

# Control of invasive non-native plants in the Glenurquhart and Lower Ness catchments

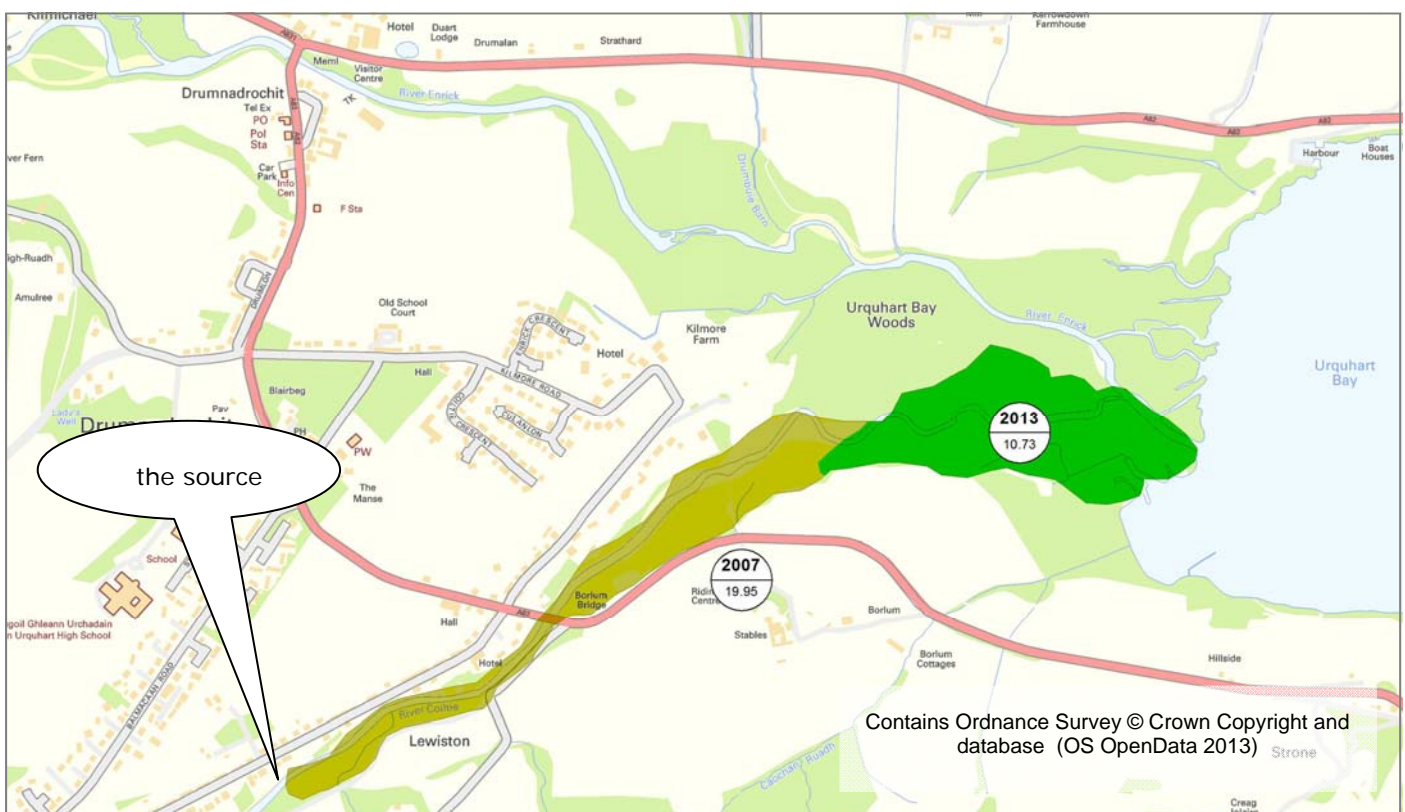


This project started in 2007 with a [survey and management plan](#) of Invasive Non-native Plants (INNPS) in the Glenurquhart catchment commissioned by SNH. This action was prompted by the abundance of riparian INNPS in Urquhart Bay Woods SSSI.

A catchment-wide control programme was initiated in 2008, and this has continued since. In 2011, the project area was extended to take in the wider Lower Ness catchment. The extent of the project area and distribution of the key riparian INNPS in Lower Ness is shown in the appended map.

The Glenurquhart catchment has received high priority because of the continuing impact of invasive plants on a designated site. Most of these invasive plant species are spread by running water, so the project has been working progressively downstream from their respective points of introduction.

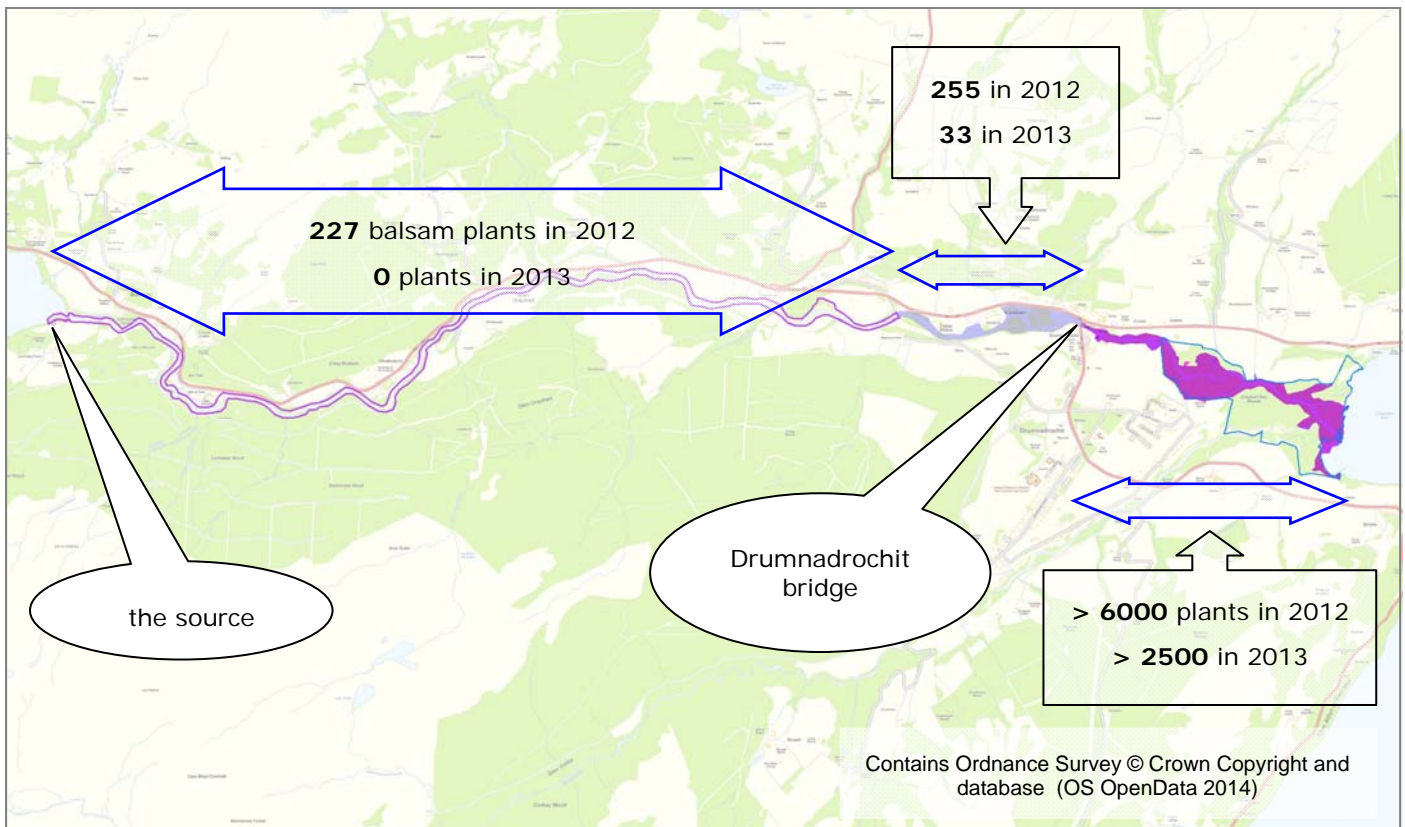
This systematic catchment-scale approach has started to pay significant dividends, with the removal of **Japanese knotweed** from almost half the area it occupied in the lower Coiltie since control started in 2008, as shown in Map 1. Most of the Glenurquhart knotweed population is now confined to Urquhart Bay Woods.



**Map 1. Distribution of Japanese knotweed in the lower Coiltie, 2007 and 2013**

Surviving knotweed plants are mostly small, especially under a tree canopy and appear more resistant to treatment than faster-growing plants in open areas.

Significant progress has also been made with controlling **Himalayan balsam**. In 2012, the population was at such a low ebb that we started monitoring progress by counting individual plants as they were removed (example recording sheet appended).



**Map 2. Control of Himalayan balsam in Glenurquhart**

Following four full seasons of control (2010-2013), we have now successfully eradicated balsam from the source at Loch Meikle downstream as far as Milton, a distance of 7.1 kms, as shown in Map 2.



*above: white butterbur flowers very early (mid February—March)*

The project has also controlled significant stands of **White butterbur**. For example, butterbur dominated the field layer over 1.7 hectares in Kilmichael in 2007, but following two successive seasons of treatment, it is now scarce.

White butterbur forms colonies which outcompete most other vegetation. These colonies steadily expand in extent and coalesce, effectively smothering all native ground flora. The plant is dispersed downstream when fragments of root are broken off during floods.

Because it is not very frequent in other parts of UK, it has not received the attention that has been afforded to other INNPS, and is not generally considered a priority for action.

The same is perhaps also true of Pick-a-back plant *Tolmiea menziesii*. The extent and ecological impact of this plant have not been assessed, but it appears to be spreading rapidly in Urquhart Bay Woods SSSI.

**Giant hogweed** is found in several locations close to Inverness, mainly along water-courses and on waste-land. Two control techniques are used. For isolated plants and small colonies, a spade is used to sever tap-roots (*right*). Larger colonies are sprayed by knapsack (*below*). Giant hogweed seed survives in the seed-bank, and control must be sustained for at least five years.



A fairly recent incomer, **American skunk cabbage** (*right*) is establishing vigorous colonies at several sites in the Lower Ness catchment.








The project has been systematically controlling these colonies by spot-praying. For the last 2 seasons, we have been carrying out trials to determine the most cost-effective and least environmentally-damaging treatments (*left*).

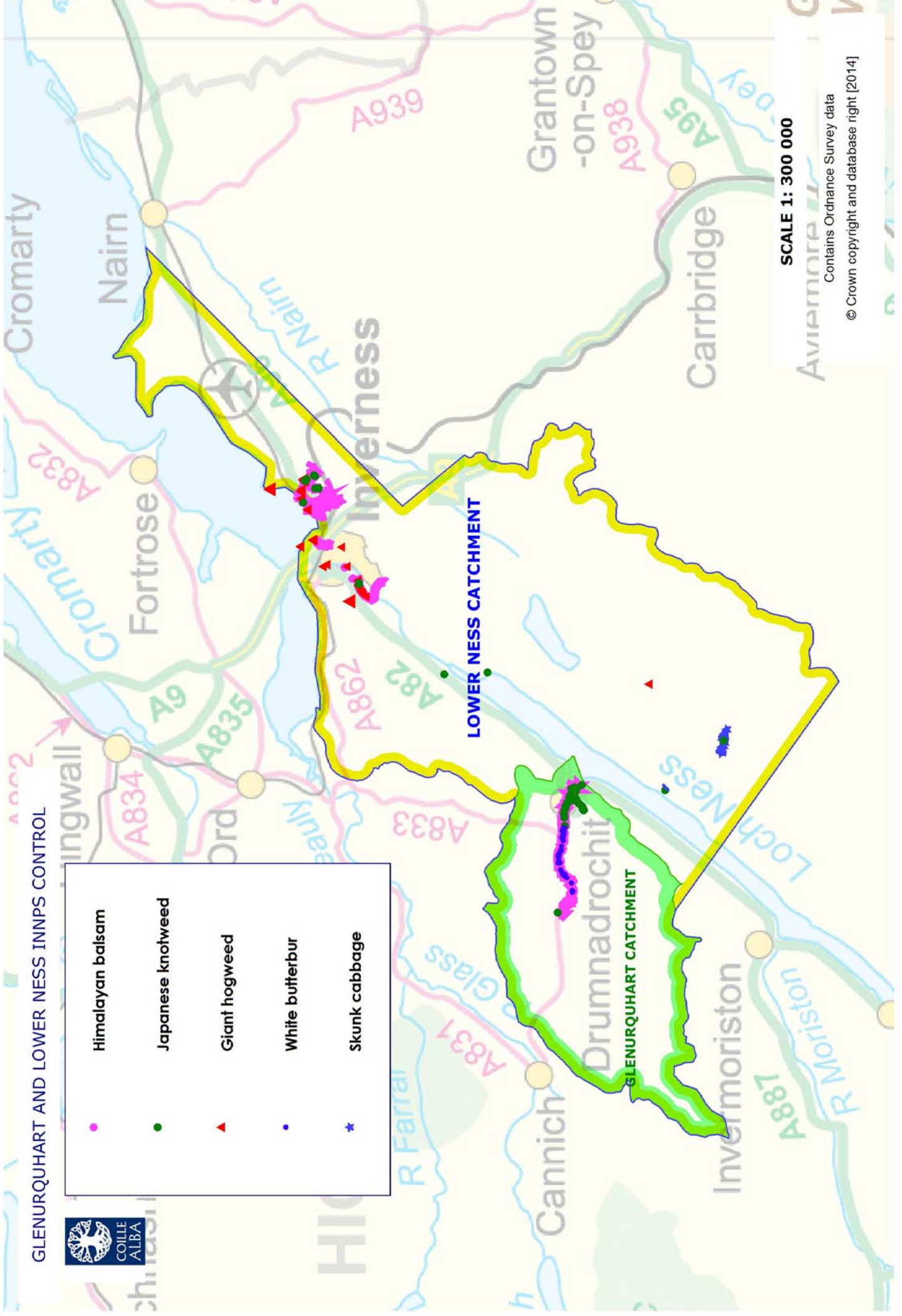
*Tolmiea menziesii* (*right*) appears to be another recent introduction in Urquhart Bay Woods SSSI. Little has been published on suitable treatments, and the first control trials are planned in 2014.



GLENURQUHART AND LOWER NESS INNSPS CONTROL



	Himalayan balsam
	Japanese knotweed
	Giant hogweed
	White butterbur
	Skunk cabbage



SCALE 1: 300 000

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**Table 1. Counts of Himalayan balsam, 2012-13**

	SITE REF	plants removed	plants removed	NOTES	
Glenurquhart and Lower Ness		2012	2013		
<b>GLENURQUHART</b>					
Lochletter	1	11	2	1. These counts were started only on 30 July 2012, so the figures for 2012 only represent the later part of this season	
Kinloch	2	0	0		
Kinloch > Laggantrattan bridge	3	28	0		
Laggantrattan > Milton	4	149	0		
Muirfield fields	4a	39	33		
Milton > Kilmichael > Drumnadrochit bridge	5	255	32		
bridge > Drumbuie march (both banks)	6	1474	150		2. Plants were counted on removal
Drumbue > Temple Pier (L bank of R Enrick)	7	>3000	>2000		
Woodland Trust (between R Enrick and R Coiltie)	8	769	346		
Borlum > Loch Ness	9	371	20		
<b>HOLM BURN AND RIVER NESS</b>					
Glen Cottage > Ness-side Estate	20	81	17	3. Highlighted cells indicate that no control was undertaken during the recording period.	
Ness-side Estate > Holm Mill	21	1641	236		
Whin Park	22	1203	53		
Ness Islands? and opp. Johnny Foxes	23	200	10		
<b>MILL BURN</b>					
Golf Club > railway	30	394	171		
NETWORK RAIL	31	>2500			
below railway (Autoglass > A9)	32	526	134		
<b>INSH / BEECHWOOD BURN</b>					
above Tesco > flyover	35		366		
Business park	36		109		
Lifescan	37		155		
Raigmore estate	38		212		
<b>SECRETAN BURN</b>					
western edge of Ashton Farm, behind Tesco to A96	41	>2500	>3000		
Seafield: A96 to railway	42		>2000		
NETWORK RAIL (Aberdeen line)	43				
below railway to sea	44				
<b>CRADLE HALL BURN</b>					
Muckovie > Cradlehall School > railway	51	202	56		
NETWORK RAIL (Perth line)	52	200	4		
<b>ASHTON FARM</b>					
upper ditches and field margins to top of Stratton wood	60		>6000		
ditches and field margins below Ashton Farm	61		>2000		
<b>CAIRNLAW BURN</b>					
source > Tower Brae North > railway	70	91	26		
railway > Brookside (Ron Macgregor's)	71	115	40		
Brookside > top point of Stratton Wood	72		1		
<b>WOODSIDE BURN</b>					
above Codfather > railway (bridge 290/334)	80	15	12		
old folks' home > Murray Place > Barn Church Road	81	187	66		
Barn Church Rd > Keppoch Rd > Duncan Forbes Primary	82	17	30		
<b>MILTON OF CULLODEN</b>					
Moray Park escarpment	90	623	127		
playpark > Loch Lann > Duncan Forbes School	91	206	23		
DF Primary > railway	92	188	>2000		
NETWORK RAIL (Aberdeen line)	93	700			
below railway to sea	94		>1000		