

# Control of invasive non-native plants in the Lower Ness catchment

End-of-season Report, October 2011

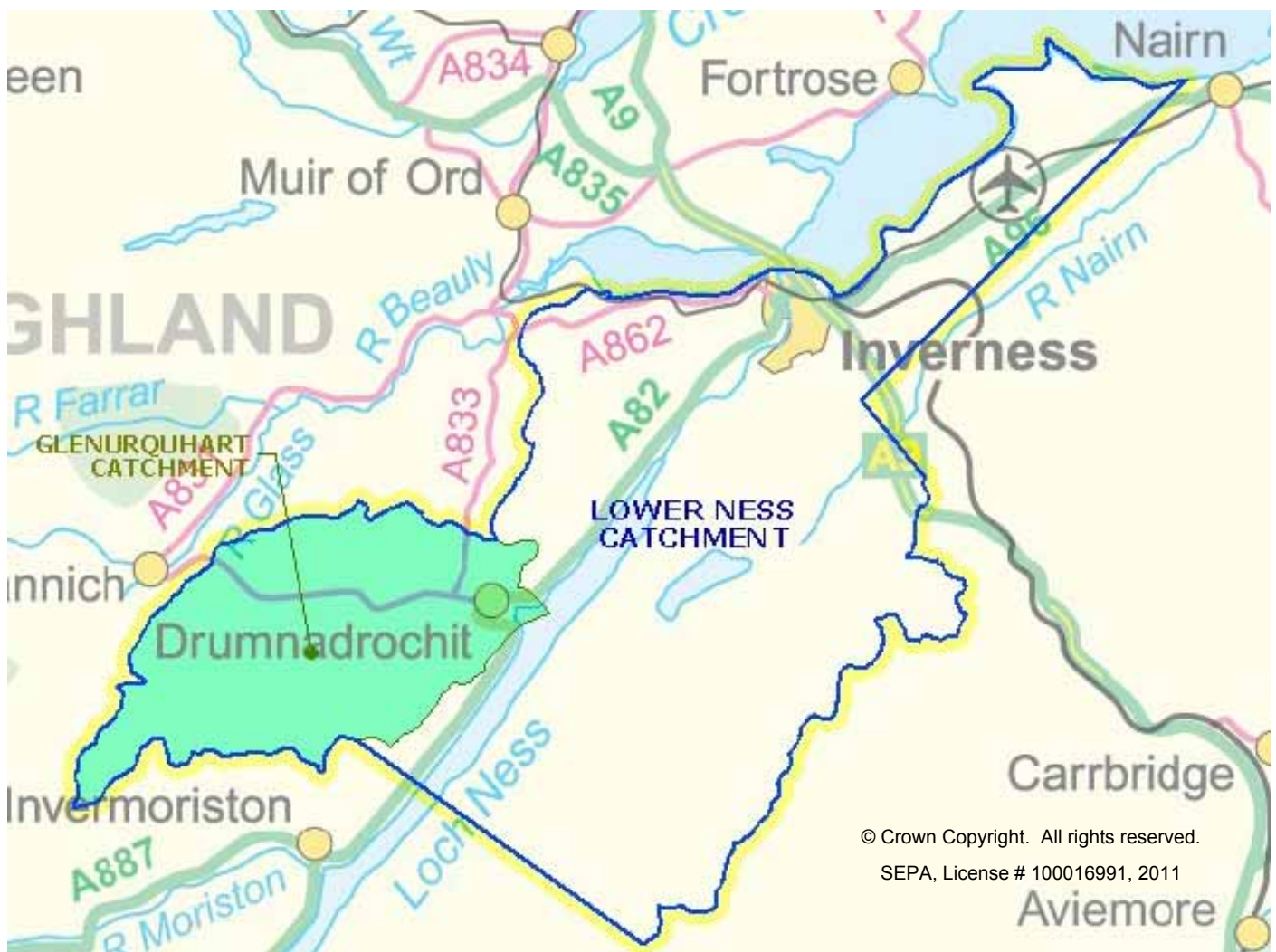


## Introduction

As part of a contract for Scottish Natural Heritage (SNH), Scottish Native Woods surveyed Glenurquhart for Invasive Non-native Plant Species (INNPS) in 2007, and drafted a [plan for their control](#).

Under a new SNH contract, we embarked on a control programme (part-way through the season) in August 2008. We completed our second full season in November 2010.

The current SEPA-funded project was originally intended simply as a continuation of the work in Glenurquhart, but with an offer of additional funding from Landfill Communities Fund, the project area was extended to include an area around Inverness which supports a significant concentration of INNPS. This expanded project area, which we have called "the Lower Ness catchment" is outlined in the map below.



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## The Glenurquhart catchment

The Project's highest priority this year has been to continue the INNPS control programme in Glenurquhart. We have now reduced all species to very low levels, but the last survivors and stragglers are proving increasingly difficult to locate as native vegetation re-colonises the ground.

**Japanese knotweed** is still present over an area of 4-5 hectares, albeit most plant growth is epinastic (*i.e.* stunted and deformed) from herbicide treatment.

Once the tall stems from previous treatments have broken down, it has proved especially difficult to spot small knotweed plants amongst other vegetation. On advice from Monsanto, we decided not to spray small plants this season. This will allow them to develop them into larger, more conspicuous plants next growing season; these will be more easily located and treated in August 2012.



*Knotweed regrowth is easily spotted during the first season after spraying, but less so in subsequent years*



**Himalayan balsam** has been very effectively controlled in Glenurquhart by a combination of cutting and pulling. To prevent any seed being set, repeated visits were made throughout the growing season to all areas where balsam has been recorded. The maximum interval between visits was set at 3 weeks, which meant that this task was very labour-demanding.

We are confident that very few plants set viable seed this season. Those that may have done so have been GPSd, and these areas will be searched especially carefully next year.

The **White butterbur** population has now diminished significantly, though many colonies which were sprayed in previous years appear to have survived, albeit in a weakened state. Little is documented about butterbur control, and this year we undertook a small scale trial to test the effectiveness of different treatments.

Lessons from these trials will be used to inform control protocols next year.





## New sites, new challenges, new opportunities

Beyond Glenurquhart, the most significant concentrations of INNPS in the Lower Ness catchment are around Inverness. In particular, there are well-established populations of **Himalayan balsam** along several burns around the town, as well as the River Ness.

There are small colonies of other INNPS too...

*Himalayan balsam occurs along more than two kms of the River Ness*



**Japanese knotweed** was found in several new locations. In a few cases, we were given consent by owners to treat stands. For some, we are still endeavouring to establish ownership.

**Giant hogweed** was found at a few sites around Inverness, many of them on land owned by Highland Council.

Most were already flowering when located, and it was too late to spray. Instead, we cut flower-heads off flowering plants, and severed the tap-roots of younger plants.



We also discovered a few sites with **American skunk cabbage**. As with butterbur, there is very little information published on control.

We carried out a small trial using two methods: excavating plants and herbicide applications. We should be able to draw some initial conclusions on the most cost-effective methods next year.





Another species of butterbur, thought to be **Giant butterbur** *Petasites japonicus*, was also surveyed. A positive identification will be made when it flowers next spring.



A map of INNPS is appended.

Some owners expressed concern over stands of ***Rhododendron ponticum***, a few of which are in the riparian zone. However, our work on other INNPS was given precedence over rhododendron control because:

- our resources were already stretched to the limit;
- unlike most other species, rhododendron can be controlled in winter;
- rhododendron control can usually be adequately funded by SRDP.

## Working with people

If we are to successfully reduce the introduction and spread of invasive non-native species, it is vital to raise awareness of the problems they cause and the precautions we can take to reduce the problem.

The Project had already established a working relationship with owners in Glenurquhart, but with a major expansion of the Project area this year, especially into suburban areas, we had to engage with many new owners.

Armed with a variety of informative [leaflets](#), project staff met over 280 land-holders this year, explained the issues and answered questions.

Much of the Himalayan balsam, especially in the Smithton-Culloden-Westhill area, is growing along burns which flow through gardens, so dialogue with house-holders was much more time-consuming than in more rural areas.

The great majority of land-holders were supportive of the Project's objectives. A few offered to undertake the control themselves, and were given advice and loaned tools to help them to do so. Most owners gave consent to Project staff to control INNPS on their land. Only 4 land-holders (less than 1.5% of those approached) refused to allow access.





Leaflets were also placed at key locations around Inverness, such as garden centres, farm shops and fishing huts.

Interaction with local communities proved to be very beneficial, and we recruited a few enthusiastic volunteers in the process.



*BTCV Green Gym volunteers helped clear scrub and balsam on a slope above the Scretan Burn*



*Some of the Project team work with volunteers*



Presentations describing the Project were given at two meetings:

- Highland Invasive Species Forum (in Plockton), and
- Inverness & Nairn Biodiversity Forum (at Eden Court Theatre, Inverness).



*Members of Inverness Angling Club turn out to help tackle Himalayan balsam on the River Ness*



*The Project has also contributed to the Scottish Invasives website.*

## Access and consents to control INNPS

While the majority of land-owners and house-holders welcomed the Project's help to tackle INNPS, four owners refused us access. One of these undertook to control the plants themselves, but no control has taken place on the other holdings.

The failure of a small minority of land-holders to cooperate is typical of catchment-scale projects. This prompted recent changes in legislation. It is hoped that the new Wildlife and Natural Environment (Scotland) Act 2011 will help the Project achieve its objectives in future years.



We also had some difficulty working with a few larger corporate land-owners and infrastructure managers. Despite providing tools, training and technical help, the results on some holdings were disappointing.

Difficulties of this kind often arise because work programmes are drawn up and budgeted for several months in advance. Discussions with a number of owners are ongoing, and it is hoped that work will proceed to plan in 2012.

## Funding

The LNINNPS Project was funded principally through two grants:

- SEPA Habitat Restoration Fund, and
- Landfill Communities Fund.

We also had some help from Woodland Trust Scotland and the Ness District Salmon Fishery Board and a few land-owners.

It is hoped that these funders will continue to support the Project in coming years.



## Proposed work programme for 2012

Our main objectives for next season are:

1. to continue INNPS control throughout the Lower Ness catchment
2. to trial control methods which minimise herbicide use, especially near watercourses
3. to explore ways to work with 'difficult' owners
4. to engage local communities
5. to disseminate the Project's experiences to others working in the field

## Controlling INNPS

In 2012, the Project will continue to control the following species on the Lower Ness area:

<b>Japanese knotweed</b>	<b><i>Fallopia japonica</i></b>
<b>Himalayan balsam</b>	<b><i>Impatiens glandulifera</i></b>
<b>Giant hogweed</b>	<b><i>Heracleum mantegazzianum</i></b>
White butterbur	<i>Petasites albus</i>
Giant butterbur	<i>Petasites japonicus</i>
American skunk cabbage	<i>Lysichiton americanus</i>
Rhododendron	<i>Rhododendron ponticum</i>

Highest priority will be given to those species shown **in bold**. In addition, in the course of our fieldwork, the invasive nature of a few other species has become apparent. In particular, the Pick-a-back plant *Tolmiea menziesii* appears to be spreading in Urquhart Bay Woods SSSI.

We propose to survey the extent of *Tolmiea* in 2012 and monitor its spread in subsequent years. A small trial will be conducted to determine the best method of control.

We have brought populations of the targeted INNPS down to a very low level in Glenurquhart. However, as they have become less frequent, the survivors and stragglers have become increasingly difficult to find.



*Tolmiea menziesii* carpets the ground over parts of Urquhart Bay Woods SSSI

In 2012, we will trial the use of a PDA to improve our ability to locate and monitor INNPS. However, the fact remains that as populations fall, a disproportionate effort has to be made to locate the remaining plants.

This begs the following questions:

- at what point should resources be withdrawn from an invasives control programme?
- is eradication a realistic objective?
- if any species is not eradicated, what steps can be taken to ensure that INNPS do not again increase to former levels?

In 2012, the project will make a careful assessment of the status of all INNPS in Glenurquhart, and draw up proposals for an exit strategy.

## Trialling control methods

The project will continue to trial control methods, especially for some of the less well-known species, such as skunk cabbage and white butterbur.

It will also explore the use of stem injection for knotweed, to increase kill rates, reduce herbicide use and minimise collateral damage to non-target species.

The results of these trials will be disseminated to other practitioners.



*Wildlife and Natural Environment (Scotland) Act 2011 (asp 6)*



Wildlife and Natural Environment (Scotland)  
Act 2011  
2011 asp 6  
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## Working with 'difficult' owners

A Code of Practice is currently being drafted to support the new WANE Act.

In order to avert any difficulties next season, we will re-establish contact with those owners with whom we anticipate possible problems and explain the implications of the new legislation.

## Engaging local communities

Special effort will be made in 2012 to develop the role played by local communities in INNPS control. We plan to give presentations to community groups, garden clubs and schools, and explore the potential for corporate volunteering. We also propose to organise open days to encourage more community involvement.

## Disseminating information

A lot has been learned in the course of this Project. Consideration will be given to the best methods for making this information available to a wider audience.



## Funding in 2012

A Project budget for 2012 is in preparation. It is hoped that SEPA and Landfill Communities Fund will assist the project for a second year, but other funding sources will also be explored.

**JP / 31 October 2011**



## LOWER NESS INNPS PROJECT

### DISTRIBUTION OF INNPS INVERNESS AND ENVIRONS

- Japanese knotweed
- Giant hogweed
- Skunk cabbage
- Himalayan balsam

