



MILLWARD FORESTRY

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Japanese Knotweed

History

Japanese Knotweed is a highly invasive plant and is recognised as the most invasive species of plant in Britain today. It originates from Asia and is a member of the Buckwheat family (Polygonaceae). Records reveal that it was introduced into the UK by a Victorian horticulturalist in 1824 as an ornamental plant and as a source of feed for cattle. Japanese Knotweed is now abundant throughout the whole of the UK.

Although the most common and notorious variety is Japanese Knotweed it is not restricted to one species of Knotweed, there are variants of the species which include Giant Knotweed, Dwarf Japanese Knotweed, Himalayan Knotweed, Lesser Knotweed, Russian Vine, Hedge Bindweed and Bohemica, a hybrid formed by Japanese Knotweed and Giant Knotweed



Japanese Knotweed is a resilient plant that, in the UK and Europe, only spreads via the movement of its' rhizomes. The rhizome, according to The Environment Agency Guidelines, can grow to a depth of 3m or more and up to 7m away from the plant. The stem of the plant can reach 3m high and is bamboo like in appearance. The leaves are 'heart shaped' and a lush green colour. It produces white flowers around September and October depending on its geographical location.

The problem

Japanese Knotweed is capable of growing 10cm per day and is found throughout the UK. It is highly invasive and capable of exposing weaknesses in buildings, forcing its way through foundations, concrete and tarmac. It has the capability to regenerate from rhizome as small as 0.4g therefore there is a massive risk of spreading the plant via groundwork and disturbance. Japanese Knotweed can cause, a reduction in land value, damage to foundations and structures, damage to road surfaces, damage to walls and swamp out native vegetation.

Japanese Knotweed and the Law

Japanese Knotweed is regulated by several pieces of legislation, the main being:

The Wildlife and Countryside Act (as amended) 1981

The Environmental Protection Act 1990

The Environmental Protection (Duty of Care) Regulations 1991



Third party litigation where damages may be sought for allowing Japanese Knotweed to spread onto other

properties may be pursued against neighbours who fail to control it. This puts a duty of care on the landowner with Japanese Knotweed infestations to be proactive in the control and eradication of it. Planning permission will also generally be refused without an eradication programme in place for the infestation.

All parts of the plant and any soil contaminated with the rhizome are classified as controlled waste and are required legally to be removed and disposed of by a licensed waste control operator.

Claims may comprise of a private claim in nuisance or a private prosecution under The 1981 or 1990 Acts. The main objective is to take legal action quickly to ensure that remedial action is taken to ensure that the incidence of Knotweed does not hinder a potential development plot or damage neighbouring land.

Control Measures

Chemical Control

Knotweed can be successfully controlled by herbicide spraying. In most cases chemical control will be the cheapest and most effective method of eradicating knotweed. Although this may take repeated applications all parts of the plant and its rhizomes are killed. With all removal methods there is always the risk that some small parts of the plant will be missed and will re-grow. There are two main methods of application, overall spraying of the whole plant or stem injection. The main herbicides normally used are either Glyphosate or Tordon 22k. Spraying should be carried out when the plant is actively growing during spring and summer. Both will also kill or damage other plants so care needs to be taken to avoid unwanted collateral damage. An adjuvant may be added to increase the efficacy of the herbicide uptake by breaking down the coating on the leaves when overall spraying. Care needs to be taken if the plant is near water and permission must be sought from the Environment Agency prior to application. Glyphosate is approved for use in or near water.



Overall Spraying

This is where the entire leaf area is sprayed using a knapsack sprayer. As both herbicides act by translocation i.e. absorbed by the green parts of the plant and taken down the stem into the roots, the smaller the plant is the more effective this will be. If not sprayed early in the season then consideration needs to be given to cutting down the growth to ground level and then spraying the shoots when they re-grow. As Knotweed rhizomes are extensive, follow up applications will be necessary. Follow up spraying should be continued until no more growth is observed

Stem Injection

Unlike overall spraying which are applied to the surface of the leaves of the plant, stem injection targets the application of a controlled quantity of herbicide directly into the core of the plant. This direct targeting of the herbicide application enables stem injection to be the least insidious method of eradication of Japanese Knotweed. It is particular useful when overall spraying is unsuitable due to the proximity of other non-target vegetation or where herbicide drift may be a problem. Tall, mature Knotweed stems are cut down and a measured dose of concentrated herbicide is injected directly down into the cut stem use a hand held spot applicator gun. Stem injection has no impact on any surrounding vegetation or wildlife. Stem injection is accepted and authorised by the E.A. to use on organic approved farms, without causing the loss of their organic status. Due to the labour intensiveness of stem injecting it is best used on smaller infestation or sites that carry environmental issues for example water courses and TPO's.

Geo-textile Membranes

These are also known as root barriers, these are a physical barrier protecting a structure or site from Japanese Knotweed infestation. These can be used for cell burial, stock pile formation and other burial methods.

Dig and Dump



On occasions there is no other option on a development site apart from removing the Japanese Knotweed contaminated soil from site and disposing in an authorised landfill site.

On-site Burial

Where the site conditions allow an on site burial strategy may be possible. This involves placing the Japanese Knotweed contaminated material at least 5m below the final ground level and capping it with clean material.

Cell Burial

Japanese Knotweed Onsite burial is a fast cost effective method of dealing with Knotweed Infestations. The constraints to this methodology are site size, water levels and area of development. Within the cell burial programme a pit is dug and lined with a geotextile membrane. All joints within the cell are welded closed. The Japanese Knotweed is then excavated and placed within this cell, ensuring no parts of the plant are left. This is then capped with a cover of geotextile membrane and welded shut, thus creating "The Cell". A cover of soil is then placed on top of the cell to a depth of approximately 2 metres. This solution is perfect for areas of sites that are not to be piled or built on. Historically clients have built car parks on top of the cells.

On-site Translocation

Soil can be excavated from the contaminated area and moved to a more convenient area on the site where it can be stockpiled on a geo-textile membrane where the Japanese Knotweed can be allowed to grow normally then herbicidally treated. Once eradication has been completed the soil can then be reintroduced and used normally on the site. This method reduces the environmental and economic problems of the dig and dump strategy.

Land Remediation Relief – Tax Relief

Land owners and developers may now be able offset some of the cost of treating Knotweed under the Finance Bill 2009, which came into effect on April 1st 2009. The act allows tax deductions for the cost of treating land contaminated by Japanese Knotweed. As of 1st April, bodies liable for corporation tax can claim a 150% deduction on expenditure for removing Knotweed. Costs will still need to be paid upfront but then claim it back at their year end..

You can contact Millward Forestry

Tel: 01737 245104 Fax: 01737 225619

Email: millwd@globalnet.co.uk Website: www.millwardforestry.co.uk