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**The Hive: Carrick on Shannon**

**Invasive Species Survey Report**

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## 1. INTRODUCTION

### 1.1 About this Report

This report details the findings of an invasive species survey carried out at the site of the *The Hive*, a business technology centre adjacent the N4 to the east of Carrick on Shannon. This report is to inform Cooney Architects (the client), on options for the proposed expansion of car parking space at this facility.

### 1.2 Site under Study

The site under study is a portion of the grounds of *The Hive*. These include car parking area, adjacent landscaped area, waste ground adjacent this, boundary vegetation (treelines, hedgerows) and adjacent lands. The area surveyed is shown in the aerial photograph below.



**Fig. 1.** Area under survey. Surveyed area shown inside the red lines.

## 2. METHODOLOGY

The methodology for the survey was a direct search of the site under study by an ecologist. This was carried out on Friday 31<sup>st</sup> January 2019. It should be noted that winter is sub-optimal for botanical survey, including for invasive plant species. However, it had been made clear to the author that Japanese Knotweed had been located within the grounds here.

Any invasive species located was hand-marked onto an aerial photograph. The nature and growth pattern of each was noted. The above-ground extent of the plants was also noted, along with notes on soil types, likely spread patterns and any evidence of previous control.

### 3. FINDINGS

Three invasive plant species were found during survey. These were: Japanese Knotweed (*Fallopia japonica*), Winter Heliotrope (*Petasites fragrans*) and Pheasant Berry (*Leycesteria formosa* also known as Himalayan Nutmeg and several other names). Japanese Knotweed was found to grow in 4 discrete locations within the site. Winter Heliotrope has a more scattered distribution but this is confined to only one portion of the site. Pheasant Berry only occurs once, in a non-native hedgerow where it was likely planted. Only one of the species – Japanese Knotweed is an invasive alien plants species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477)

#### 3.1 Japanese Knotweed

This invasive plant species is found along the banks of the small wet ditch that occurs within the site. It appears to have spread when these banks were being reformed or shaped. Along the eastern bank of the stream, the knotweed extends northward for a length of c. 9m. There is also a mature stand on this bank, around 7m to the north of this. On the western side of the ditch, knotweed extends for a similar length under the mature treeline here and up to and around the corner of the ditch with an adjacent property boundary. Finally, there is a mature stand of Japanese knotweed c. 2m to the west of the LPG fuel tanks toward the northern boundary of the site. Again, this is located on the bank of the wet ditch here.



Above photographs show Japanese Knotweed on corner of wet ditch and beside LPG tanks.

### 3.2 Winter Heliotrope

This invasive plant species is found over a scattered area to the south of the existing car park. It occurs on both sides of the wet ditch but is mostly concentrated on the eastern side of the ditch where there was previously cleared ground. It does not appear to occur elsewhere



Winter Heliotrope close to facility car park

### 3.3 Pheasant Berry

A single plant of this invasive species was found in the Beech hedging that borders the car park. It is likely that this was planted here. A fragment of a plant of the same species was found beside the northernmost stand of Japanese knotweed (JK4) but there was no evidence of this plant having spread to any other location.



Single plant of *Leycesteria Formosa* in Beech hedgerow

## 4. DISCUSSION

### 4.1 Japanese Knotweed

Japanese Knotweed appears to have been on this site for several years. The stands here are mature and there is evidence that this plant has spread within the site. However, to date the spread has been along the banks of the wet ditch within the site and it has not yet spread outside the site or onto paved surfaces.

Ireland is a signatory of a number of international treaties and conventions, including the **Convention on Biological Diversity**. Such treaties and conventions require the Irish Government to address issues of invasive alien species. This has been implemented through national legislation via **the Wildlife Acts 1976 and 2000** (as amended) and further regulated through **the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477)**.

Articles 49 and 50 of these latter regulations set out the legal implications associated with alien invasive species and Schedule 3 (See Appendix 4) of the regulations lists non-native species subject to the restrictions of Articles 49 and 50. Under Article 49 and 50 of these Regulations it is an offence to plant, disperse, allow dispersal or cause the spread of invasive species.

It is important to note that if an invasive species listed on the third schedule of the Regulations has been positively identified on a works site, it is not an option to do nothing i.e. action of some form must be taken to address the invasive species in order to comply with environmental legislation (the European Communities (Birds and Natural Habitats) Regulations 2011; SI 477). Japanese knotweed is the only such listed species found on the site. Therefore, action will be required for the management of this species.

### 4.2 Winter Heliotrope

This plant spreads by the growth of its roots and it becomes problematic when dominates areas with native species being pushed out. Though it does provide a source of winter feeding for bees, its value is outweighed by its invasive qualities. It is extremely persistent, being able to regenerate from small parts of the roots. Continued digging of it will, however, eventually exhaust the plant. At *The Hive* it has spread over an area of bare ground and unmanaged grass. It is not listed on the third schedule of the above regulations. It is not believed to be within an area proposed for works.

### **4.3 Pheasant Berry**

This plant can form dense monospecific stands and out-compete native plants in areas such as woodlands. Only a single plant of it occurs here, it is believed. It is not listed on the third schedule of the above regulations.

## 5. RECOMMENDATIONS

### 5.1 Japanese Knotweed

No development should be allowed within the area affected by this plant. Japanese Knotweed has the potential to have roots and rhizomes (underground stems) that extend up to 7m from the visible over-ground stems. Therefore, a provisional 'buffer-zone' of this distance must be maintained in which no development should occur until the plant is removed, treated or the area otherwise made safe for works. However, it is unlikely that the affected area extend this far. Growth appears confined to banks of the wet ditch and it is considered unlikely that any underground growth extends to existing hard landscaped areas.

Ideally, the plant should remain *in situ* and not be removed from the site. Removing the plant from the site requires a licence from the National Parks and Wildlife Service and would be very costly. It is recommended that if at all possible, the plant remains within the site and is chemically treated (with a herbicide) over a number of years. In order to achieve this, any developments must take place outside the affected areas. If any development within the affected areas must take place, it is recommended that any spoil or excavated materials are kept within the site if at all possible.

It is recommended in the short-term that a further site visit is held with both ecologist and architect present, in order to determine which parts of the site might remain undisturbed and where any direct action is absolutely required. A management plan for this species should then be drawn up.

### 5.2 Winter Heliotrope

It is not believed that any development is intended within the areas affected by this species. However, if any areas where this plant occurs are to be affected, measures must be taken to retain materials on site and avoid any spread of same. Machinery or plant used in this area should be cleaned *in situ* before being moved elsewhere. Again, a site visit to determine the proposed works area should be undertaken before finalising a management plan here.

### 5.3 Pheasant Berry

This single plant may readily be treated by cutting and the application of a small amount of suitable herbicide.



