OMEGA ZONE 8, ST HELENS

Omega St Helens Ltd / T J Morris Ltd

Omega Zone 8
Himalayan Balsam Control Method Statement
OPP DOC. 16

Ecological Assessments

Environmental Statements (Biodiversity)

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Planning Guidance

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Protected Species Licensing

42020 CEMP: Biodiversity

BREEAM LE01 - 05

Himalayan Balsam

Control Method Statement

Plot 1, Omega Zone 8
St Helens, WA5 3UG

the ecology Practice

Consultant Report on behalf of:

the omega opportunity

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REPORT STATUS

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Prepared by	AA	AA	
Signature	[redacted]	[redacted]	
Reviewed by			
Signature			

INTRODUCTION

BACKGROUND

1. The following report has been prepared on behalf of Omega Warrington Ltd and provides a Method Statement for the control and disposal of Himalayan balsam (*Impatiens glandulifera*) during and following construction to be undertaken at Omega Zone 8, St Helens ('The Site').

Location & Site Description

2. The Site forms part of the Omega business estate located west of Warrington, falling just within St Helens District. It is immediately south of the M62, west of Junction 8, and west of the Warrington Borough boundary and Lingley Mere at GR SJ 550905.

3. The Site is dominated by arable land with woodland belts, a network of ponds and ditches improved grassland and scrub habitat present. There is a brook along the Southern boundary of the Site from the northwest. Off-site woodland is present to the south, east and west of the Site.

Report Rationale

4. The Ecology Practice Ltd previously identified the presence of Himalayan balsam on site in a number of locations during a Phase I Habitat Survey undertaken during 2019. A map detailing the extent of Himalayan balsam on site can be seen in Figure 1. This Method Statement provides St Helens Council with the necessary detail requested in consultation from Merseyside Environmental Advisory Service to planning application ref. P/2020/0061/HYBR. The detail provides:

- current extent of Himalayan balsam;
- method of preventing further spread, including demarcation;
- method of how plants will be disposed.

ECOLOGY & STATUS OF HIMALAYAN BALSAM

5. Himalayan balsam is a herbaceous plant species native to the western Himalayans in North India. It was introduced to the United Kingdom as a garden ornamental in 1839, but escaped and became naturalised throughout the 1850's. As a non-native invasive species it is listed on Schedule 9 of the Wildlife and Countryside Act 1981, as amended, and as such, under Section 14 of the Act it is illegal to plant or otherwise cause the plant to grow in the wild.

6. It is an annual species, meaning that it completes its life cycle, from germination to the production of seed, within one growing season and then dies back. The species grows in dense thickets along riverbanks, damp areas and wet woodlands. Each plant can produce up to 800 seeds which can be propelled up to 7m from the parent plant, thus covering large areas. These seeds can float on water and therefore watercourses are particularly vulnerable to the dispersal of Himalayan balsam seeds.

7. The species dominates wet habitats with quick growth between March and October and therefore can suppress the growth of native plant species. The species may grow as tall as 3m. When the species dies back in the autumn, riverbanks can be left bare throughout the winter and be at risk of soil erosion.

Key Plant Features

8. The key features of the plant are detailed below.

Flowers

The flowers of Himalayan balsam are large and pinkish in colour. Flowers tend to appear from June to August. They are 'slipper' shaped with a 'helmeted' upper peter and short spur.

Seeds

Seeds are contained within elongated pods which are present from July to August and may contain as many as 800 individual seeds per plant. When ripened and disturbed the seed pods explode and eject seeds up to 7m away from the parent plant.

Roots

The roots are shallow and flesh and easily pulled up out of the ground.

Stem

The stems of Himalayan balsam are hollow and brittle. They may grow as tall as 3m and are green-red in colour.

Leaves

The leaves are large and narrow with serrated edges and a centred mid-rib which turns progressively more red throughout the growing season. Leaves may be up to 15cm long and grow on the stem in whorls.

ONSITE EXTENT

9. A survey was initially carried out in April 2019 by the Ecology Practice as part of the Phase I of the site, followed by a second survey in September 2019 by WSP. The plant is found growing on both watercourses within the Site. It was present as stands with signs of spread up & down the Whittle Brook in April 2019, and by September 2019 that spread had almost encompassed the Whittle brook entirely. The full extent is shown in Table 1 & Figure 1.

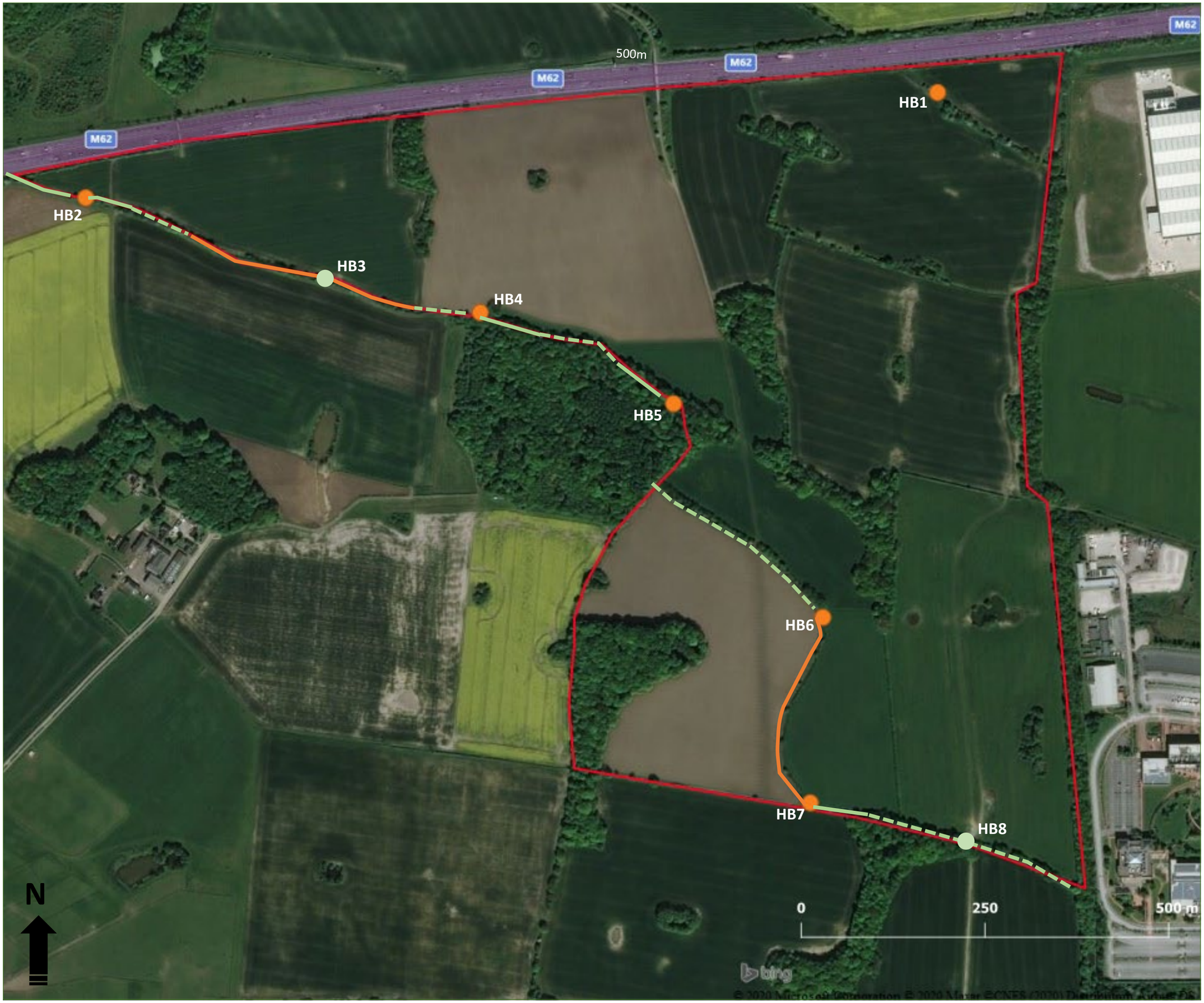
Table 1: Himalayan Balsam extent

Stand	GR	Proximity to watercourse	Other notes
HB1	SJ 553908	Within brook	On Unit 1 land
HB2	SJ540907	Within brook	On southern bank
HB3	SJ544906	On banks	Both sides of ditch, scattered at each end, more dense towards centre, mixed with great willowherb, common nettle, false oat grass, hogweed, creeping thistle and bramble.
HB4	SJ546905	In watercourse & banks & spreading into field	Two stands of HB
HB5	SJ549904		Occasional plants noted in isolation along watercourse through Booth's Wood
HB6	SJ550901		Very dense stand of HB
HB7	SJ550899		Dense stand of HB when the watercourse meets the southern site boundary
HB8	SJ550899	On banks	Both sides of ditch. Scattered at each end, more dense towards centre

Figure 1

Extent of Himalayan Balsam

Omega Zone 8



Legend

- Site Boundary
- Himalayan Balsam Stand
- Scattered Himalayan Balsam (April 2019)
- Himalayan Balsam (September 2019)

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Drawing No.: 16903-01HB_A

Revision Dates

A	B	C	D
03/07/20			

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PATHWAYS TO SPREAD

10. Himalayan balsam spreads exclusively through the germination of its seeds i.e. it does not spread via its roots.

- Each plant may produce as many as 800 seeds which can be propelled up to 7m from the parent plant.
- Seeds may also be distributed via human or animal contact, they may be transported in water, via contaminated soils and through the passage of footwear, machinery and vehicles or equipment.
- During the plants active growing season (March – October) there is potential for disturbed or severed plants to re-root or re-grow from the stem. This is of particular concern where people and/or machinery accidently up-root the plants and discard it outside the initial infestation footprint.
- * shows how it spread in 2019, from the early April extent to the September extent.

Points to consider for a Construction Site

11. There is potential for the spread of Himalayan balsam on site both within and outside the development footprint during construction works.

- Areas of Himalayan balsam should be clearly demarcated by installing a fence preventing pedestrian or vehicular access (i.e. Heras fencing). Signage should be fixed to the fencing to ensure anybody entering the area of infestation is aware of the presence of Himalayan balsam and the risk of spreading.
- No material should be disturbed or removed from the exclusion zone unless it forms part of the targeted removal of Himalayan balsam.
- All site workers should be briefed as to the presence of Himalayan balsam and the risks associated with its spreading.
- Any newly identified areas of infestation that are not detailed within Figure 1, should also be fenced off and excluded as described above.

CONTROL MEASURES

12. There are a number of potential control measures to prevent the future spread of the plant both on and off site. It is likely that a combination of methods are utilised in order to effectively control the spread. Himalayan balsam regrows annually from the distributed seeds which remain viable for up to 2 years. It is therefore important to note that whichever control methods are used efforts must be carried out **before the seed pods are produced** for maximum effect.

13. It is recommended that these actions are carried out for a period of three years to accommodate the seed viability period. The plant has the ability to re-grow from the lowest node on the stem within the same growing season and so the plant and its root system should be fully removed OR the plant must be cut below the lowest node. A localised control effort can eradicate an infestation over two to three years. However, the plant may re-establish from infestations located upstream of the Site and therefore a co-ordinated management is beneficial for long-term eradication success.

HAND PULLING

14. The shallow roots of Himalayan balsam mean that plants can be easily pulled up by hand. Plants can be pulled as soon as they are visible but this technique is most successful in the first half of the growing season, prior to the production of flowers (from June onwards). Hand-pulling must take place before the plant produces seed.

- Local conditions will determine the most appropriate timing for hand-pulling (such as water availability and temperature) but the most effective period is generally April – June, when plants are large enough to pull easily and have not produced seed.
- Arisings should be manually crushed along the entirety of the stem and then left in a single pile to decompose naturally. Once left in a compost pile plants should not be disturbed or moved. Compost piles should be periodically checked to ensure flowers are not emerging and therefore seeds are not being produced. If flowers are observed, stems should be re-crushed to ensure the plant cannot re-root or grow. Additionally, plants may be buried or removed off-site, as detailed later in this document.

- The remaining soil in an area where plants have been removed will contain a seedbank. Seeds are likely to germinate once adjacent plants have been removed at different times during the growing season. It is recommended that hand pulling is undertaken at least twice within the same area of infestation with a period approximately 4 weeks between to allow subsequent germination to take place. The same method of crushing and composting should be applied.
- It is imperative that hand pulling stops when seed pods are developing to prevent further spread.
- Hand pulling is the most effective technique but can be time consuming and labour intensive.

MECHANICAL CONTROL

15. Mechanical control (such as strimming or mowing) can be effective for controlling large stands of Himalayan balsam. The frequency of cutting must be enough to prevent flowering.

- Mechanical control is most effective when the stem is cut below the lowest node to prevent regeneration. Cutting above the lowest node may allow the plant to proliferate growth of flowers and therefore an increase in seed production is likely.
- Strimming may be an effective technique along Whittle Brook where stands become dense (HB5 and HB6). When strimming it is advisable to leave a fringe of vegetation nearest to the watercourse to act as a natural barrier to minimise debris entering the watercourse during works. Once strimming is complete, any plants of Himalayan balsam may be hand pulled and removed during the same works.
- Mechanical control tends to be less effective than hand pulling and within areas that are hard to access, such as steep, unstable banks. In unstable ground or areas of dense vegetation it may be difficult to ensure the lowest node of the plants are cut.
- Any mechanical control must ensure that dense vegetation is not removed during the active bird breeding period (March – August, inclusive) as this may present a risk to nesting birds.
- When using mechanical control effective washing of equipment should take place to ensure the Himalayan balsam is not spread off-site.

CHEMICAL CONTROL

16. Herbicide treatments can work well for large stands of Himalayan balsam.

- The recommended herbicide is a glyphosate-based treatment via foliar spray for large swards or weed wiper spray for mixed swards and individual plants. It is recommended that chemical control is used in conjunction with other methods to fully eradicate the plant.
- Where plants are present in or adjacent to a watercourse, an AqHerb011 Licence is required and agreement must be obtained from the local Environment Agency before application of herbicides proceeds. As all stands of infestation are located on or near to water on site, any contractor applying a herbicide must have the appropriate documentation before applying the herbicide.
- Plants should be sprayed prior to flowering, but late enough during the growth season to ensure that establishing plants are sufficiently covered by the spray. Repeat applications may be required to ensure sufficient coverage of herbicide. A recommended approach would be for the 1st application to be applied in April to kill initial growth and a 2nd application in May/June to kill off any late germinating seeds.

[1] https://www.gov.uk/government/publications/application-to-use-herbicides-in-or-near-water

DISPOSAL

ON-SITE BURIAL

17. On-site burial is an effective way to remove arisings and contaminated soil, including seedbanks. It can however create a large amount of disturbance and be potentially costly given the plant operation costs.

- Particular care must be given to operating machinery near to a watercourse.
- Any plants or contaminated spoil should be buried to a minimum of 1m below the surface of the ground to prevent regrowth.
- When using machinery, effective wheel washing and washing of equipment should take place to ensure the Himalayan balsam is not spread off-site.

REMOVAL FROM SITE

18. Where no suitable areas are present for on-site burial, the plant or any contaminated soils / arisings can be disposed of off-site.

- The off-site disposable of Himalayan balsam or contaminated spoil must be within a licenced landfill/contaminated waste facility.

MONITORING

DURING CONTROL

19. During the period of control, the Site should be regularly monitored by a suitably qualified person to identify any new shoots or areas of additional infestation.

POST MONITORING

20. Effective treatment, as described above, should be carried out for a minimum of three years when seeds are no longer viable. However, there is a risk of re-establishment from upstream sources and so monitoring must be undertaken for a minimum of two-years after the final year of control to ensure that no plants have re-established.

21. Monitoring should be carried out by a suitably qualified person. Where monitoring identifies the presence of Himalayan balsam then control measures as described above should be undertaken.

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