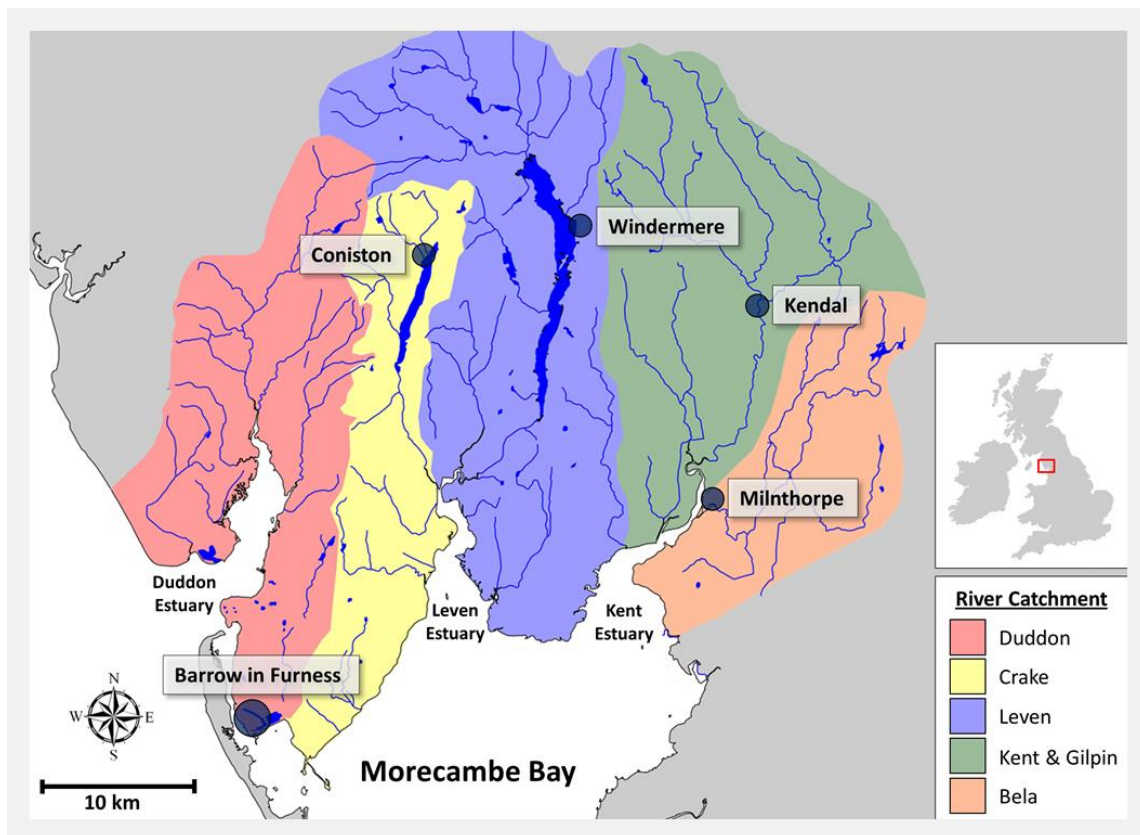


South Cumbria Himalayan Balsam Control Protocol

Thank you to partners and organisations interested and/or actively involved in Himalayan Balsam control locally. Following the Best Practice event in April, this protocol has been developed to standardise our collective approach. This protocol will be reviewed annually and SCRT will work with leading INNS partners to share learnings and work to agree a standardised protocol for Cumbria (even where local differences may occur). Protocols for other invasive species will be developed throughout the year and SCRT will liaise with partnership organisations.



Map to show area of INNS control highlighted in this document

Shared Goal

Success in Cumbria will mean that Himalayan Balsam is no longer spreading unchecked through known INNS pathways and that local organisations are working in a co-ordinated, standardised way. By 2030, the partnership aims to reduce Himalayan Balsam (HB) coverage across priority catchments by 75%.

Control efforts will prioritise the protection of internationally and nationally important conservation sites, including Special Areas of Conservation (SACs), Sites of Special Scientific Interest (SSSIs), riparian habitats, community nature reserves, and important fish spawning tributaries. These areas are especially vulnerable to the impacts of

Himalayan Balsam, including riverbank erosion, suppression of native vegetation, and degradation of aquatic habitats.

A key measure of success will be the establishment of co-ordinated annual control programmes across all major catchments in South Cumbria. Long-term management is essential because Himalayan balsam seeds can spread rapidly downstream and reinvade previously cleared areas if control is inconsistent between neighbouring landholdings.

Annual monitoring and rapid response measures will be maintained to identify and address re-emerging infestations before they become established. This approach is intended to reduce long-term management costs and improve the effectiveness of catchment-scale control.

The protocol also seeks to strengthen collaboration between volunteer groups, landowners, agencies, contractors, and local communities. Improved co-ordination will help ensure that resources are targeted effectively, duplication of effort is reduced, and control work is undertaken safely and consistently across catchments.

Window of Control

In Cumbria, Himalayan Balsam typically flowers between June and August, with seed production beginning from late July onwards depending on seasonal weather conditions and variability in location. Because the plant can disperse seed explosively over several metres, control measures must be completed before seed pods mature wherever possible.

The agreed control season will therefore run from June to September. Starting work in early June allows plants to be removed before flowering and setting seed, while extending monitoring into autumn helps identify late-germinating plants and areas requiring additional treatment.

A minimum of three site visits per season is recommended for all active control sites. However, four to six visits are considered best practice on high-density infestations or rapidly recolonising sites. Repeated visits are necessary because Himalayan balsam germinates over an extended period, meaning new plants may emerge after initial clearance work has been completed.

The suggested programme of visits is as follows:

1. Early June – Initial Pull

The first visit should focus on removing the main body of emerging plants before flowering begins. Early intervention reduces biomass and minimises the risk of later seed production.

2. Early July – Follow-Up Control

A second visit is required to remove regrowth and late-germinating plants missed during the first control session.

3. Late July/August – Pre-Seed Inspection

Sites should be inspected carefully prior to widespread seed set. Any remaining plants should be removed immediately to prevent seed dispersal.

4. September – Late Season Monitoring

Final visits should target isolated late-season plants and assess the success of control work. Monitoring at this stage also helps identify priority areas for the following season. Altered control methods should be used, if carrying out late control.

If funding or resource renders repeat visits unachievable, it is recommended that stages 3-4 be the focus of control activity. Whilst this may amount to considerably more effort at these later stages, the lack of initial visits may support later efforts due to leaf canopy restricting new growth through the season.

Control Measures

Control methods may vary depending on site accessibility, habitat sensitivity, infestation density, and the experience of those carrying out the work.

Volunteer led sites

At sites managed primarily by volunteer groups, hand pulling will be the default control method. Hand pulling is effective for Himalayan balsam because the plant has a shallow root system and can usually be removed easily from moist ground. For comprehensive information on how to pull balsam and the equipment needed, please click on the link: <https://scrt.co.uk/what-we-do/habitat-improvement/invasive-non-native-species-management/himalayan-balsam-control/>

Where appropriately trained operators are available, tools such as weed slashers, brush cutters, or trimmers may also be used to increase efficiency on larger infestations. However, manual control remains the preferred approach for volunteer-led activities because it reduces the risk of injury, minimises disturbance to surrounding vegetation, and is suitable for participants with varying levels of experience.

Landowner managed sites

On larger, high-density, inaccessible, or commercially managed sites, additional mechanical or chemical control methods may be necessary.

Trimming may be undertaken every three to four weeks during the peak growing season where infestation density makes manual pulling impractical. Repeated cutting weakens the plants and can prevent flowering and seed production if timed correctly.

Targeted herbicide treatment may also be used where appropriate, but only by qualified operators and in accordance with all relevant environmental regulations. Spot treatment may be particularly useful on steep banks, inaccessible ground, or areas where repeated mechanical control is not feasible.

Sensitive Habitats

Within designated sensitive habitats, only manual control methods will be permitted. Herbicide use will not normally be allowed within sensitive conservation areas or near watercourses unless all necessary approvals and licences have been obtained.

These restrictions are intended to protect native plant communities, aquatic habitats, pollinators, and the conservation features of designated sites. Manual methods also reduce the likelihood of unintended impacts on non-target species and minimise disturbance in ecologically sensitive environments.

Note: care should be taken not to disturb any native Touch-me-not Balsam which is generally smaller than Himalayan balsam and has yellow flowers. If in doubt consult an invasive species guide or contact SCRT.

Catchment Co-ordination

Effective Himalayan balsam control requires a coordinated catchment-scale approach because seeds are readily transported downstream by watercourses. If upstream infestations are left unmanaged, downstream control efforts are likely to be undermined by continual reinfestation.

All participating organisations therefore agree to work from upstream to downstream wherever practical. This approach helps reduce the movement of seed into areas that have already been treated and improves the long-term effectiveness of management work.

Control timing should also be coordinated between organisations, landowners, volunteer groups, and contractors operating within the same catchment. Coordinated scheduling reduces duplication of effort and ensures that neighbouring sites are managed consistently during the critical pre-seed period.

Partners will share annual work plans before control activity begins, wherever possible. SCRT will set up and manage a SharePoint folder, where co-ordination leads are encouraged to share planned activity. Sharing planned activity improves communication, helps identify gaps in coverage, and enables collaborative working across catchments.

The following organisations will act as named coordination leads:

- The Kent catchment will be coordinated by the South Cumbria Rivers Trust (SCRT). Activity to be supported by local groups and volunteers, including Kent Angling Association and Clean the River Kent Campaign.
- The Leven catchment will be split between different organisations:
 - SCRT/NT – Grasmere and Rydal. With support from volunteers and landowners.
 - White Moss - LDNPA, with support from contractors and volunteers.
 - NT – Troutbeck and Great Langdale.
- The Duddon catchment will be coordinated by Sustainable Duddon and Duddon Rivers Association, as part of the Landscape Recovery project, supported by SCRT.

SCRT are working to pull together a comprehensive map of infestation areas, co-ordination and area leads. This will be shared with partners in due course. Additional local coordinators may be identified and added annually as participation expands.

Communication

Clear and consistent communication between partners is essential to ensure effective and safe delivery of Himalayan balsam control work across Cumbria.

An annual pre-season meeting will be held each year, ideally between March and April, before the main control season begins. These meetings will provide an opportunity to review progress from the previous year, identify priority areas, discuss emerging issues, and coordinate upcoming activity.

SCRT will produce and circulate a shared action calendar to help coordinate control timings across catchments and reduce overlap between organisations and volunteer groups.

A shared contact network, such as a WhatsApp group or email distribution list, will also be maintained to support rapid communication between participants during the season. Effective communication channels will help share site updates, emerging infestations, volunteer opportunities, and biosecurity information.

All invasive non-native species sightings and management activity should be recorded using the **INNS Mapper** system to support consistent reporting and catchment-wide oversight.

The lead organisation for communication and coordination will be the South Cumbria Rivers Trust, supported by partners and volunteer groups.

Recording

Recording management activity consistently is essential for measuring progress, identifying gaps in coverage, and improving long-term control planning. However, recording systems must remain simple and accessible to encourage regular use by volunteers, landowners, and partner organisations.

Many attendees at the INNS Best Practice event held on 14 April already have experience using INNS Mapper. Although the system has some limitations, it is widely accessible, straightforward to use, and suitable for use by both volunteers and larger agencies. Data collected through INNS Mapper can also be downloaded and mapped using ArcGIS, allowing partners to undertake gap analysis, monitor treatment coverage, and identify areas requiring further intervention.

Management measures and treatment outcomes can also be recorded within the system, improving the ability to assess the effectiveness of different control approaches over time. SCRT has contacted the Yorkshire Wildlife Trust, which hosts INNS Mapper, to request additional functionality and improvements to support local operational needs. SCRT will continue to gather feedback from partners regarding functionality and feed this back to INNS Mapper on behalf of the INNS co-ordinators group. Any comments should be emailed to SCRT.

All participating groups will record Himalayan balsam presence/management using INNS Mapper as the standard recording platform.

The minimum data standard for each activity record will include:

- Location
- Date
- Action taken
- Density classification (guide below)
- Approximate number of plants removed (1–49, 50–99, 100–149, or 150+)
- Time spent on site (Under 30mins, 1-2, 2-4, 4+)

Where possible, additional information should also be recorded (in any other comments box), including:

- Before and after photographs
- GPS tracking or mapped polygons
- Regrowth observations
- Other invasive species present
- Volunteer participation numbers

To maintain accurate and up-to-date records, data should ideally be uploaded within two days of activity taking place.

Density guide

Himalayan Balsam Infestation Density Guide			
Density classification	Approx. cover	Example photo	Key features
1 Very Low	<5% cover Individual or scattered plants		- Individual plants or very small groups - Plants clearly separated - Native vegetation dominates - Usually <5% balsam cover - Easy to target individual plants
2 Low	5–25% cover Small patches; native vegetation dominant		- Small groups or patches - Native vegetation still clearly dominant - Plants generally separated - Can be easily walked through
3 Medium	25–50% cover Balsam widespread with native vegetation between patches		- Balsam occurs throughout much of the area - Several plants growing together - Native vegetation still visible - Movement through area relatively easy
4 High	50–75% cover Dense, continuous stands		- Extensive, continuous stands - Native vegetation present but suppressed - Plants frequently shoulder-to-shoulder - Walking through becomes difficult
5 Very High	>75% cover Near-monoculture; native vegetation largely suppressed		- Almost complete dominance by balsam - Native vegetation largely absent or heavily suppressed - Dense stands can be difficult to penetrate - Often forms extensive stands along riverbanks, woodland edges or disturbed ground
Use cover as a guide rather than an exact measurement; record extent separately.			

Biosecurity Standards

Strong biosecurity measures are essential to prevent the accidental spread of Himalayan balsam between sites during management activity.

All participating groups agree to follow the “Check, Clean, Dry” approach. Boots, clothing, tools, and equipment should be checked before leaving each site to ensure that seeds, soil, or plant material are not unintentionally transported elsewhere.

Following activity, all boots, clothing, and equipment should be thoroughly cleaned and allowed to dry fully before being reused at another location. Drying is particularly important because seeds and fragments may remain viable in damp conditions.

Vehicles can also contribute to the spread of invasive species. Participants should therefore avoid parking within heavily infested areas wherever possible.

Contractors operating near known Himalayan balsam sites must have an appropriate biosecurity plan in place. Toolbox talks or site briefings should be delivered before works begin to ensure that all staff understand site-specific risks and control measures.

Additional biosecurity measures include:

- Avoiding work within heavily infested sites once seed pods are present wherever practical, as disturbance may spread seed. If pulling is deemed necessary at this

stage, seed heads should be carefully collected in a bin bag and dumped in the centre of other pulled plant material.

- Leaving pulled plant material on site but away from watercourses and public access routes to reduce the risk of dispersal.
- Prioritising work from least infested sites to most infested sites where feasible in order to minimise cross-contamination.
- Providing volunteers with a biosecurity briefing at every organised event to reinforce good practice and maintain consistent standards.

Innovation and Technology – Pilots

The partnership recognises that emerging technologies and new management approaches may improve the efficiency and effectiveness of Himalayan balsam control over time.

Pilot projects will therefore be explored in several areas, including drone mapping and satellite imagery analysis to improve identification of large or inaccessible infestations. These technologies may help target resources more effectively and support catchment-scale monitoring.

AI identification tools will also be trialled to assess whether automated detection can improve recording accuracy and reduce survey time.

The partnership will support monitoring associated with biological control initiatives, helping to evaluate the long-term effectiveness of biological control agents under local conditions. This will be done in the form of a Rust Fungus trial, expected Summer 2026.

Rapid response pilot schemes will also be explored to test methods for quickly identifying and treating newly emerging infestations before they become established. Early intervention is expected to reduce long-term management costs and improve the sustainability of catchment-wide control efforts.

Pilot area(s):

- South Cumbria main rivers – Kent and Leven
- High-risk upstream source areas
- Difficult access floodplain sites
- Areas with easy access to demonstrate technology to volunteer groups

Potential Partners

- CABI
- BAE Systems

- Local Universities
- Environment Agency/ Natural England
- National Trust
- Westmorland and Furness Council
- LDNPA
- United Utilities

Commitment

Each organisation/group commits to:

Organisation	Area covered	Action	Frequency
South Cumbria Rivers Trust (SCRT)	South Cumbria catchments	Coordination, volunteer support, mapping, treatment	Annual programme
Local volunteer groups	Local river corridors, public land and private land with permission	Hand pulling, monitoring, strimming, reporting	Minimum 3 visits per season
Landowners and estates	Private land	Site access, control measures, follow-up management	Annually and as required
Local authorities / partners	Public land and infrastructure corridors	Coordination and operational support	Annually and as required
Contractors (if needed)	High-density or inaccessible areas	Specialist treatment and reporting	As required

Review

This protocol should be reviewed annually during the pre-season coordination meeting to ensure that it remains effective, practical, and responsive to changing local conditions. Annual review allows participating organisations and volunteer groups to evaluate the success of the previous season's work and make improvements where necessary.

The review process should consider lessons learned from operational delivery, including which control methods, coordination approaches, and communication systems worked well and where difficulties were encountered. Sharing practical

experience between catchments will help improve consistency and support continuous improvement across the partnership.

The review should also identify any remaining gaps in coverage, participation, data collection, or site management. Recognising these gaps early will help partners prioritise resources and target areas where additional support or coordination is required.

Emerging technology, updated guidance, and new best practice information should also be incorporated into the protocol. This may include developments in mapping systems, monitoring tools, biosecurity standards, or control techniques that could improve the effectiveness or efficiency of management work.

Catchment priorities should be reassessed annually to reflect changing infestation patterns, newly identified high-risk areas, conservation priorities, and available resources. This will help ensure that effort continues to be directed towards the areas of greatest ecological importance and where management is likely to have the greatest long-term impact.

The review process should also provide an opportunity to formally recognise new participating organisations, volunteer groups, landowners, and delivery partners. Expanding participation will strengthen catchment-wide coordination and improve the long-term sustainability of Himalayan balsam control efforts across South Cumbria.

Current partner organisations:

- SCRT/ LIFE R4Ever Kent
- National Trust
- Westmorland and Furness Council
- LDNPA
- United Utilities
- BAE
- Duddon Rivers Association
- Sustainable Duddon
- Kent Balsam Group
- Rydal/White Moss Balsam Group
- Kent Angling Association
- Cumbria Biodiversity Data Centre

- Environment Agency
- CABI
- APHA
- Natural England

Useful links

<https://www.nonnativespecies.org/what-can-i-do/check-clean-dry>

<https://innsmapper.org/home>

<https://www.gov.uk/guidance/plant-health-controls>

<https://scrt.co.uk/what-we-do/habitat-improvement/invasive-non-native-species-management/himalayan-balsam-control/>