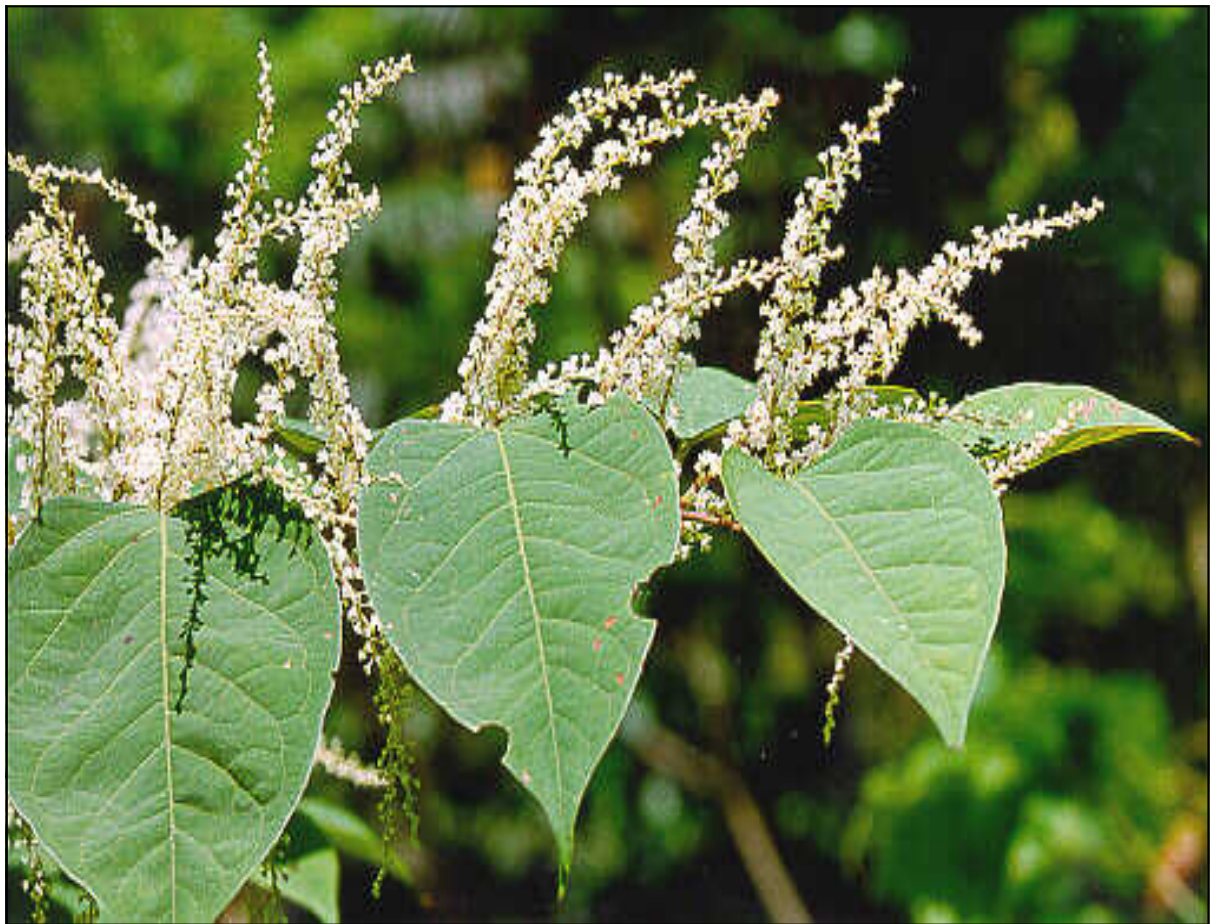


Tendring
District Council



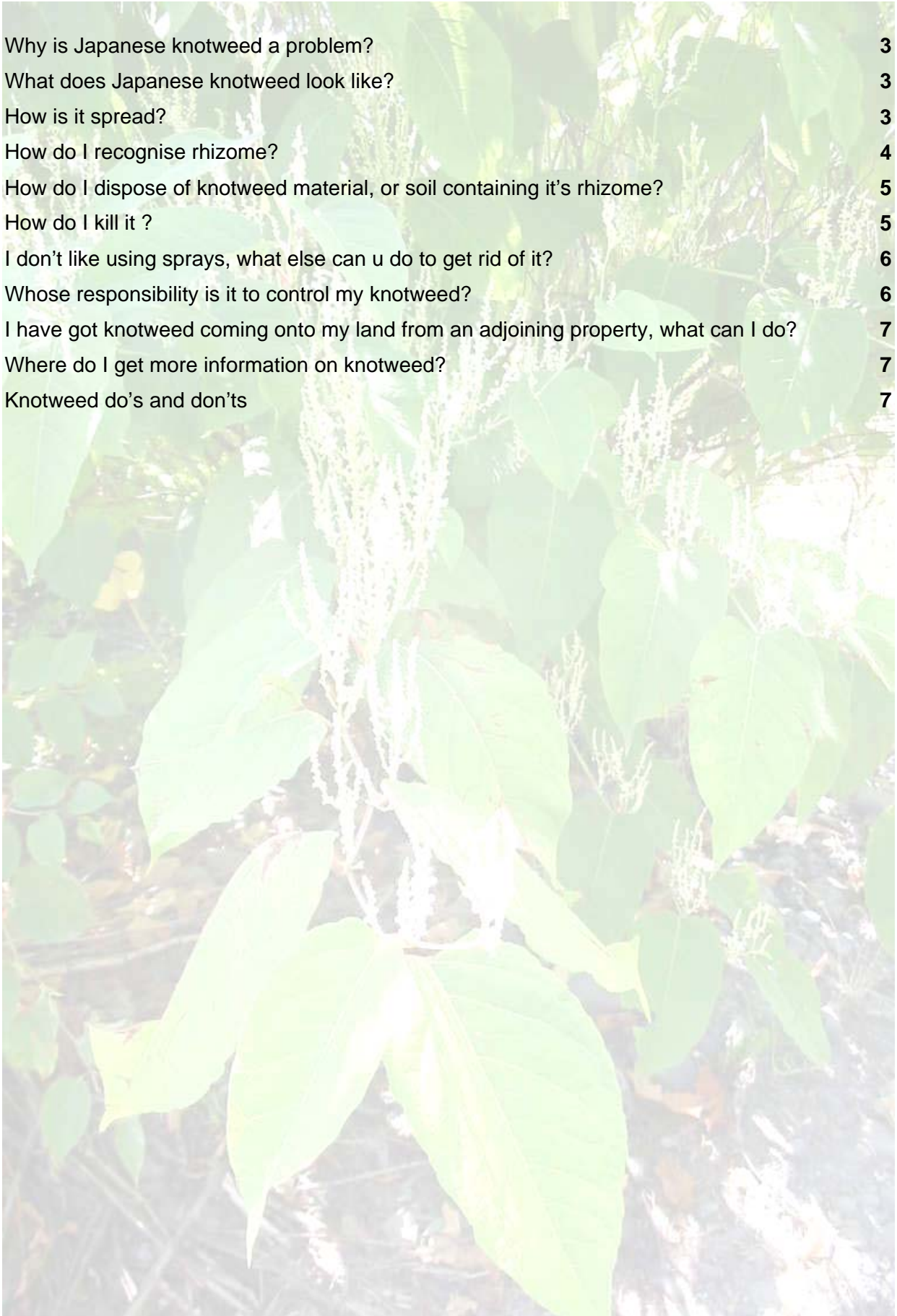
Japanese Knotweed



**Guidance for householders
& landowners**

CONTENTS

Why is Japanese knotweed a problem?	3
What does Japanese knotweed look like?	3
How is it spread?	3
How do I recognise rhizome?	4
How do I dispose of knotweed material, or soil containing it's rhizome?	5
How do I kill it ?	5
I don't like using sprays, what else can u do to get rid of it?	6
Whose responsibility is it to control my knotweed?	6
I have got knotweed coming onto my land from an adjoining property, what can I do?	7
Where do I get more information on knotweed?	7
Knotweed do's and don'ts	7



WHY IS JAPANESE KNOTWEED A PROBLEM?

Japanese knotweed is not native to Europe, therefore the pests and diseases that control it in Japan are not present in the UK. In Japan, Japanese knotweed grows in harmony with other plants and only grows a fraction of the size that it does in the UK. Similarly,, many British plants that have been taken abroad have become highly invasive elsewhere.

Japanese knotweed is a problem throughout Europe and most of North America. It's vigorous growth excludes almost all of our native species, which cannot compete with the tall summer growth or the thick mulch of decaying canes and leaves in Winter. Many of the insects that are dependant on our native plants are also lost.

WHAT DOES JAPANESE KNOTWEED LOOK LIKE?

Japanese knotweed (scientific name *Fallopia japonica*) was introduced to the UK in the mid nineteenth century as an ornamental plant. The plant is an invasive perennial weed that forms dense stands of tall canes during summer, which die back in the Autumn.

Re/ purple shoots appear in early spring. As the canes grow, the leaves unfurl and the plant turns green. Growth is rapid and mature canes can reach 3 metres (10 feet) in height. The mature canes are hollow and have a characteristic pattern of purple speckles. The leaves are carried on stems in a distinctive zig-zag pattern.

Flowering occurs in late Summer/ Autumn and consists of clusters of creamy– white flowers. Seeds are occasionally produced from pollination from related plants such as Russian Vine *Fallopia baldshuanica*, though it is extremely rare for these seeds to be fertile, as all Japanese knotweed in the UK is believed to be a female clone.

During late Autumn/ Winter the canes die off. The canes lose their leaves and turn dark brown. The dead canes remain standing, and may take up to 3 years to decompose. Dead material can form a dense litter that suppresses competition from native flora and garden plants.

Early infestations of Japanese Knotweed rarely achieve the height associated with mature stands. Canes produced from encroaching knotweed, or growth from small pieces of plant material, tends to form short canes until the rhizome becomes established. Early treatment of new infestations when they are still very small, is highly recommended.

HOW IS IT SPREAD?

Japanese knotweed can produce seeds, but it is extremely rare for these seeds to germinate. The most common method of dispersal is by means of stem, crown and rhizome (underground stem) sections.

New plants will grow from the nodes of pieces of green stem, in soil or water. Mechanical cutters, such as flails, will spread knotweed in this fashion. If stems are dried until they are dark brown, they will not re-grow unless the crown (base of the stem) is still attached.

The crown is able to survive drying and composting, and will rapidly produce new canes. If you wish to dispose of knotweed canes by drying or composting, it is important that the stems are cut above the crown, rather than pulling the plant, which will also dislodge the crown. Where local byelaws allow bonfires, canes be pulled an dried on polythene sheet, before careful burning. Living crowns usually have growth buds and have a characteristic orange/ red colouration when cut or peeled.

HOW DO I RECOGNISE RHIZOME?

The rhizome (a root-like underground stem) may reach a depth of 3 metres (10 feet) and extend up to 7 metres (23 feet) away from the parent plant. Sections of rhizome as small as 0.7gramme, or smaller than a one pence piece, can grow into a new plant!

Fragmenting the rhizome stimulates the production of small red buds, which grow into new plants. You should never accept topsoil without having first inspected it for rhizome.

Japanese knotweed rhizome appears knotty and leathery brown, Fresh rhizome snaps like carrot, and usually possess a dark orange centre core with an orange/ yellow outer ring. (Other variations do occur) The rhizome is similar to a Dock taproot, but tends to be a different shape. The fleshy rhizome lacks the bendy qualities of most normal roots. If in doubt, material can be stored at between 10-12° Celsius, in a bag for 30 days, which would be sufficient duration for rhizome to commence budding and growth.

Use this chart to help identify the knotweed;

General Characteristics	Yes	No
Twig-like appearance		
Fleshy with hardness like carrot		
Brittle when fresh, break easily like carrot		
Young rhizome is white and very soft		
Exterior of Rhizome		
Colour dark brown, like coffee granules		
Texture of the outer bark leathery		
When bark is removed, tissue is pale orange/ yellow		
Nodes at 1-2cm spacing		
Nodes slightly enlarged and 'knotty'		
At nodes white fibrous roots are common		
If present, fresh buds at nodes are red/pink		
Interior of Rhizome		
Longitudinal view		
Colour: pale orange and light yellow, similar to carrot		
Central core is usually dark orange/ brown, like rust, and sometimes hollow		
Cross section		
Cortex with rays coming from centre, like spokes from a wheel		
Total		

If the 'Yes' score is greater than the 'No' score, then treat the identified rhizomes as Japanese knotweed.

HOW DO I DISPOSE OF KNOTWEED MATERIAL, OR SOIL CONTAINING IT'S RHIZOME?

Gardeners, who have fly-tipped green waste on road verges, lay-bys and waste ground have largely been the cause of knotweed spread, as well as many other non-native invasive plants. This activity is illegal and highly damaging to the environment. If you witness an individual fly-tipping waste, you should note down the vehicle type and registration, the time, date and location, and any additional details concerning the individual involved.

This information should then provided to the Waste Crusader 01255 686768.

If you intend to dispose of knotweed canes you should dispose of them within the confines of your garden, either by composting or burning. Remember that cut stem cannot re-grow once it has dried to a dark brown colour. Dried cut stems can be then safely composted. Pulled stems, which will include crowns, are not suitable for composting. Stems should be dried on a layer of polythene to prevent rooting. If you wish to burn the stems you should contact the Environmental Health office of the Local Authority and ask advice regarding legislation concerning garden bonfires. When burning pulled stems, ensure that the crown is in the centre of the fire and is thoroughly combusted.

If you spread knotweed outside of your property, you may be liable to prosecution.

Many local councils run civic Amenity sites that receive green waste for centralised composting schemes. These sites are not suitable for receiving knotweed, unless the material consists of dried cut canes, with no associated crowns. The level of composting achieved by centralised composting schemes is unlikely to guarantee the destruction of viable knotweed waste, particularly crown and rhizome. This may subsequently lead to knotweed contamination of the compost produced from these sites.

If you have knotweed stems that cannot be disposed of within the confines of their garden, they should be disposed of at your local landfill site by prior arrangement with Essex County Council. The landfill operators should then arrange for them to be disposed of at a depth that will prevent re-growth. It is important to ensure that this material is taken to landfill, rather than to a composting scheme. Disposal to landfill should be avoided wherever possible. If you have knotweed within the cartilage of your property, you should kill it rather than crop it.

HOW DO I KILL IT ?

Fortunately, Japanese knotweed is susceptible to a range of herbicides including glyphosate, the active ingredient in products such as 'Roundup bioactive' and 'Glyphos bioactive'. Whilst chemicals such as triclophr, imazapyr and picloram are effective against knotweed, Glyphosate has many properties which make it more suitable for use by householder. Many formulations of Glyphosate, are suitable for use in or near water, the product is deactivated by micro-organisms in soil, it doesn't leach and it possesses low toxicity to animals. The bioactive formulations of Glyphosate are generally regarded as the most suitable.

Glyphosate is a translocated herbicide, which means the plant carries the herbicide down to its rhizome. Contact herbicides may appear to kill the leaves and shoots of knotweed, but unless the herbicide is translocated down to the rhizome the plant will re-grow.

Knotweed survives the winter as an underground rhizome. During autumn the plant draws food stores from the drying leaves and canes, down to the rhizome. Herbicide treatment during late Summer and Autumn appears to be more effective, as translocation is assisted by this process. If treating mature canes in Autumn is likely to cause problems, earlier applications of herbicide during Spring and Summer can be used to control its growth. However, it is essential that there are plenty of green leaves to absorb the herbicide before application is undertaken.

Glyphosate is usually sprayed onto the foliage of knotweed. Beware of drift on to non-target plants and lawns. If you are concerned about the risk to other plants, use a weed wiper to apply the herbicide instead of a spray.

Great care needs to be exercised when using herbicides near lawns and shrubs. There are no sprays which are specific to knotweed, but products such as 2, 4 D amine can be used at concentrations that do not harm grass. You must contact your local Environment Agency office before using a herbicide in or near a stream or river, a pond that is fed by groundwater. You can use a herbicide near a contained garden pond that is not supplied by groundwater or a watercourse without notifying the Environment Agency, although care is still needed to avoid damage to wildlife.

If you are not confident with the use of herbicides, or lack the equipment and protective clothing, you should use the services of a qualified landscape gardening contractor. When employing contractors for spraying, you should insist on seeing their National Proficiency Tests Council (NPTC) Certificate of Competence for the use of pesticides. Each certificate has an individual number. Use the information within this leaflet to test the knowledge of potential contractors, to ensure that you employ someone with a good knowledge of knotweed control.

It will take at least three years of herbicide treatment before knotweed has been eradicated. By the third year of the treatment, knotweed growth may only be a few centimetres tall and easily overlooked amongst grass and herbage.

It is essential that treatment continues until no further growth appears. Any disturbance to the rhizome at this stage will stimulate further growth, however, controlled rotavation of the infested area can be used to stimulate the exhausted rhizome to produce more foliage, which can then be sprayed. If a rotavator is unavailable, a series of spade cuts will also stimulate the rhizome. Clean implements thoroughly after use to prevent spread of fragments.

I DON'T LIKE USING SPRAYS, WHAT ELSE CAN I DO TO GET RID OF IT?

It is very difficult to remove large or well established infestations without the assistance of herbicides.

Cutting, mowing or grazing gradually weakens the plant, but if you are using this technique you must be aware that it will take many years to exhaust the rhizome (probably more than 10 years). Cutting should be performed at least once a month during growing season. Great care needs to be taken with the cut material to avoid further spread. Unless material can be disposed of within the confines of the property, cutting back should not be adopted.

Pulling is more effective than cutting, because it removes crown and some rhizome. However the waste generated is highly infectious and needs to be disposed of with great care. Pulling is most effective where knotweed has recently become established, from infected topsoil for instance. It may take many years to exhaust the widespread rhizome of an established plant.

WHOSE RESPONSIBILITY IS IT TO CONTROL MY KNOTWEED?

The responsibility for the control of knotweed usually rests with the landowner or tenant of the land. The Environment Agency, or local government are not obliged to control knotweed on behalf of other landowners. Similarly, disputes between neighbours regarding problems associated with knotweed are largely a civil matter.

I HAVE GOT KNOTWEED COMING ONTO MY LAND FROM ADJOINING PROPERTY. WHAT CAN I DO ?

This is a common problem that often lacks a satisfactory answer. The best solution is to co-operate with the neighbouring landowner and co-ordinate your control efforts, by sharing costs of labour, for instance. If you do not know who owns the adjoining land, or you are in dispute with your neighbour, current legislation offers little support. The Environmental Protection Act 1990 does provide some legal support if knotweed is causing a nuisance to private property. A private nuisance has been defined as an "unlawful interference with a person's use or enjoyment of land, or some right over, or in connection with it."

Wherever possible, it is best to encourage co-operation and support within the community to control knotweed and prevent further spread.

WHERE DO I GET MORE INFORMATION ON KNOTWEED?

The Japanese Knotweed Manual by Lois Child and Max Wade (Packard Publishing Limited, Forum House, Stirling Road, Chichester, West Sussex. ISBN 1-85341-127-2) provides a comprehensive account of the problems associated with knotweed, as well as practical advice on managing the problem.

Knotweed do's

- Do follow good practice for the control of knotweed.
- Do ensure that herbicides are used safely and effectively.
- Do ensure that knotweed is burned or composted thoroughly, within the cartilage of your property.
- Do co-operate with neighbours to co-ordinate your knotweed control programme.

Knotweed don'ts

- Do not fly-tip Japanese knotweed, or any other garden waste.
- Do not contaminate green waste composting schemes with knotweed material.
- Do not accept topsoil unless you have first inspected it for knotweed rhizome.
- Do not delay. If you find you have knotweed growing on your land you should eradicate it.