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## **INVASIVE SPECIES REPORT FOR A SITE AT MAIN ST, KESHCARRIGAN, CO. LEITRIM**



**Leitrim County Council**  
*c/o WGG Architects and Surveyors*  
21 Church View  
Cavan

*May 2023*

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# 1 INTRODUCTION

## 1.1 BACKGROUND

In February 2023, Whitehill Environmental was commissioned by WGG Architects and Surveyors to undertake a survey and prepare a report in support of a proposed development on a greenfield site at Main St, Keshcarrigan, Co. Leitrim. The purpose of this study was to ascertain the presence of scheduled invasive species on the site. Leitrim County Council have indicated their intention to shortly seek planning permission under Part 8 for a residential development on this site.

## 1.2 REGULATORY CONTEXT

### RELEVANT IRISH LEGISLATION

In September 2011, comprehensive regulations which addressed deficiencies in Irish law implementing the EU Birds and Habitats Regulations (S.I. 477 of 2011) were signed into law. The European Communities (Birds and Natural Habitats) Regulations 2011 contained important new provisions to address the problem of invasive species. A list of Invasive Alien Species have been defined and are set out in the regulations and it is an offence to release, allow to disperse or escape, to breed, propagate, import, transport, sell or advertise such species without a license.

The two regulations that deal specifically with these scheduled lists of species are:

- Regulation 49 - Prohibition on introduction, breeding, release and dispersal of certain species.
- Regulation 50 - Prohibition on dealing in and keeping certain species (Regulation 50 is not yet in effect)

The invasive plant and animal species to which the Birds and Habitats Regulations (2011) apply are presented in Schedule Three, Part 1 - 3. Part 1 details the plants species, Part 2 the animal species while Part 3 outlines the animal or plant vector materials. These species are presented in Tables 1 - 3 below.

Common name	Scientific name	Geographical Application
American skunk-cabbage	<i>Lysichiton americanus</i>	Throughout the State
A red alga	<i>Grateloupia doryphora</i>	Throughout the State
Brazilian giant-rhubarb	<i>Gunnera manicata</i>	Throughout the State

Broad-leaved rush	<i>Juncus planifolius</i>	Throughout the State
Cape pondweed	<i>Aponogeton distachyos</i>	Throughout the State
Cord-grasses	<i>Spartina</i>	Throughout the State
Curly waterweed	<i>Lagarosiphon major</i>	Throughout the State
Dwarf eel-grass	<i>Zostera japonica</i>	Throughout the State
Fanwort	<i>Cabomba caroliniana</i>	Throughout the State
Floating pennywort	<i>Hydrocotyle ranunculoides</i>	Throughout the State
Fringed water-lily	<i>Nymphaoides peltata</i>	Throughout the State
Giant hogweed	<i>Heracleum mantegazzianum</i>	Throughout the State
Giant knotweed	<i>Fallopia sachalinensis</i>	Throughout the State
Giant-rhubarb	<i>Gunnera tinctoria</i>	Throughout the State
Giant salvinia	<i>Salvinia molesta</i>	Throughout the State
Himalayan balsam	<i>Impatiens glandulifera</i>	Throughout the State
Himalayan knotweed	<i>Persicaria wallichii</i>	Throughout the State
Hottentot-fig	<i>Carpobrotus edulis</i>	Throughout the State
Japanese knotweed	<i>Fallopia japonica</i>	Throughout the State
Large-flowered waterweed	<i>Egeria densa</i>	Throughout the State
Mile-a-minute weed	<i>Persicaria perfoliata</i>	Throughout the State
New Zealand pigmyweed	<i>Crassula helmsii</i>	Throughout the State
Parrot's feather	<i>Myriophyllum aquaticum</i>	Throughout the State
Rhododendron	<i>Rhododendron ponticum</i>	Throughout the State
Salmonberry	<i>Rubus spectabilis</i>	Throughout the State
Sea-buckthorn	<i>Hippophae rhamnoides</i>	Throughout the State
Spanish bluebell	<i>Hyacinthoides hispanica</i>	Throughout the State
Three-cornered leek	<i>Allium triquetrum</i>	Throughout the State

Wakame	<i>Undaria pinnatifida</i>	Throughout the State
Water chestnut	<i>Trapa natans</i>	Throughout the State
Water fern	<i>Azolla filiculoides</i>	Throughout the State
Water lettuce	<i>Pistia stratiotes</i>	Throughout the State
Water-primrose	<i>Ludwigia</i> (all species)	Throughout the State
Waterweeds	<i>Elodea</i> (all species)	Throughout the State
Wireweed	<i>Sargassum muticum</i>	Throughout the State

**Table 1 - Third Schedule: Part 1 Plants**

Common name	Scientific name	Geographical Application
A colonial sea squirt	<i>Didemnum spp.</i>	Throughout the State
A colonial sea squirt	<i>Perophora japonica</i>	Throughout the State
All freshwater crayfish species except the white-clawed crayfish	All freshwater crayfish species except <i>Austropotamobius pallipes</i>	Throughout the State
American bullfrog	<i>Rana catesbeiana</i>	Throughout the State
American mink	<i>Neovison vison</i>	Throughout the State
American oyster drill	<i>Urosalpinx cinerea</i>	Throughout the State
Asian oyster drill	<i>Ceratostoma inornatum</i>	Throughout the State
Asian rapa whelk	<i>Rapana venosa</i>	Throughout the State
Asian river clam	<i>Corbicula fluminea</i>	Throughout the State
Bay barnacle	<i>Balanus improvisus</i>	Throughout the State
Black rat	<i>Rattus rattus</i>	Offshore islands only
Brown hare	<i>Lepus europaeus</i>	Throughout the State
Brown rat	<i>Rattus norvegicus</i>	Offshore islands only
Canada goose	<i>Branta canadensis</i>	Throughout the State
Carp	<i>Cyprinus carpio</i>	Throughout the State

Chinese mitten crab	<i>Eriocheir sinensis</i>	Throughout the State
Chinese water deer	<i>Hydropotes inermis</i>	Throughout the State
Chub	<i>Leuciscus cephalus</i>	Throughout the State
Common toad	<i>Bufo bufo</i>	Throughout the State
Coypu	<i>Myocastor coypus</i>	Throughout the State
Dace	<i>Leuciscus leuciscus</i>	Throughout the State
Freshwater shrimp	<i>Dikerogammarus villosus</i>	Throughout the State
Fox	<i>Vulpes vulpes</i>	Offshore islands only
Grey squirrel	<i>Sciurus carolinensis</i>	Throughout the State
Greylag goose	<i>Anser anser</i>	Throughout the State
Harlequin Ladybird	<i>Harmonia axyridis</i>	Throughout the State
Hedgehog	<i>Erinaceus europaeus</i>	Offshore islands only
Irish stoat	<i>Mustela erminea hibernicus</i>	Offshore islands only
Japanese skeleton shrimp	<i>Caprella mutica</i>	Throughout the State
Muntjac deer	<i>Muntiacus reevesi</i>	Throughout the State
Muskrat	<i>Ondatra zibethicus</i>	Throughout the State
Quagga Mussel	<i>Dreissena rostriformis</i>	Throughout the State
Roach	<i>Rutilus rutilus</i>	Throughout the State
Roe deer	<i>Capreolus capreolus</i>	Throughout the State
Ruddy duck	<i>Oxyura jamaicensis</i>	Throughout the State
Siberian chipmunk	<i>Tamias sibiricus</i>	Throughout the State
Slipper limpet	<i>Crepidula fornicata</i>	Throughout the State
Stalked sea squirt	<i>Styela clava</i>	Throughout the State
Tawny owl	<i>Strix aluco</i>	Throughout the State
Wild boar	<i>Sus scrofa</i>	Throughout the State

Zebra mussel	<i>Dreissena polymorpha</i>	Throughout the State
<b>Animals to which Specified Provisions of Regulations 49 and 50 apply:</b>		
Fallow deer	<i>Dama dama</i>	Throughout the State
Sika deer	<i>Cervus nippon</i>	Throughout the State

**Table 2 - Third Schedule: Part 2 Animals**

Common name	Scientific names	Geographical Application
Blue mussel ( <i>Mytilus edulis</i> ) seed for aquaculture taken from places (including places outside the State) where there are established populations of the slipper limpet ( <i>Crepidula fornicata</i> ) or from places within 50 km. of such places	Mussel ( <i>Mytilus edulis</i> ) Slipper limpet ( <i>Crepidula fornicata</i> )	Throughout the State
Soil or spoil taken from places infested with Japanese knotweed ( <i>Fallopia japonica</i> ), giant knotweed ( <i>Fallopia sachalinensis</i> ) or their hybrid Bohemian knotweed ( <i>Fallopia x bohemica</i> )	Japanese knotweed ( <i>Fallopia japonica</i> ) Giant knotweed ( <i>Fallopia sachalinensis</i> ) Bohemian knotweed ( <i>Fallopia x bohemica</i> )	Throughout the State

**Table 3 - Third Schedule: Part 3 Vector Material**

In addition, the Wildlife Amendment Act (2000) of The Wildlife Act (1976) makes it an offence to cause an exotic species of flora to grow wild anywhere in the state:

*"Any person who plants or otherwise causes to grow in a wild state in any place in the State any (exotic) species of flora, or the flowers, roots, seeds or spores, otherwise than under and in accordance with a license granted in that behalf by the Minister shall be guilty of an offence".*

## EUROPEAN LEGISLATION

In July 2016 the European Commission published the Commission Implementing Regulation 2016/1141 which sets out an initial list of 37 species to which EU Invasive Alien Species Regulation 1143/2014 will apply. The associated restrictions and obligations came into force on 3rd August 2016.

Three distinct types of measures are envisaged under the Directive, which follow an internationally agreed hierarchical approach to combatting IAS (Invasive Alien Species):

- **Prevention:** a number of robust measures aimed at preventing IAS of Union concern from entering the EU, either intentionally or unintentionally.
- **Early detection and rapid eradication:** Member States must put in place a surveillance system to detect the presence of IAS of Union concern as early as possible and take rapid eradication measures to prevent them from establishing.
- **Management:** some IAS of Union concern are already well-established in certain Member States and concerted management action is needed so that they do not spread any further and to minimize the harm they cause.

Plant species listed in these Regulations include:

- American skunk cabbage *Lysichiton americanus*
- Asiatic tearthumb *Persicaria perfoliata* (*Polygonum perfoliatum*)
- Curly waterweed *Lagarosiphon major*
- Eastern Baccharis *Baccharis halimifolia*
- Floating pennywort *Hydrocotyle ranunculoides*
- Floating primrose willow *Ludwigia peploides*
- Green cabomba *Cabomba caroliniana*
- Kudzu vine *Pueraria lobata*
- Parrot's feather *Myriophyllum aquaticum*
- Persian hogweed *Heracleum persicum*
- Sosnowski's hogweed *Heracleum sosnowskyi*
- Water hyacinth *Eichhornia crassipes*
- Water primrose *Ludwigia grandiflora*
- Whitetop weed *Parthenium hysterophorus*

Animal species listed on the directive include:

- Amur sleeper *Percottus glenii*
- Asian hornet *Vespa velutina*



- Chinese mitten crab *Eriocheir sinensis*
- Coypu *Myocastor coypus*
- Fox squirrel *Sciurus niger*
- Grey squirrel *Sciurus carolinensis*
- Indian house crow *Corvus splendens*
- Marbled crayfish *Procambarus spp.*
- Muntjac deer *Muntiacus reevesii*
- North american bullfrog *Lithobates (Rana) catesbeianus*
- Pallas's squirrel *Callosciurus erythraeus*
- Raccoon *Procyon lotor*
- Red swamp crayfish *Procambarus clarkii*
- Red-eared terrapin/slider *Trachemys scripta elegans*
- Ruddy duck *Oxyura jamaicensis*
- Sacred ibis *Threskiornis aethiopicus*
- Siberian chipmunk *Tamias sibiricus*
- Signal crayfish *Pacifastacus leniusculus*
- Small Asian mongoose *Herpestes javanicus*
- South American coati *Nasua nasua*
- Spiny-cheek crayfish *Orconectes limosus*
- Topmouth gudgeon *Pseudorasbora parva*
- Virile crayfish *Orconectes virilis*

On 13 July 2017 the European Commission published Commission Implementing Regulation 2017/1263 which added a further 12 species to the current list of 37 species regulated under the EU Invasive Alien Species Regulation (1143/2014). These are:

Plant species

- Alligator weed *Alternanthera philoxeroides*
- Milkweed *Asclepias syriaca*
- Nuttall's waterweed *Elodea nuttallii*
- Chilean rhubarb *Gunnera tinctoria*
- Giant hogweed *Heracleum mantegazzianum*
- Himalayan balsam *Impatiens glandulifera*
- Japanese stiltgrass *Microstegium vimineum*
- Broadleaf watermilfoil *Myriophyllum heterophyllum*
- Crimson fountaingrass *Pennisetum setaceum*

Animal species

- Egyptian goose *Alopochen aegyptiacus*
- Raccoon dog *Nyctereutes procyonoides*
- Muskrat *Ondatra zibethicus*

## **2 METHODOLOGY**

### **2.1 STATEMENT OF COMPETENCY**

The field survey was undertaken and a supporting report has been prepared by Noreen McLoughlin. Noreen is the owner and main ecologist at Whitehill Environmental. Noreen holds a BA (Hons) in Natural Science (Mod) Zoology and an MSc in freshwater ecology (TCD, Dublin). She has been a full member of the CIEEM (Chartered Institute of Ecology and Environmental Management) for over 17 years.

### **2.2 DESK STUDIES**

Information on the site and the area of the proposed development was studied prior to the completion of this statement. The following data sources were accessed in order to complete a thorough examination of potential impacts:

- National Biodiversity Data Centre (NBDC) – Information pertaining to invasive plant and animal species within the study area.
- WGG Architects & Surveyors Ltd – Information regarding the proposed development including site plans and specifications.

### **2.3 FIELD STUDIES**

A visit to the site of the proposed application in Keshcarrigan was conducted on February 14<sup>th</sup> 2023, when field notes, species lists and photographs were taken. Habitats within the application site were classified in accordance to Level 3 of *A Guide to Habitats in Ireland* (Fossit, 2000). Particular attention was paid to invasive alien species within the application site.

### **SEASONAL CONSTRAINTS**

February is a sub-optimal time of the year to undertake any plant survey. However, in the case of well-established stands of Japanese knotweed *Fallopia japonica*, its over wintering form is usually evident, as the bamboo like stems persist throughout the winter months. However, any recently established and young plants would not be visible at this time of the year.

### 3 DEVELOPMENT DESCRIPTION

#### 3.1 DEVELOPMENT DESCRIPTION

Leitrim County Council are seeking permission for a proposed residential scheme on a 0.73ha site at Main St, Keshcarrigan, Co. Leitrim. Permission will be sought under Part 8 of the Planning and Development Regulations 2001. The proposed development will consist of the construction of 4 1 bed apartments (2 no. ground floor + 2 no. first floor) in one single block. Planning also pertains to connections to existing foul main, watermain and surface water discharge and all ancillary and associated works. An extract from the planning drawings submitted is shown in Figure 1.

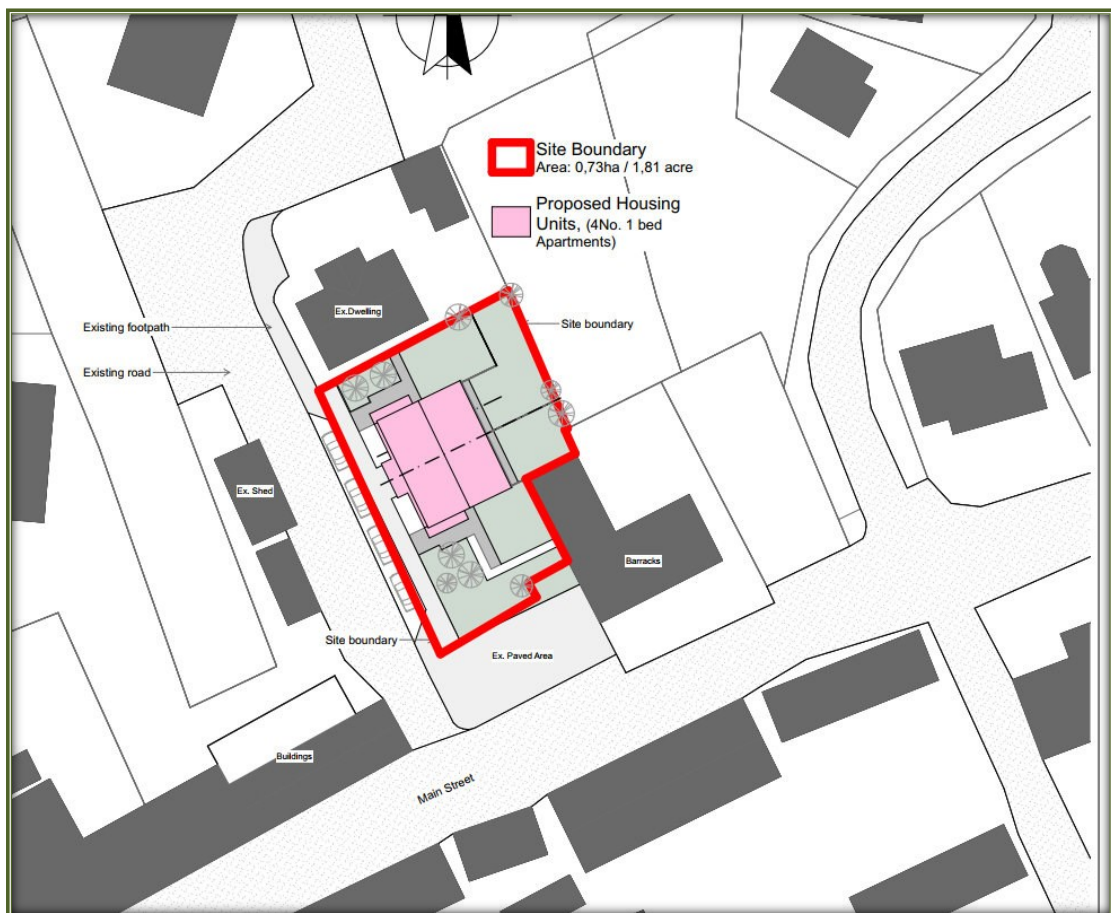


Figure 1 – Extract from Planning Drawings (As Prepared by WGG Architects)

## 4 SITE CHARACTERISTICS

### 4.1 SITE LOCATION AND SURROUNDING ENVIRONMENT

The proposed development site is 0.073ha in area and it is located to the north of Main St, within the village of Keshcarrigan in Co. Leitrim. Access to the site will be via the creation of a new entrance just off a cul-de-sac that services a small number of other private residential dwelling houses. The proposed site is bounded to the west by the cul-de-sac, to the north by a private residential site, to the south by Main St and to the east by a green field site.

Site location maps are shown in Figures 2 and 3, whilst an aerial photograph of the site is provided in Figure 4.

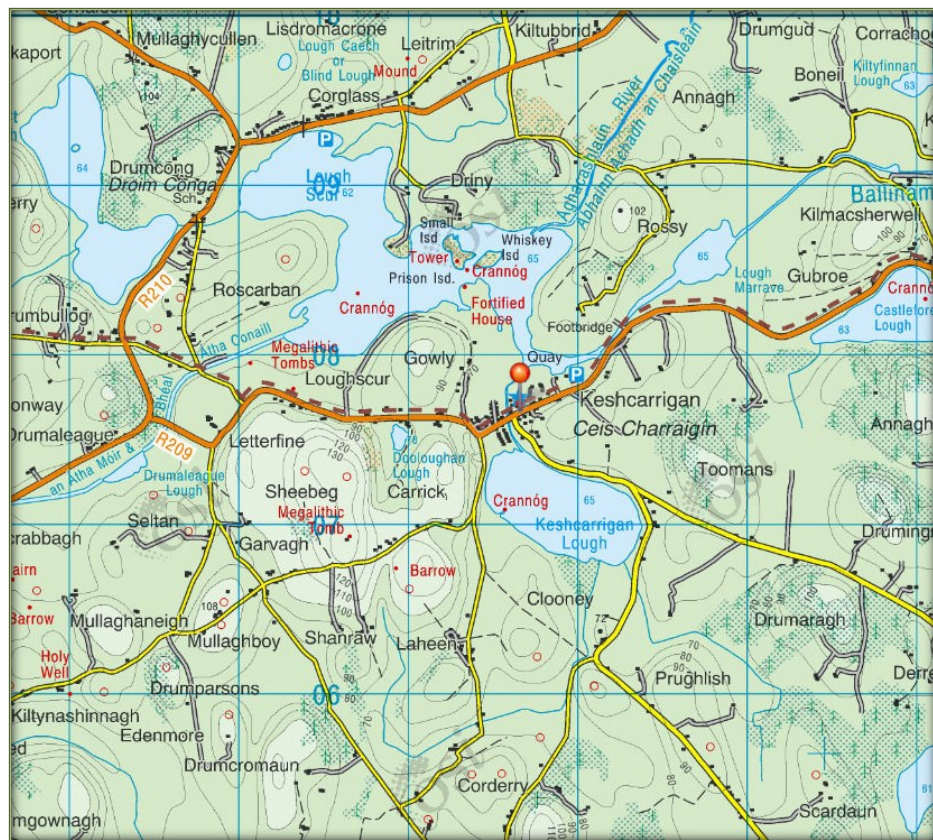


Figure 2 – Map showing the Location of the Application Site (Pinned)

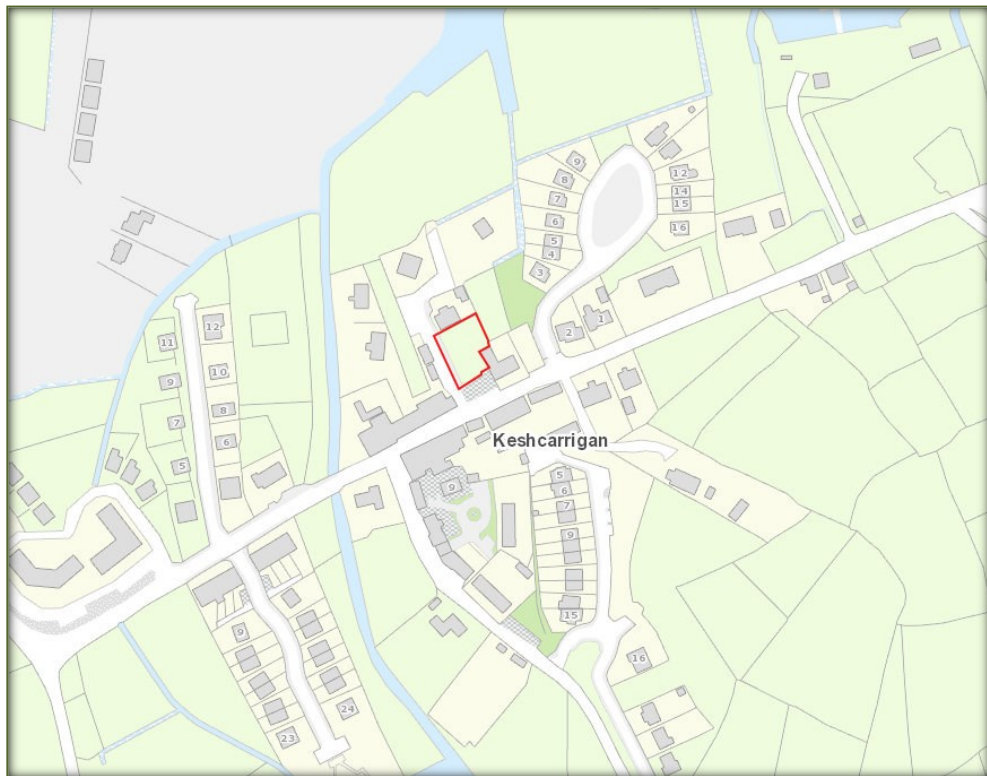


Figure 3 – Map showing the Location of the Application Site (Outlined in Red)

#### **Habitats within the Application Site**

The application site does not lie within or adjacent to any area that has been designated for nature conservation purposes. The habitats in the site were assessed during the site walkover. The site is largely overgrown and unmanaged and the main habitat within it is scrub (Habitat Code WS<sub>1</sub>) that is dominated by extensive bramble growth *Rubus fruticosus agg.* There are also some scattered immature birch trees *Betula pendula* within the site. Other shrub species noted within the site included butterfly bush *Buddleja davidii* and dogwood *Cornus* sp. A small area at the front of the site has recently been cleared of growth, resulting in an area of bare soil.



**Figure 4 – Aerial Photograph of the Site (Outlined in Red)**

## 5 RESULTS OF SURVEY

### 5.1 EXISTING RECORDS

An examination of the website of the National Biodiversity Data Centre, revealed that there are records for the presence of a number of listed invasive species (Under S.I. 477) from within the relevant 10km square (H00) of the proposed development. These species include:

- Roach (*Rutilus rutilus*) – Medium Impact Invasive Species
- Canadian Waterweed (*Elodea canadensis*) – High Impact Invasive Species
- Japanese Knotweed (*Fallopia japonica*) – High Impact Invasive Species
- Nuttall's Waterweed (*Elodea nuttallii*) – High Impact Invasive Species
- American Mink (*Mustela vison*) – High Impact Invasive Species
- Fallow Deer (*Dama dama*) – High Impact Invasive Species

Within the 1km (H0307), records exist for roach and Nuttall's waterweed.

### 5.2 FIELD SURVEY RESULTS

No invasive species were noted within the application site on the day of the survey in February 2023. Japanese knotweed is perhaps the most likely invasive plant species to occur locally. It spreads easily through the movement of vegetative material or topsoil and spoil containing vegetative material, which can rapidly propagate. The overwintering canes of mature and well-established knotweed plants were not seen within the development site on the day of the survey. However, having regards to the winter timing of the survey, it could not be ascertained with certainty if there were any recently established plants of young knotweed overwintering on the site. These would begin to become evident from April / May onwards.

Knotweed was not noted on lands adjacent to or close to the application site, or along the roads approaching the application site. This means that the chances of the site becoming naturally infested with knotweed is relatively low at the moment. However, the introduction of vegetative material with the potential to propagate from machinery moving between sites or from contaminated topsoil is a possibility, and therefore every precaution must be taken to ensure that this does not occur.

There were no obvious new areas of infill or evidence of new material being brought into the site and these areas are generally the most likely locations for the emergence of new incidences of knotweed in any site.



## **6 DISCUSSION AND RECOMMENDATIONS**

Although there is currently no knotweed found within the application site, precautions should be undertaken during all stages of site preparation, construction and landscaping. This is important as the potential for the transfer of knotweed vector material from one site to another is easily done and it is always a genuine risk. Therefore, the following recommendations should be adhered to at all stages of site preparation and construction:

- Machinery should not be brought onto the site from areas contaminated with knotweed or any other known invasive without thorough cleaning and power washing.
- All topsoil brought into the site must be free from invasive species vector material.
- During the landscaping of the site, only native Irish species should be used. Consideration should be given to pollinators and areas providing suitable plants for pollinating species should be provided.
- It is recommended that the site is re-surveyed during the height of the growth season to ensure that there are no emerging stands of knotweed growing on the site. At an early stage, these emerging crops would be easy to remove and treat.

## Appendix I: PHOTOGRAPHS OF THE SITE



Scrub Habitats within the Site



Scrub Habitats within the Site



**View of Site Along the Road**



**Birch Trees within the Site**