

## Context

This document is intended to help those intending to carry out useful work in the environment. It is for guidance only and is not completely exhaustive of all considerations. Any person or organisation taking on environmental improvement works should satisfy themselves that they have carried out sufficient checks with suitable advisory bodies to cover all risks and methods required for their proposed actions.

## Background

Himalayan balsam, *Impatiens glandulifera* is a non-native invasive plant that was introduced to Britain in 1839 due to its exotic colourful attraction for parks and gardens. Since then it has rapidly expanded its territory, especially along river banks and other damp nutrient-rich areas.

Its invasive nature was first documented by the Royal Horticultural Society in 1930. In the Tyne river system the ability for Himalayan balsam to rapidly establish and crowd-out our native flora, reducing local biodiversity has been noted as an increasing problem over the last 15yrs or so. It also reduces access to river banks and public areas for recreational purposes.

Himalayan balsam is an annual plant which can produce around 800 seeds per stem. The viability of these seeds is approximately 3 years. The seeds can be dispersed by wind, along water courses, via birds and the digestive tracts of ruminating animals and on tyres and footwear etc.



Himalayan balsam at Tyne Green forming a dense stand and reducing access to the river

## Legislation

The Wildlife and Countryside Act 1981 provides the primary controls on the release of non-native species into the wild in Great Britain. It is an offence under section 14(2) of the Act to 'plant or otherwise cause to grow in the wild' any plant listed in Schedule 9, Part II. Himalayan balsam was added to this list in April 2009. Therefore it is the land owner's responsibility to prevent the spread of Himalayan balsam from their land but there is no legislative powers to require eradication.

## Management Strategy

For Tyne Rivers Trust our emphasis is on river bank management and therefore the most sensible approach is to control Himalayan balsam from headwaters downstream. However to fully control the plant consideration of other sites of colonisation must be included.

Permission from the landowner both for access and removal activity must be secured in advance. Many landowners are receptive to offers of help.

Himalayan balsam is not noxious or dangerous to humans therefore no specific Personnel Protective Equipment is required for protection from the plant, it is however advisable to produce a Risk Assessment for managing Himalayan balsam control. This should include consideration for the physical activity of the task as well as site specific consideration in terms of accessing the site and working close to or in water or other potentially dangerous environments. Many people volunteer to pull balsam as they dog walk or take part in their own leisure activity however if volunteers are asked to attend a specific event and/or when working on private land first aid provision should be considered.

Volunteers recruited by an organisation for the specific task of Himalayan balsam management should be covered by the organisation's insurance policy. Tyne Rivers Trust registers the volunteer and monitors total volunteer hours to ensure that our insurance policy covers the level of all volunteer activity.

### ***Hand Pulling – 'Balsam bashing'***

One of the most effective (but labour intensive) methods of control is to pull individual stems and destroy the lifted plant by crushing and then piling the stems.

1. Ensure that everyone taking part is fully able to identify Himalayan balsam.
2. The best time to pull Himalayan Balsam is when the stems are at least 50cm tall and before the flowers turn to seeds. This can be between April and late June depending on the climatic conditions of the year and the location in the Tyne Valley.
3. Pull the stems gently to ensure that the whole root system is removed. It can be more successful the lower down the stem you grip but obviously this makes it more back breaking work – be sure to bend your knees not at the waist!
4. Crush the pulled stems to prevent nutrients reaching the flower heads. The flowers can in some cases produce seeds even when pulled.
5. Place the pulled stems in high piles. This prevents roots from the stems on the top of the pile from being in contact with the soil and re-rooting. It also prevents light getting to the plants at the bottom of the pile and growing should re-rooting occur. It is always worth revisiting the piles to pick off the occasional re-growing stem.
6. Himalayan balsam should not be removed from the site. To avoid transfer of seed during high water, wherever possible make the piles as far away from the river bank (within the site) as possible and if possible on hard ground.
7. If pulling late in the season please take every precaution not to transfer already popped seeds on soles of shoes or clothing. When flower heads have produced seeds the best approach is to accept it for this season and start earlier the following year!
8. Himalayan balsam seeds can remain viable but may not germinate for 3 years. Therefore on any site anticipate returning at least 3 years after the first session to confirm successful management. If Himalayan balsam exists upstream or upwind of the management site ongoing visits will be required.

### ***Slashing / Strimming***

Slashing or strimming Himalayan balsam provides a greater rate of cutting stems and potentially more immediate satisfaction. These methods can also incur the cutting of other native species which may or may not thrive from the pruning. Either of these methods requires additional risk assessment; make sure you have considered the use of sharp and powered hand tools. You will also need to think about the additional cost of equipment, its safe storage and maintenance to required standards for insurance cover. Stems should be cut as close to the ground as possible (below the first node) and still need to be crushed or removed from contact with soil for the best effects. Some experimental work has been completed in the Prudhoe area and further monitoring of seed production after cutting would be interesting.

### ***Spraying / Stem injection***

The use of pesticide for the treatment of flora in the environment requires qualifications in Pesticide Application; PA1 and PA6 (hand held applicators); for use beside a water course requires specific additional training. Reputable trainers such as Lantra, Kirkley Hall or Houghhall College can advise on full requirements depending on ultimate management strategy. Spraying is limited by wind and rain conditions which must be considered in any method statement, Risk Assessment and operation. Spraying will adversely affect all other flora in the area. Working near to a water-course also requires a licence from the Environment Agency. Any pesticide used must be suitable for use in or near water. Active ingredients of 2,4-D or Glyphosate are effective. Tyne Rivers Trust has been granted licences for using RoundUp ProBiactive for stem injection near water courses. To date Tyne Rivers Trust has not employed spraying as a management technique.

### **Useful resources:**

<http://tyneriverstrust.org/habitat-improvements/invasive-species/>

[www.nonnativespecies.org](http://www.nonnativespecies.org)

[www.plantlife.org.uk](http://www.plantlife.org.uk)

<http://www.naturalengland.org.uk/ourwork/regulation/wildlife/enforcement/injuriousweeds.aspx>

<http://www.t-c-m-rd.co.uk/invasive-weeds/himalayan-balsam/>

<http://www.lantra.co.uk/CourseFinder.aspx>

<http://www.northumberland.ac.uk/campuses/kirkley-hall/>

<http://www.eastdurham.ac.uk/1419/courses.php>

Are you already engaged in tackling Himalayan balsam or managing other invasive species? We'd love to hear about what you are doing, what works and what you've learned.

Please get in touch.

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