

Beacon

Invasive Plant Intelligence

Authored by
leading invasive
plant experts,
Environet



Removing Japanese Knotweed from Development Sites

Minimising disruption and cost is key for developers, but the environmental impact of invasive plant removal is increasingly important.

The discovery of Japanese knotweed on site is always a concern for developers who are anxious to keep development schedules on track and ensure there are no costly delays. With remediation usually taking place within an enabling works contract or very early in the construction process, swift and efficient remediation is vital in order to avoid major disruption.

But with increasing numbers of developers committing themselves to new and ambitious Net Zero pledges, sustainability is playing a major part in decision-making all the way through the supply chain and ensuring that the environmental impact of on-site invasive plant removal sits comfortably within their wider sustainability strategy.

The good news is that treatment options have developed and improved considerably over recent years and it's now possible to avoid the significant financial and environmental costs associated with consigning vast amounts of soil to landfill.

Is it possible to 'go green' when dealing with knotweed?

The short answer is yes. Herbicide treatment is seldom the answer for developers since there's no way of knowing if the rhizome is dead - and disturbing the ground is likely to act as a catalyst for new growth. Excavation is the recommended approach and it's here that new innovations are creating more environmentally friendly and lower-cost options for developers.

KEY LINKS

**Commercial
Solutions**

**Xtract™ Zero-Waste
Solution**

Site Supervision

Eco Innovations



Xtract™ in action

The traditional 'Dig & Dump' method, whereby knotweed infested soil is physically excavated with all materials consigned off-site to authorised landfill, is extremely costly and creates significant adverse environmental impacts arising from haulage, the use of valuable landfill and the need to import clean fill. Accordingly, It should be considered a method of last resort.

Xtract™ - separating knotweed from soil

A much more eco-friendly alternative is Xtract™, our patented method for removing knotweed from construction sites and screening it to separate the knotweed rhizome, before returning the clean soil to the ground. It can be completed in a matter of days and costs can be reduced by as much as 50%, due to the elimination of landfill disposal and need to import clean fill.

Reducing landfill tax costs

Landfill Tax is now generally charged at the higher rate for disposal of contaminated topsoil, around £90 per tonne, yet there is widespread abuse of the system resulting in the illegal reduction of costs by classifying the soil incorrectly. This means many pay the lower rate (a few pounds per tonne) when in fact topsoil, or a mix of topsoil and subsoil, should attract the higher rate.

"Costs can be reduced by as much as 50%, by eliminating landfill disposal and the need to import clean fill."

Developers using Xtract™ not only save altogether on Landfill Tax costs (legally) but they can also usually claim Landfill Remediation Tax Relief. Introduced by the Finance Act 2001, this tax relief incentive encourages the redevelopment of derelict land that has been blighted by previous industrial use. Extended to include Japanese knotweed removal in 2009, it allows relief from Corporation Tax of up to 100% for companies involved in the remediation of contaminated land, plus an additional deduction of 50% for qualifying expenditure incurred by companies cleaning up contaminated land acquired from third parties.

As a result of the tax savings and the environmental impacts, Xtract™ has grown hugely in popularity in recent years as the importance of sustainability has increased and Net Zero targets have become central to all decision-making.

Watch our Xtract™ removal process in action!



Creating biochar from knotweed rhizome

Even Xtract™ produces some waste in the form of knotweed rhizome and to deal with this we need to go one step further. We recently secured a patent for our method of converting knotweed rhizome to biochar, locking the carbon scavenged by the plant during its lifetime away in the soil for thousands of years. The process involves heating the rhizome in the absence of oxygen, otherwise known as pyrolysis, thereby removing naturally occurring tars to leave carbon in the form of charcoal. Benefiting from a honeycomb-like structure, the charcoal can be charged with additives such as liquid

organic fertilisers to create a useful soil amendment that significantly improves soil structure. Conversion of the rhizome resulting from excavation into biochar is the final stage of a complete eco-friendly solution for dealing with knotweed waste, which could potentially be used to deal with plant waste produced by other invasives such as bamboo and Giant Hogweed. The next stage of our research will tackle delivering economies of scale, including processing large quantities of waste efficiently and sourcing markets in the agricultural and horticultural sectors for the biochar produced.



Authored by experts, Beacon is a series of information papers providing insights into the removal and treatment of invasive plants in the UK.

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