



## JAPANESE KNOTWEED EXCAVATION & LANDFILL

### ADVICE NOTE

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### Summary

In order to excavate Knotweed and dispose of it at a licensed landfill, there are obligations that need to be satisfied to stay within the law. There are tasks that need to be completed, to ensure that an excavation is carried out efficiently, without delay and economically.

Excavation is one of several methods for eradicating Knotweed and offers landowners piece of mind because eradication is immediate; similarly because Knotweed goes off-site the residual risks resulting from this form of control are negligible.

However, excavation and cartaway to landfill can be expensive. The Environment Agency in their guide "The Knotweed Code of Practice (EACoP 2006)" state that excavation should be regarded as a last resort and other control measures should be assessed first; most of which are more economic and can be completed quickly and efficiently.

If excavation and disposal to landfill is the only viable option (which can often be the case) then this guide looks at the key issues which must be addressed to enable excavation to be completed efficiently, without delay and economically.

To put excavation into context, Japanese Knotweed spreads via rhizomatous roots. These can extend in the ground some 7 metres from a visible stand and 3 metres deep. It is therefore quite possible to generate 20 tonnes (a lorry load) of waste from just 1M<sup>2</sup> of visible Knotweed. Knotweed can reproduce through a small fragment of root making it imperative that all roots are excavated, while not contaminating other areas of the site.

### Sequence of operations to ensure that waste can go off-site.

1. Desktop study: Find an appropriate landfill site and obtain a copy of their controlled waste license and landfill operator's license. Obtain a Site Investigation Report or find out about the site history. Check with the landfill operator as to the nature of material they are allowed to accept.
2. Site hygiene, contain the Knotweed, if it's unknowingly disturbed and spread further, the costs will increase. Fencing off Knotweed is advisable.
3. Undertake contamination testing of the proposed Knotweed waste. There are methods employed to effectively collect & test waste material. At PBA Solutions we can ensure that these methods are employed.
4. Get test results and forward to the landfill operator for their acceptance.
5. Collect information and apply for tax exemption if applicable.
6. Complete pre-treatment.
7. Arrange haulage, obtaining copies of their Waste Carrier's License.
8. Undertake excavation ensuring that a Knotweed Clerk of Works is employed as a watching brief or a Knotweed specialist is employed to complete the whole operation.
9. Record all waste leaving site.
10. Obtain waste transfer notes & weighbridge tickets, verify that they tie up.
11. Reconcile on-site records with waste transfer notes & weigh bridge tickets. Check numbers, quantities, dates and tax status.

## Desk Study

Once excavation and landfill has been selected as the only viable control option, several other factors, if not already assessed, must be looked at in further detail. Financially it's wise to check that a local landfill site, able to take Knotweed waste. Not all landfill sites take Knotweed waste. Before excavation can start on site, contamination & tax exemption issues need to be resolved and as such these issues have been discussed below. However site hygiene and pre-treatment should be completed simultaneously with desktop work.

## Pre-treatment

Pre-treatment is now an integral component of any Knotweed control programme that integrates taking Knotweed waste to landfill, and as such there is a legal obligation to undertake pre-treatment. There are several pre-treatment methods that can be implemented to fulfil the obligations of the waste regulations, and it is understood that pre-treatment will become more onerous as time goes on.

The Environment Agency (EA CoP 2006) state that all excavated material should be pre-treated. The objective of pre-treatment is to reduce the viability of the Knotweed. At PBA Solutions we can ensure that this operation is effectively specified and implemented. It's important to remember that certain chemical treatments could either limit or adversely effect waste acceptance. It is therefore important that advice is sought from a Japanese Knotweed Consultant with an understanding of these issues.

## Excavation

Excavation of Japanese Knotweed is often completed using mechanical excavators. It is important that this operation is conducted under the watchful eye of a qualified Japanese Knotweed Clerk of Works, as recommended by the Environment Agency. An important role for the Clerk of Works, in relation to excavation, is to monitor progress and ensure that site hygiene is enforced at all times.

An experienced Clerk of Works is able to manage a site in such a way that the risk of cross-contamination is greatly reduced. A methodical approach to managing excavators is fundamental if work is to be completed efficiently. Factors to consider are:

- Suitable haulage routes with hygiene controls in place
- Supervision via the appointed Clerk of Works (correct visual identification and chasing of Knotweed rhizome)
- Driver education (hygiene, overfilling, enforcing measures to rectify spilling of Japanese knotweed waste)
- Excavator management (keeping the machine in or out of the contamination zone)
- Suitable site clean-down on completion
- Suitable cleaning of machinery
- Management of other trades

**One aspect of good Knotweed management is that of controlling costs. The cost of employing a Knotweed specialist can be absorbed through the saving, resulting from effective excavation. Advantages of using a Knotweed specialist during excavation are:-**

- Correct rhizome identification. Failure to do this may result in excessive waste coming off-site, which is expensive. To the untrained eye sycamore root can be mistaken for knotweed.
- An experienced Clerk of Works is able to chase out knotweed, vastly minimising the amount of waste that has to go off-site.
- Good excavator and vehicle management reduces needless cross-contamination, reducing the amount of waste that needs to go off-site.

### **Legal context of removing Knotweed to landfill**

The Environment Agency advise that off-site disposal should be treated as the last resort when evaluating knotweed control options. Early consideration of knotweed and the implications of control should be undertaken from the outset, to enable Architects or Developers to accommodate other control measures.

From a commercial perspective, taking knotweed off-site is very attractive. At PBA Solutions we can ensure that off-site removal is undertaken professionally, ensuring that any legal obligations are met. Japanese Knotweed is classified as 'Controlled Waste' under the Environmental Protection Act 1990.

Waste must be transported by a registered carrier under the Controlled Waste Regulations 1991. Furthermore there is a legal requirement to pre-treat waste. This is a legal requirement under the Landfill Directive 2002.

### **Contamination**

It is important to ensure that waste designated for landfill is correctly described and not contaminated with anything other than knotweed. Contamination testing must be undertaken to accurately describe the waste. It is important that no other contaminants are present at levels which would make the proposed waste "Hazardous Waste". There is a mechanism in place for documenting waste movement in the UK and a licensed waste carrier will want a description of the waste to be carried. This is known as the Duty of Care Regulations.

### **Tax Exemption**

Customs & Excise tax waste that goes to landfill. Currently the rate is £32 per tonne (April 2008) increasing year on year at present. There is a lower rate, currently £2.50 per tonne (April 2008) applied if the waste contains less than 5% visible knotweed. In addition it is currently possible to get tax exemption from Customs & Excise in certain circumstances. Application for exemption requires survey data and information pertaining to historical land use. At PBA solutions we can collect data and apply for exemption as part of the knotweed management process.

