

Wasted streams: the downstream legacy of mine waste from derelict mines

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Environmental impacts from old derelict mines continue in many areas of former and ongoing mining. Although environmental impacts at the derelict mines themselves are often well constrained, impacts from the downstream dispersal of solid phase mine waste and aqueous contaminants are often cryptic and overlooked. We use field portable X-ray fluorescence (XRF) spectrometry, Total Reflection XRF spectrometry and X-ray diffractometry to help quantify off-site environmental impacts from derelict base metal mines. Our research shows rather variable environmental impact from old mines, depending on a range of physical characteristics of the site, including mineralogy and grain size of the waste, and the history of human activity during mining.