

Overview

Species: Giant Hogweed (*Heracleum mantegazzianum*)

Description: a non-native, invasive weed species. Giant Hogweed is one of the largest herbaceous plants in the United Kingdom. This weed is similar to rhubarb in appearance but much larger; a fully grown plant will stand 3-4 metres tall. In early summer the plant produces a large inflorescence of white flowers.

Typical locations: common along rivers and derelict land and often found along verges and in parks.

Associated risks

Environmental: out-competes native plant species, threatening bio-diversity and soil erosion.

Health risks: the plant produces a toxic sap which irritates human skin resulting in painful burns and blistering. Exposure to light after contact with Giant Hogweed will aggravate the symptoms further. For some people long term photo sensitivity has been diagnosed.

Action to take after touching Giant Hogweed:

- Keep effected skin away from light sources
- Wash skin with soapy water, use eye wash solution if eyes came into contact
- Get medical advise as soon as possible

The Law

The wildlife and Country side Act 1981 makes it an offence “to plant or otherwise encourage” the growth of Giant Hogweed. The Environmental Protection Act 1990 classified Giant Hogweed as ‘Controlled waste’.

What is Giant Hogweed?

Belonging to the parsley family and characteristically big; it reaches 3-4 metres when in flower. The white flowers are umbel shaped and produced in the early summer. Giant Hogweed can establish itself in stressful situations through efficient seed dispersal, and has the ability to hold sufficient energy reserves. Toxic sap present within parts of the plant make it a human health and safety hazard. The smaller, common Hogweed is often miss-identified by experts and the general public alike as being Giant Hogweed.

Identification of Giant Hogweed

Young leaf development against mature stems



Intermediate leaf development



Mature developed leaf



Mature plant in flower



How it spreads

Giant Hogweed reproduces via seed. It is the sheer abundance of seed and the plant's ability to self-fertilise that makes Giant Hogweed such a successful invader. A mature plant will commonly produce 20,000 seeds. These seeds will be distributed in many ways; the mechanisms of seed dispersal are relative to the location of the weed:

- Wind distribution: spread 0-10m
- Water courses: potential spread over 1km
- Railway Lines: potential spread 0-100m
- Roadways: potential spread 0-100m
- Mowing of grass: potential spread 50m

Control Measures

Giant Hogweed can be controlled in many ways. In summary there are three distinct types of control;

- **Herbicide** – use of pesticides.
- **Cultural** – use of traditional horticultural techniques, root cutting and cultivating.
- **Mechanical** – excavation to landfill or burial of weed and contaminated material.

Selection of Control Measures

Controlling Giant Hogweed requires potential measures to be evaluated against a given criteria.

- **Environmental impact** – There is an obligation to reduce chemical use. Landfill is a resource that needs to be preserved making excavation and disposal less desirable. In most cases cultural methods of control alone fail to eradicate Giant Hogweed.
- **Cost** – Cultural and mechanical methods put a greater burden on the financial cost of any proposed control programme when compared to herbicide.
- **Target weed situation** – By prioritising key areas and rationalising treatments in less urgent locations, a more economic and environmentally focused control programme can be adopted.

Holistic approach – through using a combination of control methods specifically selected for the site, ensures that the most economic eradication is achieved.

Treatment objectives

- There are two objectives of Giant Hogweed control. The first is to remove the visible plant, and the second is to eradicate the seed bank because Giant Hogweed reproduces via seed.
- It takes 3-5 years for a plant to reach maturity and only when it has reached maturity will it produce flower and seed.
- To achieve eradication PBA Solutions use eradication systems that initially kill the most mature plants, i.e. those that will set seed first, moving through to treating the seed bank.
- Seeds will sit in the soil for a number of years; initially more than 6,000 viable seeds per square metre are present after a mature plant has flowered; this will reduce to 200, 16, 10 to less than 10 respectively each consecutive year. Treatment of resulting re-growth from the commencement of a control programme should therefore last at least 4 years, assuming no seed is blown in from neighbouring properties.

Treatment precautions

- Spraying the plant with an appropriate herbicide is the most economic option available. The choice of chemicals is affected by the environmental issues, including adjacent vegetation and waterways.
- The person undertaking the spraying must hold a Certificate of Competence for herbicide use, or should work under the direct supervision of a certificate holder. A COSHH assessment must be carried out for all activities involving herbicides.
- There are health hazards associated Giant Hogweed treatment, personnel treating this weed need to complete a risk assessment. By using an invasive weed specialist such as PBA Solutions these issues would naturally be taken care of.

Tap root cutting

- To reduce the burden put upon herbicide control it is possible to look at tap root cutting, a cultural method of control.
- Through using a sharp spade it is possible to cut the tap root. This will kill the plant. It is suggested that the root is dug out and allowed to dry out in-situ.
- Rather than adopting this method for all control visits, it may be possible to combine root cutting with herbicide control.
- This technique of control, while labour intensive, is still believed to be commercially viable on smaller stands of Giant Hogweed.

Summary : Giant Hogweed

- Giant Hogweed is an aggressive invader species that needs to be controlled reproducing through seed dispersal.
- It poses both environmental risks and is a health and safety hazard
- Under the Wildlife & Countryside Act 1981, it is an offence “to plant or otherwise encourage” the growth of Giant Hogweed.
- Control options include herbicide, root cutting, excavation and burial.

Invest in the expertise of a specialist such as PBA Solutions who can ensure the best control measures are selected and effectively implemented. In addition where on-site techniques are to be used, an invasive weed specialist can navigate clients around the legal implications of such work, negating the need for a waste management licence.

Citation & reference

Booy/wade, (2007) Giant Hogweed Management 2007, rps group plc
Giant Alien EU Frame Work V Project www.giant-alien.dk/