



## Floating Pennywort - *Hydrocotyle ranunculoides*

First naturalised in 1990 as a result of discarded plants from garden ponds. It spreads rapidly and can grow up to 20cm per day, quickly dominating a waterbody by forming thick mats and impeding water flow and amenity use. May out-compete native species by blocking out light, causing deoxygenation, obstructing air breathing insects and reducing water temperatures. It is found mostly in the south-east of England and occasionally in the north-west of England and Wales.

### Management Options:

#### Chemical Treatment

Glyphosate at 6l/ha in 400 litres of water. Efficiency is greatly increased with use of the adjuvant Codacide Oil at 1l/ha.

**Suitability:** Particularly useful for terrestrial growth, thus avoiding deoxygenation problems. Good for sites that have poor access for mechanical/manual removal, or as a treatment following mechanical removal.

**Equipment:** Knapsack sprayer, preferably with a long-lance. Life jacket and any other personal protective equipment deemed necessary after risk assessment.

**Efficiency:** Good, but less effective in late summer when the rafts become denser. However late summer treatments are effective against re-growth if the site was treated earlier in the year.

**Constraints:** Requires AqHerb01 approval from the Environment Agency and NPTC PA1 & PA6 qualifications. Potential for damage to non-targets. There is a risk of deoxygenation if large decomposing biomass is not removed.

#### Mechanical Cutting

Cut using a weedboat/reciprocating blades. The location should be netted to retain propagules.

**Suitability:** Useful for reducing biomass of large infestations, prior to chemical control.

**Equipment:** Specialist cutting equipment/weed boat. Vehicle & trailer if not disposing at site. Stop-nets and sweep nets. Life jacket and any other personal protective equipment deemed necessary after risk assessment.

**Efficiency:** Good, if propagules can be contained.

**Constraints:** Requires access if disposal is off-site. Expensive and it is likely that the treatment will have to be repeated regularly, particularly in eutrophic situations. Avoid damage to the habitats of sensitive species, such as water voles and nesting birds.

#### Mechanical Pulling

Pull using a hydraulic rake or bucket. The location should be netted to retain propagules.

