JKW Control Programme Irwell River Catchment

Review 2022 - 2024

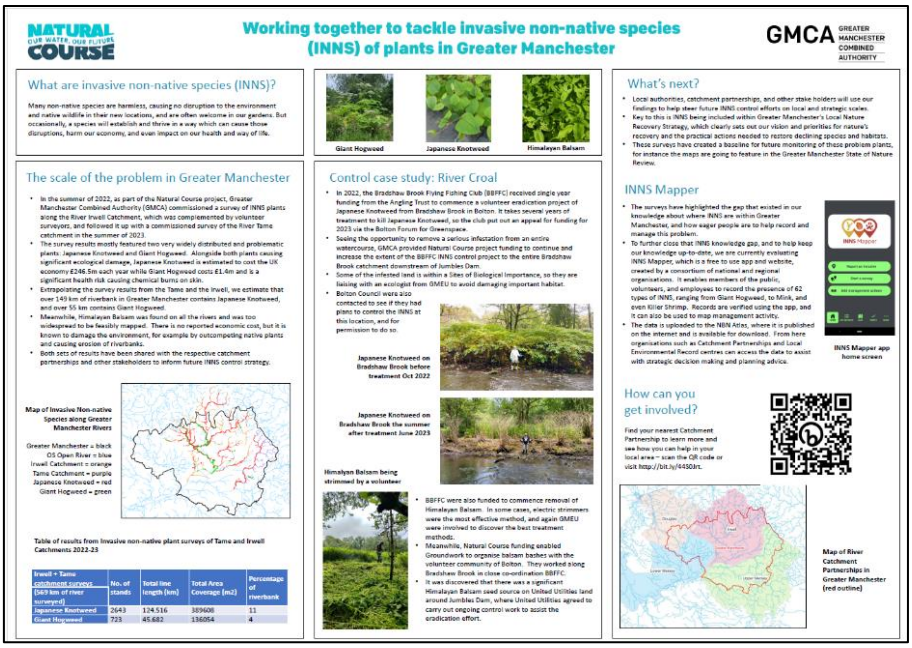
BOLTON GREEN UMBRELLA

Contents

Background and Overview

In the summer of 2022, as part of the Natural Course project, Greater Manchester Combined Authority (GMCA) commissioned a survey of INNS plants along the River Irwell Catchment.

The following poster, Natural Course 2023 INNS Project Summary was produced:



Below are salient points extracted from that report:

- ***The survey results mostly featured two very widely distributed and problematic plants: Japanese Knotweed (JKW) and Giant Hogweed. Alongside both plants causing significant ecological damage. JKW is estimated to cost the UK economy £246.5m each year***
- ***Extrapolating the survey results ….. we estimate that over 149 km of riverbank in Greater Manchester contains JKW***

Note: The Natural Course report had a wider remit than this report which concentrates on JKW along Bradshaw Brook, plus a number of other specific areas. The Natural Course report covers Giant Hogweed as well as JKW, and the Tame Catchment area as well as Irwell Catchment Area which are not covered in this report.

Table of results from Invasive non-native plant surveys of Tame and Irwell Catchments 2022-2023

Irwell + Tame Catchment surveys (569 km of river surveyed)	No. of stands	Total line Length (km)	Total Area Coverage (m2)	Percentage of riverbank
Japanese Knotweed	2643	124,516	389608	11
Giant Hogweed	723	45.682	136054	4

Below is a section from that report outlining the programme of JKW control undertaken by Bradshaw Brook Fly Fishing Club (BBFFC) and its secretary John Frazer in response to the survey.

Control case study: River Croal

- In 2022, the Bradshaw Brook Flying Fishing Club (BBFFC) received single year funding from the Angling Trust to commence a volunteer eradication project of Japanese Knotweed from Bradshaw Brook in Bolton. It takes several years of treatment to kill Japanese Knotweed, so the club put out an appeal for funding for 2023 via the Bolton Forum for Greenspace.
- Seeing the opportunity to remove a serious infestation from an entire watercourse, GMCA provided Natural Course project funding to continue and increase the extent of the BBFFC INNS control project to the entire Bradshaw Brook catchment downstream of Jumbles Dam.
- Some of the infested land is within a Sites of Biological Importance, so they are liaising with an ecologist from GMEU to avoid damaging important habitat.
- Bolton Council were also contacted to see if they had plans to control the INNS at this location, and for permission to do so.

Japanese Knotweed on Bradshaw Brook before treatment Oct 2022

Japanese Knotweed on Bradshaw Brook the summer after treatment June 2023

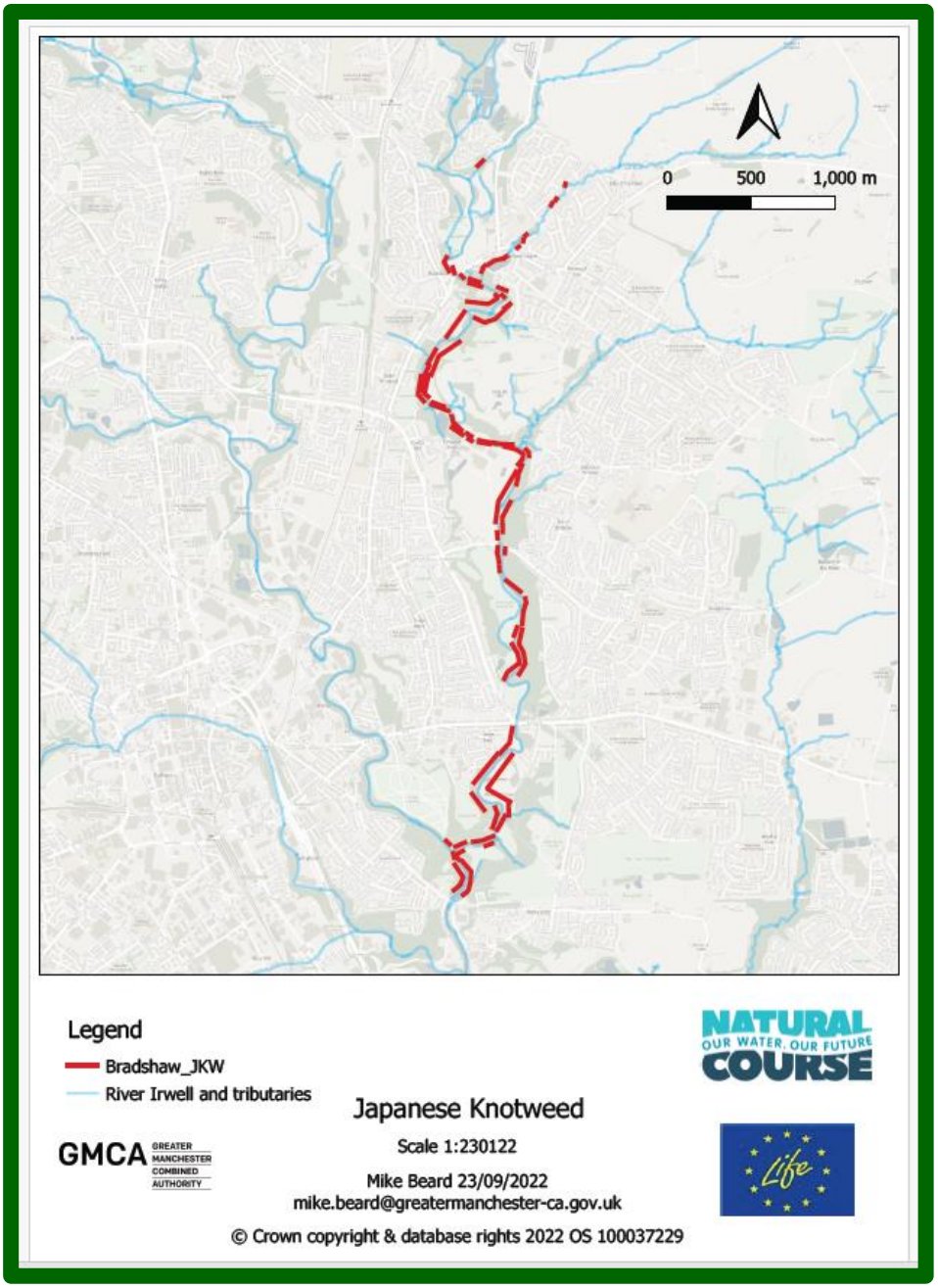
Himalyan Balsam being strimmed by a volunteer

- BBFFC were also funded to commence removal of Himalayan Balsam. In some cases, electric strimmers were the most effective method, and again GMEU were involved to discover the best treatment methods.
- Meanwhile, Natural Course funding enabled Groundwork to organise balsam bashes with the volunteer community of Bolton. They worked along Bradshaw Brook in close co-ordination BBFFC.
- It was discovered that there was a significant Himalayan Balsam seed source on United Utilities land around Jumbles Dam, where United Utilities agreed to carry out ongoing control work to assist the eradication effort.

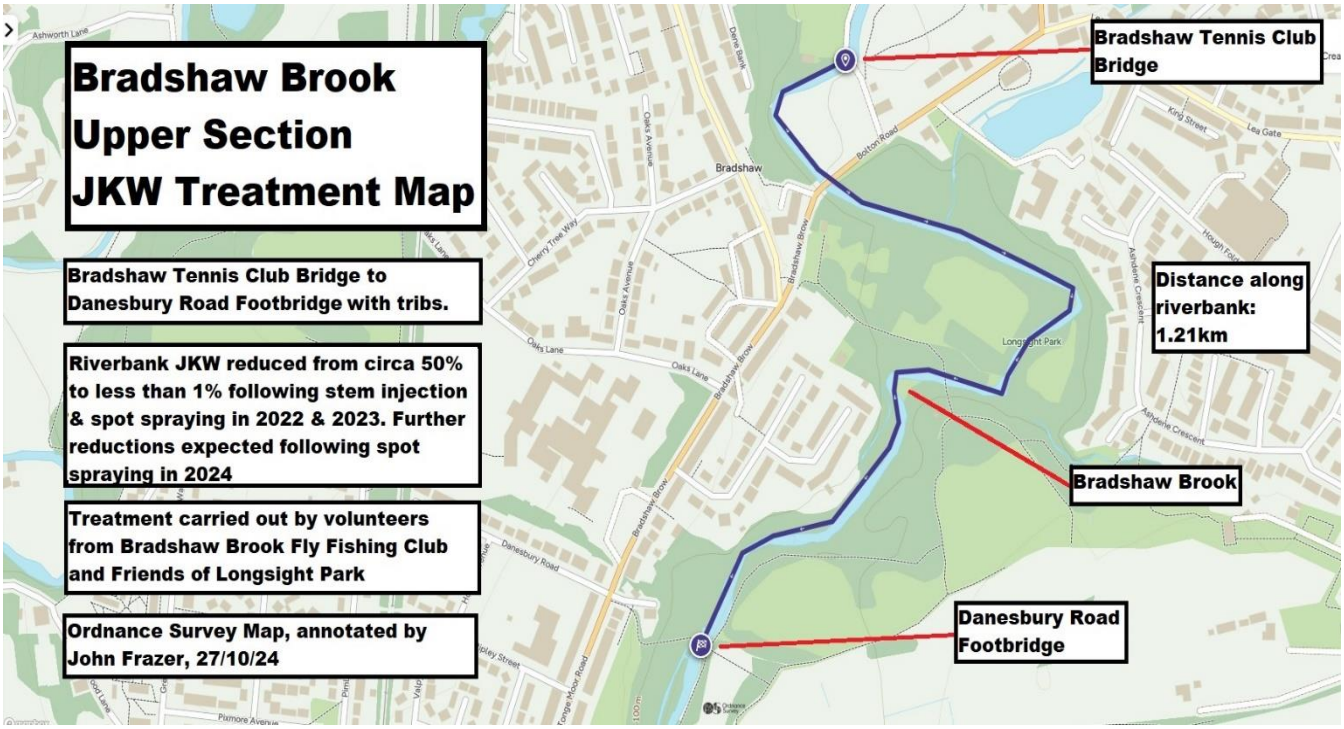
2022 Natural Course survey of Japanese Knotweed along Bradshaw Brook

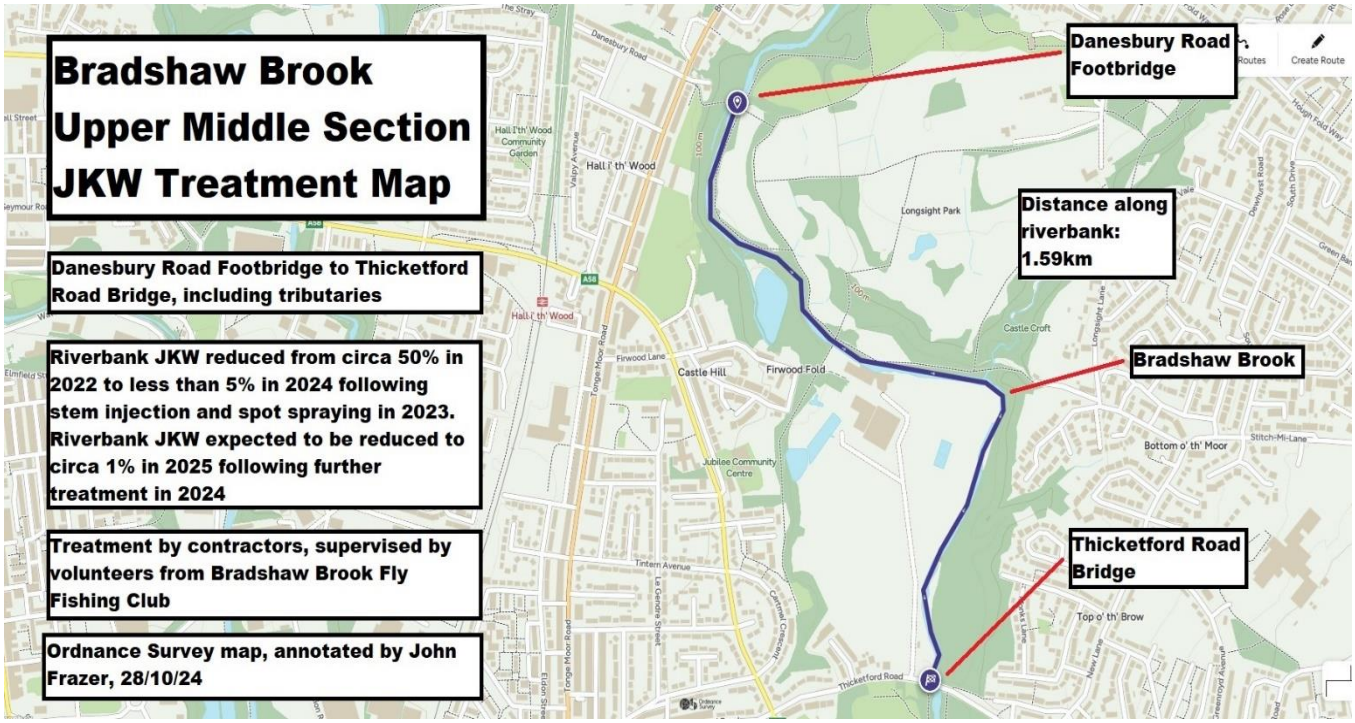
The survey was carried out by Mike Beard of Natural Course, using professional ecological surveyors with some additional information provided by volunteers. It examined the infestation of JKW along Bradshaw Brook beginning upstream of Bradshaw Cricket Club in the north, through Longsight Park and Firwood Fold, through Seven Acres Country Park and Leverhulme Park down to Darcy Lever. Below is the map of the surveyed areas illustrating presence of JKW.

Click HERE to open the map below in a new browser

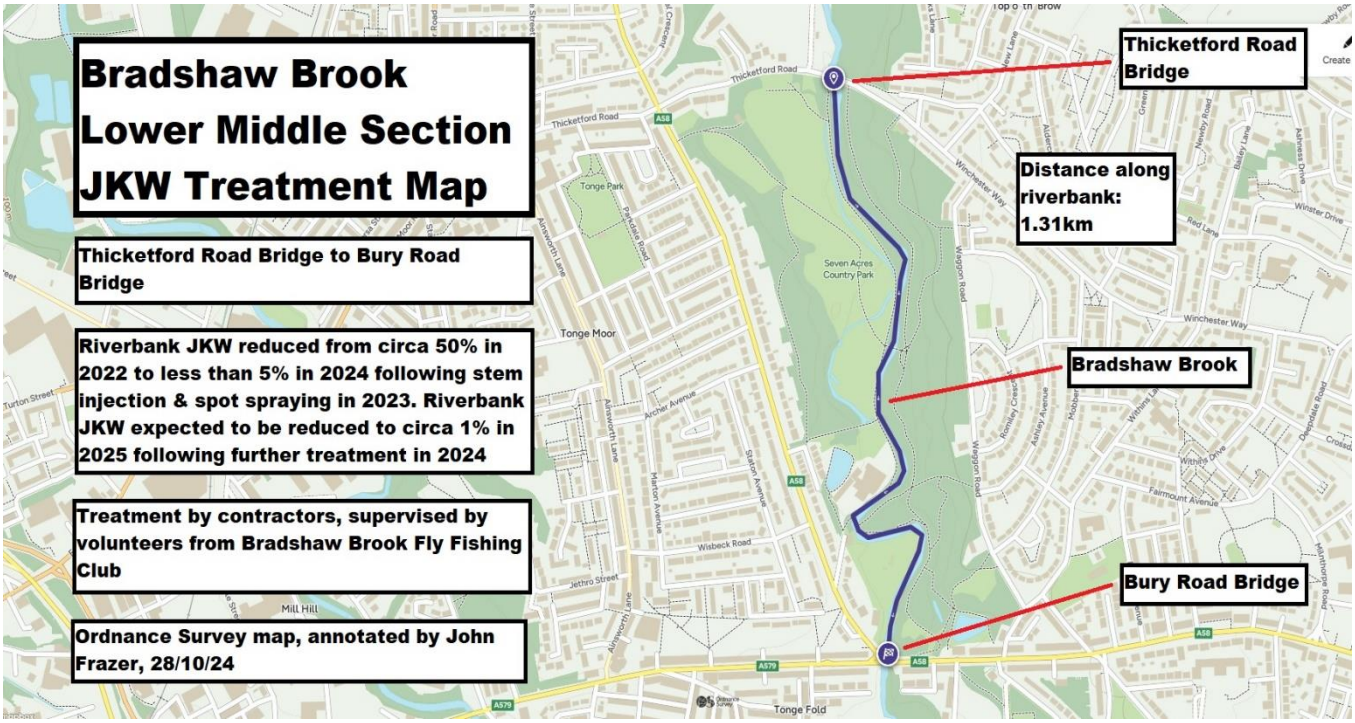


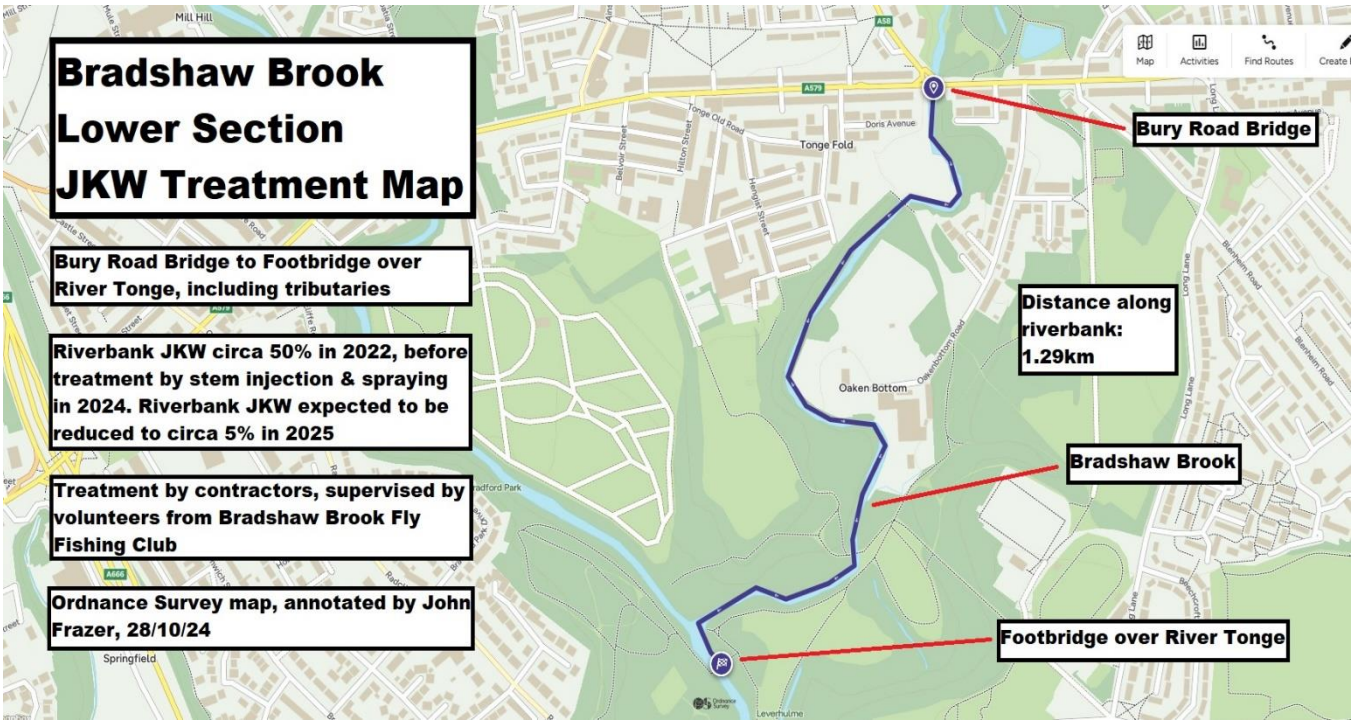
Graphic and street view maps of the surveyed area for comparison purposes





Graphic and street view maps of the surveyed area for comparison purposes continued





Approach taken for the JKW control programme

BBFFC's plan was to systematically follow the Natural Course survey along the banks of Bradshaw Brook, starting upstream of Bradshaw Cricket Club at the furthest upstream stand of Japanese Knotweed (JKW). The goal was to make as much progress as possible each season while maintaining the areas already treated, beginning in autumn 2022. The optimal window for treating JKW is quite short, from mid-August to the end of October. During this period, the sap in the JKW is sinking down from the plant, and injecting herbicide at this time ensures it is taken down into the roots with maximum effectiveness.

Years 2 and 3 (2023 and 2024) involved starting again at Bradshaw Cricket Club, checking and retreating where necessary.

In the first year, the treatment was almost exclusively carried out by stem injection. In subsequent years, spraying and spot spraying were used for stunted regrowth that was too small to inject.

Key aspects of the approach used:

- Repeat treatments, re-treating previously treated areas
- Gather empirical evidence
- Extensive and methodical recording of results
- Extensive and methodical recording of areas treated
- Provide a blueprint for future programmes

Giant Hogweed

Japanese Knotweed

Himalayan Balsam

2022 to 2023 : Year 1 and 2 of JKW control programme

2022 : Year 1

Funding acquired : £5000 from the Angling Trust
Spending:

- £1200 for John Frazer to undergo a 4 day Pesticide Training Course, DEFRA approved: One Ash Training - Pesticide Training Courses He was then assessed and certified by Lantra: Home - Lantra
- Remaining funds spent on PPE, herbicide, spray back packs, injection guns, and insurance

Detailed report for further information:
JKW_BB_2022_Treatment_Report.pdf

Area Treated:
In addition to the treatment along Bradshaw Brook, some injection was carried out at Riding Gate Brook and Slack Lane Brook.

An area of around 4000 square metres was treated in total, which is around the size of a football field.

2023 : Year 2

Following on from the success of treating over 4,000 square metres of Japanese Knotweed on Bradshaw Brook in 2022 and generally achieving a 95%+ reduction in regrowth in 2023, the project was expanded in 2023 to:

1. Continue the treatment of the areas from the 2022 Project.
2. Expand the treatment further downstream through Longsight and 7 Acres Parks.

Funding acquired: £9,900
£7500 from GM Combined Authority via Natural Course, for maintaining areas previously treated, and extending downstream.
£1300 from Bolton School via BGU
£1100 from BGU

Spending:

- 2 battery powered brush cutters (£1500 each) to control HB
- Payment of professional gardeners to achieve required progress. Physical requirements too hard for volunteers only.
- Insurance

Detailed report for further information:
Click **HERE** for the detailed 2023 report
Click **HERE** for the detailed 2024 report

Area Treated:
9000 square metres, from Bradshaw Cricket Club (retreating) down through Longsight and & 7 Acres to Bury Road Bridge (ERC)

These illustrations are screen shots of the ArcGIS survey app used to record results.

Grey boxes along the riverbank show the areas of JKW treated.

The ArcGIS survey app was managed by Groundwork (Greater Manchester).

2024 : Year 3 of JKW control programme

The 2024 JKW treatment achieved the objective of reaching the Tonge confluence in Leverhulme Park. Operations proceeded slowly at the end of September and beginning of October, due to lack of funds for contractors. However, after BGU provided £2K funding and Friends of Longsight Park provided circa £750.00 funding we were able to complete the treatment down to the Tonge confluence.

Funding acquired: £8144.26

£3010 from Irwell Catchment Partnership
£1000 from BBFFC
£800 from Bolton School
£2000 from Bolton Green Umbrella
£600 from Friends of Captain's Clough and Friends of Firwood Fold via BGU
£734.26 from Friends of Longsight Park

Plus £2000 of equipment from United Utilities

Spending:
- Payment of professional gardeners to achieve required progress
- Quantities of pesticide
- Insurance

Area Treated:
2805 square metres on previously untreated section from Bury Road to Tonge confluence

2057 square metres: maintenance and further push back of previously treated sections from Bradshaw Cricket Club to Bury Road

Some areas in Captains Clough LNR and Darcy Lever Gravel Pits were also treated

Total: 4861 square metres

Some of the 2024 funding was also used to treat 17,000 square metres of Himalayan Balsam (HB) downstream of Jumbles Dam by hand pulling, strimming, spraying & spot spraying with herbicide, at a total cost of £3,445.00, which included £2,435.00 expenditure on contractors.

Programme Summary Statistics

	£ funding	Source	Sq metres treated	Areas covered
2022 (Yr 1)	5000	Angling Trust	**4000**	All the sites identified by Natural Course's INNS survey between the Jumbles Dam downstream as far as footbridge at Danesbury Road in Longsight Park, including all the Brook's tributaries.
2023 (Yr 2)	7500	GMCA Natural Course	**9000**	In excess of 9,800 square metres of JKW was treated with Herbicide including all sites identified by Natural Course's INNS survey between the Jumbles Dam downstream through Longsight and 7 Acres Parks, as far as the Bury Road bridge, including all the Brook's tributaries.
	1300	Bolton School (via BGU)		
	1100	BGU		
2024 (Yr 3)	3010	Irwell Catchment Partnership	**4862**	Previously untreated section from Bury Road to Tonge confluence Maintenance and further push back of previously treated sections from Bradshaw Cricket Club to Bury Road Some areas in Captains Clough LNR and Darcy Lever Gravel Pits were also treated
	2000	Equipment United Utilities (UU)		
	1000	BBFFC		
	800	Bolton School (via BGU)		
	2000	Bolton Green Umbrella (BGU)		
	600	Friends of Captain's Clough and Friends of Firwood Fold via BGU		
	734.26	Friends of Longsight Park		
TOTALS	**£25 044.26**		**17,862**	**£1.40 per square metre**

Key Findings from 3 years of treatment

- Based on the original survey a trend is becoming very clear - the circa 50% riverbank JKW infestation is reduced to circa 5% after the first year's treatment and less than 1% after the second year's treatment.
- Retreatment is very quick because there is so little regrowth, which needs to be sprayed or spot sprayed rather than stem injection.
- Areas where JKW has been reduced are very quickly infested by Himalayan Balsam, so INNS control programmes need follow-up planting of natural species.
- Using professional gardeners was essential to achieve required progress. Physical requirements are too hard for volunteers only.

DEFRA report: Great Britain Invasive Non-Native Species Strategy 2023- 2030

The JKW Control programme outlined in this report is a small step towards meeting the requirements set out in the strategy compiled by DEFRA in February 2023.

The Great Britain Invasive Non-Native Species Strategy 2023 to 2030

Below is an extract from Page 12:

Chapter 2: Aim and strategic outcomes

The overarching aim of the Strategy is to minimise the risk of introduction and establishment and reduce the negative impacts of INNS in GB through a strong partnership approach. This Strategy follows the CBD hierarchical approach, which emphasises prevention, followed by early detection and rapid response, and finally long term management and control.

The key outcomes of the Strategy are that, by 2030 we will:

- ***Prevention: reduce establishments of INNS by at least 50% compared to 2000 levels.***
- ***Surveillance, early detection and monitoring: significantly improve our detection and monitoring capability, including increasing inspections and investigations.***
- ***Management: eradicate, control or contain INNS – prioritised by greatest impact and the likelihood of success.***
- ***Prioritisation and risk analysis: set out an agreed approach to the prioritisation of species based on risk and likelihood of success to ensure our efforts are focused to where they can achieve the greatest benefit.***
- ***Evidence: commission the research priorities outlined in the Evidence Strategic Plan, to ensure that the strategy is based on the best available evidence, and identify gaps and priority areas for further development.***
- ***Awareness raising: increase awareness of INNS issues and promote appropriate changes in behaviour or attitudes throughout all relevant sectors and among the general public.***
- ***Coordination: improve co-ordination of actions within governments, government associated bodies, and key actors outside government.***

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