MWP

Invasive Alien Species Management Plan

Carrownagowan 110kV Grid Connection

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1. Introduction

This report details the presence of Invasive Alien Species (IAS) within the study area and outlines an Invasive Alien Species Management Plan to provide the Developer, and the Appointed Contractor with measures to ensure compliance by all parties with Planning and Environmental Requirements.

1.1 Project Background

Planning permission was granted by ABP for the Carrownagowan Wind Farm on 29/09/2022 and the Applicant is now seeking permission under section 182A of the Planning and Development Act 2000 (as amended) for a proposed underground grid connection (UGC) (the 'Proposed Development').

The Proposed Development comprises an approximately 25km long 110kV underground cable connection from the consented Carrownagowan Wind Farm substation to the existing ESB owned 110kV substation at Ardnacrusha, County Clare which will allow the electrical energy generated from the wind farm to be exported onto the national grid. A full description of the Proposed Development is provided in Chapter 2 Description of the Proposed Development of the EIAR, Volume II.

1.2 Scope of Assessment and Objectives

The objective of this assessment was to:

- Identify any IAS listed on the Third Schedule to the European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended). A blacklist of unwanted species is set out in the Regulations. It is an offence without a licence, to release or allow to disperse or escape, to breed, propagate, import, transport, sell or advertise such species. See Section 2.2 for more detail.
- Identify other IAS considered to be ecologically damaging;
- Map locations and describe where invasive species occur; and
- Provide recommendations for IAS identified in the study area.

2. Relevant Legislation and Policy

The legislative framework governing the control of IAS includes:

- Wildlife Acts, 1976 to 2022;
- European Communities (Birds and Natural Habitats) Regulations, 2011 (as amended); and

The pertinent provisions of the legislation are summarised in Sections 2.1 and 2.2, hereunder.

Objective 14.26 of the Clare Development Plan (CDP) 2017-2023, which relates to Alien and Invasive Species is to

- raise awareness of the threat of alien invasive species and take all necessary steps to prevent the spread of non-native invasive species and noxious weeds in the plan area, including requiring landowners and developers to adhere to best practice guidance in relation to their control; and
- require all development proposals to address the presence or absence of invasive alien species on the proposed development site and to require an Invasive Species Management Plan where such species are present.

Target 4.4 of the National Biodiversity Action Plan (NBAP) states that:

- harmful invasive alien species are controlled and there is reduced risk of introduction and/or spread of new species.

2.1 Wildlife Acts, 1976 to 2022

Section 52(7)(c) of the Wildlife Act, 1976, as inserted by 56(d) of the Wildlife (Amendment) Act, 2000 reads as follows:

> *"Any person who— [...] plants or otherwise causes to grow in a wild state in any place in the State any species of flora, or the flowers, roots, seeds or spores of flora, ['refers only to exotic species thereof'][...] otherwise than under and in accordance with a licence granted in that behalf by the Minister shall be guilty of an offence*."

2.2 European Communities (Birds and Natural Habitats) Regulations, 2011 to 2021

Species such as Japanese Knotweed (*Fallopia japonica*) and Himalayan knotweed (*Persicaria wallichii*) are listed as Invasive Alien Species in Part 1 of the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011, as amended). Failure to comply with the regulations can result in either civil or criminal prosecution, with very severe penalties accruing. The relevant sections of the regulations are reproduced below.

> *"49(2) Save in accordance with a licence granted [by the Department of Arts, Heritage and the Gaeltacht], any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place [a restricted non-native plant], shall be guilty of an offence."*
>
> *49(3) … it shall be a defence to a charge of committing an offence under paragraph (1) or (2) to prove that the accused took all reasonable steps and exercised all due diligence to avoid committing the offence.*
>
> *50(1) Save in accordance with a licence, a person shall be guilty of an offence if he or she […] offers or exposes for sale, transportation, distribution, introduction or release—[any restricted non-native animal or plant species], anything from which an animal or plant referred to in subparagraph (a) can be reproduced or propagated, or a vector material listed in the Third Schedule, [which includes] soil or spoil taken from places infested."*

3. Methodology

3.1 Desk Study

Searches of the National Biodiversity Data Centre (NBDC) was carried out for any documented records of non-native plant species listed under the Third Schedule of the European Communities Regulations 2011 (S.I. 477 of 2011) in the hectads R56, R66, R57 and R58 containing the proposed development

Documented records of High Flora Impact species in R67 include curly waterweed (*Lagarosiphon major*), Canadian waterweed (*Elodea canadensis*), Nuttall's waterweed (*Elodea nuttallii*) and Japanese knotweed (*Fallopia japonica*). Records of Medium Flora Impact species listed on the Third Schedule include water fern (*Azolla filiculoides*) and Himalayan knotweed.

Documented records of High Flora Impact species Regulation (Ireland) in R57 include Japanese knotweed and Indian balsam (*Impatiens glandulifera*). Records of Medium Flora Impact species listed on the Third Schedule include Himalayan knotweed and *Rhododendron ponticum*.

3.2 Field Survey

The study area included the footprint of the Proposed Development and adjacent areas within 7m, noting that Japanese Knotweed underground growth can extend 7m horizontally beyond the parent plant, or over-ground growth.

Field surveys were undertaken by Gerard Gayes (BA Sc.) at the study area over three growing seasons (2018; 2019 and 2022). The surveys included all seasons. Gerard is a Senior Ecologist with Malachy Walsh and Partners and has over 13 years' experience in environmental consultancy. He is a member of the Chartered Institute of Ecology and Environmental Management (MCIEEM) and the Freshwater Biological Association (FBA). Gerard has a diverse ecological profile, with Phase 1 habitat, mammal (including bats), bird, amphibian, macroinvertebrate, and tree survey experience. He is co-author and/or carried out surveys for NPWS Irish Wildlife Manual Nos. 15, 24, 26, 37, 45. Ger was the lead ecologist on the aquatic surveys undertaken for the project and was also involved in habitat and mammal surveys.

The presence of IAS was recorded within the study area during ecological surveys carried out between July 2018 and, October 2019 and again in November 2022. The location of any IAS present was recorded using GPS location and details such as the size and area of infestation were noted. During surveys particular focus was given to IAS listed on the Third Schedule of the of the European Communities (Birds and Natural Habitats) Regulations 2011 (SI 477 of 2011, as amended), as such black listed species require special treatment in accordance with the regulations set out in Section 2 and in line with the CDP and NBAP.

4. Results

Two species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations, 2011, (as amended) were recorded within the study area: Japanese Knotweed (*Fallopia japonica*) and Rhododendron.

Cherry laurel (*Prunus laurocerasus*) was recorded at a single location within the study area. **Figure 1** shows the locations of invasive alien species identified during surveys. These locations are listed in **Table 1**.

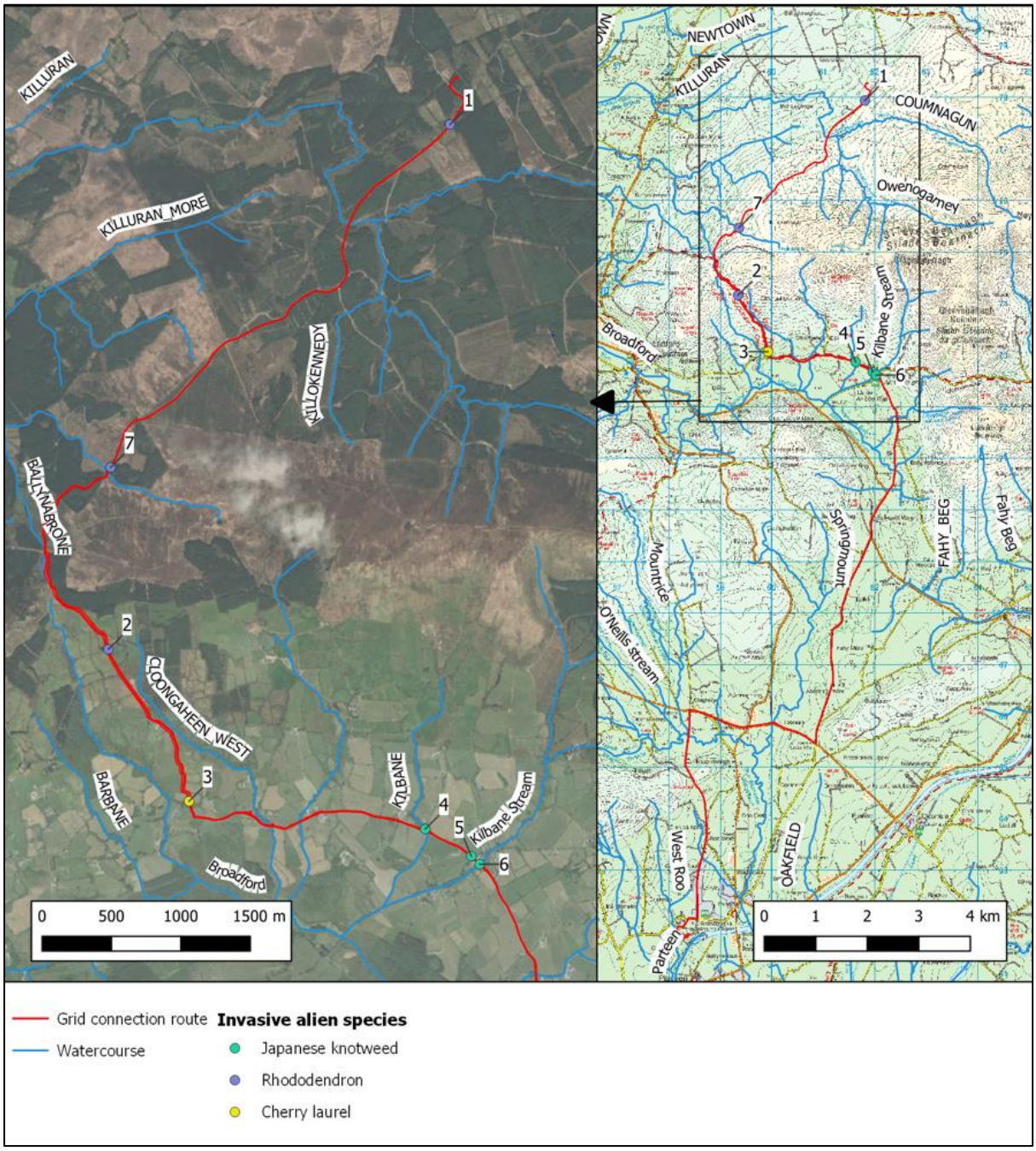

Figure 1 Invasive species survey results

Table 1 Invasive species survey results

Site	Species	Comments	X	Y
1	Himalayan Knotweed	Stand size is ca. 10m X 15m, located at junction towards northern end of the site, in footprint of substation. This stand was growing on a slightly raised mound.	561881	678177
1	Rhododendron	Infestation on both sides of access track. Mature dense stand going down into ravine on northern side of access track. 10m X 20m, 4 plants on southern side of road.	561771	677972
2	Rhododendron	Mature tree recently flailed	559309	674193
3	Cherry laurel	Mature tree	559890	673097
4	Japanese Knotweed	Set back from north side of road by ca. 2m. Stand ca. 3m x 2m	561592	672897
5	Japanese Knotweed	Adjacent to north side of road along a length of ca. 10m	561924	672702
6	Japanese Knotweed	Boths sides of road adjacent to watercourse	561985	672644
7	Rhododendron	Some young plants In line with the cable route through recently felled woodland (WS5).	559325	675502

5. Management Measures

The management of Rhododendron, Cherry laurel and the one stand of Japanese Knotweed will be subject to containment measures as outlined below. With the exception of one stand of Japanese Knotweed (Site No 6; Table 1), there will be no interference with the plant or its root system due to the use of horizontal directional drilling (Site No. 3, 5 and 7; Table 1). This approach will involve drilling which will occur below the depth of root penetration and/or render roots unviable with respect to regeneration.

Oversight of IAS exclusion areas will be the responsibility of site manager / environmental manager. Management of IAS is likely to be sub-contracted to a company / individual appropriately qualified and insured to treat / remove the IAS.

5.1 Containment

Containment of spread will be the initial step and main priority of the management plan. The primary risk of spread is considered to be during the construction phase. Prior to finalising the Invasive Plant Species Management Plan and prior to the commencement of any development works, the footprint of the works will be re-surveyed to ensure that any proliferation of invasive plant species is noted and recorded. Containment of infested areas will be achieved by establishing 'Exclusion zones' around the stands of invasive plant species within or adjacent to the development area and by implementing the following bio-security measures;

- Re Survey to establish the extent of invasive plant species within the development area (time lapse),
- Installation of Exclusion Zones,
- Toolbox talks will be carried out to communicate measures to all personnel,
- Personnel will be informed of their legal obligations to prevent the spread of invasive species, and of the penalties that apply.
- Works inside the exclusion zones, not directly associated with the Invasive Plant Species Management Plan, will not be permitted.
- Removal of vegetation/soil from the exclusion zones will be carried out only by the appropriately qualified personnel, and will be supervised by the project ecologist to control the potential spread of infested soil/material from the exclusion zones to other areas.

The above will reduce the potential for spread IAS, during construction, ensuring compliance with legislation.

5.1.1 Japanese Knotweed

The specialist appointed by the Developer or on their behalf by the contractor will develop a site-specific management plan to prevent the spread of the plant during works to install Proposed Development. The approach to containment and / or management of Japanese knotweed will be based on recognised industry good practice methods. Where required and / or appropriate such measures may include, but are not limited to, treatment of the plant in-situ within 7 m of the trenching, removal of potentially infested excavated material off-site or a combination of these as determined by the specialist. The specialist will be required to authorise commencement of works in the approximately 25 m section of the route affected by Japanese knotweed. There will be no works within the 25 m section of the route until the Japanese knotweed specialist is satisfied that all appropriate measures are in place to prevent accidental spread of the plant. The specialist will oversee the implementation of any proposed treatment and supervise works within the 25 m section as required.

5.1.2 Cherry Laurel and Rhododendron

While these plants were recorded within the study area, they can be avoided during the construction stage of the proposed development and therefore, treatment of cherry laurel and rhododendron is not required.

5.2 Biosecurity Measures During Construction

The following biosecurity measures will be implemented throughout the construction of the grid connection:

- There will be no works within the exclusion zones.
- The exclusion zone will not be used for access, or parking area for vehicles or personnel.
- No soil, vegetation, rubbish or any other material will be removed from the exclusion zone.
- There will be no vehicles operating within the exclusion zones.
- There will be no soil, spoil or aggregate required for the trenching works within the public road. Should such materials be required for the works off road then they will be sourced from a reputable source that can verify the materials are free from contamination by IAS.
- All plant and equipment employed on the construction site (e.g. excavator, footwear, etc.) will be thoroughly cleaned down using appropriate method such as compressed airprior to arrival on site/leaving site to prevent the spread of invasive plant species; This process will be detailed in the contractor's method statement.

Trenches will be backfilled and revegetated / re-surfaced immediately each day after the cable is installed to prevent the accidental spread or introduction of IAS.

6. References

CABI, 2019. Persicaria wallichii (Himalayan knotweed) [Online] Available at: https://www.cabi.org/isc/datasheet/120210 [Accessed 24 11 2022].

Kelly, J., Maguire, C.M. & Cosgrove, P.J. (2008). Best Practice Management Guidelines Japanese knotweed Fallopia japonica. Prepared for NIEA and NPWS as part of Invasive Species Ireland.

NBDC, 2020. Biodiversity Maps [Online] Available at: https://maps.biodiversityireland.ie/Map [Accessed 24 11 2022].

NRA, 2010. Guidelines on "The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads" National Roads Authority, Dublin.

Appendix 1

Chemical Control Guidelines

For herbicide treatment, the following general guidelines should be observed (it is noted that the infestation, occurs in proximity of stream):

- Herbicide treatments should always be applied by a competent and licensed operator.
- Herbicide operators should take appropriate measures to avoid or minimise risks to themselves, construction personnel, members of the public and the surrounding environment. Details of any health or environmental hazards will be provided on the manufacturer's label or in accompanying documentation.
- Most herbicides are harmful to humans, and some are toxic or carcinogenic. They may also harm domestic pets and wild animals that enter the site.
- If herbicides enter water they can kill aquatic plants and organisms. Care should be taken when working in proximity of streams, and drains.
- Broad-spectrum systemic herbicides such can be toxic to non-target organisms, including trees and native vegetation.
- Herbicides should be applied using spot spray, or leaf wiping application.
- Where appropriate, ecological screening of both the infested site(s) and the proposed treatment methodology should be assessed in advance of treatment works.
- Targeted, treatment methodology should be deployed.
- Where relevant, prior to any herbicide applications a temporary construction fence should be placed around the treatment areas, in order to prevent access by members of the public.
- Advisory / warning signage should be kept in place across the full treatment programme, to mitigate the risk of third party interference or damage.