



Giant Hogweed

(*Heracleum mantegazzianum*)



HIGH RISK

Common Names

Giant Hogweed, Cartwheel Flower, Hogsbane, Giant Cow Parsnip.

Family: Apiaceae (Carrot family)

Status in Ireland

Giant Hogweed is an Invasive species, listed under the European Communities (Birds and Natural Habitats) Regulations 2011. It is illegal to plant or cause its spread.

Description / Profile

Giant Hogweed is a highly invasive and dangerous plant, originally from the Caucasus region, but now found in many parts Ireland. It is known for its immense size and toxic sap. It spreads rapidly, outcompeting native plants, reducing biodiversity, and causing soil erosion along riverbanks. Control and eradication of Giant Hogweed are essential due to its environmental and health impacts.



Size

Can grow between 2 and 5 metres in height.

Leaves

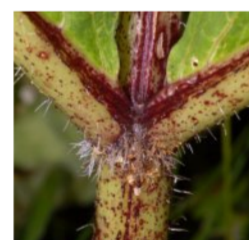
The leaves are large deeply lobed, and jagged, irregular edge, dark green on the upper side and lighter underneath. Each leaf is divided into multiple sharply pointed segments, with a serrated appearance. Leaves can grow up to 1.5 metres in length, alternately arranged along the stem with hollow stalks (petioles) covered with reddish-purple spots and coarse hairs.



Giant Hogweed Leaf

Stems

Stems are hollow, ridged, green with distinct purple blotches and bristles. Stems can grow up to 10 cm in diameter and have white hairs. Like other parts of the plant, the stem contains toxic sap that can cause severe burns and blisters when exposed to sunlight, making handling the plant dangerous without protective gear.



Giant Hogweed Stem

Flowers

The flowers are large, umbrella-like clusters (umbels) of white flowers up to 50 cm wide. The individual flowers are small and white, sometimes with a slightly pinkish hue. Flowers appear from June to August. Each umbel contains numerous tiny flowers, typically arranged in clusters of 50 to 150 rays, creating a broad, dome-shaped appearance.



Giant Hogweed Flower

Seeds

The seeds are flat, oval (up to 10mm in length), and have brown lines across them. A single plant can produce thousands of seeds, which can remain viable in the soil for several years, contributing to its rapid spread.



Giant Hogweed Seed

Roots

Giant Hogweed has a thick, fleshy taproot, which is deep and robust. This taproot allows the plant to anchor firmly in the soil and store nutrients, enabling it to survive through the winter. Finer, fibrous roots extend outward from the taproot to absorb water and nutrients.



Giant Hogweed Root

Habitat

Giant Hogweed is commonly found along rivers, streams, and canals where water helps disperse its seeds. The moist, nutrient-rich soils in these areas provide ideal conditions for growth. It also often colonises disturbed areas such as roadsides, railway embankments, and wasteland, where it can take advantage of the disturbed soil to establish quickly. In some cases, Giant Hogweed can be found in meadows, pastures, or other open grasslands, particularly if these areas are not regularly maintained.

While it prefers open, sunny locations, Giant Hogweed can also be found along the edges of woodlands and forests, where there is enough light to support its growth. The plant can establish in a variety of soil types, including clay, loam, and sandy soils, but prefers well-drained, fertile soils. It grows best in nutrient-rich soils, such as alluvial floodplains or areas enriched by organic matter.

Control & Management

Effective management requires a combination of herbicide application, mechanical removal, and careful monitoring, particularly in sensitive or 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 roots. 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.

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 roots are removed.

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

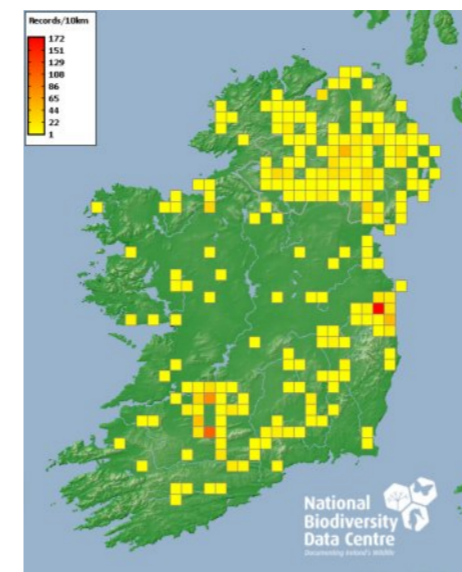
Manual Removal - For small infestations, manual removal of plants, including roots, can be effective. Ensure all root fragments and seeds are removed to prevent regrowth.

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 roots, particularly near infrastructure or sensitive areas.

Herbicide Treatment Timetable

Month	Treatment	Herbicide Type	Herbicide Rate	Considerations
March - April	Early Growth Stage Foliar Application	Glyphosate-based herbicide (e.g., Roundup ProActive)	4-6 L/ha of 360g/L formulation	Apply when new shoots are actively growing and 15-30 cm tall. Ensure full coverage of leaves and stems.
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 reach 50-100 cm in height. Avoid spraying during flowering.
July - August	Cut & Paint Method	Glyphosate or Triclopyr	10-15 ml of 360g/L solution per cut stem	Cut stems close to the ground and immediately apply herbicide to cut surfaces. Suitable for dense patches or near sensitive areas.
September - October	Late Season Foliar Application	Glyphosate	5-6 L/ha	Apply to any regrowth before the onset of dormancy. Ensure thorough coverage of all foliage.
November - February	Physical Removal & Site Maintenance	N/A	N/A	Remove dead plants, roots, and any remaining debris. Monitor for regrowth and follow up as needed.



This map shows the current (2024) distribution of Giant Hogweed 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 2-3 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.

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 - Giant Hogweed can spread easily along rivers and streams in Ireland, where water can carry seeds downstream.

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

Proximity to Infrastructure - Giant Hogweed is often found along riverbanks and drainage ditches, where its seeds can easily be spread by flowing water. This poses risks of further colonisation downstream, clogging of waterways, and potential damage to drainage infrastructure.

Giant Hogweed's large size and dense growth can destabilise soil, particularly along riverbanks and embankments. When the plant dies back in winter, the lack of ground cover can result in significant erosion, potentially damaging infrastructure such as roads, railways, and embankments.

Legal Requirements - Under the European Communities (Birds and Natural Habitats) Regulations 2011, it is illegal to cause the spread of Giant Hogweed. Adhering to invasive species management practices is crucial.

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.

Toxic Plant Safety

The sap of Giant Hogweed is phototoxic and can cause severe burns, blisters, and skin irritation when in contact with skin and exposed to sunlight. Always wear PPE, including gloves, goggles, long sleeves, and trousers. Sap is released most readily when plant tissue is damaged. Try to avoid cutting or breaking stems unnecessarily. **Do Not Burn:** Burning Giant Hogweed releases toxic vapours from the sap, which can cause respiratory damage or skin burns.

On-site Biosecurity Measures

Prevent Spread - Avoid disturbing the plant unnecessarily, as seeds / root 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 seeds 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 2-3 years to check for regrowth or new infestations.

Follow-up treatments may be necessary for several years due to the persistent nature of the root 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 Giant Hogweed.

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

For further information and free advice, please contact:
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