

Bid to snuff out threat from old mines

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Communities near old mine workings could benefit from moves to limit the harmful impact of slow-burning slagheap fires.

Engineers from the Universities of Edinburgh and Strathclyde are studying piles of coal, shale or other minerals left over from industrial mining to assess how best to cope with hidden risks.

Their research was presented at the [Geological Society of America](#) Annual Meeting in Minneapolis, Minnesota.

The heaps, also known as bings, can self-ignite many years after they are formed and burn slowly for years afterwards, leaching chemicals, emitting [greenhouse gases](#) and raising the risk of landslip.

Temperature probes and [thermal imaging](#) were used to study a burning bing in North Lanarkshire, Scotland.

The 30-metre high waste heap began smouldering in 2009, some 80 years after the pit was closed.

"Examining slow-burning fires in piles of shale or coal helps us to understand the dynamics of how these fires move slowly but burn large amounts of fuel, and how fissures of air within the heap can fuel the burning" said Dr. Guillermo Rein, School of Engineering at the University of Edinburgh.

The researchers are studying how the fires develop and spread, and hope

that this new understanding will enable the development of low-cost, effective ways to manage the fires.

The team were able to discover how the [fire](#) took hold and developed, and pinpointed channels within the heap that deliver air to fuel the smouldering.

This will help protect the local communities by limiting the risk of landslip as well as safeguarding the local [ecosystems](#) and environment.

Provided by University of Edinburgh

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