

APPENDIX 7.8: INVASIVE SPECIES MANAGEMENT PLAN

1. Infestation Locations

Japanese Knotweed Infestations



Invasive Species Survey:

Infestation ID: IS_K1

ITM: 556978, 671632

Infestation Type:
Japanese Knotweed (*Fallopia japonica*)

Dimensions of Infestation:
114m x 66m

Separation Distance: 465m –
North of proposed works
within the Eastern DA.

**Infestation Specific
Biosecurity Measures**

No measures required due
to distance from works





Invasive Species Survey:

Infestation ID: IS_K2

ITM: 556948, 671826

Infestation Type:
Japanese Knotweed

Dimensions of Infestation:
4m x 4m

Separation Distance: 681m –
North of proposed works
within the Eastern DA.

Infestation Specific
Biosecurity Measures

No measures required due
to distance from works





Invasive Species Survey:

Infestation ID: IS_K3

ITM: 554216, 667590

Infestation Type:
Japanese Knotweed

Dimensions of Infestation:
1.5m x 1.5m

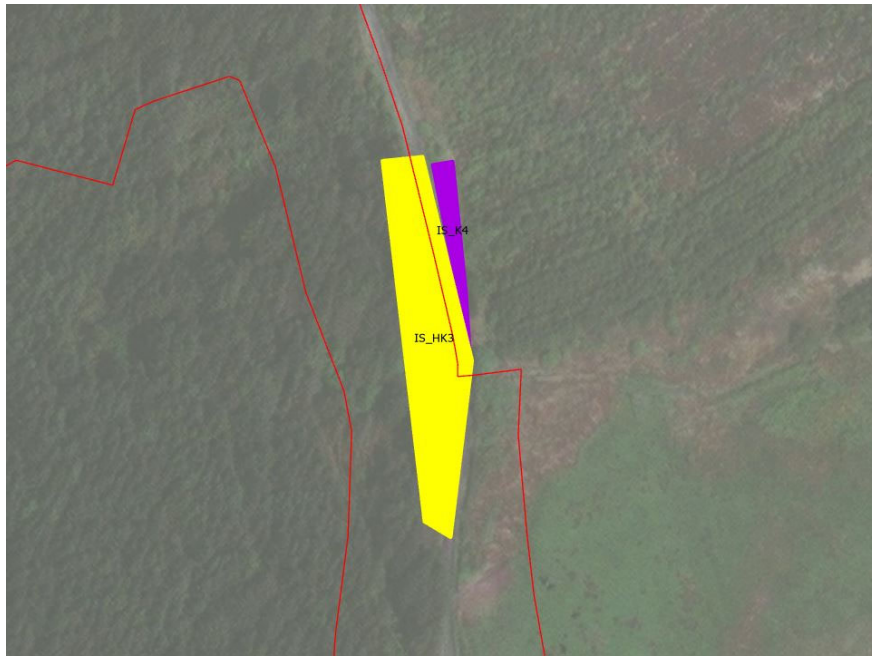
Separation Distance: 4m
from construction works on
the grid connection route

Infestation Specific
Biosecurity Measures
*(to be implemented under
supervision of an invasive
species specialist)*

Construction works
adjacent to the infestation
will be carried out under
supervision of the invasive
species specialist.

High density polyethylene
grass carpet terram
covering the infestation
during the preconstruction
phase and maintained
throughout the duration of
works.

Excavated material from the
section marked in red on
the map, will be disposed as
potentially contaminated
material, by a licenced
contractor to a suitably
licenced waste facility.



Invasive Species Survey:

Infestation ID: IS_K4

ITM: 552879, 669066

Infestation Type:
Japanese Knotweed (purple)

Dimensions of Infestation:
50m x 5m

Separation Distance: 2.5m -
Adjacent to proposed site
roads between T1 and T3,
Western DA.

Infestation Specific
Biosecurity Measures
*(to be implemented under
supervision of an invasive
species specialist)*

Construction works
adjacent to the infestation
will be carried out under
supervision of the invasive
species specialist.

High density polyethylene
grass carpet terram
covering the infestation
during the preconstruction
phase and maintained
throughout the duration of
works.



Invasive Species Survey:

Infestation ID: IS_K5

ITM: 553462, 667582

Infestation Type:
Japanese Knotweed

Dimensions of Infestation:
30m x 15m


Separation Distance: 704m -
West of the grid connection
route works.

Infestation Specific
Biosecurity Measures

No measures required due
to distance from works



Himalayan Knotweed infestations

	<p><u>Invasive Species Survey:</u></p> <p><u>Infestation ID:</u> IS_HK1</p> <p><u>ITM:</u> 554227, 667869</p> <p><u>Infestation Type:</u> Himalayan Knotweed (<i>Koenigia polystachya</i>)</p> <p><u>Dimensions of Infestation:</u> 37m x 5m</p> <p><u>Separation Distance:</u> 0m – Within the footprint of grid connection construction works and proposed site roads.</p> <p><u>Infestation Specific Biosecurity Measures</u> (<i>to be implemented under supervision of an invasive species specialist</i>)</p> <p>Construction works within the infestation will be carried out under supervision of the invasive species specialist.</p> <p>High density polyethylene grass carpet terram covering the infestation during the preconstruction phase and maintained throughout the duration of works.</p> <p>Excavated trenching material from the grid connection and proposed site roads marked in red on the map, will be disposed as potentially contaminated material, by a licenced contractor to a suitably licenced waste facility.</p>
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Invasive Species Survey:

Infestation ID: IS_HK2

ITM: 553498, 667532

Infestation Type:
Himalayan Knotweed

Dimensions of Infestation:
72m x 60m

Separation Distance:
630m- West of the grid connection route works.

Infestation Specific Biosecurity Measures

No measures required due to distance from works





Invasive Species Survey:

Infestation ID: IS_HK3

ITM: 552872, 669051

Infestation Type:
Himalayan Knotweed

Dimensions of Infestation:
96m x 16m

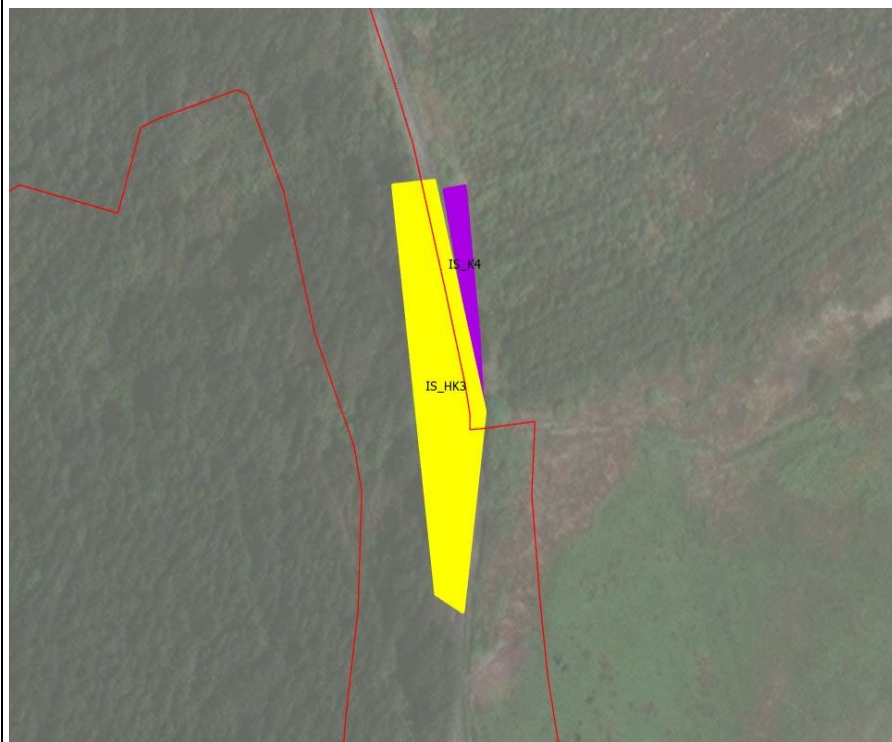
Separation Distance: 0m-
Located within the footprint of proposed site roads between T1 and T3, Western DA.

Infestation Specific Biosecurity Measures
(to be implemented under supervision of an invasive species specialist)

Construction works within the infestation will be carried out under supervision of the invasive species specialist.

High density polyethylene grass carpet terram covering the infestation during the preconstruction phase and maintained throughout the duration of works.

Excavated material from the section marked in red on the map, will be disposed as potentially contaminated material, by a licenced contractor to a suitably licenced waste facility.



Rhododendron Infestations



Invasive Species Survey:

Infestation ID: IS_RD1

ITM: 574208,662599

Infestation Type:
Rhododendron
(*Rhododendron ponticum*)

Dimensions of Infestation:
5m x 3m


Separation Distance: 5m-
East of the IPP connection
route.

Infestation Specific
Biosecurity Measures
(to be implemented under
supervision of an invasive
species specialist)

Construction works carried
out within 5m of the
infestation will be carried
out under supervision of the
invasive species specialist.



Butterfly Bush Infestation

	<p><u>Invasive Species Survey:</u></p> <p><u>Infestation ID:</u> IS_BF1</p> <p><u>ITM:</u> 556654, 666686</p> <p><u>Infestation Type:</u> Butterfly Bush (<i>Buddleja davidii</i>)</p> <p><u>Dimensions of Infestation:</u> 11m x 9m</p> <p><u>Separation Distance:</u> 0m Partially located within the footprint of the IPP connection route.</p> <p><u>Infestation Specific Biosecurity Measures:</u> <i>(to be implemented under supervision of an invasive species specialist)</i></p> <p>Construction works adjacent to the infestation will be carried out under supervision of the invasive species specialist.</p> <p>Excavated trenching material from the section of the IPP connection route marked in red on the map, will be disposed as potentially contaminated material, by a licenced contractor to a suitably licenced waste facility.</p>
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Invasive Species Survey:

Infestation ID: IS_BF2

ITM: 555736, 667003

Infestation Type:
Butterfly Bush

Dimensions of Infestation:
2m x 3m

Separation Distance: 8m
Located adjacent to the
IPP connection route.

Infestation Specific
Biosecurity Measures:
*(to be implemented under
supervision of an invasive
species specialist)*

Construction works
adjacent to the infestation
will be carried out under
supervision of the invasive
species specialist.

Excavated trenching
material from the section
of the IPP connection
route marked in red on
the map, will be disposed
as potentially
contaminated material, by
a licenced contractor to a
suitably licenced waste
facility.

2. Biosecurity Measures for the Containment and Management of Invasive Species during the Construction Stage

The most relevant and current guidance in relation to the management of non-native invasive plant species and animal species during construction projects, will be implemented during the construction of the Proposed Development.

The prescriptions for the treatment of invasive species were derived with reference to the following literature:

- Managing Japanese knotweed on development sites - The Knotweed Code of Practice produced by the Environmental Agency (2013);
- NRA Guidelines on The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads (2010);
- Managing Invasive Non-native Plants in or near Freshwater, Environment Agency (2010);
- Best Practice Management Guidelines Japanese knotweed *Fallopia japonica*, Invasive Species Ireland (2015);
- IFI Biosecurity Protocol for Field Survey Work, Inland Fisheries Ireland (2010).
- Higgins, G.T. (2008) *Rhododendron ponticum*: A guide to management on nature conservation sites. Irish Wildlife Manuals, No. 33. National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.

2.1 Biosecurity Measures for works proximate to Invasive Plant Species Infestations

2.1.1 Pre-Construction Processes

- The covering of vegetative knotweed infestations with high density polyethylene grass carpet terram at all identified locations prior to any works commencing on that section and the monitoring of construction works at that section when it happens. The polyethylene grass carpet terram covering will only be placed on and removed from the infestation under direct supervision from environmental clerks of work. When taking the terram off an infestation and moving to the next section the construction team will need to ensure that all adherent material has been removed and placed within the adjacent infestation i.e. it will be important not to spread the infestation;
- No posts will be used to secure the coverings i.e. there will be no uncontrolled ground interference within 7 meters of any infestation during any of these operations;
- Once each knotweed infestation has been covered, works can begin at that location.
- *Rhododendron* infestations will not be covered with high density polyethylene grass carpet terram, instead where works occur within 5m of *Rhododendron* infestation, works will be supervised to ensure machinery doesn't come in contact with infestation
- Excavated trenching material from the section of the grid connection route and IPP connection route within 15m of an infestation, will be disposed as potentially contaminated material, by a licensed contractor to a suitably licensed waste facility.
- Construction machinery will not come into contact with any of the adjacent vegetation during excavation.

2.1.2 Construction Phase Processes for works locations proximate to Infestations

- Before construction begins on any section, all General Operatives will attend a toolbox talk on invasive species. No General Operative will be allowed to work on the project without completing the toolbox talk;
- Only licensed hauliers are to collect and disposing of material.

2.2 Biosecurity Measures to Prevent the Spread/Introduction of Aquatic Invasive Species

2.2.1 Inspection and Cleaning of Delivery Vehicles

- Prior to arrival on site, the contractor's vehicles and equipment will be thoroughly cleaned and then dried using high-pressure steam cleaning, with water hotter than 65 degrees Celsius, in addition to the removal of all vegetative material. Items difficult to soak/spray will be wiped down with a suitable disinfectant (e.g. Virkon Aquatic);
- Evidence that all machinery has been cleaned will be required to be on file for review by the statutory authorities. Given that Crayfish Plague has affected rivers in the area, particularly the River Blackwater, site B17 (see Appendix G of the EIAR) tested positive for Crayfish plague 6km downstream of proposed IPP connection route works. The level of evidence required of the Contractor will be actual registration plates of vehicles onsite and a register of when, how and where each of these were cleaned before they arrived on site;
- A Virkon footbath will be available at site compound area and construction areas
- Each construction crew will be equipped with a 'disinfection box'. This will contain Virkon Aquatic, a spraying mechanism, cloths or sponges, a scrubbing brush and protective gloves. Protective gloves will be worn when using any disinfectant solution;
- Visual inspections will be carried out on all machinery and equipment (particularly for machinery and equipment exiting the site and which has come into contact with water or soils) for evidence of attached plant or animal material, or adherent mud or debris. Any attached or adherent material will be removed before entering or leaving the site of operation, securely stored away from traffic for removal to the waste storage area in the Temporary Compound at the end of the work day;