Geofabrics

Clearing the Route

CuTex Geocomposite – Safe and Effective Root Barrier Inhibition for Japanese Knotweed

The spread of invasive plants, like Japanese Knotweed, is a huge headache for the rail industry. Damage to infrastructure – like pipework, drains, ballast and cabling – and uncontrolled spread to neighbouring land can result in excessive costs for remediation, prosecution and compensation claims. Knotweed can also obscure railway signals and signs, making it a significant safety concern, too.

What is Japanese Knotweed?

Japanese Knotweed is considered to be the most aggressive of invasive plant species. Affecting a wide range of environments, it's often found colonising man-made habitats, such as roadsides, railways and brownfield land. Its main method of spreading is via rhizome fragments – these can be as small as a 1g in weight and still form a new knotweed colony, even after lying dormant.

Knotweed can be dispersed in water, through garden waste, fly-tipping and via machines at construction sites, establishing a colony from one rhizome that can extend up to seven metres with plants around two to three metres high. That means its excavation and prevention methods are a serious business. It's thought that eradicating all known knotweed in the UK would cost billions of pounds.

The Tried and Extensively Tested Solution to Invasive Plants

It's not illegal to have Japanese knotweed on your land, but legislation exists to prohibit its further spread. Once it has been removed from a site, action must be taken to prevent any rhizome fragments from re-growing.

There are a number of solutions on the market, from chemical treatments to plastic barriers. However, these can cause problems of their own. Plastic prevents water from draining freely, creating the risk of flooding. And chemicals can damage the ecosystem and have a detrimental effect on nutrients, other plants and wildlife. This is where CuTex comes in.

CuTex is a permeable geocomposite root barrier system consisting of a copper sheet mechanically encapsulated between two high-strength geotextiles. An innovative solution to the problem of invasive plants, it can provide direct protection from root intrusion to foundations and drains, landfill caps, roads, railways, dams and green roofs. So, what are its key benefits?

A Fully Permeable Barrier

Root barrier systems to prevent the spread of Japanese knotweed have traditionally involved the use of impermeable membranes. CuTex is unique in that it is fully permeable.

This offers major advantages over plastic barriers in a railway environment, which can prevent drainage, create waterlogging in the ballast and cause track flooding and damage to electrics. CuTex allows water to drain freely, protecting ballast from 'ponding'.

A Double-Edged Approach to Root Inhibition

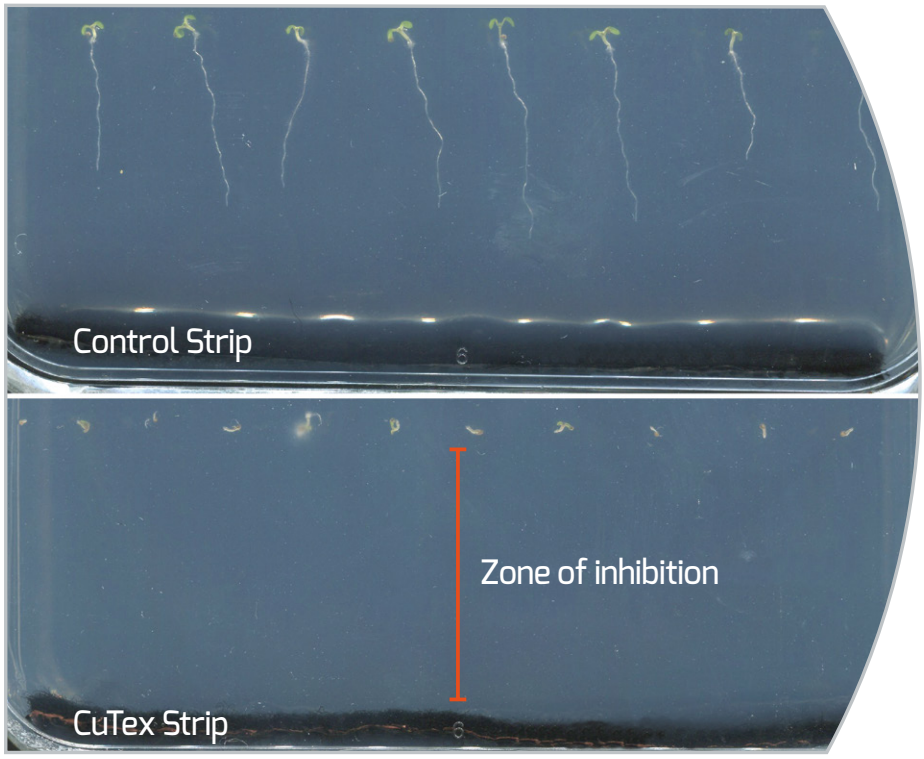
CuTex is a physical barrier to root growth. But more than that, it produces a reaction which acts as a chemical barrier, too.

The copper oxide ions released by the copper layer in CuTex create a 'zone of inhibition' which stops the spread of aggressive plants – with no detrimental effect on soil nutrients or other plants. This 'zone' becomes more effective over time.

Extensively and Independently Tested

Geofabrics has invested heavily in testing to evaluate the effectiveness of CuTex. The Centre for Plant Sciences at the University of Leeds independently assessed CuTex as a root barrier to Japanese knotweed and other invasive plants.

The research verified that CuTex inhibits root growth, is safe and that its effectiveness increases over time – providing the best possible solution on the market today.



A 'Future Proof' Root Barrier System for HS2

Washwood Heath in Birmingham is where HS2's fleet of state-of-the-art high-speed trains will be serviced and maintained once in operation. In preparation for HS2, excavation of Japanese knotweed took place on various dates through autumn and winter 2020, with the final excavations complete in early March 2021.

The areas cleared required a high-performance, permeable and horizontal root barrier that would halt the growth of knotweed once installed – also preventing 'ponding' issues in these areas. CuTex was installed in six separate areas, providing reassurance that Japanese knotweed was eradicated from the area, permanently, providing a clear environment for HS2.

Solving the Problem of Knotweed for Network Rail

Network Rail is faced with the problem of Japanese knotweed on much of its land, nationwide. Before the implications of knotweed were known, this plant was actually introduced to stabilise embankments. However, it soon took over and now threatens ballast, pipework, foundations of buildings, drains and electrics across the NR estate. In addition to the damage that it's causing to track and infrastructure, Network Rail has faced a huge number of claims from homeowners, whose properties back on to railway land, from where knotweed has spread.

With strict guidance in place, regarding the mapping and treating of knotweed, Network Rail has traditionally used pesticides and herbicides to treat the problem. CuTex, however, is a more effective solution that only has to be laid once, as opposed to repeated cycles with chemicals.

Andrew Leech, Commercial Director at Geofabrics explains:

"The investment we made in testing CuTex was vital as we wanted proof that CuTex was the best product available on the market. With verification from the University of Leeds backing our product, the rail industry can install CuTex safe in the knowledge that they are doing their utmost to address the problem of Japanese knotweed on their own land – as well as acting responsibly to prevent the spread to neighbouring land."

Get in Touch for More Details:

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CuTex
Copper Composite Root Barrier

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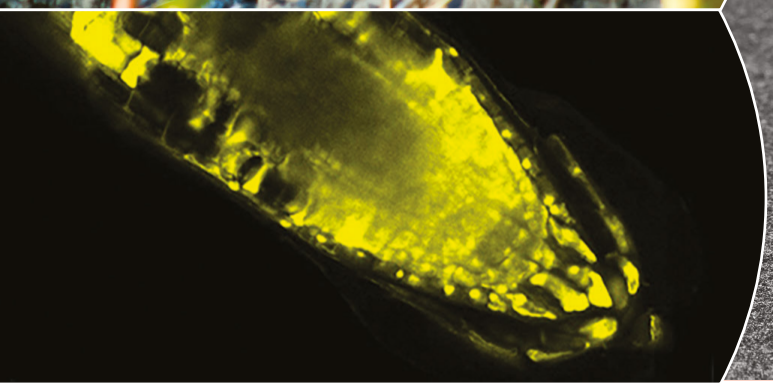
Stop Japanese Knotweed in its tracks



The scientifically-proven root barrier for the rail industry

- Permeable – allows drainage with no pooling or flooding risk
- Safe – will not damage the environment, wildlife or contaminate water
- Effective - Independently tested

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