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Environmental Consulting & Restoration, LLC



VEGETATION MANAGEMENT PROPOSAL

TO: River Hawk Environmental, LLC

FROM: Brad Holmes

DATE: May 23, 2025

RE: 53 Bel Air Road, Hingham

Environmental Consulting & Restoration, LLC (ECR) has prepared this Vegetation Management Proposal to accompany the project located at 53 Bel Air Road in Hingham (the Site). Portions of the site contain non-native invasive plant species. More specifically, the back yard of the site is infested with Japanese Knotweed (*Polygonum cuspidatum*), which is a highly aggressive non-native invasive plant species. Japanese Knotweed is an invasive plant that was brought from Asia in the 1800s. It grows in dense stands and reaches incredible heights very quickly. It also outcompetes native vegetation, provides little by way of wildlife habitat value, and significantly degrades the environment. This proposal is designed to treat, remove, and manage Japanese Knotweed at the site.

The majority of the site is proposed as a single family home redevelopment project as identified on the site plan. The area where development is proposed will be managed so the management of Japanese Knotweed will be minimal and will be maintained during normal site operations. The area beyond development at the site, which is the non-disturbed buffer zone, is the focus area for this proposal. The control of Japanese Knotweed would be performed by licensed herbicide applicators. The methods to control Japanese Knotweed are listed below:

1. Foliar Treatment - Japanese knotweed will be foliar-treated with sensitive area-approved herbicide applied by licensed applicators using low-volume hand-pumped backpack sprayers.
2. Targeted Herbicide Application Methods - Targeted methods are used to ensure that herbicide is applied carefully only to Japanese Knotweed. A brief description of each method may be found below.
 - Stem injection: Using the JK Injection System®, the licensed herbicide applicator injects each individual Knotweed cane with 5 cc/ml of the wetland approved glyphosate-based herbicide. The herbicide is injected at a 100% concentration, as recommended in the literature and on the supplemental herbicide label.
 - Glove technique (hand wipe): A licensed herbicide applicator puts on an absorbent cotton glove under a chemical-resistant glove. The applicator moistens the cotton glove with herbicide dispensed from a hand-pumped low-volume backpack sprayer equipped with specialized ultra-low-volume nozzles and then wipes each stem and leaf of the individual Knotweed plants. A solution of herbicide, wetland nonionic surfactant and blue indicator dye is used.
 - The Side Swipe® Pro method: The licensed herbicide applicator handles the Side Swipe Pro like a hockey stick to precisely and selectively apply herbicide to the target plants. The wipe-on applicator pad assures no drift or overspray. The protective shield over the top of the applicator pad permits safe herbicide application around desirable plants and shrubs.

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The successful management of Japanese Knotweed requires ongoing maintenance over several years. More specifically, the management is proposed over three years with success goals as noted below:

Year One

Option 1

Task 1. (Spring/Summer 2025). Japanese knotweed will be cut and removed from the focus area. By cutting the plants early in the growing season, they will be stressed, and the regrown plants will be smaller and require less herbicide when treated in late summer after it flowers (August).

Task 2. Herbicide treatment (August). Japanese Knotweed will be foliar-sprayed with a sensitive area-approved herbicide applied by licensed technicians using low-volume hand-pumped backpack sprayers.

Option 2

Task 1. Herbicide treatment (August). Stem inject individual Japanese Knotweed stems > 1/2" diameter with JK Injection System®. Stems < 1/2" diameter will be hand wiped or foliar sprayed with specialized backpack sprayers fitted with ultralow volume nozzles for targeted application procedure. Herbicide will be used for both procedures.

Task 2. Follow-up herbicide application (Late August – 2 weeks after Task 1). The licensed herbicide applicators will return to the site to look for any Knotweed that appears unaffected by the earlier treatment using the same methods described in Task 1.

Task 3. Removal in late fall (October/November). Dead Knotweed plant material will be cut and hauled for off-site for disposal. Disposal will be at a facility familiar with processing non-native invasive plant species. Since these plants will be dead from the herbicide applications, it is unlikely that the spread of this invasive species onto the disposal site will occur.

Task 4. Seeding (October/November). A seed mix will be broadcast throughout the Knotweed management area, followed by the installation of a light, weed-free straw mulch. Selected seed mix will consist of a mix of native buffer zone species such as New England Conservation/Wildlife Seed Mix from New England Wetland Plants, Inc.

Year Two

Task 5. Follow-up herbicide application (Late August/September). Any regrowth of Knotweed within the focus area will be hand-wiped using the glove technique described above or wiped with a Side Swipe Pro Applicator. Sparsely vegetated areas will be scratched and seeded again as noted in Task 4.

Year Three

Task 6. Follow-up herbicide application (Late August/September). Any regrowth Knotweed will be hand-wiped using the glove technique or wiped with a Side Swipe Pro Applicator. Sparsely vegetated areas will be scratched and seeded again as noted in Task 4.

Success Criteria - Objective: 80% (or better) Knotweed control resulting from Year One treatments; 95% Knotweed control resulting from Year Two follow-up work; and 99% Knotweed control resulting from Year Three follow-up work. Please note that these success goals may vary based on unique site characteristics and persistence of Japanese Knotweed.

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Stewardship & Maintenance - Successful Japanese Knotweed management requires a long-term commitment and will need to be ongoing in order to protect the investment in the three-year management program. 99% control within the focus area can be achieved; however, attention will need to be paid to the 1% of plants that will reemerge every season and try to reestablish themselves on the site. This small amount of reemerging Knotweed should be able to be handled by the landscape contractor or property owner that will manage the landscaped areas of the site. Options for managing Knotweed after the initial three years usually consist of hand pulling, spot herbicide wiping, and/or cutting.

Upon review of this proposal, please contact me at (617) 529 – 3792 or brad@ecrwetlands.com with any questions or requests for additional information.

Thank you,
Brad Holmes, Professional Wetland Scientist #1464
Manager