

## Title: Gold mining in Sydney - city scale bioprocessing of gold rich waste materials

**Abstract:** Billions of dollars of valuable materials and precious metals are discarded in waste streams every year – contributing to an ever growing environmental and humanitarian catastrophe. Mint Innovation have developed a new process for recovering valuable materials including gold, palladium and copper from the thousands of tonnes of e-waste that are discarded in cities like Sydney every year. Based on a chemical/biological process, the Mint gold recovery plant is tailored to a city scale waste problem and can be deployed into any city adjacent to the point of waste collection. The low-carbon technology means gold recovered at Mint biorefineries produces 90% less carbon emissions than virgin mined material during processing. Mint have been developing and scaling the technology since 2017 and are now in the final stages of deploying the world's first commercial biorefinery in Sydney. Following completion of the first deployment, Mint plan to establish plants in cities across the world.