

River Sid Himalayan Balsam Initiative

Information pack for landowners and volunteer groups

The project

The River Sid Himalayan Balsam initiative, now entering its third year, aims to reduce the impact and spread of the invasive, non-native plant across the catchment of the River Sid.

Himalayan balsam was introduced to the UK as an ornamental garden plant which proceeded to spread to the wider environment. With no form of natural control in the UK, the plant grows unchecked up to 3 metres tall and outcompetes our native flora. The sight of large stands of balsam has become increasingly familiar over recent years particularly around watercourses, wet woodlands and waste ground.

The plant is particularly damaging along our watercourses, as new growth quickly takes hold on exposed riverbanks and sand bars. It is a short-lived annual which quickly grows to full height, reproduces, and then dies off during the summer months of the year. As the root bulb can grow to the size of a tennis ball (sometimes larger) during its short lifespan, this breaks up soil and other vegetation which is then left unbound and exposed when the plant dies back in early autumn. Along our watercourses, this leaves the soil highly vulnerable to erosion.

Removal of the plant must be carried out over a large area (sometimes at a catchment scale) to ensure all plants are tackled; leaving just one individual plant presents a high risk of re-incursion as each plant produces several hundred seeds which are easily dispersed. Landowners are encouraged to remove any balsam growing on their land, and if you claim Single Farm Payment it is compulsory to control the invasive on your land. It can be tricky however to do this comprehensively and in a coordinated way. That is where volunteer groups are invaluable, as they are able to cover large areas of land to survey and remove the plant, giving our native flora the opportunity to return.

Information pack

The purpose of this pack is to provide volunteers with background information about Himalayan balsam and the River Sid initiative, as well as information for group leaders to help set up and carry out balsam pulling days.

Contents

- Control methods
- Volunteer Risk Assessment
- Plant recording form
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- Health & Safety



Control Methods

There are a number of control methods for Himalayan balsam, and the correct option(s) should be selected depending on location and amount of balsam to be tackled. The various options are considered here:

Mechanical and hand-pulling

Use of hand or tractor mounted mechanical cutting equipment can be the most tempting control method due to its speed, however, these techniques can effectively coppice plants and encourage dense, multi-stemmed regrowth.

The best time to tackle balsam is once the majority of plants have reached full height and are in flower; July is usually the best month to aim for. It is imperative to control plants well before seeds are produced, which is typically 6-8 weeks after flowering.

If you using a strimmer or brushcutter, cut as close to the ground as possible and below the lowest 'node' in the stem.

Hand-pulling is the most effective technique for removal if time is available. Take care to pull up the whole plant including the root. Once removed, snap each stem a couple of times to kill off the plant, and then these can be left to desiccate by hanging over a fence or branch; large quantities can be piled and will rot down within a few weeks, ensure any piles are away from the river and at landowner discretion.

Chemical

Herbicide control can be effective when used at the right time and in the right place. A common problem is herbicide products entering watercourses, causing environmental damage. Permission from the EA is required if herbicide application is the only option of control near watercourses. Remember GAEC 14: Do not apply within 2 metres of a watercourse.

Away from watercourses and where it is safe to use Glyphosate (e.g. Roundup), the recommended rate per hectare is 2 litres of Glyphosate diluted with 200 litres of water. Particularly effective in woodland environments where balsam may be widespread, although beware Glyphosate will kill much of the understory, and so limit application to spot-spraying.

It is best to apply herbicide once the plant is in flower but before it has seeded, typically during July to early August. Herbicide treatment should be combined with other methods such as grazing or hand pulling, to remove growth throughout the year.

Grazing

Himalayan balsam can be grazed by stock when the plant is in its early growth stages, with cattle finding it particularly palatable, although the presence of any animals will have some benefit. Aside from eating the plant, trampling and bruising stems as animals come into contact with balsam will also weaken plants, preventing growth and seeding.

Grazing works best as a form of control when combined with other methods such as hand-pulling. This enables access to areas out of reach to animals and removal of growth once cattle have been moved on from the area.

It is important to exclude stock once the plant has flowered and seeds are forming, as animals will disperse seeds quickly through contact with fur. Take care to avoid poaching of the ground where cattle are grazing near watercourses.

And a note on Bio-control...

Bio-control is the use of a natural enemy to control another organism. All plants and animals have controlling agents in their native environment including pests, disease, predators and herbivores. When species are introduced to a new range (i.e. they are non-native) these natural enemies are missing from the new environment, often meaning they can survive and reproduce unchecked.

In the case of Himalayan balsam, CABI (www.cabi.org.uk) have identified a natural control agent of balsam in its native range of northern India and Nepal. Here, a species of rust fungus limits growth of the plant to 50cm and prevents the large stands we see in the UK.

Rigorous testing is required on any bio-control agent before it is released into a new region, as the agent could adapt to affect native species. CABI have progressed well with testing of the rust fungus, and a phased release to the wider environment is possible as early as Autumn 2014. It is intended that the introduction of the fungus will weaken the plant sufficiently to allow our native plants to compete, whilst also reducing the size and spread of individual plants to allow easier control.

Risk Assessment for volunteers hand pulling

Site location (inc. grid ref or postcode):

Date:

First Aider:

Supervisor signature:

Supervisor name:

Supervisor telephone/ mobile:

Supervisor company:

Hazard	Potential harm	Actions to prevent harm
Lyme disease	Infection	Wear long sleeved shirt
		Wear trousers and tuck into socks
		Warn people to check for ticks at end of day
Weil's disease	Infection	Cover new or recent wounds with watertight adhesive dressings
		Wear waders or wellington boots and water proof gloves
		Avoid rubbing your eyes, mouth and nose with wet hands
		After working in water or in contact with anything that may have been contaminated by rodents or cattle, wash hands and forearms thoroughly with soap and water/hand gel, particularly before eating drinking or smoking.
		Put on dry protective clothing as soon as possible.
		Advise people of the need for good hygiene
Drowning, falling	Trip, fall, possible death	Check bank is stable before approaching edge
		Avoid crossing deep water
		Use a pole or stick to test edges, depth and help with stability
		Supervisor to establish if anyone is a non-swimmer (more relevant to the downstream sections with deeper water)
		If the river is in flood or the water discoloured, it might be more appropriate to postpone a session or to reconvene on a smaller stream or tributary which is less affected and safer to work.
Toxic blue/green algae	Poisoning from algal blooms/bacteria	Where possible, avoid skin contact with the water
		If you have to identify aquatic plants where there is an algal scum, wear gloves and other suitable protective clothing
		Use clean water to remove any splashes
		Wash hands thoroughly before eating, drinking or smoking
Sunburn/sunstroke	Rash, illness	Obtain weather forecast prior to going on site
		Make sure appropriate dress eg sun hats
		Use sun cream on exposed areas
Lone working/disorientation	Risk of attack/accidents and emergencies	Stay in visual contact with other members of team; work in teams of 2-3 people
		Check mobile reception
		Lone working discouraged but if unavoidable there needs to be a procedure whereby their non-return is noticed – advise family member of where they are going and what time they will be back / or phone call to office when they are back.
		Supervisor to obtain accurate numbers and preferably names of who is out with them and this must be checked through the day and again at the end of the day's work.

Poisonous plants (giant hogweed)	The sap damages skin pigment cells and allows the skin to burn on exposure to UV A in sunlight, producing blisters. The skin discolouration and damage may take years to heal and so is potentially very serious.	Know how to ID the plant
		Avoid touching the plant with bare skin or hands
Wet, muddy, slippery, uneven ground and surfaces (particularly in wet weather); tree roots; large rocks and irregular ground often hidden by dense vegetation; hedge banks; animal burrows; tree stumps and logs; trailing vegetation	Slips, trips and falls	Wear appropriate footwear
		Always move carefully over rough, rocky or vegetation covered terrain, taking care to avoid loose boulders and watch out for burrows. Do not run down scree slopes or steep hills, and take care not to dislodge loose rocks or other objects.
Insects, nettles	Bites and stings, possible anaphylactic shock	Don't investigate wasp nests or bee swarms too closely
		Use gloves when pulling the plant
		Wear long trousers and sleeves (even if hot)
Barbed wire/plants with thorns	Cuts and scratches	Maintain a safe distance from barbed wire and overhanging thorny plants. Do not climb over fences.
		Have first aid kit available
Fire	Burns	Do not smoke or start fires
Dead animals	Risk of transfer of disease or fungal spores	Do not touch or move dead animals. Report to Defra as appropriate. Do not work immediately downstream of carcass if it is in/ near water.
Dehydration	Illness	Make sure everyone brings plenty to drink and drinks it; consider drinks breaks once an hour
Tetanus	Spores are commonly found in the soil and may infect minor wounds where the skin is broken	Spores are commonly found in the soil - all volunteers to have up to date tetanus immunisation; Otherwise, see your local GP for a tetanus vaccination if you have cut yourself on a plant or got soil or manure in an open wound.
		Wear gloves and maintain good hygiene ie wash hands
Livestock	Trampling, kicking, butting, goring	Try to avoid entering fields with livestock if possible

Plant Recording Form

By submitting your sightings and the location of Himalayan balsam to a record centre, you are helping to build an up-to-date picture of the plant's distribution. This assists local action groups target their efforts on the ground, and provides the Invasive Non Native Species Secretariat (INNSS) with guidance on the severity of the invasion from a national perspective.

There are a number of ways that you can submit your records:

Online

The key place to submit your records on line is with Devon Biodiversity Records Centre. You will need the information requested in the form below, and then follow the links to 'Submit Records' at www.dbr.org.uk

If you are interested in being involved further, you can also record your sightings on the INNSS 'iRecord' website, which may require registration. Follow the instructions at www.brc.ac.uk/irecord/enter-non-native-records

Smartphone Apps

There are a number of smartphone apps out there which can be used to identify, record, locate by GPS and submit your sightings whilst in the field.

Plant Tracker: Developed by the Environment Agency, University of Bristol and Centre for Hydrology and Ecology, this comprehensive app is quick, informative and easy to use. The data is collected by the above organisations to be used in targeting INNS removal. You can download it to iPhone or Android from: <http://planttracker.naturelocator.org/>

Further apps are available:

That's Invasive!: Developed to provide a unified recording system for invasives across Europe. A good app for identification. www.rinse-europe.eu/smartphone-apps

Aqua Invaders: Targeted at freshwater aquatic species, if you are carrying in-stream surveys also: <http://naturelocator.org/aquainvaders.html>

By Post

We encourage you to use the above digital recording methods, however if you do not have access, you can submit records by post to Devon Biodiversity Records Centre, 27 Commercial Road, Exeter, EX2 4AE.



Legal Guidance

There are a few considerations for landowners to bear in mind with regards to Himalayan balsam. Invasive plant species cost the UK economy and individual property owners millions of pounds per year, and these laws and regulations aim to encourage landowners to take ownership of the problem on their land. It is difficult to put an economic cost on the impact of Himalayan balsam, but as it contributes to loss of farmable land through erosion and requires annual control to prevent further spread, it is not just our natural habitats that suffer from its presence.

Legal status of Himalayan balsam in England

Himalayan balsam is listed on schedule 9 of the Wildlife and Countryside Act 1981

- As a landowner, if you have the invasive plant on your premises, you have a responsibility to prevent it spreading into the wild or onto other landowners land.
- As Himalayan balsam is such a prolific disperser of its seeds, this practically means it should not be planted or maintained, and should be controlled wherever possible.
- **This law is applicable to owners of all premises from home and garden owners, to farmers, estate owners to public property.**



Look out for Himalayan balsam seedlings in early May

Single Farm Payment and Cross-compliance

If you claim Single Farm Payment on your holding, as you are probably aware you are required to adhere to certain rules that aim to protect the environment, known as cross-compliance. The following 2 rules should be considered if Himalayan balsam is present on your land:

- **GAEC 11 Control of Weeds:**

A. 1. You must take all reasonable steps to prevent the spread of specified invasive non-native weeds and injurious weeds on your land and onto adjoining land.

This includes rhododendron, Japanese knotweed, giant hogweed and **Himalayan balsam**.

- **GAEC14 Protection of hedgerows and watercourses:**

A. 1. You must not cultivate or apply fertilisers or pesticides to land within 2 metres of the centre of a hedgerow, watercourse or field ditch;

A. 2. You must not cultivate or apply fertilisers or pesticides to land between the edge of the watercourse or field ditch and 1 metre on the landward side of the top of the bank.

Failure to comply with the above can result in penalty if the RPA carry out an inspection and find you in breach.

Use of pesticides near watercourses

It is illegal to use pesticides (includes herbicides) along waterways in the UK unless permission is granted by the Environment Agency. As well as the in-stream environments themselves, these laws cover the land immediately adjacent to watercourses (the riparian zone) as there is a high risk of pesticides applied here running off or leaching into the watercourse.

The width of land classed as 'adjacent to the watercourse' that is covered under these regulations is not a designated distance, but will instead depend on the soil and rock type, gradient and other environmental factors. In some cases you may be safe to spray within a few metres of a watercourse if precision equipment is used; however, on sloping or quick-draining soils a larger buffer is likely to be required.

Permission is only likely to be granted if there is a large, significant area of balsam and there is minimal risk to the riverine environment, and a certified pesticide contractor may be required to undertake the work. Chemical control therefore works out to be one of the costliest forms of control.

For further information regarding pesticide applications, please refer to the Voluntary Initiative for Promoting Responsible Pesticide Use: www.voluntaryinitiative.org.uk

Remember, a healthy grass buffer strip along your riverside land is a permanent, natural feature to capture any nutrient, pesticide or waste run-off from your farm, and are a necessity along all of our country's watercourses.

Land ownership and riverside management

If you own land that abuts a watercourse, it is likely that you own up to half way across the river unless otherwise agreed. **It is therefore your responsibility to manage and protect the river and its banks on your side.**

Riverside management is sometimes under the control of an angling club or the Environment Agency who may own the fishing rights to a river, although not the land. Consult with your local EA fisheries team, or the angling club if applicable, to agree on the best course of management if balsam is present; it is usually in their interest to remove balsam as it degrades fish habitat.

A few health & safety considerations

It is important to consider your personal health and safety as well as that of fellow workers, landowners, local communities, public and the wider environment. The purpose of removing balsam is, after all, to improve our natural environment and protect the health of our population by maintaining our waterways to a high standard.

When checking areas for balsam or looking to start work on a new location, **ensure you have the full permission of the Landowner.** It can be tricky to establish this along watercourses, where there are typically many owners in each stretch of river

Ensure you and fellow volunteers stay safe when working near water; please refer to the risk assessment included in this pack for further guidance on team safety. It is also important to consider members of the public in the vicinity.



www.sidvaleassociation.org.uk