

Japanese Knotweed Overview

Species: Japanese knotweed (*Fallopia japonica*, syn. *Polygonum cuspidatum*, *Reynoutria japonica*).

Description: a non-native invasive weed species. It grows in dense clumps up to 3 metres tall, producing shield-shaped green leaves. Its stem is hollow – similar to bamboo. It produces clusters of cream flowers towards the end of summer.

Typical locations: common along railways, riverbanks, roads, footpaths and derelict sites.

Environmental risks: out-competes native plant species, threatening bio-diversity.

Structural risks: the extensive root system can penetrate roads, paths and walls with the potential to cause substantial structural damage.

The law: the Wildlife and countryside Act 1981 makes it an offence 'to plant or otherwise cause' the growth of Japanese knotweed. The Environmental Protection Act 1990 EP (Duty of care) Regulations 1991 classify Japanese knotweed as 'controlled waste.'

Control options: Herbicide treatment (including stem injection), excavation, bund treatment, burial and root barrier capping.

What is Japanese knotweed?

Japanese knotweed was introduced into the UK as an ornamental plant during the 1800s by plant hunters. It has the following external characteristics:

- It forms dense clumps known as 'stands'.
- The hollow stems look like bamboo while the shield-shaped leaves look similar to dogwood.
- In the spring the plant produces fleshy red tinged shoots, quickly developing into dense stands as described above.
- These stands can reach a height of 1.5 metres by May and 3 metres by June.

The root system

- Japanese knotweed has an extensive underground root (rhizome) network.
- Knotweed normally extends to approximately 3 metres from a visible stand but has the potential to spread to 7 metres where ground conditions allow.
- Roots can reproduce through vegetative propagation, meaning that new plants can be created from small fragments of existing plants. A fragment of root as small as 0.7 grams can grow to form a new plant.

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Identification of Japanese knotweed



Top: Leaves

Middle: Root / Rhizome

Bottom: Mature plant

Top: Young shoot

Bottom: Flowers (summer)

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Typical locations

Japanese knotweed is commonly found along railway lines, riverbanks, roads and footpaths, in graveyards and on derelict sites. It often grows in an area after being dropped, dumped or fly-tipped in soil or garden waste.

The risks posed by Japanese knotweed

The extensive underground root system can penetrate paths, roads and walls causing structural damage. If allowed to spread unchecked, it can cause substantial damage.

Ignoring knotweed is financial nonsense because the cost of waste remediation needs to be added to the repair cost. For example, tarmac gets damaged and needs to be repaired; the waste material containing knotweed needs to be disposed of prior to laying new tarmac. This remediation can be very expensive, particularly if the waste is taken to landfill.

The risks and costs posed by Japanese knotweed can be mitigated by the implementation of a properly managed treatment programme. Early treatment of knotweed can make financial sense.

Surveyors are becoming more aware of Japanese knotweed and this can affect the price of property.

Loss adjusters are becoming more aware of Japanese knotweed. Implementing a suitable control programme can mitigate against rising insurance premiums.

Japanese knotweed and the law

- Under the Wildlife and Countryside Act 1981 it is an offence 'to plant or otherwise cause' the growth of Japanese knotweed. This could include cutting the plant or roots and disturbing surrounding soil if not correctly managed.
- If Japanese knotweed is found on-site, it should be left undisturbed. Advice should then be sought on the most appropriate cost-effective method of control.
- Once disturbed knotweed becomes a waste and subject to the Environmental Protection Act 1990, as well as the Environmental Protection (Duty of Care) Regulations 1991. This act classifies Knotweed waste as controlled waste.
- A waste carrier's licence is required to remove controlled waste off-site.
- Dealing with waste on-site requires a waste management licence unless the Environment Agency Code of Practice is strictly implemented. This requires the expertise of a knotweed specialist such as PBA Solutions.
- Japanese knotweed control work must be undertaken or supervised by a suitably qualified person (see Control section below).

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Control of Japanese knotweed

There are a number of options available for the treatment of Japanese knotweed. Most of the options take a number of years to be effective. Selecting the most appropriate method of control requires present and future land use is assessed, along with environmental factors pertaining to the site in question.

1. Spraying with herbicide

- Spraying the plant with an appropriate herbicide is the most economic option available. The choice of chemicals is affected by environmental issues including adjacent vegetation and waterways.
- The time-scale depends on the chemical used. Spraying can take several years. It is worthy to note that the Environment Agency in their Code of Practice for treating knotweed state that one should be cautious of anyone claiming quick eradication.
- The person undertaking herbicide application must hold an NPTC Certificate of Competence for herbicide use. A COSHH & environmental assessment must be carried out for all activities involving herbicides. Records of treatment must be kept.

WARNING: THE USE OF HERBICIDES ADJACENT TO WATERWAYS IS RESTRICTED AND REQUIRES APPROVAL FROM THE ENVIRONMENT AGENCY. HERBICIDES SHOULD ONLY BE APPLIED BY SUITABLY QUALIFIED OPERATORS.

2. Excavation, controlled burying, capping and bund treatment

- For instant Japanese knotweed removal and eradication, clearing of above ground leaf/stem material and the removal of ground material contaminated with roots should be carefully excavated. The resulting material can be disposed of off-site (costly), buried or capped with root barrier or turned into a temporary bund or permanent bund and treated with herbicide.
- To dispose of knotweed-contaminated material off-site, the expertise of a specialist knotweed company is essential to monitor excavations, ensuring that the quantity of waste is kept to a minimum and good onsite hygiene is provided to prevent future re-establishment. Contaminated material removed from the site to a licensed landfill requires a waste transfer licence, and that the waste transfer documentation should be retained.
- Dealing with knotweed waste on-site requires that the Environment Agency Code of Practice is strictly implemented to negate the need for a waste management licence. It is recommended that the expertise of a knotweed consultant is utilised when undertaking on-site Japanese knotweed remediation.
- Where controlled burial is selected as a possible control measure it is normal to encase the Japanese knotweed-contaminated spoil using a suitable root barrier as an “envelope”. This is known as Cell Burial, and is advantageous in reducing the burial depth when compared to straightforward pit burial. A large area would be required, geological and ecological impact would need careful consideration.

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The Way Forward

- If you suspect the presence of Japanese knotweed on your land, premises or property, do not attempt to deal with it by cutting it or strimming.
- Construction managers should contact PBA Solutions to obtain the Environment Agency Knotweed Code of Practice (free publication). The EA guide states that a knotweed clerk of works and a knotweed management plan should be employed. Most importantly fence off any visible stands, taking into account root spread, and then take advice.
- Homeowners and garden services contractors should make sure knotweed fragments do not contaminate garden waste or compost, or not inadvertently spread around a property.
- Obtain specialist advice as soon as possible to identify the most appropriate and cost-effective method of control and/or disposal, to ensure current legislation is met. In the first instance contact PBA Solutions who offer free phone advice.

Summary: Japanese knotweed

- Japanese knotweed is an aggressive invader species that needs to be controlled
- It poses both environmental risks and risks to structures
- Under the Wildlife & Countryside Act 1981, it is an offence 'to plant or otherwise cause' the growth of Japanese knotweed.
- The plant spreads 'vegetatively', meaning even a tiny fragment of the plant can grow to form a new plant.
- Control options include herbicide, excavation, burial, root barrier capping and bund treatment.
- Invest in the expertise of a specialist, such as PBA Solutions, who would generally save you money in the long run through good control selection and waste minimisation. In addition, where onsite techniques are to be used, a knotweed specialist can navigate clients around the legal implications of such work, negating the need for a waste management licence.

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