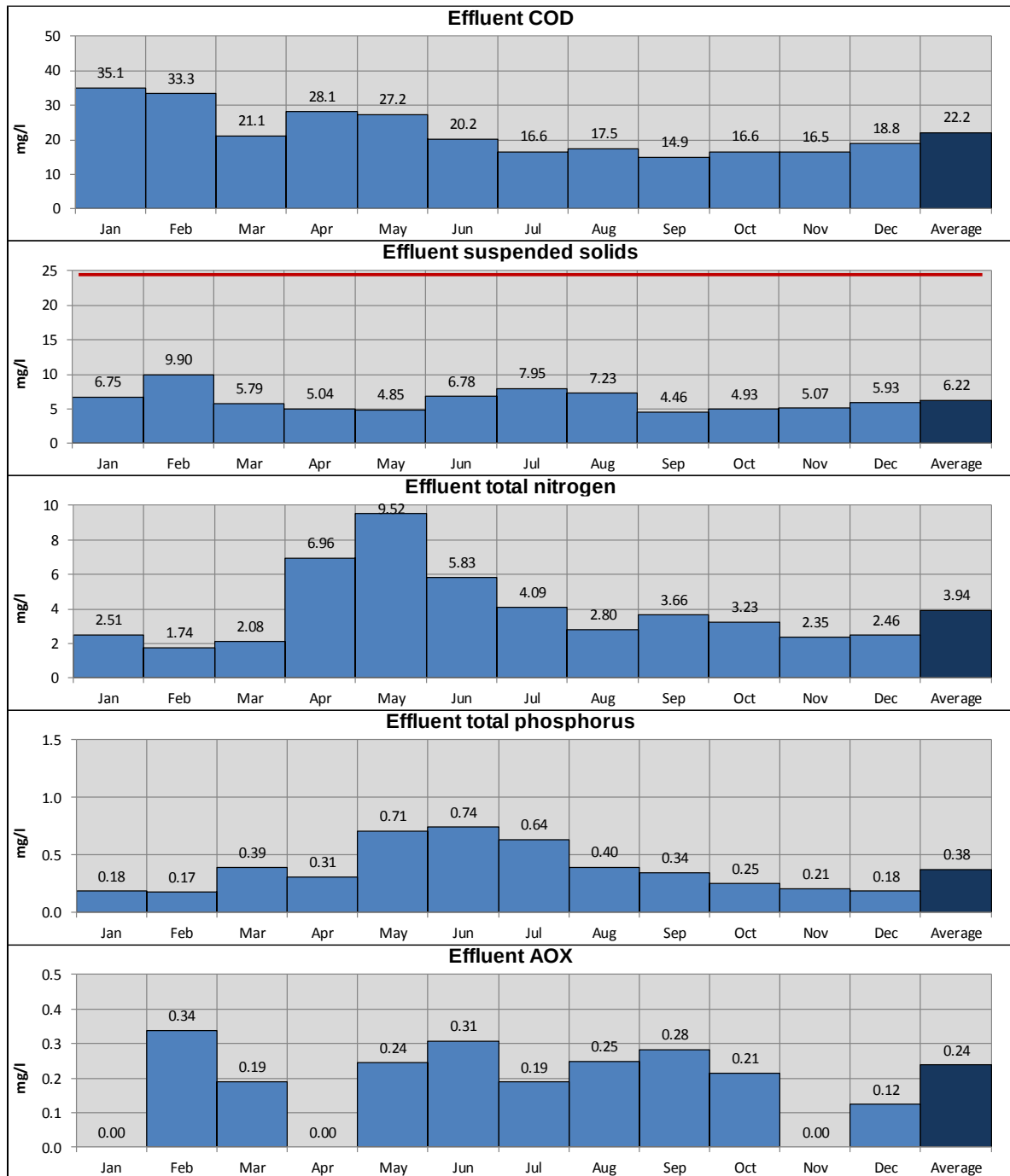


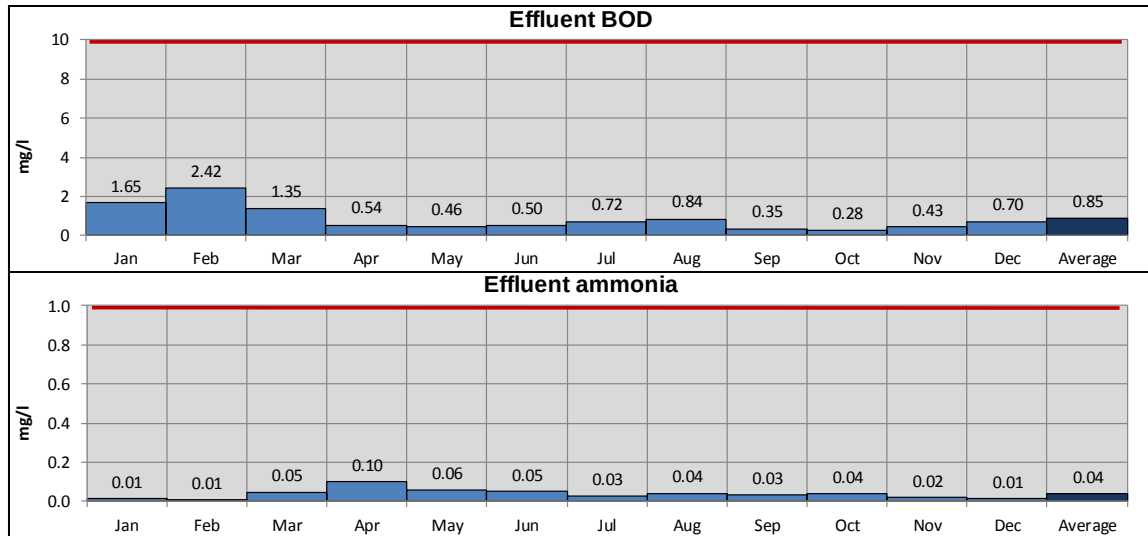
The declining trend in water usage is reflected in the quantity of water that is recycled as shown in the graph below.





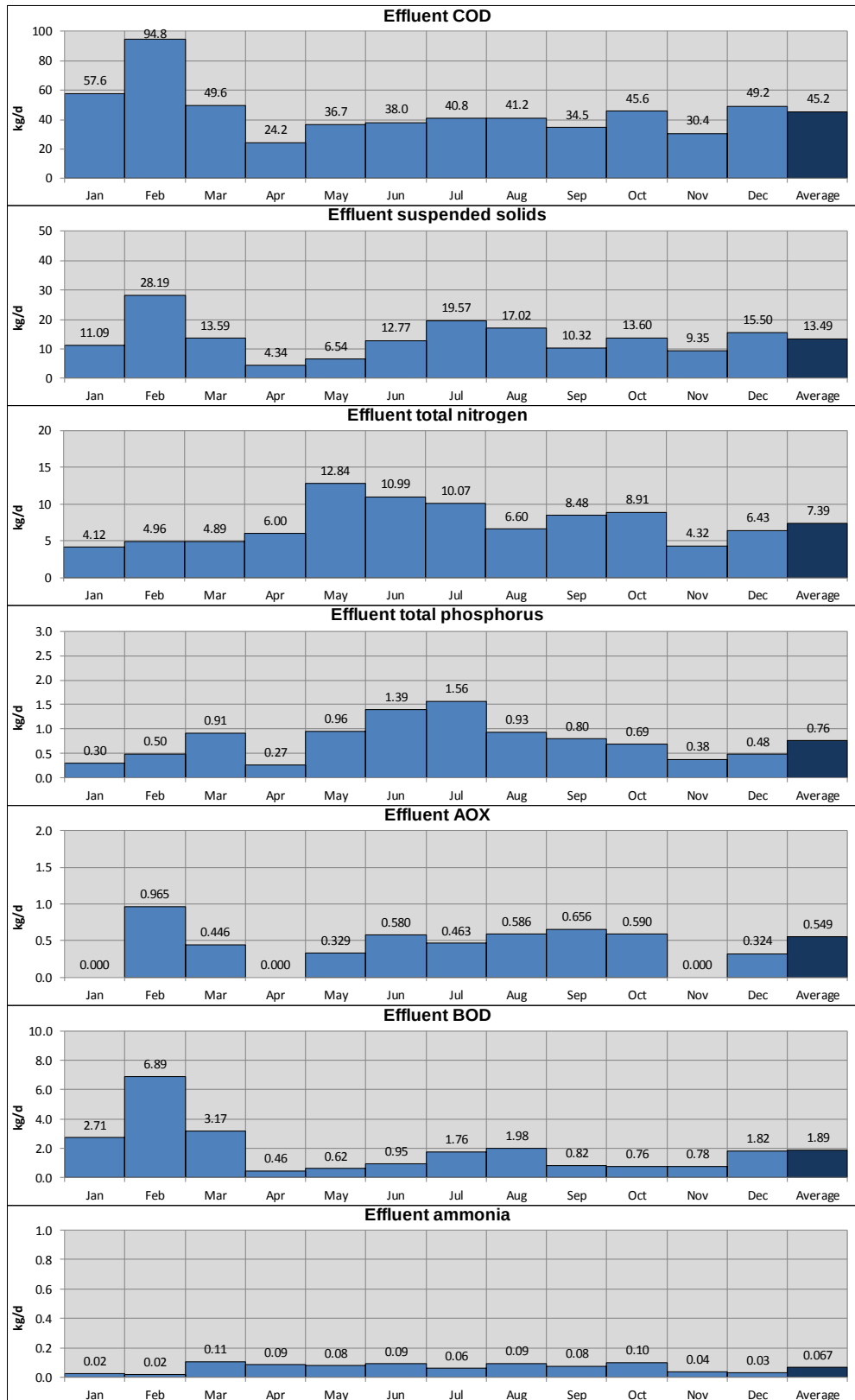
EMISSIONS TO WATER (mg/l)







EMISSIONS TO WATER (annual kg/tonne)





6.0 Waste

The following list is typical of waste streams emanating at Bridgend mill and their respective disposal routes:

1. Paper sludge – primarily cattle bedding
2. General Waste – Treated (Recyclables segregated from general waste) or Recovered (Refuse Derived Fuel Plant)
3. Metals – Recycled
4. Oils – Recovered
5. Cardboard and Polythene – Recycled following separation.
6. Building rubble – Recycled
7. Polythene – Recycled
8. Wood –Recycled
9. Non-standard waste, which includes both hazardous and non-hazardous and have varying disposal routes. These wastes typically include:

Batteries
Hazardous wastes
Paints and solvents
Process and other chemicals
PC monitors (W.E.E Waste)
Fluorescent tubes etc. etc.

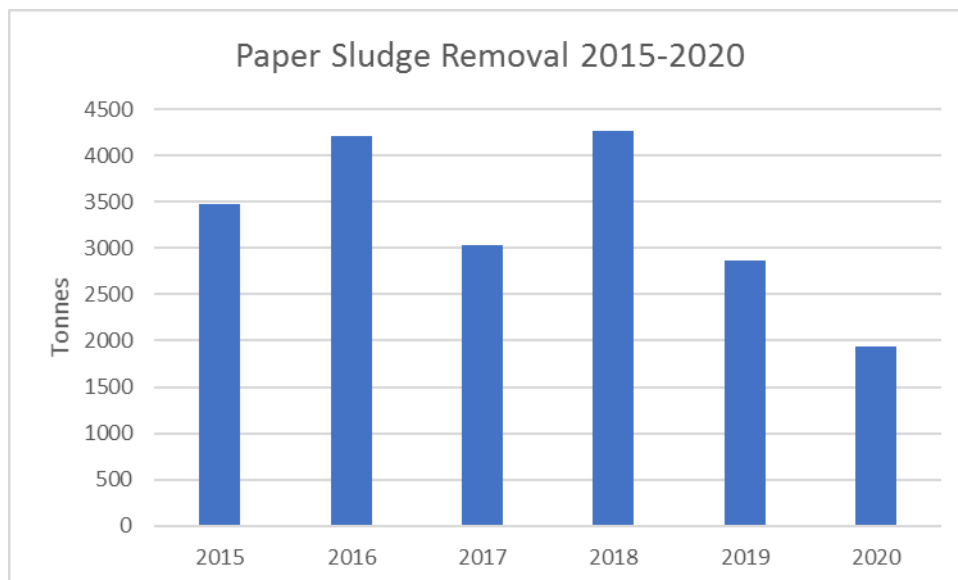
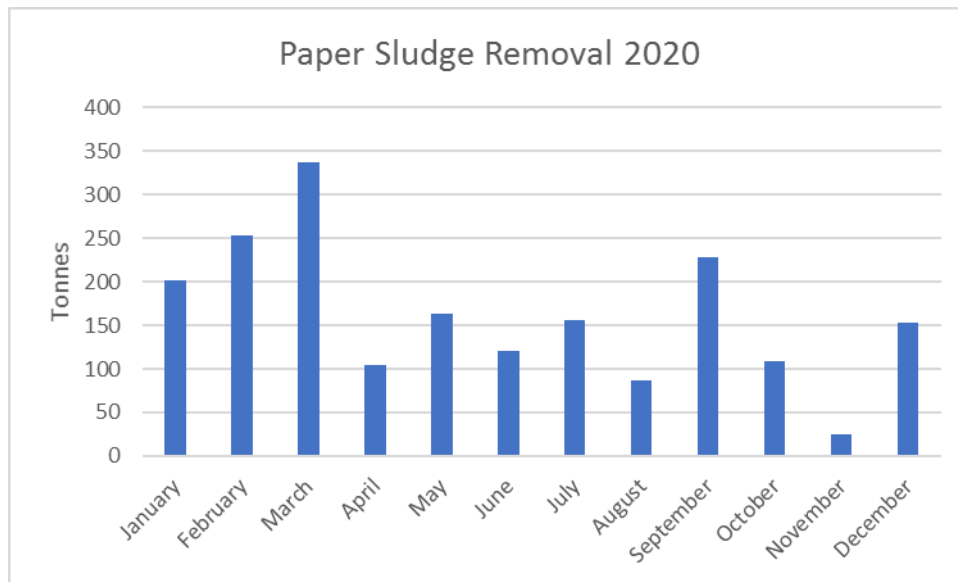


The above graph depicts the annual trend of wastes generated at the Bridgend site during 2020.



7.0 Sludge removal

The graph below shows the amount of sludge removed from site in 2020 per month and the graph below that shows sludge removal over the last 6 years.





8.0 Energy

Bridgend Paper Mill is a member of a Climate Change Levy Agreement negotiated scheme (Confederation of Paper Industries). The company met its energy target under this scheme for 2020.

The mill is also registered with the EU Emissions Trading Scheme. This is verified by the Environment Agency through the Mill's Greenhouse Gas (GHG) Emissions Permit as well as the online ETSWAP reporting system. No major non-conformances have been reported in this calendar year.

