OMEGA ZONE 8, ST HELENS

Omega St Helens Ltd / T. J. Morris Limited

Invasive Plant Species Report
OPP DOC. 13

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DECEMBER 2019

PUBLIC

Omega St Helens / T. J. Morris Limited

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TYPE OF DOCUMENT (VERSION) PUBLIC

PROJECT NO. 70060349

OUR REF. NO. OPP DOC.13

DATE: DECEMBER 2019

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EXECUTIVE SUMMARY

Omega St Helens / T. J. Morris Limited commissioned WSP UK Ltd (WSP) to conduct an invasive plant species walkover survey to inform the Omega Zone 8 Proposed Development. The purpose of this walkover survey was to confirm the presence, and record the locations of any invasive, non-native plant species subject to legal control, identify any resultant legal constraints; and make recommendations for secure removal of these species from the applicant site.

The applicant site primarily consists of approximately 75 hectares of arable farmland. The fields are bounded by hedgerows and often accompanied by ditches filled with flowing water. There are five small blocks of broadleaved woodland within the survey area, some of which house game-bird feeders. The northern perimeter borders the M62 motorway between Burtonwood and Rainhill.

The invasive plant species survey was undertaken by an experienced senior ecologist and full CIEEM member with over ten years' experience of botanical surveys. The survey was based on an ecological walkover survey approach, whereby all accessible areas of the applicant site were walked by the surveyors in a single day (18 September 2019), in daylight hours, with a visual search for the target species undertaken. Where present, the species, location and extent were recorded using a handheld GPS and were target noted onto a map with the approximate size of each stand.

Two invasive plant species subject to legal control were recorded during the survey; Himalayan balsam and rhododendron. The most frequently recorded species was Himalayan balsam. It was strongly associated with the ditches containing flowing water, across the southern boundary of the applicant site but single plants were observed growing in the crop within 5m of these ditches. Rhododendron was recorded in dense stands, up to 4.5m high in places. It was restricted to three of the woodland areas; Plain Plantation, Booth's Wood and Duck Wood.

Best practice environmental protection measures should be incorporated into any Construction Environmental Management Plan (CEMP) to prevent the spread of Invasive Non-Native Species (INNS). Such measures should include:

- Avoiding disturbance to areas of the applicant site containing invasive non-native species as far as is possible.
- Site staff and contractors should be made aware of the biosecurity risks.
- The contractor must ensure that contaminated material is not inadvertently transported offsite but is appropriately contained and treated on site, or if it does need to be transported and disposed of, this is done in a responsible manner and adheres to legislation controlling waste.
- Proposals for controlling invasive species should have up to date, detailed survey results for an accurate extent of species coverage. The distribution of each invasive plant species will change from year to year and these locations should be re-checked as necessary.

1. INTRODUCTION

1.1. PROJECT BACKGROUND

1.1.1. WSP UK Ltd (WSP) has been instructed by Omega St Helens / T. J. Morris Limited to produce an invasive plant species report to accompany a hybrid planning application for the proposed westwards expansion of the Omega Business Park, located south of the M62 approximately 1.6km west of the M62 Junction 8 at its closest point (hereafter referred to as the 'applicant site'). The applicant site location, centred at National Grid Reference SJ 5590 0845, is shown in **Figure 1** and titled 'Study Area'.

1.1.2. The applicant site primarily consists of approximately 75 hectares of arable farmland. The fields are bounded by hedgerows and often accompanied by ditches filled with flowing water. There are five small blocks of broadleaved woodland within the applicant site, some of which house game-bird feeders. The northern perimeter borders the M62 motorway between Burtonwood and Rainhill.

1.1.3. The hybrid planning application will include the following elements (hereafter referred to as the 'Proposed Development'):

- Full Planning Permission for the erection of a B8 warehouse, with ancillary offices, associated parking, infrastructure, and landscaping; and
- Outline Planning Permission for Manufacturing (B2) and Logistics (B8) development with ancillary offices and associated car parking, landscaping and infrastructure (detailed matters of appearance; layout and scale are reserved for subsequent approval).

1.1.4. Construction of the Proposed Development is anticipated to commence for the full planning application in September 2020 with completion by the end of 2021. Timescales and programme for the remainder of the applicant site are unknown at this stage and will be subject to market demand.

1.2. ECOLOGICAL BACKGROUND

1.2.1. To inform an Environmental Impact Assessment Scoping Report[1], an extended Phase 1 habitat survey following Joint Nature Conservation Committee 2010[2] was completed by The Ecology Practice between 8 - 12 April 2019[3]. This survey identified a number of stands of invasive, non-native plant species subject to legal control and recommended that these were subject to further survey in order to establish the full scope of them within the applicant site .

1.3. BRIEF AND OBJECTIVES

1.3.1. In September 2019, WSP UK Ltd (WSP) was commissioned by Omega St Helens / T. J. Morris Limited to conduct an invasive non-native species (INNS) walkover survey of the applicant site to inform the Proposed Development.

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[1] WSP (2019). *Omega Zone 8: Information to Support a Scoping Opinion Request*

[2] Joint Nature Conservation Committee 2010. *Handbook for Phase I habitat survey: a technique for environmental audit*. JNCC, Peterborough

[3] The Ecology Practice (2019). *Omega 8: Phase 1 Habitat Survey*

1.3.2. The purpose of the walkover survey was to:

- Record the presence and map the location and extent of any invasive non-native plant species, such as Japanese Knotweed *Reynoutria japonica*[4], Himalayan balsam *Impatiens glandulifera* or giant hogweed *Heracleum mantegazzianum,*
- Identify any resultant legal constraints; and
- Make recommendations for how constraints may be managed.

[4] Japanese knotweed has recently changed scientific name to *Reynoutria japonica* however is still referred to in the legislation relating to invasive non-native plant species as *Fallopia japonica* until these are amended.

2. METHODS

2.1. ECOLOGICAL SURVEY FOR INVASIVE PLANT SPECIES

2.1.1. No standard method exists for invasive plant species survey; the survey was based on an ecological walkover survey approach, whereby all accessible areas of the applicant site were walked by the surveyors in a single day, in daylight hours, with a visual search for the target species undertaken.

2.1.2. Particular focus was given to areas where the target species were most likely to be found, for example water courses, woodland, hedgerows and areas of disturbed ground. Tracks where imported material may have been used or where fly-tipping or movements of vehicles or machinery could have led to the spread of these species were also checked.

2.1.3. Where found to be present, the species and location were recorded using a handheld GPS, with photos taken where possible. Any stands of invasive, non-native plant species identified were target noted onto a map and the approximate size of each stand given. The locations of individual plants, small scattered stands and large dense stands of plants found during the walkover survey are provided in **Figure 1**. The locations are representative and do not necessarily provide mapping of the exact extent of each species or the precise location of each individual plant.

2.2. DATES OF SURVEY AND PERSONNEL

2.2.1. The invasive plant species walkover survey was undertaken by an experienced senior ecologist and full CIEEM member with over ten years' experience of botanical surveys. A graduate ecologist with 3 years' experience assisted during the survey. The survey was completed on the 18 September 2019. Weather conditions were dry, warm and still.

2.3. NOTES AND LIMITATIONS

2.3.1. The surveys were all conducted within the optimal survey period for botanical surveys (generally accepted to be between April and September). As such it is considered that sufficient information was gathered to identify the presence of invasive species on applicant site.

2.3.2. The scale of the applicant site and the presence of dense areas of woodland understorey in some areas mean that it is possible that small stands or individual plants of invasive species could have been missed during the walkover survey. However, it is considered that the applicant site was surveyed adequately and that overall the distribution of invasive species has been mapped accurately.

2.3.3. The mapping produced in support of the report is based on point locations taken using a handheld GPS device which is subject to varying degrees of accuracy depending on satellite coverage and other factors. The GPS locations recorded were for the main aggregation of each plant species at each location. Each point therefore does not represent full coverage of the species at each location. Any invasive plant management plan should take account of this and up to date detailed surveying by a qualified land surveyor should be undertaken to provide accurate extents of species coverage. The distribution of invasive plant species will, inevitably, change from year to year, therefore these locations should be re-checked as necessary.

3. RESULTS

3.1. OVERVIEW

3.1.1. Two species of plant subject to legal control were recorded during the survey: Himalayan balsam *Impatiens glandulifera* and rhododendron *Rhododendron ponticum*. The locations and extents of these species are shown in **Figure 1** and described in **Table 1.**

3.1.2. The most frequently recorded species was Himalayan balsam. It was strongly associated with the ditches containing flowing water, across the southern boundary of the applicant site, but single plants were observed growing in the crop within 5m of these ditches.

3.1.3. Himalayan balsam is a non-native, invasive terrestrial plant species. It is an annual plant that is typically found in wetter habitats, although it will tolerate drier conditions. It has spread rapidly throughout the UK and Ireland, favouring moist and semi-shaded damp places, predominantly banksides by slow-moving watercourses where it often forms continuous stands. Individual plants can reach 2m in height.

3.1.4. Rhododendron was recorded in dense stands, up to 4.5m high in places. It was restricted to three of the woodland areas which contained game bird feeders; Plain Plantation, Booth's Wood and Duck Wood.

3.1.5. Rhododendron is an established non-native invasive species within the UK, threatening a variety of natural and semi-natural habitats and the associated flora and fauna. It was first brought to Britain for botanical gardens and used on big estates as cover for game birds. It is a large shrub which can grow up to 8m tall, spreading to fill the available space, outcompeting and displacing all other vegetation and local fauna. Each plant can produce over one million seeds each year that spread in the wind, and it also spreads with massive tangles of branches rooting in the ground.

Table 1 - Invasive Plant Species Results

Stand Number	Species	Approximate Area of Stand	Grid Reference	Single species stand or mixed with other vegetation	Proximity to watercourse	Land use and slope	Other details
1	Rhododendron	70m x 35m	SJ 54544 90854	Mixed	Adjacent	Woodland named Plain Plantation. Broad-leaved woodland adjacent to arable field. At side of motorway. Gentle slope	Dense stand within broad-leaved woodland. Up to 4.5m high in places
2	Himalayan Balsam	130m x 3m	SJ 54016 90770 - SJ 54122 90734	Mixed	On banks & extending into arable field	Arable field & steep ditch	Both sides of ditch. Scattered. Mixed with great willow herb *Epilobium hirsutum*, common nettle *Urtica dioica*, false oat grass *Arrhenatherum elatius,* common hogweed *Heracleum sphondylium* and bramble *Rubus fruticosus*

Stand Number	Species	Approximate Area of Stand	Grid Reference	Single species stand or mixed with other vegetation	Proximity to watercourse	Land use and slope	Other details
3	Himalayan Balsam	385m x 3m	SJ 54122 90734 - SJ 54484 90601	Mixed	On banks & extending into arable field	Arable field and steep ditch	Both sides of ditch. Scattered at each end, more dense towards centre. Mixed with great willow herb, common nettle, false oat grass, hogweed, creeping thistle *Cirsium arvense* and bramble
4	Himalayan Balsam	300m x 3m	SJ 54484 90601 - SJ 54929 90453	Mixed	On banks	Arable field and steep ditch	Both sides of ditch. Scattered. Mixed with great willow herb, common nettle, false oat grass, hogweed, creeping thistle and bramble
5	Rhododendron	85m x 30m	SJ 54939 90460	Mixed	Adjacent & on banks of watercourse	Woodland named Booth's Wood. Broad-leaved woodland surrounding pond, adjacent to arable field. Gentle slope	Dense stand with occasional broad-leaved trees

Stand Number	Species	Approximate Area of Stand	Grid Reference	Single species stand or mixed with other vegetation	Proximity to watercourse	Land use and slope	Other details
6	Rhododendron	270m x 75m	SJ 54794 90034	Mixed	Adjacent	Woodland named Duck Wood. Broad-leaved woodland surrounding pond, adjacent to arable field. Gentle slope	Single dense stand beneath broad-leaved canopy. 3 - 4m high
7	Himalayan Balsam	640m x 3m	SJ 54971 90281 - SJ 55188 89896	Mixed	On banks	Arable field and steep ditch	Both sides of ditch. Very dense stand. Mixed with great willow herb, common nettle, false oat grass, hogweed and hedge bindweed *Calystegia sepium*
8	Himalayan Balsam	255m x 3m	SJ 55188 89896 - SJ 55436 89797	Mixed	On banks	Arable field and steep ditch	Both sides of ditch. Scattered at each end, more dense towards centre

4. LEGISLATION AND PLANNING POLICY CONTEXT

4.1. OVERVIEW

4.1.1. Legally controlled invasive species have been recorded within the applicant site. It will therefore be necessary to ensure that the Proposed Development is compliant with legislation, as summarised below.

4.2. LEGISLATION

WILDLIFE AND COUNTRYSIDE ACT 1981

4.2.1. For those species listed on Schedule 9, Part II of the Wildlife and Countryside Act 1981 as amended, it is an offence under Section 14 (2) (a) of the Act to "plant or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, to do so would be guilty of an offence." Rhododendron is listed under this legislation.

THE INVASIVE ALIEN SPECIES (ENFORCEMENT AND PERMITTING) ORDER 2019

4.2.2. For those species listed under Part 2 the Invasive Alien Species (Enforcement and Permitting) Order 2019, it is an offence to "Plant or otherwise cause to grow in the wild any specimen which is of a species of plant which is included in Part 2 of Schedule 2." Himalayan balsam is listed under this legislation.

OTHER LEGISLATION

4.2.3. Legislation such as the Environmental Protection Act (1990) (EPA) and Waste Management Licensing Regulations (1994) (WMLR) control the movement, treatment and disposal of controlled waste, which would include material contaminated with INNS. This is to prevent "endangering human health and without using processes or methods which could harm the environment and in particular without risk to water, air, soil, plants or animals."

5. RECOMMENDATIONS

5.1.1. Due to the presence of these species on applicant site, biosecurity precautions must be implemented, during construction works. INNS and their propagules can be present in soil, organic material (e.g. plant debris) and water. Such material can be carried on footwear, clothing, vehicles and other equipment.

5.1.2. Good practice environmental protection measures (such as detailed in CIRIA, 2015[5]) should be incorporated into any Construction Environmental Management Plan (CEMP) and implemented on site to prevent the spread of INNS during works. Such measures should include:

- Avoiding disturbance to areas of the applicant site containing INNS as far as is possible and areas clearly demarcated to prevent encroachment. Where this is not possible, it will be necessary to implement measures to minimise the likelihood of offences being caused during the construction phase. These measures could include wheel washing and proper disposal/ treatment of removed topsoil or material to avoid inadvertently spreading seeds or parts of invasive plant species off-site.
- All site staff and contractors should be made aware of the biosecurity risks associated with INNS.
- The contractor must ensure that contaminated material is not inadvertently transported off-site, but is appropriately contained and treated on site, or if it does need to be transported and disposed of, this is done in a responsible manner and adheres to legislation controlling waste.
- Measures should be informed by up to date, detailed survey results for an accurate extent of species coverage. The distribution of each invasive plant species will change from year to year and these locations should be re-checked as necessary.

[5] Construction Industry Research and Information Association, 2015

6. CONCLUSIONS

6.1.1. The invasive species walkover survey of the applicant site identified two invasive non-native plant species subject to legal control.

6.1.2. The most frequently recorded species was Himalayan balsam. It was strongly associated with the ditches containing flowing water across the southern side of the applicant site. Rhododendron was recorded in dense stands but was restricted to three of the woodland areas.

6.1.3. Recommendations have been made for the control of these species during the construction phase.

7. REFERENCES

7.1. PROJECT REFERENCES

- WSP (2019). Omega Zone 8: *Information to Support a Scoping Opinion Request*.
- The Ecology Practice (2019). Omega 8: *Phase 1 Habitat Survey.*

7.2. TECHNICAL REFERENCES

- CIEEM (2016). *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland, Terrestrial, Freshwater and Coastal*.
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- HMSO (1994). *The Waste Management Licensing Regulations 1994*.
- The Property Care Association (PCA) (2015). Guidance Note – *Management of Himalayan balsam outlines best practice for Himalayan balsam control*.
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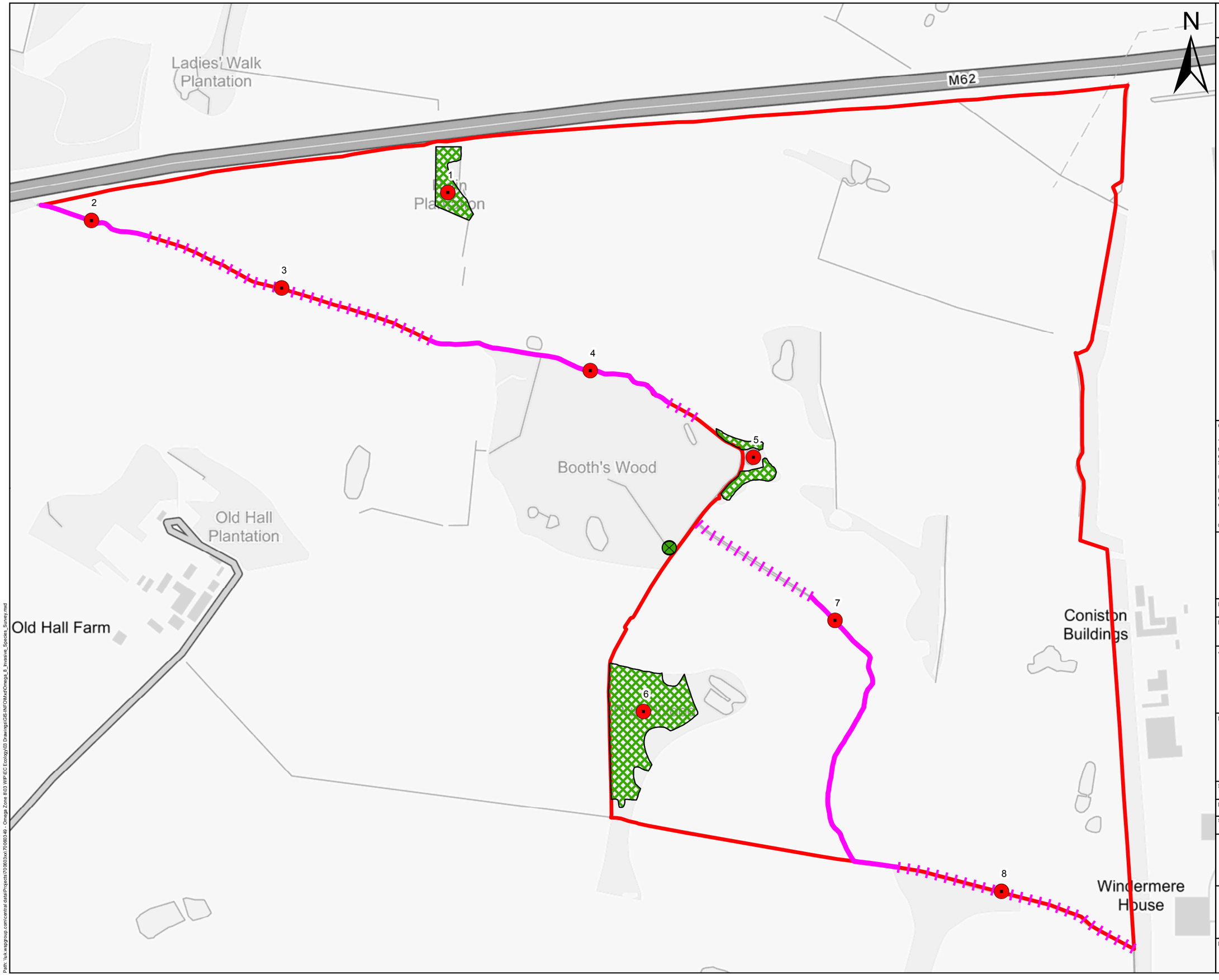
- https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN010072/EN010072-001971-Snowdonia%20Pumped%20Hydro%20Limited%2012 [Accessed 24/09/19].

8. FIGURES

Figure 1 - Invasive Plant Species Survey Results



THIS DRAWING MAY BE USED ONLY FOR THE PURPOSE INTENDED AND ONLY WRITTEN DIMENSIONS SHALL BE USED

Legend

- Study Area

Schedule 9 Species

- Rhododendron ponticum
- Impatiens glandulifera - constant
- Impatiens glandulifera - scattered
- Rhododendron ponticum
- Stand

Revision Details	By / Check	Date	Suffix

Drawing Status: DRAFT

Job Title: Omega Zone 8

Drawing Title: Figure 1: Invasive Species Survey Results

Scale at A3: 1:4,500

Drawn			
UKRDE001			
Stage 1 check	Stage 2 check	Originated	Date
XX	XX	KS	01/10/2019

Drawing Number:

Path: \\uk.wsgroup.com\central data\Projects\70060349 - Omega Zone 8\03 WIP\EG Ecology\03 Drawings\GIS-INFO\Mxd\Omega_8_Invasive_Species_Survey.mxd

Appendix A

IMAGES

Photograph	Description
 Image 1 - SJ 54543 90852	STAND 1 Rhododendron Dense stand within broad-leaved woodland. Up to 4.5m high in places
 Image 2 - SJ 54543 90852	STAND 1 Rhododendron
 Image 3 - SJ 54025 90761	STAND 2 Himalayan Balsam On both sides of ditch. Scattered. Mixed with great willow herb, common nettle, false oat grass, hogweed and bramble

 Image 4 - SJ 54025 90761	STAND 2 Himalayan Balsam
 Image 5 - SJ 54025 90761	STAND 2 Himalayan Balsam
 Image 6 - SJ 54270 90672	STAND 3 Himalayan Balsam On both sides of ditch. Scattered at each end, denser towards centre. Mixed with great willow herb, common nettle, false oat grass, hogweed, creeping thistle and bramble

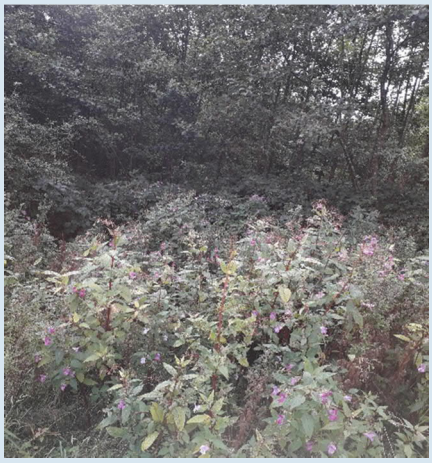
 Image 7 - SJ 54270 90672	STAND 3 Himalayan Balsam
 Image 8 - SJ 54573 90583	STAND 4 Himalayan Balsam On both sides of ditch. Scattered. Mixed with great willow herb, common nettle, false oat grass, hogweed, creeping thistle and bramble
 Image 9 - SJ 54639 90576	STAND 4 Himalayan Balsam

 Image 10 - SJ 54639 90576	STAND 4 Himalayan Balsam
 Image 11 - SJ 54839 90510	STAND 4_Himalayan Balsam
 Image 12 - SJ 54966 90423	STAND 5 Rhododendron Dense stand with occasional broad-leaved trees

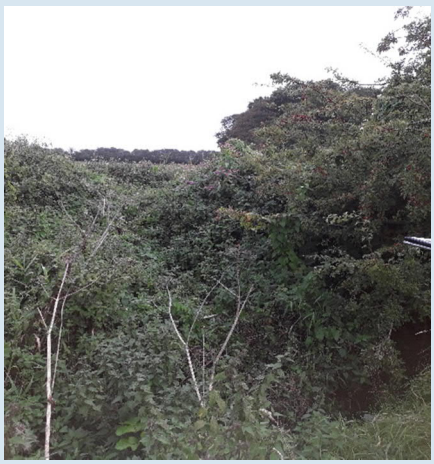
 Image 13	STAND 6 Rhododendron
 Image 14 - SJ 54819 90160	STAND 6 Rhododendron Single dense stand beneath broad-leaved canopy 3 - 4m high
 Image 15 - SJ 55046 89925	STAND 7 Himalayan Balsam On both sides of ditch. Very dense stand. Mixed with great willow herb, common nettle, false oat grass, hogweed and bind weed

 Image 16 - SJ 55050 90053	STAND 7 Himalayan Balsam
 Image 17 - SJ 55089 90148	STAND 7 Himalayan Balsam
 Image 18 - SJ 55392 89818	STAND 8 Himalayan Balsam On both sides of ditch. Scattered at each end, denser towards centre

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