

## How WRC's waste doctors have helped their clients in the year since lock-down began...

It's a year since the first lock-down started. Since then our labs have stayed open throughout, adopting split shifts and additional safe working practices so we can continue to support our customers. Look how much has been achieved by our waste and resources team even against this backdrop - here are a few highlights.

### March



We completed our report for ICER on "Assessment of Persistent Organic Pollutants (POPs) in waste electrical and electronic equipment (WEEE) (<https://bit.ly/3id75Lf>). We now want to help industry accurately assess other polymer streams to demonstrate that they are compliant with the POPs Regulations and WEEE Directive.

### April



Three national regulators accepted our current non-hazardous waste classification for our customers' incinerator bottom ash. To achieve this we provided expert routine sample assessment and data monitoring as well as in-depth advanced characterisation work to understand the chemical speciation of trace heavy metals critical for accurate classification.

### May



We carried out MONS testing on disposable wipes as part of the Fine to Flush programme to provide a measure of the biodegradable content of personal care products. By working for manufacturers we helped the water industry to reduce plastics entering domestic wastewater.

### June



We talked to a number of energy from waste operators about ammonia testing in IBA. Ammonia is being used with urea to dose flue gas emissions and meet more stringent NOx emissions standards. The question was what test would generate the most useful data.

### July



We completed revisions to our expanded toolbox of advanced tests for speciating metals in biomass ash to support hazardous property assessments, especially HP14 (ecotoxic) (<https://bit.ly/39ASiWK>). At the same time we widened our network of European synchrotrons for XAS analysis to support our metal speciation research/service and worked with a consortium on behalf of CEWEP (European EfW trade association) to understand HP14 assessment across CEWEP members.

## August



We supported one energy from waste facility investigate the suitability of using their process residues as cement replacements. We provided consultancy around mix formulations, chemical properties and undertook environmental leaching test assessments to develop an end use for the material.

## September



As we came out of lockdown 1 we provided support to an anaerobic digester operator to better understand the composition of food waste being received at the facility. Following representative site sampling of incoming loads we sorted through a time series of large samples of food waste in our labs to be sure of getting robust data.

## October



We looked at the composition and temperature that slags are formed on EfW boilers, causing fouling. By helping our clients understand these properties they can learn how to minimise slag formation in their process reducing process downtime.

## November



We battled the elements and Covid restrictions to collect samples of waste soft furnishing textiles and polymers from around the country. We're helping the Environment Agency understand the levels of POPs in sofas, chairs and other soft furnishings.

## December



All year, through improved sampling and analysis, we have helped a new biofuel EfW operator customer to consistently report higher biogenic carbon values than they could previously.

## January



We successfully renewed our accreditation to ISO/IEC 17025:2017 for those clients that need UKAS accredited testing for a range of assessments including biodegradability testing such as BMc or DR4.

## February



We collected hundreds of samples of non-WEEE cables and are now embarking on XRF screening and chemical testing to investigate whether they contain POPs for the BMRA.

**And so it continues...difficult problems to solve in difficult times, but there is light at the end of the tunnel!**

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