



4 Trevor Way, Sudbury

Japanese Knotweed (*Reynoutria japonica*) & Phragmites  
(*Phragmites australis ssp. australis*)  
Management Plan

Brian P. Colleran, MSc., Principal  
[www.ecologicallandmanagement.com](http://www.ecologicallandmanagement.com)  
293 High Road, Newbury, MA 01951  
978.358.1423



## Document Summary:

At a site visit on August 1<sup>st</sup>, attended by Brian Colleran, of Ecological Land Management, and Mark Arnold, of Goddard Consulting, LLC; the presence of both *R. japonica* and *P. australis* was noted, as was the extent of each infestation. While other invasive species were noted on site, they are not being addressed as part of this plan. Each of the species this document addresses had relatively few representatives, therefore providing a ideal situation for achieving control of these species quickly and with relatively low amounts of herbicide utilized.

## Species Status & Known Site History:

*P. australis*: The relatively small stand on site was first noted by the Sudbury Conservation Agent during a site visit. The stems are relatively short and somewhat dispersed from each other. While there is a native strain of *P. australis*, (*P. australis* spp. *americanus*) the nature of this site as a wetland replication area makes the population present on site less likely to be the native. As with most invasives, invasive *P. australis* is commonly associated with disturbed sites. Prior to any work being conducted, it will be confirmed that these plants are not of the native strain.

*R. japonica*: The onsite *R. japonica* have a history of management. Based on the available evidence, it seems that a form of tarping was the primary tactic utilized. Observed *R. japonica* stems are found growing at the edge of several plastic tarps which have several inches of soil on top of them. The creeping, vineline growth forms observed in many of the plants are also suggestive of ongoing mechanical control efforts. However, no “witch’s broom” growth forms were noted, suggesting that no herbicide has been utilized recently.

## Proposed Work:

*P. australis* – *September 2022*: Chemical management of *P. australis* is proposed to be achieved using a stem injection methodology. Stems will be cut, seedheads bagged for disposal, and a water safe formulation of glyphosate inserted into the hollow stem. This methodology is ideal for situations where the population is relatively small, and where there is a desire to reduce the amount of spraying.

*R. japonica* – *September 2022*: Chemical management of *R. japonica* will be conducted by foliar spraying. A water safe formulation of glyphosate will be utilized. As opposed to the stem injection being conducted on the nearby *P. australis*, stem injection will not be available due to the small stem sizes of all *R. japonica* on site. A cut/paint methodology is possible but would likely result in less glyphosate making it into the rhizome system, due to the small stem sizes. Upon arriving at the site for treatment, if any stems are found to be large enough to be injected, or for cut/paint to provide a more optimal method of introducing herbicide to the rhizomes, such methodologies will be utilized.



*R. japonica* – *May/June 2023*: Based on European studies, an early season application of herbicide c has shown effectiveness when paired with a follow up herbicide treatment at the end of the year. Depending on the success of the September 2022 treatments, an herbicide with a different mode of action may be utilized for the 2023 season.

*R. japonica* – *August/September 2023*: Stems of *R. japonica* which emerge from the remaining rhizome network will again be treated with herbicide, using glyphosate and/or imazapyr, and likely using a cut/paint approach, due to a presumption that the majority of growth will have a “witch’s broom” growth form, making a herbicide application using spray or injection techniques impossible.

*P. australis* – *August/September 2023*: Chemical management of *P. australis* is proposed to be achieved using a stem injection methodology. Stems will be cut, seedheads bagged for disposal, and a water safe formulation of glyphosate and/or imazapyr inserted into the hollow stem.

While the population of both species will be much reduced after the 2022 treatment, some plants are expected to remain. The potential change in late season herbicide is proposed to account for any resistance of the regrowth to the glyphosate utilized in 2022, and early 2023.

#### **Expectations:**

Based on the low population sizes present prior to treatment in 2022, there is the potential for no regrowth of either species to take place in the spring of 2023. However, these species are both extremely difficult to eradicate, should be expected to return. The most likely time frame for complete management of these plants to be confirmed is the Spring of 2024.

Thank you for the opportunity to offer these ecological restoration services,



8/22/22

Brian Collieran, MS, CERP, PWS, AFB

Principal & Restoration Ecologist



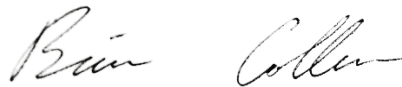
**Cost Estimate & Billing Outline:**

Based on the proposed work outlined in the “Japanese Knotweed (*Reynoutria japonica*) & Phragmites (*Phragmites australis ssp. australis*) Management Plan” for 4 Trevor Way, Sudbury it is estimated that the proposed services will require payment of 1700 dollars.

This cost estimate is inclusive of all herbicide preparation, herbicide application, associated site visits, and communications, and travel.

Billing would be conducted in three installments of 1000 dollars in the Fall of 2022, 350 in the Spring of 2023, and 350 in the Fall of 2023.

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