

Cultivating a cure for concrete cancer

May 1 2012

'Self-healing' concrete is being developed by researchers at Northumbria University which could see cracks in concrete buildings become a thing of the past.

Dr Alan Richardson, a Senior Lecturer in Construction in the School of the Built and Natural Environment, is using a ground-borne bacteria – bacilli megaterium - to create calcite, a crystalline form of natural calcium carbonate. This can then be used to block the concrete's pores, keeping out water and other damaging substances to prolong the life of the concrete.

The bacteria is grown on a nutrient broth of yeast, minerals and urea and is then added to the concrete. With its food source in the concrete, the [bacteria](#) breeds and spreads, acting as a filler to seal the [cracks](#) and prevent further deterioration.

It is hoped the research could lead to a cost-effective cure for 'concrete cancer' and has enormous commercial potential.

While further research is needed, Dr Richardson is hopeful that the repair mortar will also be effective on existing structures.

So-called 'concrete cancer' may be caused by the swelling and breaking of [concrete](#) and is estimated to cost billions of pounds worth of damage to buildings.

Dr Richardson said: "This project is hugely exciting. The potential is

there to have a building that can look after itself.”

Provided by Northumbria University

Citation: Cultivating a cure for concrete cancer (2012, May 1) retrieved 26 June 2024 from <https://phys.org/news/2012-05-cultivating-concrete-cancer.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.