

Llanwern Annual Waste Report 2020

**EPR Permit Ref: BS3905IP. Tata Steel Strip Products UK, Llanwern Works
Re: PPC Permit Condition 9.7 – “The Operator shall conduct a waste minimisation audit that analyses the use of raw materials, assess the opportunities for the reduction in generation of wastes and provides an action plan for achieving the identified improvements. The review shall assess the current disposal techniques to ensure that the disposal of wastes meets the requirements of the Landfill Directive. A report shall be provided to the Agency. Timescales shall be agreed with the Agency (Natural Resources Wales).”**

Site Waste Management

The site waste management contract has been in operation for the eighth year. Continuity of the same site waste management Company has enabled us to optimise recycling rates and disposal routes, in-line with the established waste management hierarchy. The working relationship with site Waste Management Service provider remains positive.

General waste is sent to an energy recovery process. This being in-line with a high-level company objective to eliminate waste from landfill.

We have seen a decrease in general waste and sustained recycling rates for 2020.

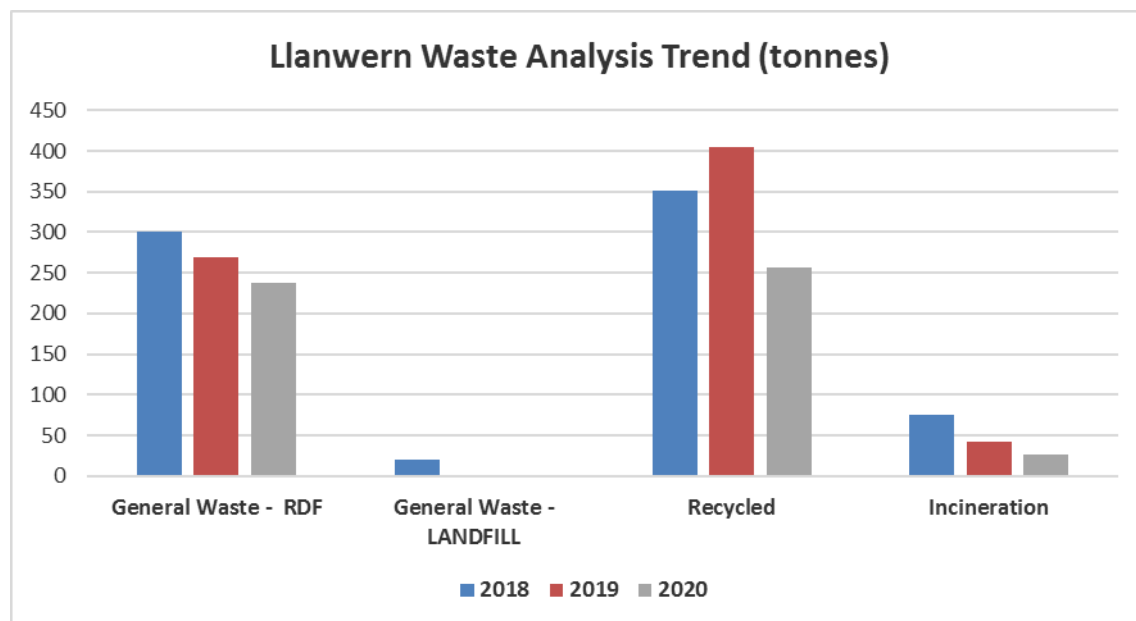
The annual (non-steel) waste recycling target was set at 50%, our annual performance resulted in 52% being recycled for 2020. We saw a further decrease of general waste of 33t for 2020, compared with 2019.

General waste remains diverted from landfill, to an energy recovery process.

The working relationship with site Waste Management Service provider remains positive. Regular meetings with Waste Management Contractor to discuss performance and opportunities.

The trend can be seen as a graphical representation on the next page.

Llanwern Waste Analysis of general



LL Water Usage

There was a reduction in process water usage, of 537,000m³, generally down to the production pauses due to the Coronavirus pandemic. There has also been a continual focus on detecting and fixing leaks in water systems.

Process Waste Streams

This section details the specific process waste streams, and outlines the disposal / recycling route of each

Liquid Waste Oil [Recycle]

Waste oil arisings come from a number of sources, either directly from processes, or indirectly from oil separators & interceptors. Such arisings undergo a variety of processing, including: gravity separation, chemical & thermal treatment, centrifuge, magnetic separation etc. in order to achieve an oil specification that can be sold to a third party for re-use as lubrication oil following further off-site re-processing or for re-use in PT morfa coke ovens.

Ferrous Hydroxide Filter Cake [Disposal]

During the Pickling process, the rinse waters used in the final stages of the process are collected & treated by a dedicated effluent treatment plant. The product of this process is a FeOH Ferrous Hydroxide filter cake. Despite it having a high Fe content, the recycling options are limited due to presence of small concentrations of Cl, which negates the option to recycle into steelmaking via the Sinter Plant process. As there are no other viable treatment options, the material is dispatched for Non-Hazardous landfill currently. Tata are currently exploring opportunities to see if this waste stream can be diverted from landfill.

Zinc Dross [Recycle]

In the Zodiac galvanisation process, Zinc dross is skimmed from the surface of the molten zinc-coating bath, and is then bulked-up into an adequate quantity for dispatch to a metal re-processor based elsewhere in the EU for recycling – Trans frontier Shipment of Waste protocols therefore apply

Hotani Sludge [Recycle]

The Hotani cleaning section in the Zodiac galvanisation process produces a sludge which is recycled at Port Talbot blast furnaces.

Primecoat Passivation [Recycle & Disposal]

Cr free passivation Zodiac galvanization plant. The Primecoat Rinse waters are disposed off site to a treatment process. This process is an acid / alkali treatment process which produces a non-hazardous press cake. The process involves mixing liquid acid wastes with an alkali lime slurry mix in a reaction vessel. Once the mix has become neutral it is passed through a hydraulic press, the filtrate produced is either discharged or recycled to produce more lime slurry, the press cake is sent to a non-hazardous landfill.

Improvement Plan

Aside from routine activities that endeavour to achieve improvements, the setting of specific project objectives & targets is integrated into the site ISO14001 management system.