

Phlorum
Estates Review
April-May 2007

APRIL-MAY 2007

Estates
Review

Tying the knot

An area roughly the size of London is under threat from Japanese knotweed in the UK, posing huge risks for commercial and domestic developments says *Dr Paul Beckett*, founder of environmental consultancy *Phlorum*

THE DEPARTMENT for the Environment, Food and Rural Affairs has conservatively placed the total cost of controlling Japanese knotweed at £1.56bn. Developers are cursing botanical enthusiasts who introduced this invasive weed from Asia in the mid-nineteenth century as an ornamental plant.

Dr Beckett says the speed with which it spreads is phenomenal, growing from pieces of the plant or root system that are cut and transported by people, animals or by water.

"Japanese knotweed does not compete fairly with our native species and is able to spread unchecked. Once it has established itself, Japanese knotweed shades out native plants by producing a dense canopy of leaves early in the growing season."

Dr Beckett says it can be a recurring expense for developers if the weed is not properly removed and the site remains infected, even by small fragments of the rhizome.

"If the knotweed is left untackled it can significantly devalue the land harbouring it."

If knotweed comes into contact with flowing water it can become hazardous. Water acts as an ideal device for transportation of the weed and it can begin to grow in any place that it is deposited.

Knotweed can spread rapidly down watercourses and any flooding can easily dislodge rhizomes, which are then carried downstream to start new colonies.

One of the most high profile cases of Japanese knotweed contamination has been the recent development of the 2012 Olympic sites in east London.

With the redevelopment of these semi-derelict sites on a tight timescale in the first place, the cost and disruption that the eradication of knotweed can cause could be disastrous.

Inevitably, the problems faced with the Olympic development and other major infestations that have hit the headlines, has led to a number of scare stories about Japanese knotweed that Dr Beckett says some unscrupulous companies are taking advantage of.

"Unfortunately there are a few companies out there who aren't environmental consultants, but who claim to be knotweed experts and charge vastly over inflated sums for its removal.

While knotweed does pose a serious risk to developments, it is essential that you carefully seek out professional advice rather than having a knee-jerk reaction that could set you back a small fortune."

It is found, for example, in several places on the riverside throughout Leicester where the local council



has prioritised the control of plants growing close to the watercourses, next to important habitats or in the floodplain, because the main means of contamination is through rhizomes dislodged by the flood.

The locations of the plant have been mapped so that its spread can be monitored regularly. There are isolated clumps and stems along the canal, which pose a threat to structural integrity of the riverside. If this were to collapse, the surrounding land would experience a shift which would effect nearby developments.

Japanese knotweed is also common on sites that are disturbed by human activity, such as railway lines, old allotments, rubbish tips and derelict land.

The transfer of soil, rubble and rubbish between sites is the most common cause for the spread of knotweed although it is also spread from site to site through bits of root stuck to machinery and tires.

Dr Beckett says for the development of any new site it is essential that polluted areas are clearly marked out. Areas that do not need to be disturbed during the works should be fenced off, allowing a buffer of several metres to allow for the likely extent of the roots.

On leaving parts of the site known to contain Japanese knotweed, any tracked machinery that has been used should be thoroughly cleaned within a designated area. This spot should be as close as possible to the polluted area on which the machinery has been working to avoid any spread of the plant.

Phlorum was called in to deal with a knotweed ridden industrial site in Havant, Hampshire, in October



2004 which consisted of a derelict piece of land which was part of an existing factory. The owners of the factory were looking to sell the unused land from the site which had been previously valued at £1m.

But the land had not been managed for more than 20 years and had become overgrown with scrub and the centre had become infested with Japanese knotweed, resulting in a severe devaluation of the site.

The estimated cost of removing the knotweed to a landfill site was £500,000, half of what the land was worth. This posed a massive problem for the land owner who did not want to lower the sale price and had a potential buyer already interested in the land.

Phlorum came up with a solution that cleared the knotweed in six months, using a mixture of herbicide treatments before removing the crowns, stems and clumps, which are the most invasive parts of the



plants, and taking them to a specialist landfill site.

It was then necessary to employ a mechanical method of sorting material to remove larger rhizomes and break up other smaller rhizomes which promotes the uptake of herbicides.

The work was carried out for about £30,000 - an estimated saving of £470,000.

Material containing Japanese knotweed is classified as controlled waste under the Environmental Protection Act, 1990 and as such must be disposed of safely at an appropriately licensed facility such as a landfill site, according to the act's Duty of Care Regulations.

To prevent Japanese knotweed from damaging important habitats, it is necessary to control or remove it. Attempting to dig out the plants either by hand or excavator usually makes the situation worse.

There are two commonly used methods for the eradication of Japanese knotweed:

Spraying the weed with an appropriate herbicide is one available option; however it can take several years to make an impact and rarely achieves eradication without mechanical disturbance.

Herbicide treatment can give the appearance of control but the roots below ground may still be viable and will cause the plant to regrow. Spraying can usually only be carried out during the growing season when there is green, leafy material present.

Herbicide treatments take effect within a few weeks but eradication usually requires a number of revisits throughout the growing season. Whilst this is rarely a complete solution to any knotweed problem a spraying programme may be an option for weakening the plant before removal or treating regrowth and remaining plants in the spring.

A quicker method of removing Japanese knotweed involves the clearing of the above ground-leaf and stem material and the removal of below-ground material that is polluted with roots.

Dr Beckett says the future of Japanese knotweed in Britain looks set to continue being problematic.

The weed is already a significant threat to gardens, buildings, roads and agricultural land throughout the western world, but the worst may be yet to come.

"If you suspect that your site is contaminated or if you already have a problem with knotweed, it is vital that you take action and seek the support and guidance of professional experts. If you don't you run the risk of significantly devaluing your development site, or at worst, face legal action," says Dr Beckett. ■

Clockwise from above: Japanese knotweed can grow through concrete with significant consequences; Phlorum use a mixture of herbicide treatments to remove the most invasive parts of the plants, the crowns, stems and clumps; knotweed contamination could cause problems to the semi-derelict 2012 Olympic sites in east London