Thomson environmental consultants





Precautionary Working Method Statement – Invasive Non-Native Species

Bailey Bridge, Manchester

For

Pick Everard

Report Ref.: PIC001-005-002/001/001

August 2024

London & South East
Compass House
Surrey Research Park
Guildford
GU2 7AG. UK
t: +44 (0)1483 466 000

North East
Unit 5 Carrwood Park
Selby Road
LS15 4LG, UK
t: +44 (0)113 518 2121

North West
Two Four Nine North
Lynnfield House
Church Street
Altrincham
Greater Manchester
WA14 4DZ
t: +44 (0) 113 518 2121

Wales & South West
Sophia House
28 Cathedral Road
Cardiff
CF11 9LJ UK
t: +44 (0) 292 066 0180

Midlands
605 Holly Court, Holly Farm
Business Park
Honiley, Kenilworth
Warwickshire
CV8 1NP. UK
t: +44 (0) 121 827 3180

East
70-72 The Havens
Ransomes Industrial Estate
Ipswich
IP3 9BF

t: +44 (0)1483 466 000

Enquiries

e: enquiries@thomsonec.com

w: www.thomsonec.com

Project Number	Report Number
PIC001-005-002	001

Revision No.	Date of Issue	Author	Approver
001	16/08/2024	Lauren Hornsby-Riley	Elizabeth Redpath

Disclaimer:

Copyright Thomson Environmental Consultants Limited. All rights reserved.

No part of this report may be copied or reproduced by any means without prior written permission from Thomson Environmental Consultants Limited. If you have received this report in error, please destroy all copies in your possession or control and notify Thomson Environmental Consultants Limited.

This report has been prepared for the exclusive use of the commissioning party and unless otherwise agreed in writing by Thomson Environmental Consultants Limited, no other party may use, make use of or rely on the contents of the report. No liability is accepted by Thomson Environmental Consultants Limited for any use of this report, other than for the purposes for which it was originally prepared and provided.

Opinions and information provided in the report are on the basis of Thomson Environmental Consultants Limited using due skill, care and diligence in the preparation of the same and no explicit warranty is provided as to their accuracy. It should be noted and it is expressly stated that no independent verification of any of the documents or information supplied to Thomson Environmental Consultants Limited has been made.

Contents

1. Project Overview and Rationale 5
   1.1 Background 5
   1.2 The Brief 5
2. Himalayan balsam 6
   2.1 Characteristics 6
   2.2 Legislation 6
3. Japanese knotweed 7
   3.1 Characteristics 7
   3.2 Legislation 7
4. Precautionary Working Method Statement 8
   4.2 Personnel Activity During Works 8
   4.3 Contaminated Soil 9
   4.4 Vacuum Excavation 9
   4.5 Toolbox Talk 9

Figure 1 Photographs of the Works Area

1. Project Overview and Rationale

1.1 Background

1.1.1 Manchester City Council appointed Pick Everard to provide structural engineering services in connection with the proposal to replace the existing Bailey Bridge spanning the River Mersey south of Chorlton Water Park in Manchester, due to its dereliction.

1.1.2 As part of the Project, Pick Everard are to undertake ground investigation (GI) works around the existing bridge's abutment to identify potential hazards and challenges, and to understand the ground conditions at the site to inform the project scope. The GI works will take place on the banks of the River Mersey within an area known to be infested with Himalayan balsam (*Impatiens glandulifera*), a non-native invasive species (INNS) of plant in Britain.

1.1.3 The GI works are to be undertaken in August during daylight hours and will take four days to complete. Personnel will access the banks on foot, and vehicles will be located on tarmac path on the top of the bank.

1.1.4 The personnel will collect soil samples from two boreholes through the tarmacked track for geotechnical and chemical laboratory testing. Additionally, they will be excavating down the side of the bridge abutments using a mini vacuum excavator. Any vegetation would be cleared using hand tools prior to excavation.

1.2 The Brief

1.2.1 Thomson environmental consultants Ltd. was commissioned by Pick Everard on the 2nd August 2024 for the production of a Precautionary Working Method Statement (PWMS) to facilitate borehole sampling to be conducted within the known infestation area of Himalayan balsam.

1.2.2 Following an ecological survey conducted by Thomson environmental consultants Ltd. on 15th August 2024, a stand of Japanese knotweed (*Reynoutria japonica*) was recorded around the north bridge abutment in addition to Himalayan balsam. As such, the scope of this document has been amended to also discuss Japanese knotweed.

1.2.3 This PWMS includes a summary of the characteristics of Himalayan balsam and Japanese knotweed, relevant legislative considerations, as well an explanation of the working methods to be implemented in order to comply with such considerations.

2. Himalayan balsam

2.1 Characteristics

2.1.1 Since its introduction into Britain in 1839, Himalayan, or Indian balsam has escaped and quickly colonised the banks of watercourses, semi- shaded woodlands, damp areas and waste ground throughout Britain.

2.1.2 Himalayan balsam is a tall herbaceous annual plant that grows up to 2.5m tall, has a pink-red succulent and hollow stem, spear shaped green leaves with serrated edges and pink-purple flowers. The seeds are contained within pods that explode, which can spread them over a wide area, up to 7m. If the plants are located next to a water course, the seeds, which are buoyant and can float, can be transported much further away from the host plant, by the flow of the water.

2.1.3 Himalayan balsam completes its life cycle in one season and reproduces each year from its seeds which can germinate early in the growing season. The plant can grow vigorously, with plants reaching their full height by July/August. It can flower and set seed between July and October.

2.1.4 Each individual plant can produce numerous seeds, so a single seed that germinates can create a new substantial invasion in a new area, all on its own.

2.1.5 Himalayan balsam can be easily identified during the growing season, but the seedlings and the stems from the previous year's growth, which decay very quickly, can be difficult to find outside of the growing season.

2.1.6 The plant is unable to spread from fragments of its roots or stems. However, under the correct conditions, plants that have been uprooted can potentially re-root from the nodes on the stem. Similarly, the plant can re-sprout unless it is cut below the first node. If not, it can regrow more vigorously and therefore produce more flowers and seeds than it would have had it not been cut.

2.1.7 Himalayan balsam plants have a very shallow root system and are often found growing in dense stands which results in the surrounding vegetation being suppressed. As a result, it has the potential to leave areas of bare ground when it dies back in the Autumn. This can then leave riverbanks susceptible to erosion during the growing season.

2.2 Legislation

2.2.1 Himalayan balsam is listed under Part 2 of the Invasive Alien Species (Enforcement and Permitting) Order 2019, as amended. Under the order it is an offence to plant or otherwise cause to grow in the wild any species which is listed under Part 2 of the order.

2.2.2 If any part of the plant from which it would be able to grow, or any soils that contain parts of the plant from which it could re-grow are to be removed from the site in which it is growing, then this must be treated as Controlled Waste, under the Environmental Protection Act 1990.

3. Japanese knotweed

3.1 Characteristics

3.1.1 Brought to Britain from Japan in the mid-nineteenth century as an ornamental garden plant, Japanese knotweed is a highly invasive perennial plant that can grow up to 3m tall. It has hollow, bamboo-like stems that are green with reddish-purple speckles and can grow in dense clusters. The leaves are broad, heart-shaped, and arranged in a zigzag pattern along the stems. The plant produces small, creamy-white flowers in late summer to early autumn, which form in clusters along the stems.

3.1.2 Japanese knotweed spreads primarily through its extensive rhizome (underground stem) system, which can extend up to 7m horizontally and 3m deep. Even small fragments of rhizome or stem can give rise to new plants, making it extremely difficult to control. Unlike Himalayan balsam, Japanese knotweed does not spread through seeds in the UK, as it rarely produces viable seeds in this region.

3.1.3 The plant is resilient and can grow in a wide range of habitats, including roadsides, riverbanks, and residential areas. Its vigorous growth can cause significant damage to buildings, infrastructure, and natural habitats. Japanese knotweed can quickly outcompete native vegetation, leading to reduced biodiversity and increased soil erosion, particularly along riverbanks where it often grows.

3.1.4 During the growing season, Japanese knotweed can be identified by its distinctive, rapidly growing stems and large leaves. In winter, the plant dies back, leaving behind dead, woody stems that persist for some time. However, the rhizomes remain active underground, ready to regenerate in the spring.

3.1.5 Control of Japanese knotweed requires a comprehensive management plan, as cutting or digging can inadvertently spread the plant further. Herbicide treatment is often necessary but can take several years of repeated application to fully eradicate the plant from an area. Given its ability to regrow from even tiny fragments, Japanese knotweed is considered one of the most problematic invasive species in the UK.

3.2 Legislation

3.2.1 Japanese knotweed is listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). As such, it is an offence to plant or otherwise cause Japanese knotweed to grow in the wild.

3.2.2 Under the Environmental Protection Act 1990, Japanese knotweed is also classified as controlled waste.

4. Precautionary Working Method Statement

4.1.1 An ecology survey undertaken on 15th August 2024 identified Himalayan balsam around both abutments, with Japanese knotweed also present at the north abutment. Photographs 1 to 4 on Figure 1 show the presence of Himalayan balsam and Japanese knotweed around the bridge abutments where the works will be undertaken.

4.1.2 Manchester City Council operate vegetation management in the area and have confirmed that they will undertake vegetation clearance around the abutments prior to the GI works. Vegetation, including the Himalayan balsam and Japanese knotweed, will be cut down to approximately ground level with arisings left on site.

4.2 Personnel Activity During Works

4.2.1 As the area infested with INNS is required to be accessed during the works, the following measures are to be implemented:

Prior to mobilisation

- Pick Everard Project Manager to ensure all personnel, directly employed or subcontracted, are aware of the presence of INNS, and the requirements to avoid spread of these species in advance of site work.
- All clothing, footwear, equipment and vehicles to be used on site must be in a clean condition, free from soils, plant material and debris etc.
- Works supervisor to ensure that cleaning brushes, hoof picks and boot / equipment washing facilities are prepared so they will be available to personnel during the works. Provision of hot water if possible.
- Check whether your organisation has any other guidance, such as a Biosecurity Policy.

Each day - During GI works

- Keep access to a minimum when working on the banks to avoid dispersing plant material outside of the working area.
- Do not take vehicles onto banks, keep to established tracks and park vehicles on hard standing.
- Any soils or vegetation arisings produced to gain access to survey locations should be left on site as close as possible to where they came from.

Each day - Before leaving site

- Follow the GB Non Native Species Secretariat **Check, Clean, Dry** protocol - https://www.nonnativespecies.org/what-can-i-do/check-clean-dry/#

Check:

- Check your equipment, and clothing after leaving the immediate infested area for mud or plant material. Remove anything you find and leave it at the site.

Clean:

- Ensure footwear, especially boot treads, and all equipment is visibly clean, paying attention to areas that are damp or hard to access - use of brushes and hoof picks to remove potentially contaminated material (soil, plant material, and debris).

- Boot and equipment washing facilities to be used prior to leaving site, using hot water if possible.
- Ensure any vehicle(s) is clean - in particular, remove any accumulated mud before leaving the site.

Dry:

- Once thoroughly cleaned, all items should be allowed to dry before being used again or being taken to another site as some invasive plants and animals can survive for over two weeks in damp conditions.

4.3 Contaminated Soil

4.3.1 Due to the presence of Japanese knotweed, which is able to spread rhizomes up to 7m, all soil samples within 7m of the Japanese knotweed stand must be treated as contaminated. Including the soil taken from below the tarmac area if within 7m.

4.3.2 Any soil removed from the works area for further sampling should be disposed of appropriately as controlled waste once subsequent testing is completed. Disposal should be via a registered operator and disposed of at a suitably licensed waste disposal facility in accordance with Environment Agency, Department for Environment, Food & Rural Affairs and Natural England Guidance.

4.4 Vacuum Excavation

4.4.1 A vacuum excavation vehicle will be used to prepare the area around the abutments for the investigation surveys. The soil will be reinstated following the surveys by the same machine.

4.4.2 As the machine will take in contaminated soil into the machine, the internal parts of the vacuum excavation vehicle have potential to transport INNS material off site that could be spread elsewhere, contravening legislation, in the absence of biosecurity control.

4.4.3 The vacuum excavation activity will be undertaken by a subcontractor to Pick Everard, and Pick Everard has made the subcontractor aware of the presence of INNS at the works area. The subcontractor has outlined the biosecurity measures that will be implemented by themselves, confirming that once the soil has been reinstated, the machine and any component parts that may have encountered INNS material will be washed with water while on site until clear of debris. The wastewater and material to be flushed onto the INNS infested area.

4.5 Toolbox Talk

4.5.1 The document will be delivered as a 'Toolbox Talk' to **all** operatives working on site, prior to the GI works commencing. The Toolbox Talk can be delivered by the most senior supervising person on site, or by a suitably experienced ecologist. Either will remain on site during the works to ensure compliance with the precautionary working methods.

4.5.2 **All operatives working on site should attend the Toolbox Talk, and they must sign the attendance sheet in Appendix 1 to show that they have been briefed and that they understand, and will comply with, the measures to be implemented with regard to the identified INNS.**



Photograph 1:

Veiw from west of north abutment to south showing stands of Himalayan balsam on the banks both sides or the river.



Photograph 2:

East side of north abutment showing dense stand of Himalayan balsam and Japanese knotweed.



Photograph 3:

East side of north abutment where Himalayan balsam and Japanese knotweed are present with other tall forb species.



Photograph 4:

View of south abutment with Himalayan balsam abundant to west and occasional cover elsewhere.

Client: Pick Everard		Drawing Ref: PIC001-005-002/001/001	Thomson environmental consultants
Figure Number: Figure 1		Drawn: LHR / Checked: ER	www.thomsonec.com enquiries@thomsonec.com
Figure Title: Photographs of the Works Areas		Date: 16/08/2024	

Appendix 1: Toolbox Talk Attendance Form

TOOLBOX TALK BRIEFING RECORD					
I, the undersigned site supervisor, have briefed the site operatives on the toolbox talk and am satisfied with the competency of everyone on site to adhere to a safe method of working.					
Briefing delivered by:		**Position:**		**Date**	
We (the undersigned) have attended and understood the toolbox talk and will comply with the specified requirements					

NAME (PRINT)	SIGNATURE	DATE