N.B. This Species Identification Guide is intended to outline the key identification factors and treatment options only and should not be used as a definitive method for species ID. Legislation and its interpretation is constantly evolving. A variety of other IAPS may be encountered, which may require specific survey and mitigation. Please contact Japanese Knotweed Control Ltd (mail@jkc.ie) for the latest position & advice.

ID Guide

Giant Knotweed

HIGH RISK

(*Fallopia sachalinensis*)

Common Names
Giant Knotweed, Japanese Bamboo, Sakhalin knotweed, Reynoutria sachalinensis, Reynoutria vivax, Polygonum sachalinense.

Family: Polygonaceae (Buckwheat family)

Status in Ireland
Highly invasive and listed under the European Communities (Birds and Natural Habitats) Regulations 2011, which makes it illegal to spread this species.

Description / Profile
Giant knotweed is a highly invasive species that can cause significant ecological and structural damage. It is a highly resilient plant with its extensive rhizome system making it very difficult to eradicate, and enabling it to spread rapidly in disturbed areas from very small fragments.

Giant knotweed is closely related to Japanese knotweed - (*Fallopia japonica*) which are both gynodioecious, with male and female (*male sterile*) flowers on separate plants.

Size
Can grow up to 2-4 metres tall during the summer months.

Leaves
Heart or heart-shaped with a pointed tip, 10-28 cm wide and 15-40 cm long with a lobed base. Leaves are arranged alternately along the stem.


Giant Knotweed Leaf

Stems
Hollow, bamboo-like stems with distinct reddish-brown spots. Stems have a zig-zag growth pattern and are smooth with a green colour, sometimes purple-tinged. Stems become brittle and woody, brown in colour as the plant dies back in winter but persist upright.


Giant Knotweed Stem

Flowers
Small, creamy-white flower clusters (panicles) appear in late summer (August-September), up to 15 cm long. Giant knotweed is not known to produce viable seeds in Ireland.


Giant Knotweed Flower

Rhizomes
Underground rhizomes are orange/yellow and can spread horizontally up to 7 metres and reach depths of 3 metres. Rhizomes are highly regenerative: even small fragments can give rise to new plants.


Giant Knotweed Rhizome

Giant Knotweed Crown


Giant Knotweed Crown & Winter Stems

Habitat
Native to Japan and parts of East Asia, in it's native environment it can be found growing on the side of volcanic mountains and has a very hardy perennial growth cycle. In Ireland, it can be frequently found on roadsides, riverbanks, brownfield sites, and urban areas. Giant Knotweed prefers moist, well-drained soils, often thriving in disturbed areas.

Control & Management
Effective management requires a well-planned herbicide treatment programme combined with mechanical and biosecurity measures, particularly in protected areas.

Note: *Herbicide use near watercourses requires special permission from the local council or the Environmental Protection Agency (EPA).*

Chemical Control
Herbicide treatment (such as our Green Matters™ foam treatment) - is the most effective method, particularly when applied in late summer/early autumn when the plant is storing energy in its rhizomes. If near watercourses, use only aquatic-approved herbicides to prevent contamination and consider stem injection technique for a more precise application. Maintain a buffer zone (at least 10 metres) and avoid herbicide run-off.

Note: *Herbicide treatment is not suitable where an area infested with Japanese knotweed is designated for development. Excavation will be required to clear the area before development can commence.*

Growth Stage - Use appropriate herbicide formulations depending on the growth stage, example, in early growth (spring), full height (summer), flowering (late summer), or dying back (autumn/winter).

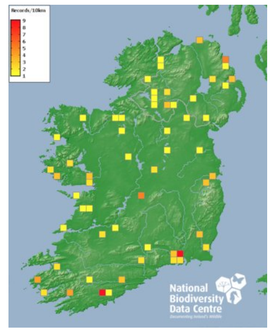
Mechanical Control
Excavation - mechanical removal can be effective and can be conducted all year round but must be done carefully to ensure all rhizomes are removed. Excavated soil containing knotweed must be managed and disposed of at authorised landfill sites.

S.O.S.™ - JKC soil screening service is an option to reduce landfill costs. Screened solis can be re-used on site to minimising materials requiring disposal to a licensed facility.

Deep Cell Burial - If there is space on the site, a burial cell can be considered. Vector material should be buried in a prepared cell that is lined with root barrier at a depth no less than 3m.

Treatment Bund- If there is space on the site, a treatment bund can be considered. Vector material should be placed in a prepared bund that is lined with root barrier and monitored/treated until new growth is completely suppressed.

Root Barriers - Barriers can be installed to prevent the spread of rhizomes into adjacent properties. Installing root barriers can help contain the spread of rhizomes, particularly near infrastructure or sensitive areas.



This map shows the current (2024) distribution of Giant Knotweed in Ireland, recorded by the National Biodiversity Data Centre.

Reporting
Reporting sightings of invasive species in Ireland to the National Biodiversity Data Centre and/or the relevant local authority.

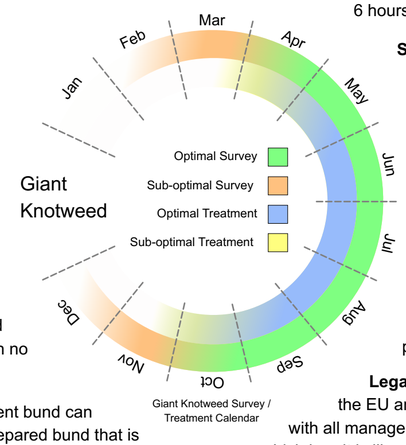
https://records.biodiversityireland.ie/start-recording.

Monitoring and Maintenance
Regular monitoring of the site is essential, particularly after initial treatment or excavation. Plan for follow-up inspections of treated / excavated areas for at least 3-5 years to check for regrowth or new infestations.

Environmental Considerations
Herbicide Handling - Use PPE, including gloves, goggles, and long-sleeved clothing. Avoid skin and eye contact and inhalation. Follow all safety instructions on herbicide labels.

Herbicide Application Method - Use foliar spraying for large infestations and the stem injection method for smaller stands or in sensitive areas. Ensure accurate calibration of spraying equipment to avoid over-application.

Weather Conditions - Apply during calm, dry conditions to minimise drift. Avoid application during heavy rainfall or when rain is forecast within 6 hours to reduce run-off.



Giant Knotweed Survey / Treatment Calendar

Storage & Disposal - Store herbicides securely in a dry, well-ventilated area away from water sources. Dispose of containers and unused herbicides according to local regulations to prevent environmental contamination.

Watercourses - Knotweed spreads easily along rivers and streams in Ireland, where water can carry rhizome fragments downstream.

Soil Movement - Soil movement or excavation might cause further spread, such as during construction projects.

Proximity to Infrastructure - Giant Knotweed has the potential impacts on roads, walls, and buildings.

Legal Requirements - Follow legal requirements under the EU and Irish regulations, ensuring compliance with all management and disposal practices. Under Irish law, it is illegal to cause or allow the spread of Giant Knotweed. Special care must be taken to manage and prevent its spread during construction and landscaping projects.

Herbicide Treatment Timetable

Month	Treatment	Herbicide Type	Herbicide Rate	Considerations
March - April	Eaerly Growth Stage Foliar Application	Glyphosate-based herbicide (e.g., Roundup ProActive)	4-5 L/ha of 360g/L formulation	Apply when new shoots are 20-50 cm tall. Ensure full coverage of leaves. Use lower rates on smaller plants to avoid rapid dieback before herbicide absorption.
May - June	Mid-Growth Stage Foliar Application	Glyphosate or Triclopyr (e.g., Garlon 4)	Glyphosate: 5-6 L/ha; Triclopyr: 4-5 L/ha	Apply when plants are 1-1.5m tall. Avoid spraying during flowering. Ensure thorough coverage for maximum uptake.
July - August	Stem Injection Method	Glyphosate	10 ml of 360g/L solution per stem	Inject herbicide directly into the hollow stem 20 cm above the ground. Suitable for dense stands and sensitive areas (may not practical for large areas).
September - October	Late Season Foliar Application	Glyphosate	5-6 L/ha	Apply to any regrowth before the onset of dormancy. This is the most effective period as the plant translocates nutrients to the roots.
November - February	Physical Removal & Site Maintenance	N/A	N/A	Remove dead plants, roots, and any remaining debris (may not practical for large areas). Monitor for regrowth and follow up as needed. Avoid soil disturbance to prevent the spread of rhizomes.

Safety Protocols
Herbicide Handling - Use PPE, including gloves, goggles, face mask and long-sleeved clothing, Coveralls. Avoid skin and eye contact and inhalation.

Follow all safety instructions on herbicide labels. If the infestation is in a public area, signage may be required to warn the public and prevent soil disturbance.

On-site Biosecurity Measures

Prevent Spread - Avoid disturbing the plant unnecessarily, as rhizome fragments can easily spread and establish new colonies. Remove and bag all cut material for proper disposal.

Equipment Cleanliness - Clean all tools, equipment, footwear, and clothing before leaving the site to prevent the spread of rhizomes and plant material.

Transport of Plant Material - Transport all plant material in sealed containers to an authorised disposal site.

Do not compost or leave on-site, as this can lead to further spread.

Monitoring & Follow-Up - Regular monitoring of the site is essential, particularly after initial treatment or excavation.

Plan for follow-up inspections of treated / excavated areas for at least 3-5 years to check for regrowth or new infestations.

Follow-up treatments may be necessary for several years due to the persistent nature of the rhizome system.

Long-Term Management

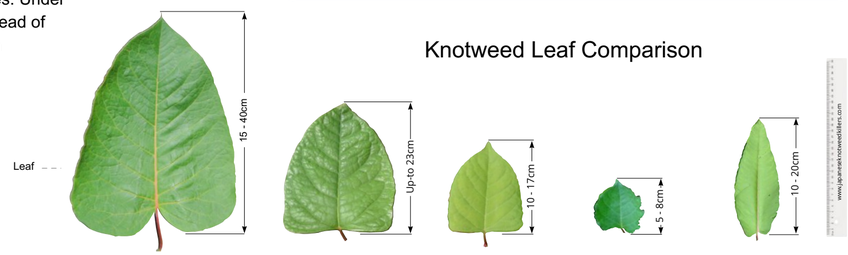
Site Rehabilitation - Following successful control, implement a long-term monitoring and rehabilitation plan to restore native vegetation and prevent reinvasion.

Re-vegetation - Replant treated areas with native species to restore ecological balance and prevent re-invasion by Japanese Knotweed.

Community Engagement - Engage local communities in identification and reporting of knotweed infestations. Educate on its ecological impacts and promote the use of native alternatives for landscaping

For further information and free advice, please contact:
Japanese Knotweed Control Ltd.
Email: mail@jkc.ie
Tel: +353 (0)86 250 8805
Web: www.jkc.ie

Knotweed Leaf Comparison



Species	Giant knotweed (*Fallopia sachalinensis*)	Bohemian knotweed (*Fallopia × bohemica*)	Japanese knotweed (*Fallopia japonica*)	Dwarf Japanese knotweed (*Fallopia japonica var. compacta*)	Himalayan knotweed (*Persicaria wallichii*)
Flower					
Stem					
	Giant knotweed	Bohemian knotweed	Japanese knotweed	Dwarf Japanese knotweed	Himalayan knotweed
Plant Size	4m to >5m tall	2m to >4m tall	1.5m to >3m tall	1m to <1.5m tall	2m to >3m tall
Leaf Size L/W	15cm to 40cm 2/3 as wide	12cm to 23cm 2/3 as wide	10cm to 17cm 2/3 as wide	5cm to 8cm 2/3 as wide	10cm to 20cm 1/2 as wide
Sex	Perfect and fertile, usually produces seed	Female or Perfect, occasionally produces seed	Female or Perfect (rare), occasionally produces seed	Female or Perfect (rare), occasionally produces seed	Perfect and fertile, usually produces seed
Flower Colour & Arrangement	Green-white to cream-white with compact, drooping arrangement	Green-white to cream-white with erect or loose, drooping arrangement	Green-white to cream-white with a loose, drooping arrangement	Pink-white with erect or loose, drooping arrangement	Pinkish-white to pink with a loose, spreading arrangement