

FLOATING PENNYWORT

Hydrocotyle ranunculoides

June 2017



KEY INFORMATION

Preferred Habitat: Standing or slow flowing water.

Wandle Distribution:

Croydon Sutton Merton Wandsworth



Recommended Control: Hand-lifting & Foliar Spray

Biosecurity: During control, booms or double-stop nets should be used downstream. Check, Clean & Dry protocol should be followed before leaving site.

Wandle Strategy: Tackle and clear this species from the upstream sources working down towards the Thames, section by section as laid out in the timeline of the Action Plan.



SPECIES INFORMATION

Origin: Southern coastal United States & south to Panama, Cuba and South America.

Biology: FPW is a highly invasive aquatic plant with incredibly rapid growth. Under the right conditions, the plant can double its biomass in as little as 4 days. Growth rates as high as 20 cm per day have been recorded, producing 70 kg of wet weight per metre square.

This rapid growth results in the quick formation of dense rafts on still/slow moving water.

FPW largely reproduces vegetatively, able to root from small fragments of plant. These fragments can be spread by flooding, man, birds and other animals, assisting long distance dispersal.

Both flowers and fruit have been observed on the Wandle and it is thought that rooted plants may be reproducing by seed, and floating colonies reproducing vegetatively.

IMPACTS ON THE WANDLE

Dense rafts of FPW can quickly smother small waterbodies, blocking out sunlight to the water below, suppressing native aquatic plants below.

This loss of native vegetation reduces the availability of food, shelter and refuge for aquatic species.

The decomposition of large volumes of dead or dying FPW biomass forms a layer of silt on the bottom of slow flowing water, depleting oxygen levels as the FPW is broken down.

With silt accumulation and a lack of other native aquatic plants, the structural diversity of the waterbody is lost. This can prevent many invertebrates and other species from successfully completing their life cycles, further reducing biodiversity.

Large rafts can also increase local flood risk.

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RECOMMENDED CONTROL: INTEGRATED APPROACH

Equipment: Hand saws, forks, grappling hooks with rope, wheelbarrows and boat.

Qualifications: None unless integrating with herbicide control (see next page)

PPE: Gloves, waders and /or wellingtons

Time of Year: Feb/March to Oct

1. Manual Control

Manual control is the best place to start with FPW control.

It can be used to:

- reduce the biomass of large, dense infestations
- to keep on top of small amounts of regrowth.

How?

To prevent further spread, double stop nets or booms should be placed downstream to catch fragments while working and for two weeks after.

Large chunks of FPW can be hand lifted by sawing rafts into manageable sections.

Float or drag these chunks (using a grappling hook) to the side and hook out the rafts with a 4 tint potato hook (or chrome).

Any biomass removed by hand must be piled far enough away to ensure it cannot be washed back into any watercourse.



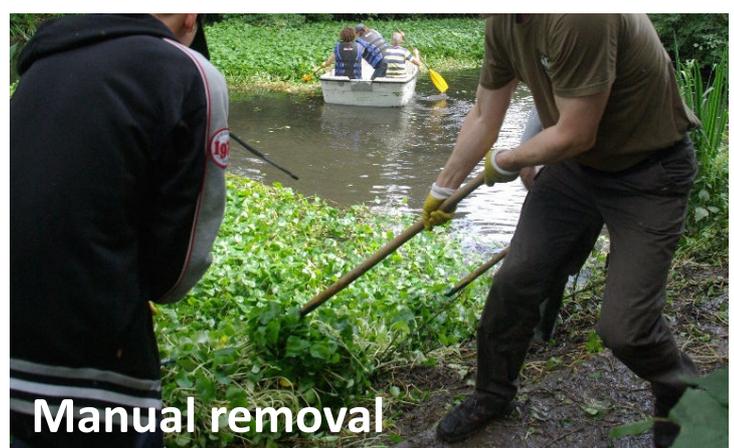
Dense FPW infestation, Watermeads



Regrowth, Ravensbury Park



Manual removal



Manual removal

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RECOMMENDED CONTROL: INTEGRATED APPROACH

- Equipment:** Knapsack sprayer, extendable lance, aquatic herbicide
- Qualifications:** PA6W. *A herbicide agreement from the Environment Agency is also required.*
- PPE:** Gloves, waders and /or wellingtons, face shield, micropore tape for any open cuts or grazes on skin
- Time of Year:** Feb/March to Oct

Ensure you have Environment Agency consent before using herbicide on the Wandle.

EA consent is required if working near/on water or within 1 m of the top of the bank. You will find the **AqHerb 01** form in the Management Plan and guidance on how to complete this. It is recommended you seek advice from your local Environment Agency team before starting a control programme. More locally, the Wandle Trust are happy to advise as well.

2. Chemical Control

Herbicide has been combined with manual control on the Wandle to successfully control FPW at number of sites.

Spray FPW rafts at a rate of **4.5L/Ha** with a **2.3 % solution of ProVantage 480** (23 ml/1000 ml of water with an adjuvant and marker - both approved for use on or near water - at the recommended ratios) using a **knapsack sprayer and extendable lance** from the bank or by boat depending on the waterbody.

Note that the effects of herbicide may not be visible for up to 3 weeks. A follow-up spray 19 to 21 days later can be used to further restrict and limit regrowth.

For photographs of this control in action, see the FPW Gallery in the INNS Action Plan.

3. Repeated Control

It is vital to continue monitoring the site for regrowth.

Repeated hand-lifting, and foliar spraying if needed, will maintain FPW at low levels but vigilance is required to ensure the infestation doesn't return.



Living Wandle
Landscape Partnership

