



# Invasive Species Management Plan Hart Road Thundersley

9<sup>th</sup> October 2020  
3545



# Introduction

Ebsford Environmental Ltd are a consulting and contracting business specialising in the management of invasive species. We lead the way in delivering efficient, environmentally sustainable and cost-effective projects to a varied client base nationwide, with a unique service offered through a range of bespoke solutions. Our work is accredited by the two leading industry governing bodies: The Invasive Non-Native Specialist Association (INNSA) and the Property Care Association (PCA). We were the first UK company to obtain dual membership of these professional bodies that set standards and ensure projects are in line with current best practice. Our delivery of projects was recognised in 2019 when we were awarded the Contractor of the Year Award by the Property Care Association.

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# 1.0 PROJECT SUMMARY

Client:	Legal & General Modular Homes
Commissioned by:	Ben Tidmarsh, Development Delivery & Engineering Lead
Date Prepared:	9 <sup>th</sup> October 2020
Prepared By:	Hannah Gilmour, Managing Consultant M: 07947 541355 E: hannahgilmour@ebsford.co.uk
Job Number:	3545

**PROPOSED END USE:**

Residential development

**TARGET COSTS:**

£4,750+VAT

**TIMESCALES FOR ERADICATION:**

2 years

**LOCATION:**

**INFESTATION WITH  
DEVELOPMENT FOOTPRINT:**

Yes

No ✓

**OPTIONS CONSIDERED:**

Herbicidal treatment programme

Supervision of Himalayan balsam  
material relocation/burial followed by  
herbicidal treatment programme



# 2.0 SURVEY OVERVIEW

## 2.1 Introduction

Ebsford Environmental Ltd were commissioned by Legal & General Modular Homes to undertake an invasive species walkover survey at land earmarked for development at Hart Road, Thundersley. The survey was undertaken in October 2020 following a survey in May 2020 in which the site was not fully accessible. The objective of this document is to provide the visible baseline location and extent of the invasive non-native species (INNS) that are listed under Schedule 9 of the Wildlife and Countryside Act. Ebsford will assess the impact, risk and barriers to the site and provide fully costed options available whilst covering your duty of care.

## 2.2 Survey Method

Our surveyors are all Property Care Association (PCA) qualified surveyors for Japanese knotweed and have extensive experience regarding the identification of the relevant species at all times of year. This includes the three species of Japanese knotweed: *Reynoutria japonica*, *Reynoutria japonica x sachalinensis* & *Fallopia sachalinensis* and all other species as listed within Schedule 9 Part II of the Wildlife & Countryside Act 1981 (as amended)<sup>1</sup>. Any material that could be considered a controlled waste under the Environmental Protection Act 1990 (as amended)<sup>2</sup>.

Ebsford follow the INNSA Code of Practice which has been produced by experts within the field at the request of the Environment Agency to replace the withdrawn Code of Practice for Developers. It demonstrates the current best practice for the management of Japanese knotweed in the industry. As a regulating body within the construction industry INNSA members subscribe to the Invasive Code of Practice to improve standards within the industry and offer peace of mind to clients. This dedication to high standards and working in line with best practice is entrenched in everything Ebsford does, not simply for Japanese knotweed.

<sup>1</sup> Wildlife & Countryside Act 1981: The legislation aims to prevent the planting of Schedule 9 listed plant material in the wild where it then poses a threat to our native biodiversity and ecosystems. With respect to the plants section 14(2) states: if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, shall be guilty of an offence.

<sup>2</sup> Environmental Protection Act 1990 (as amended): Places a "Duty of Care" on the producer and anyone they employ to dispose of soil or other material contaminated with Japanese knotweed or giant knotweed. The material then becomes a controlled waste which can only be taken to licensed landfill sites and dealt with appropriately.

## 2.3 Site Observations

The site is best described as a large rectangular parcel of land primarily consisting of meadow/grazing land in Thundersley, Benfleet. To the north of the site are situated residential properties of Hart Road, to the north east, the site is met by further residential properties, and a dense tree line to the south east. The western boundary is formed by a dense hedgerow, with the grounds of Cedar Hall school beyond it; to the southern boundary, the site is met by a watercourse.

It is along this boundary that Himalayan balsam was identified during the survey. As we are nearing the end of the growing season for Himalayan balsam, and colder temperatures are setting in, we can see that the species is beginning to die back. As can be seen in figure 1, the Himalayan balsam foliage is beginning to yellow, and some flowers remain, meaning flower senescence has been reached, whereby seeds are dispersed, ready to germinate the following spring. The vector of introduction of the species is highly likely to be the watercourse to the southern boundary of the site; it prefers moist environments, and thus typically colonises waterside areas.

Himalayan balsam (*impatiens glandulifera*) is covered by the same legislation as species such as Japanese knotweed - Schedule 9 of the WCA 1981 (rev. 2), meaning that it is an offence to plant or otherwise cause to grow in the wild. The species is Britain's tallest growing annual plant, often reaching a height of three metres. In terms of the life cycle, the seeds require the winter chill to break dormancy; they then germinate over a short period, often during March to April, and grow prodigiously before flowering in June/July. These brightly coloured flowers are paired with seed pods, which house thousands of seeds. This is the key part of the Himalayan balsam cycle whereby seeds are flung from the seed pods, as far as 7m meaning it is possible for the infestation to grow significantly each year if left unmanaged. It is particularly known for outcompeting other species, causing river bank erosion when it dies back in the winter, and is a significant barrier to development as well as a hindrance to landscaped areas due to its highly invasive nature.

In terms of development, Himalayan balsam does not negatively impact built structures in the same way that Japanese knotweed does, but it is part of the client's duty of care as a responsible developer to prevent the further spread of the species and comply with the Wildlife and Countryside Act.

The survey also noted the presence of False Virginia Creeper (*parthenocissus inserta*). This was observed within a hedgerow to the north of the site. The species is listed within Schedule 9 of the Wildlife and Countryside Act in the same way as species such as Japanese knotweed and Himalayan balsam, however, its impacts on developments are not deemed to be as much of a concern, in fact, Virginia creeper and false Virginia creeper are often sold in many garden centres. Nonetheless, the presence of the species on site should be monitored carefully. The species is a vigorous deciduous and decorative climber, often favoured for the brilliant deep red colours the leaves turn in the autumn. Leaves are formed of five ovate leaflets, and feature inconspicuous flowers.

## 3.0 OPTION APPRAISAL

For the management of Himalayan balsam on this site, Ebsford have carefully considered all solutions and have recommended the most appropriate methodology in order to be cost-effective and cover the client's duty of care. This is an herbicidal treatment programme, of which is discussed in more detail below. This methodology will allow compliance with the Wildlife and Countryside Act, as well as following best practice utilising a PCA and INNSA approved contractor. This option treats the infestation in situ.

Please note - Ebsford have not recommended off-site disposal of Himalayan balsam. Due to the shallow depth of the root system, the excavated material can be classified as a top soil and subjected to higher rate landfill tax. Similarly, we often find this is a frustrating and not definitive solution as the viable seed can remain present on site regardless of careful biosecurity measures due to the explosive nature of the seed bank, as well as the potential risk of re-introduction from the watercourse. This would then almost feel as though the premium for off-site disposal was not cost effective.

Ebsford are aware that works are to be undertaken for the formation of an attenuation pond. As indicated in the drawing in section 6.0, instances of Himalayan balsam are present along the length of the southern boundary. If such works are to encroach into the Himalayan balsam infestation area, for example the tracking of machinery, or the movement of material, it would be prudent to address the infestation issue to ensure it is not exacerbated by the works. Ebsford are happy to provide a watching brief; this would also include a toolbox talk covering key biosecurity measures to prevent the further spread of the seedbank.

Ebsford would supervise the scrape of soils containing the seedbank from areas to be disturbed to an approximate depth of 200mm; this would allow the formation of the attenuation pond and reduce the risk of spreading it to further areas. The resulting material can be stockpiled in a suitable area to create a laydown area, and following the completion of the works, the area would then ultimately be subject to control via the aforementioned herbicidal treatment programme.

Alternatively, the resulting material could be buried within the attenuation pond under supervision, and followed by an herbicidal spot treatment and monitoring programme. This methodology would be subject to compliance with RPS 178 – the regulatory position statement for disposing of, treating or burying material without the need for a permit. Burial should be in an area not to be disturbed, such as a POS area; there must be adequate space to bury material with a minimum of 2m of clean cover, as well as in a location that is at least 7m from any site boundary. This can be discussed further if the client wishes.

As discussed, we are nearing the end of the growing season for Himalayan balsam, and as such, the herbicidal treatment programme would commence in the spring of next year; as the species is annual, any herbicidal treatment at the current time of year is not beneficial as instances are already beginning to die back, and the seedbank to form next year's growth is already present.

### ***3.1 Herbicidal treatment programme methodology***

A standard programme for the species is two years as detailed below. Ebsford will conduct a site review following the completion of the two-year programme in order to assess the success and discuss with the client further control measures if deemed necessary. We apply a non-residual herbicide (Glyphosate) that is safe to use near watercourses, trees, shrubs and bushes. Ebsford will make any necessary applications to the EA, for example for the use of herbicides in close proximity to a watercourse.

Implementing a management plan would certainly achieve a >90% reduction and would cover the client's duty of care. Please see below methodology for the herbicidal treatment programme, commencing in 2021. Treatments will be applied to any new growth throughout the season to deplete the seedbank over the course of the full programme; it is envisaged that four treatments will be administered before the end of each season. Herbicide treatments will be applied every four to six weeks as follows:

Year	Action
April - August 2021	Ebsford team to attend site and:  Conduct herbicidal treatment of Himalayan balsam (4 visits per year)
April - August 2022	Treatment of HB (4 visits per year)

On each visit an assessment of the species will be made to determine: 1) the quantity of live growth and health of the infestation; 2) impact of previous treatments; and 3) the quantity of herbicide required for treating the species on that specific visit. Operatives will be searching for signs of success of treatment; the species will be knocked back following the first treatment, with significant drooping of the canes.

Ebsford operatives hold relevant qualifications of competence required for the application of herbicides, namely the relevant NPTC PA1 and PA6 certificates, and best practice is always adhered to in chemical dilution, always following chemical product labels. Herbicides are administered via foliar application with knapsack sprayers. Ebsford conduct herbicide applications in line with best practice as per the INNSA Code of Practice, which stipulates strict guidelines for its' members to follow, for example the effect on the surrounding environment is minimised by using only the necessary quantity of herbicide, recommended dosage rates are always followed. Safety and control measures are followed closely on all visits, such as the use of Personal Protective Equipment, namely a spray suit, gloves and face shield. Knapsacks are filled inside the Ebsford vehicle using a drip tray to avoid spillages. In order to protect the environment as far as possible when applying herbicides, only the target species' foliage is sprayed, taking care to ensure drift of the herbicide is kept to a minimum. Ebsford are highly diligent in health and safety procedures, ensuring risks to operatives as well as the public and the environment are minimised throughout all herbicidal application works.

### 3.2 False Virginia Creeper

As discussed, the species is listed on Schedule 9 of the Wildlife and Countryside Act, meaning that it is prudent to control the species as a responsible developer. Ebsford recommend the cutting of the species to ground level, with the arisings remaining in situ to decompose naturally. Following this, Ebsford will apply herbicidal treatment via herbicide plugs to the remaining stump and root ball material – this will limit damage to the hedgerow if it is to be retained. Alternatively, if the hedgerow is to be removed as part of the site's development, Ebsford will simply provide a watching brief for the removal of the hedge, ensuring that no invasive material is spread elsewhere, and, given the relatively insignificant volume involved with the removal of the root ball, will dispose of this off site for the client.

## 4.0 BUDGET ANALYSIS

### 4.1 Himalayan balsam

Please see the table below detailing the yearly costs for the herbicidal treatment programme for Himalayan balsam:

Element Description	Unit	Number	Total
Site set up and RAMS preparation	Lump	1	£350
2021 Treatment programme	Visit	4	£1,600
2022 Treatment programme	Visit	4	£1,600
2023 Monitoring visit	Visit	1	£400
TOTAL (excluding VAT)			£3,950+VAT

As discussed, a watching brief and toolbox talk can be provided; this would be chargeable at £650+VAT per day of supervision; this is relevant to any supervision of excavation, relocation and/or burial works necessary.

### 4.2 False Virginia Creeper

Element Description	Unit	Number	Total
Cutting works	Day	1	£650
Herbicide plugs	Lump	1	£150
TOTAL (excluding VAT)			£800+VAT



## 5.0 SITE SURVEY IMAGES

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*Figure 1: View of Himalayan balsam at the southern boundary*

## 6.0 SITE SURVEY DRAWINGS



# TERMS AND CONDITIONS

## *Interpretation*

“Client” means the person named on the proposal document for whom the contractor has agreed to provide the specified service in accordance with these Terms. “Contract” means the contract provision of the specified service. “Contractor” means Ebsford Environmental Ltd. “Specified Service” means the service to be provided by the Contractor for the Client & referred to in the proposal.

## *Acceptance of Terms & Conditions*

The client will be deemed to have accepted these terms & conditions on agreeing the contract, proposal, or any such agreement verbally, in writing or electronically.

## *The Contractor/Consultant*

The Contractor/Consultant agrees to perform the work in a competent manner and in accordance with good practice and known science as applied to arboriculture and ecology, as specified in the proposal document, which forms part of this contract.

## *Payment*

On completion of each stage of the contract an invoice will be submitted for the agreed sum. Unless otherwise agreed in writing, this invoice will fall due for immediate payment with full and final settlement required in 30 days from the date of invoice. Value Added Tax will be charged at the current rate where applicable. Any payments overdue by 60 days may result in suspension of services which would be of serious detriment to any continuous herbicidal treatment programme & an assessment will need to be made as to whether we can commit to the original eradication date. We reserve the right to pass any late payments to a 3rd party debt collection agency where further fees may apply.

## *Warranties*

Where applicable our services are back up by either a 5 year or 10 year warranty issued on completion of the contract. All warranties come in to effect as of the eradication date. We reserve the right to revoke any warranty where the full contract value has not been paid.

## *Complaints*

Any complaints arising from work performed under this contract must be made within 7 days from the date of invoice, unless otherwise agreed in writing.

## *Disputes*

Any disputes arising under these terms & conditions shall be determined by English Law.

## *Expiry of Quotation*

The contractor reserves the right to withdraw and re-price work if the client does not accept the quotation within 30 days of submission, unless otherwise agreed in writing

## *Cancellation*

Any cancellation made outside of 7 days from acceptance of the terms & conditions, but prior to work commencing will be subject to a cancellation fee of 10% of the contract value. Where a contract has commenced & visits undertaken, a cancellation fee of 20% of the remaining contract value staged payments will be charged.

## *Visit Cancellation*

Any cancellation made outside of 7 days from arrangements for access will be subject to a cancellation fee of £250.00 + VAT. Where a contract has commenced & visits are attempted but not possible, a cancellation fee of £500.00 + VAT will be charged.

## *Completion of Contract*

Completion of contract is dependent on weather conditions. Work operations delayed by poor weather will be resumed as soon as conditions allow. Any addition expense incurred by the contractor for changes to the site conditions outside of our control will be charged at our cost price plus 15%. Details of such costs will be submitted in writing prior to work commencing. Any cancellation forced by these additional costs will be subject to the charges detailed in the “Cancellation” section of this document.

#### *Forces Majeure*

The contractor will not be liable in damages or otherwise for non-performance of contract because of adverse weather conditions, strikes, lockouts, war and civil commotion, or lack of adequately skilled labour due to causes beyond our control. Further, the contractor retains the right in such circumstances to cancel the Contract in whole or in part. Completion dates shall be contingent upon weather conditions.

#### *Insurance Cover*

The contractor will maintain a level of £5,000,000 Third Party and Public Liability Insurance & £10,000,000 Employers Liability Insurance throughout the contract period for any damages to persons or property resulting from the implementation of this contract.

#### *Data Protection Act*

The client's details will be held on the contractor's computer database. The information will not be made available to external companies.

#### *Tree Preservation Orders & Conservations Areas*

Any trees in close proximity to treatment areas on under this contract may be subject to a Tree Preservation Order or in a Conservation Area. It shall be the client's responsibility to notify Ebsford Environmental Ltd.

#### *Private Covenants*

Investigation of Private Covenants shall be the responsibility of the client and no liability is accepted by the contractor for a breach of any such Covenant.

#### *Site Conditions*

The contract price is based on the site conditions, existing at the time of the formation of the contract, remaining unchanged for the duration of the contract.

#### *General*

If any provision of these terms is held by any court or other competent authority to be invalid or unenforceable in whole, or in part, the validity of the other provisions of these terms and the remainder of the provision in question shall not be affected. Law shall apply to the contract, and the parties agree to submit to the non-exclusive jurisdiction of the courts.