

Permit Reference: BX3376IG
Continental Teves (UK) Ltd,
Waun y Pound Industrial Estate,
Ebbw Vale,
Blaenau Gwent,
NP23 6PL.

Rebecca Green
Natural Resources Wales,
Rivers House,
St. Mellons Business Park,
St. Mellons,
CF3 0EY,

cc Liz Parr

3rd December 2021

Dear Rebecca,

Re: Permit BX3376IG Continental Teves annual review for permit condition 2.4.1.1: Waste & Water Audits

The following letter is a response to the PPC permit condition 2.4.1.1

Carry out periodic waste minimisation audits and water use efficiency audits. If such an audit has not been carried out in the 2 years prior to the issue of this Permit, then the first such audit shall take place within 2 years of its issue. The methodology used and an action plan for increasing the efficiency of the use of raw materials or water shall be submitted to the Agency within 2 months of completion of each such audit and a review of the audit and a description of progress made against the action plan shall be submitted to the Agency at least every 4 years thereafter.

1. Water Efficiency

Continental Automotive of which Continental Teves Ebbw Vale are a part set annual targets on the consumption of water. Each year this is set at -3% of the consumption in the previous year. The comparison unit is m³/1000 parts produced.

For the Ebbw Vale site this is potentially a misleading unit of measurement as whilst there are many parts that consume water during machining and/or zinc/zinc nickel plated, there is an increasing number of products that are only assembled and therefore do not consume any water during the production process and hence distort the measurement.

The water consumption on site falls into the following categories

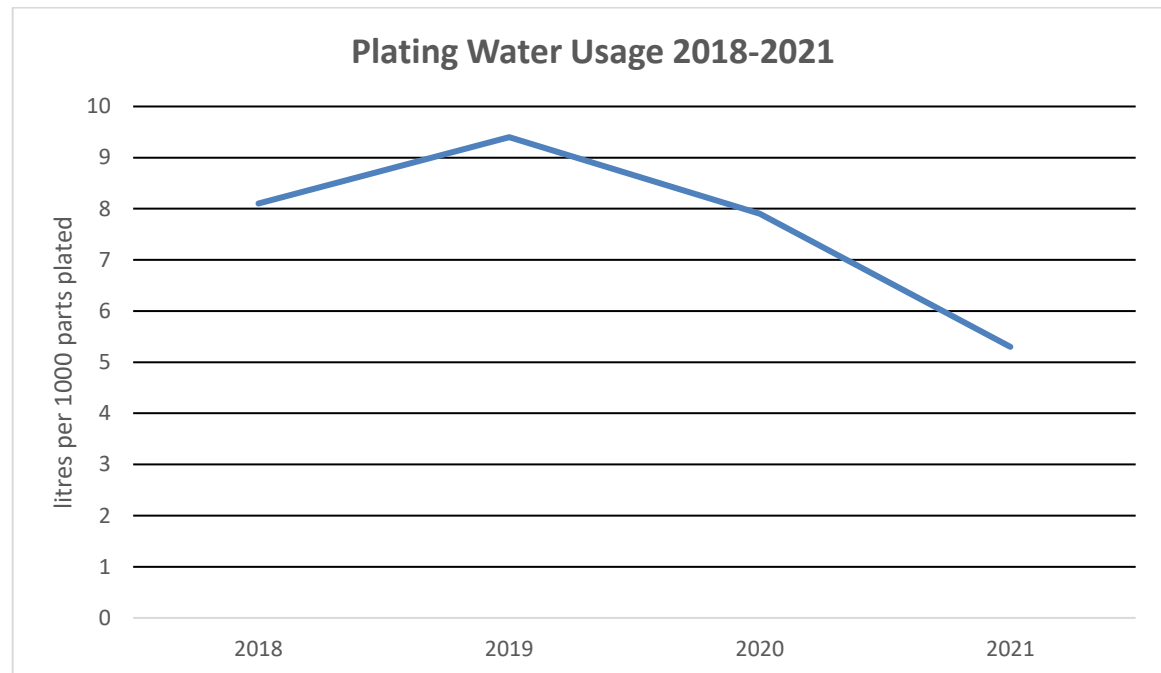
- Plating
- Machining
- Showers and toilets
- Other domestic
- Water for testing fire protection equipment

Plating and machining consume the most amounts of water (see below). Taps and showers are fitted with push button starts which automatically turn themselves off after a short period of time. Fire testing water is in accordance with regulations.

Plating

For many years, plating had been the focus of water reduction programs. Figure 1 below shows the reduction in water usage over the period 2018 to November 2021

Figure 1



These reductions have been achieved by improving the workflow through the plating plant and changes in cycle times to increase the number of parts plated without increasing water flow rates through the rinse system.

With regards to the further reduction in water usage in the plating plant, it is currently considered that the investment in the equipment to achieve this does not justify the savings that can be achieved. This may change at a future date. The investment therefore will be used to reduce water consumption in the machining area where vast amounts of water-soluble coolant is disposed of when it could be recycled and hence larger reductions can be made

Machine Shop

The second largest consumer of water is the machine shop which uses a water-soluble oil as a coolant for the cutting machines (5% oil, 95% water). Since the machining process generates a lot of a mixture of oil and metal fines, the machines can become quite dirty and hence need to be cleaned on a regular basis. The audit of the process found that the coolant was being disposed of unnecessarily when the machines were being cleaned.

Figure 2 shows the amount of coolant disposed of between 2018 and 2021. Note that for the purposed of water saving calculation, the figures have not been rationalised.

Figure 2

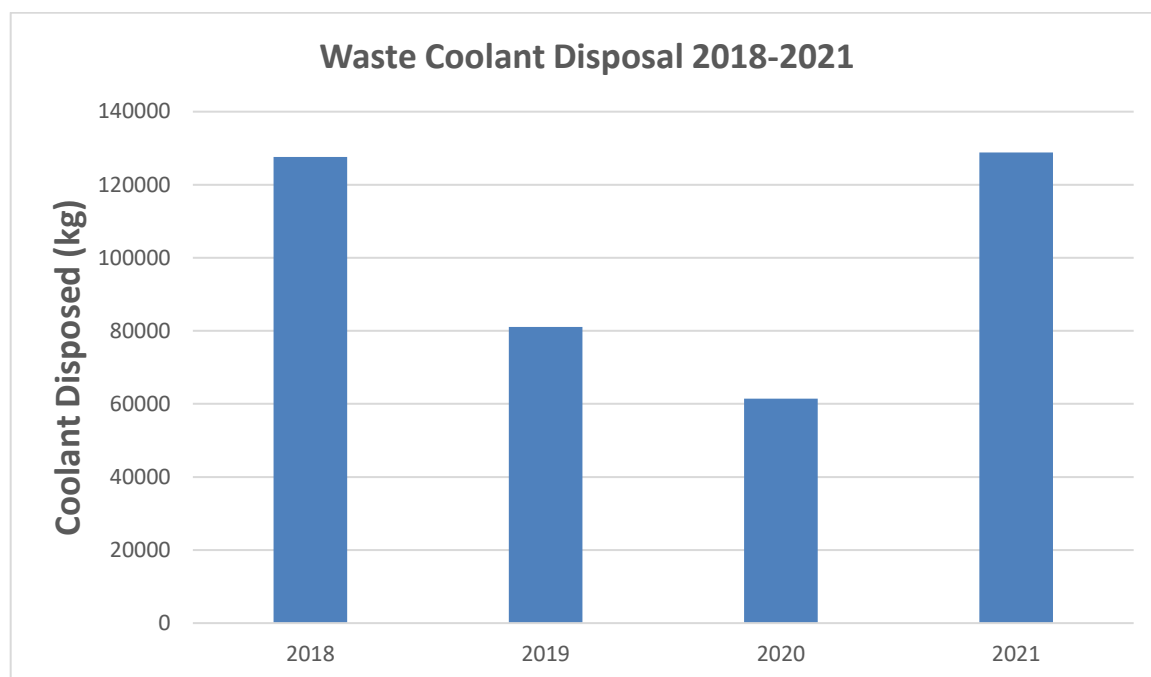


Table 1

Date	Objective	Status
Jan 19	Monitor usage & understand sources of waste	Complete Jan 2020
Jan 20	Set targets for reduction & define unit of measurement (kg/TGB minute (see below for definition))	Interrupted by Covid-19 pandemic. Not completed until Jan 2021
Jan 21	Interpret data and source appropriate equipment to clean & recycle coolant	Complete Jun 2021
Jul 21	Complete trials	Oct 2021
Oct 21	Order placed	Delivery Nov 2021
Nov 21	Monitor improvements	Review Q1 2022

Estimated reduction in water:

It is estimated that 60% of the waste produced may be prevented which on average (based on last 4 years)

= 99,745kg/year

@95% water – 94,760 kg

2. Waste Minimisation

Physical Material

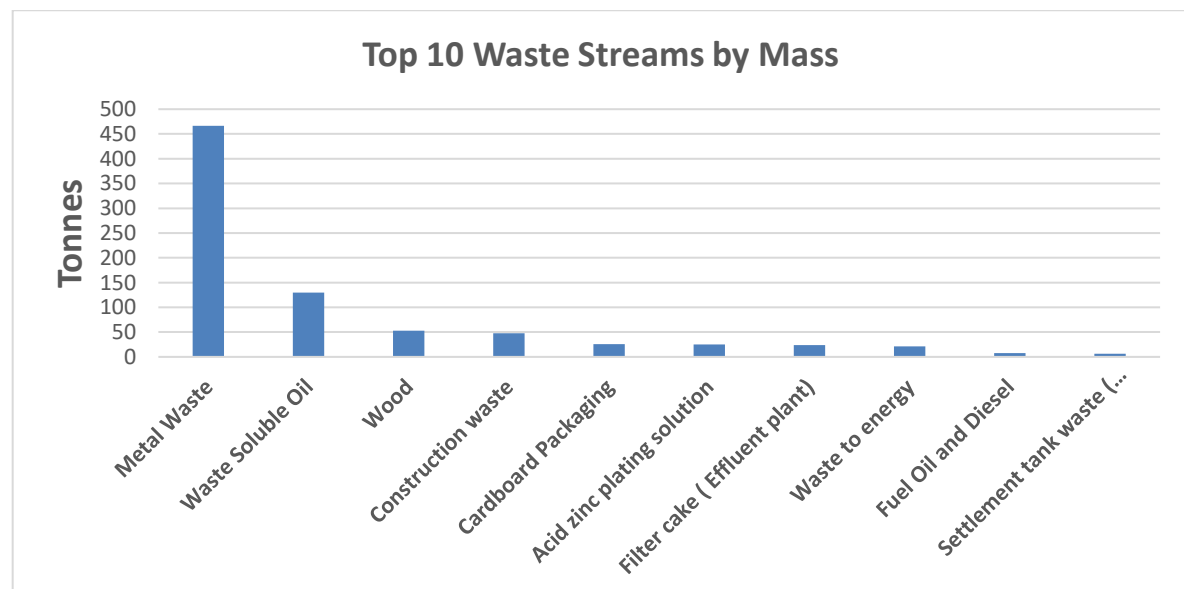
Similar to that described under water efficiency, Continental Automotive also set targets for waste production. Waste is measured in tonnes/1000 parts produced. A target of -2% in the total amount is set and also a target for recycling of the waste produced of 95% (or +3%/year if 95% is not achieved)

At Ebbw Vale, the waste is divided into four categories

- Non-hazardous – recycled
- Non-hazardous – landfill
- Hazardous – recycled
- Hazardous – landfill

The top ten largest contributors to waste area shown in Figure 3

Figure 3



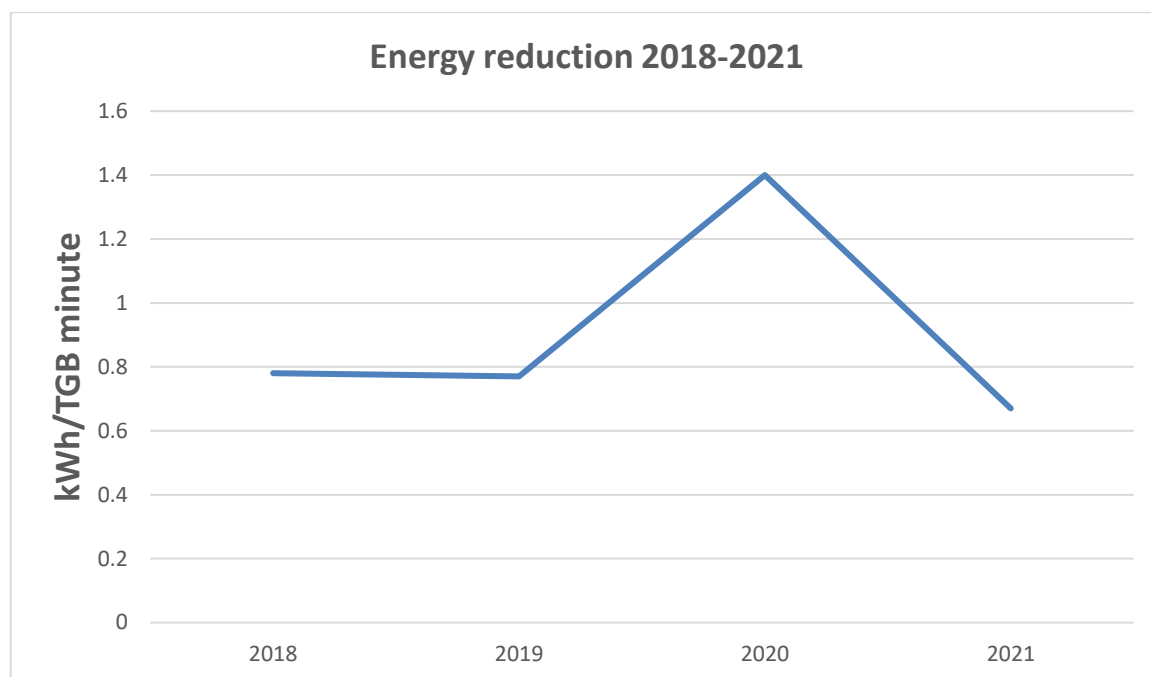
As can be seen, the two largest contributors are scrap metal (from machining - non-hazardous recycled) and coolant (hazardous recycled). The focus on waste reduction has therefore been on reducing the amount of waste coolant as described in the section on water reduction above. (Metal waste is produced by the machining process and cannot be controlled directly but only by ensuring quality and other process are followed

Energy

In addition to reducing waste on materials, there has also been a focus on energy reduction (Continental targets are -3% per year). The measure for energy is the TGB minute which is a function of the run time of a piece of equipment. This is a better measure than the number of pieces as parts are produced on many different machines and take different times on different machines. Figure 4 shows the reduction in KWh/TGB minute achieved between 2018 and 2021.

The peak in 2020 is a result of the Covid-19 pandemic – the factory remained open but was producing a much lower number of components – however the fixed load e.g., lighting was could not be flexed with production volumes

Figure 4



These values were achieved by actions such as:

Ensuring electrical equipment was shut down when not in use

Fixing compressed air leaks

Increasing hourly output of plating plant -allowing it to run less time - e.g lighting can be turned off for longer periods.

Yours sincerely

P. French

Head of Plating and Environmental Management