

Simple test could offer cheap solution to detecting landmines

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Scientists have developed a simple, cheap, accurate test to find undetected landmines.

Students from the University of Edinburgh have created a custom-made [bacteria](#) that glows green when it comes into contact with chemicals leaked by buried explosives.

The bacteria can be mixed into a colourless solution that, when sprayed on to the ground, forms green patches to indicate the presence of landmines.

Researchers say that the organism, which is cheap to produce, could be delivered from the air onto areas thought to contain landmines, with results available within a few hours. The bacteria is not dangerous to people or animals.

Between 15,000 and 20,000 casualties are caused each year by landmines and unexploded ordnance, according to the charity Handicap International. Some 87 countries contain minefields including Somalia, Mozambique, [Cambodia](#), Iraq and Afghanistan.

Scientists and engineers were able to create their bespoke bacteria with an emerging technique known as BioBricking. The tool enables [bacteria](#) molecules to be assembled from a range of tiny parts called, like a very small-scale machine.

Researchers involved in the project say that although as yet they have no plans to make their product commercial, they believe it could form a cheap, accessible and easy-to-use alternative to existing landmine sensors.

Dr Alistair Elfick of the University's School of Engineering, who CO-supervised the students' project, said: "This anti-mine sensor is a great example of how innovation in science can be of benefit to wider society. It also demonstrates how new scientific techniques can allow molecules to be designed for a specific purpose."

Source: University of Edinburgh

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