



APPENDIX 11

INVASIVE SPECIES MANAGEMENT PLAN (ISMP)

Invasive Species Management Plan

Cunlaghfadda Green
Energy Project, Co.Mayo





DOCUMENT DETAILS

Client: **Cunlaghfadda Green Energy Ltd**

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1. INTRODUCTION

1.1 Background

MKO have prepared this site-specific Invasive Species Management Plan to support the Environmental Impact Assessment Report (EIAR) which accompanies the planning application for the Cunlaghfadda Green Energy Project in Co. Mayo (the Proposed Project), which includes 7 no. wind turbines and all associated infrastructure and works. The Proposed Project is located approximately 5.3km northwest of the town of Claremorris, and 16km southeast of the town of Castlebar. The full description of the Proposed Project is detailed in Chapter 4 of the EIAR.

Where the term 'Plan' is used in this document, this refers to the Invasive Species Management Plan.

Several stands of Japanese Knotweed (*Reynoutria japonica*) were identified within the south of the Site during multidisciplinary walkover surveys carried out by MKO ecologists, between June 2023 and July 2025. These surveys were carried out to inform the Natura Impact Statement (NIS), and Chapter 6 Biodiversity of the Environmental Impact Assessment Report (EIAR) which have been prepared by MKO to accompany the planning application for the Proposed Project.

This document has been prepared with reference to current legislation and best practice guidelines in the identification, treatment and management of invasive alien species listed on the First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (S.I. 374 of 2024) and 'Third Schedule' of Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). The document does not provide advice or guidance with reference to waste legislation.

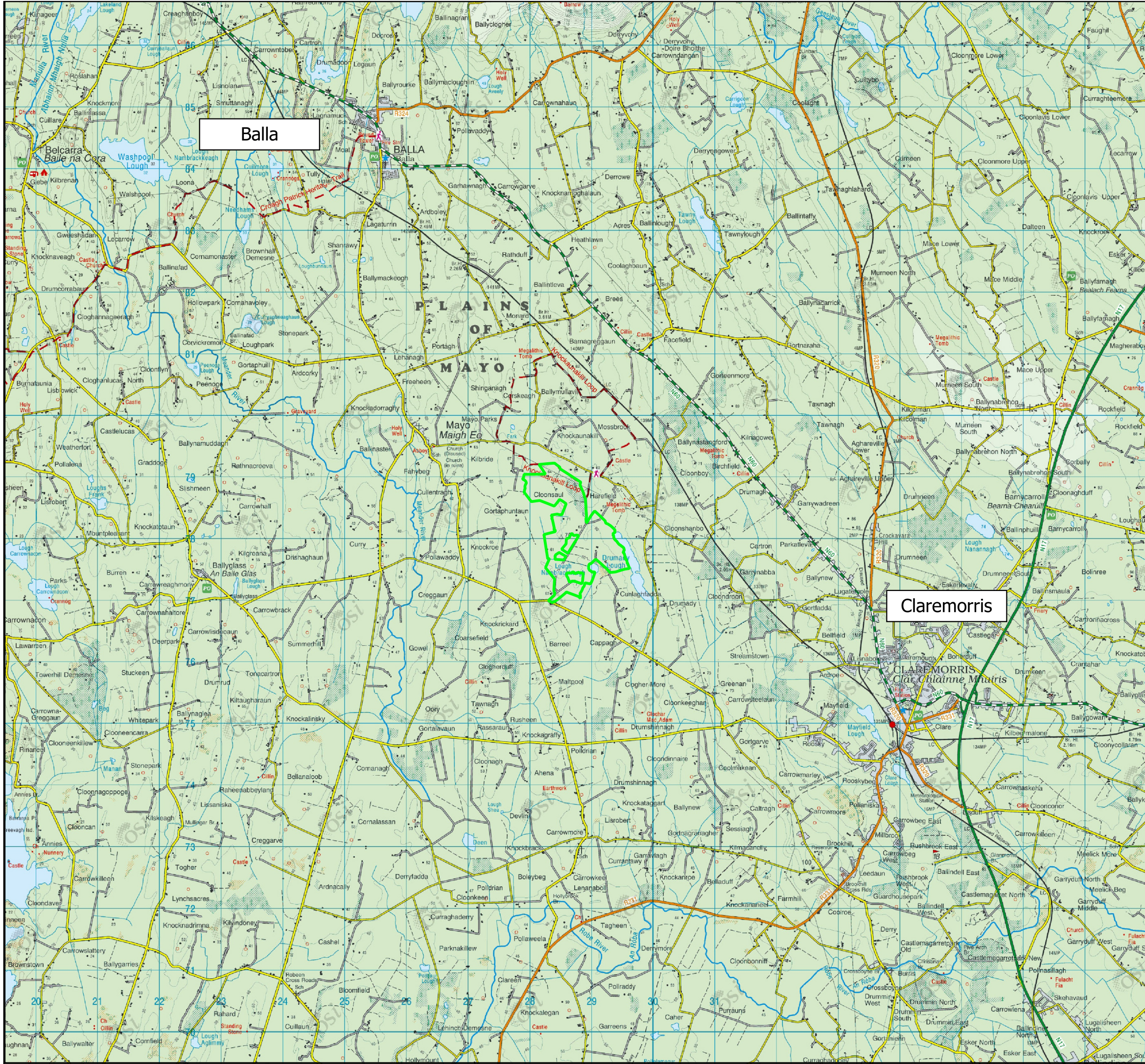
The objectives of this report are summarised below:

- › Provide site specific best practice guideline measures for the control and management of invasive species.
- › Provide detailed recommendations for the management of invasive species listed on the First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (S.I. 374 of 2024) and Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). The recorded locations of invasive species within the Site are mapped in Figure 3-1 below, showing their distribution within and adjacent to the EIAR Site.

For the purposes of this Invasive Species Management Plan, the following references are used where referring to aspects of the Proposed Project:

- › Where the 'Proposed Wind Farm' is referred to, this refers to turbines and associated foundations and hardstanding areas, including access tracks, underground cabling, permanent meteorological mast, temporary construction compound, peat and spoil management, biodiversity enhancement, tree felling, site drainage, operational stage signage, turbine delivery route and junction accommodation works, and all ancillary works and apparatus. The Proposed Wind Farm is described in detail in Chapter 4, Section 4.4.1 of this EIAR.
- › Where the 'Proposed Grid Connection' is referred to, this refers to the proposed 110kV onsite substation, underground 110kV cabling and end masts connecting the proposed 110kV substation to the 110kV Castlebar to Cloon overhead line, access tracks and all ancillary works and apparatus. The Proposed Grid Connection Route is described in detail in Chapter 4, Section 4.4.2 of this EIAR.
- › Where the 'Proposed Project' is referred to, this encompasses the entirety of the project (Proposed Wind Farm and Proposed Grid Connection) for the purposes of this EIA in accordance with the EIA Directive. The Proposed Project is described in detail in Chapter 4 of the EIAR.

- › Where 'the Site' is referred to, this relates to the primary study area for the EIAR, as delineated by the EIAR Site Boundary in green as shown on Figure 1-2 of Chapter 1 of the EIAR and encompasses an area of approximately 165 hectares.



Map Legend

 EIAR Site Boundary



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Drawing Title

Site Location

Project Title
Proposed Cunlaghfadda Green Energy Project

Drawn By
NS

Checked By
RK

Project No.
220825

Drawing No.
Figure 1-1

Scale
1:60,000

Date
2025-11-27



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1.2

Legislative Framework

In 2011, the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011) were introduced. Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011) include legislative measures to deal with the dispersal and introduction of invasive alien species.

Non-native species subject to restrictions under Regulations 49 and 50 are included in the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). High impact invasive species on this list include, among others, Japanese knotweed, giant hogweed, giant knotweed, giant rhubarb, Himalayan balsam, Himalayan knotweed, bohemian knotweed and rhododendron. Vector materials which aid in the spread of these species include soil or spoil taken from places infested with Japanese knotweed (*Reynoutria japonica*), Giant knotweed (*Reynoutria sachalinensis*) or their hybrid bohemian knotweed (*Reynoutria x bohemica*). Two vector materials are referred to in the regulations (Third Schedule Part 3), one is blue mussel seed and the second is:

“Soil or spoil taken from places infested with Japanese knotweed, Giant knotweed or their hybrid Bohemian knotweed”.

Regulation 49

“any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow in any place specified in relation to such plant in the third column of Part 1 of the Third Schedule, any plant which is included in Part 1 of the Third Schedule, shall be guilty of an offence.”

Regulation 50

“a person shall be guilty of an offence if he or she has in his or her possession for sale, or for the purposes of breeding, reproduction or propagation, or offers or exposes for sale, transportation, distribution, introduction or release

- (a) an animal or plant listed in Part 1 or Part 2 of the Third Schedule, (b) anything from which an animal or plant referred to in subparagraph*
- (b), can be reproduced or propagated, or*
- (c) a vector material listed in Part 3 of the Third Schedule,”*

In 2024, the European Union (Invasive Species) Regulations 2024 (S.I. 374 of 2024) were then introduced. These Regulations include offences in relation to invasive alien species of national concern under Regulation 17(1) whereby a person shall not:

“introduce into the State,

- a. keep, including in contained holding,*
- b. breed, including in contained holding,*
- c. import into, export from or transport within the State, except for the transportation of species to facilities in the context of eradication,*
- d. place on the market,*
- e. use, exchange or offer for exchange,*
- f. permit to reproduce, grow or cultivate, including in contained holding, or*
- g. release into the environment*
- h. an invasive alien species of national concern.”*

Invasive alien species of national concern under Regulation 16(1) are listed in the ‘First Schedule’ of the European Union (Invasive Species) Regulations 2024. Invasive species in this list include plants such as:

Japanese knotweed, giant hogweed, giant knotweed, giant rhubarb, Himalayan balsam, Himalayan knotweed, Bohemian knotweed and Rhododendron.

Vector materials under Regulation 16(2) are included in the ‘Second Schedule’ of the European Union (Invasive Species) Regulations 2024. Two vector materials are referred to in the regulations, the first is blue mussel seed and the second is:

“Soil or spoil taken from places infested with Japanese knotweed (Reynoutria japonica) Giant knotweed (Reynoutria japonica) or their hybrid Bohemian knotweed (Reynoutria x bohemica)”.

Under Regulation 17(2), a person shall not

- a. *“import or otherwise introduce into the State,*
- b. *place on the market,*
- c. *use, exchange or offer for exchange, or*
- d. *release into the environment,*
- e. *a vector material.”*

Under Section 40 of the Wildlife Act 1976 (as amended), it is an offence for a person to

“cut, grub, burn or otherwise destroy, during the period beginning on the 15th day of April and ending on the 31st day of August in any year, any vegetation growing on any land not then cultivated or in course of cultivation for agriculture or forestry”.

The management of invasive plant species should refer to Section 40 of the Wildlife Act particularly during the preparation of Invasive Species Management Plans.

The list of invasive plant species not listed under the First Schedule is not exhaustive and many invasive species, hereafter referred to as “non-First Schedule” invasives, continue to grow prevalently in Ireland. These species include, among others, butterfly bush (*Buddleja davidii*), montbretia (*Crocsmia x crocosmiiflora*), traveller’s joy (*Clematis vitalba*), winter heliotrope (*Petasites pyrenaicus*), cotoneaster (*Cotoneaster horizontalis*), Himalayan honeysuckle (*Leycesteria formosa*) and cherry laurel (*Prunus laurocerasus*).

1.3

Guidance Documents

The following guidance documents and literature sources were consulted during the preparation of this report:

- Irish Water (2016) IW-AMT-SOP-009 Information and Guidance Document on Japanese knotweed
- Stokes *et al.* (2004). Stokes, K., O'Neill, K. & McDonald, R.A. (2004) *Invasive species in Ireland*. Unpublished report.
- TII (2020) The Management of Invasive Alien Plant Species on National Roads – Technical Guidance
- Property Care Association (2018) Code of Practice for the Management of Japanese knotweed
- NPWS (2024). Ireland’s 4th National Biodiversity Action Plan 2023-2030.
- www.invasivespeciesireland.com
- www.invasivespeciesni.co.uk
- EPA (2022). Managing Invasive Alien Plants in Ireland
- Environment Agency (2013). The Knotweed Code of Practice: Managing Japanese Knotweed on Development Sites (Version 3, amended in 2013. Environment Agency.

1.4

Statement of Authority

A baseline ecological survey was undertaken on the 7th of July 2025 by Katy Beckett (B.A., M.Sc.) and Amy McDermot (B.Sc.) of MKO. Both ecological surveyors have the necessary qualifications and experience to perform baseline ecological surveys, including detailed invasive species surveys. This Invasive Species Management Plan (ISMP) was prepared by Amy McDermot and Chandra Walter (B.Sc., M.Sc.). The ISMP has been reviewed by Sarah Mullen (B.Sc., M.Sc., Ph.D ACIEEM). Sarah has over 8 year's professional experience in ecological consultancy. Please see Appendix 12 of the NIS for further detail on relevant experience of all ecological surveyors.

2.

CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

The development description for the Proposed Wind Farm planning application to Mayo County Council, appears in the public notices as follows:

The development will consist of the provision of the following:

- i. 7 no. wind turbines with a top of foundation to blade tip height of 160 metres; a rotor blade diameter of 136 metres; and hub height of 92 metres, 1 no. meteorological mast with a height of 92 metres and subsequent decommissioning of the wind turbines and meteorological mast following a thirty five-year operational life from the date of full commissioning of the wind turbines;
- ii. Turbine and meteorological mast foundations and associated temporary and permanent hard-standing areas;
- iii. All associated underground electrical and communications cabling and subsequent decommissioning of all underground cabling within the site connecting the turbines to a proposed 110kV substation following a thirty five-year operational life from the date of full commissioning of the wind turbines;
- iv. 1 no. temporary construction compound;
- v. Upgrade and widening of existing internal tracks and provision of new permanent and temporary site access tracks and all associated site drainage;
- vi. Upgrade and temporary road widening works along the L15053 and provision of 1 no. passing bay;
- vii. 1 no. new temporary site entrance off the L1505 in the townland of Knockroe to accommodate the delivery of abnormal loads and construction phase traffic;
- viii. 1 no. new permanent site entrance in the townlands of Cunlaghfadda and Cloonbaul;
- ix. 1 no. borrow pit;
- x. 10 no. peat and spoil management areas;
- xi. 2 no. temporary security cabins;
- xii. Tree felling and vegetation removal;
- xiii. Biodiversity enhancement areas;
- xiv. Site drainage;
- xv. Site fencing, gates and signage; and
- xvi. All related site works above and below ground and all ancillary development.

The development description for the Proposed Grid Connection planning application to ACP will appear in the public notices as follows:

The development will consist of the provision of the following:

- i. 1 no. 110kV electrical substation compound consisting of 2 no. single storey control buildings with welfare facilities, all associated electrical plant and apparatus, underground cabling, lighting columns, lightning masts, fencing and access gates, signage, 2 no. wastewater holding tanks and 2 no. rainwater harvesting tanks;
- ii. The installation of c. 982 metres of 110kV underground cabling, 2 no. new end masts with a height of c. 16 metres and associated hard-standing areas to facilitate the new 'loop-in/loop-out' connection into the existing Castlebar to Cloon 110kV overhead line;
- iii. A telecommunications tower with a height of 36 metres and associated foundation, hard-standing area, fencing and access gate;
- iv. A temporary construction compound;
- v. Provision of new permanent and temporary construction site access tracks;
- vi. Tree felling and vegetation removal;
- vii. Site drainage; and

- viii. All related site works above and below ground and all ancillary development.

This application seeks a ten-year planning permission and a 35-year operational life from the date of commissioning of the entire wind farm.

3. INVASIVE SPECIES RECORDED

3.1 Japanese Knotweed

Japanese knotweed (*Reynoutria japonica*) is a tall vigorous, hardy perennial plant native to Japan, Korea and Northwestern China. The species was introduced to Britain in the mid-19th century as an ornamental plant for large gardens, prized due to its imposing size and sprays of creamy white flowers. By 1886 it was established in the wild and is now considered one of the most problematic plant species in the UK and Ireland. Japanese knotweed has a rapid upward growth rate of shoots at the beginning of the growing season which allows it to outcompete native vegetation, and lateral growth via extension of rhizomes which are capable of penetrating built structures over time. Japanese knotweed is characterised by shield-shaped leaves which are flat at the base and carried on zigzagged stems which are sturdy, purple spotted, hollow and bamboo-like with regular spaced nodes. The flowers (only female in the UK and Ireland), appear in late summer or early autumn and are creamy white coloured in drooping clusters 8cm to 12cm in length. In spring, the emerging stems are green to red/ purple with rolled leaves that unfurl as the shoots extend. At the end of the year, the stems persist and turn various shades of brown, sometimes with an orange tinge. The rhizome is dark brown in colour, generally darker towards the centre with lines often radiating from the centre.

Due in part to spreading vegetatively and rapid growth, Japanese knotweed is highly invasive and can impact native species by shading out native and rare plant species. As with other species of knotweed, Japanese knotweed is expensive to control and difficult to deal with. As set out by the Environment Agency (2013)¹, Japanese knotweed rhizomes can extend up to 7m horizontally from visible growth. Therefore, a 7m buffer zone should be applied to areas of Japanese knotweed, with all areas within this buffer being treated as potentially contaminated.

Japanese knotweed is listed on the First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (S.I. No.374 of 2024) and Third Schedule of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011). As this species was found on site, a management plan has been prepared for the Site and is detailed in Section 4 below.

3.2 Location of Japanese Knotweed within the Proposed Project Site

3.2.1 Recorded Distribution

During the ecological walkover survey, Japanese knotweed (*Reynoutria japonica*) was recorded exclusively within the southern portion of the Site, to the south of all proposed turbine infrastructure (see Figure 3-1).

The distribution of Japanese knotweed within the Site is strongly associated with existing access tracks/ roads and areas of historical disturbance within the Site. The most significant infestations occur along the existing local road running south to north through the Site, this being the L15053 (see Figure 3-1) from the Cappagh North Road (L1505). This existing road will function as the main access road to the Site. It is proposed to upgrade this road (L15053) as part of the Proposed Project, which will consist of

¹ Environment Agency (2013) *The Knotweed Code of Practice: Managing Japanese Knotweed on Development Sites (Version 3, amended in 2013)*. Environment Agency.

road widening and resurfacing. In this southern section of the Site, large, well-established stands are present on both sides of the L15053 road, with several stands located immediately adjacent to the road.

Further infestations were recorded along the L15054 which branches away from the southern section of the L15053 road through the Site and runs in a northeasterly direction. One stand is located adjacent to a farmyard outside the Site, but immediately adjacent to the L15054 road. These infestations include a mix of medium-sized stands and smaller, emerging patches located along the road margins, within adjacent cutover bog and wet grassland habitats, and along drainage features (see Figure 3-1).

Elsewhere in the southern section of the Site, more dispersed, smaller infestations are present within cutover bog habitats to the east and west of the L15053 road, including a cluster of occurrences within an area of previously disturbed ground/spoil to the east of the L15053 road. These areas are located further than 150m from the L15053 and L15054 roads and are not located within the footprint of the Proposed Project.

A map showing the recorded distribution of Japanese knotweed within the Site is provided in Figure 3-1

Representative stands of Japanese knotweed are shown in Plate 3-1 to Plate 3-5, illustrating typical occurrences within high, moderate, and low-risk areas across the Site.

3.2.2 Relationship to the Proposed Works

The primary interaction between Japanese knotweed and the Proposed Project occurs along the L15053 road through the Site which is proposed for upgrade as part of the Proposed Project. In several locations on the Site (see stands marked as red in Figure 3-1), established stands of Japanese knotweed are located adjacent to the L15053 road. The construction footprint of the proposed upgrade to the L15053 road overlap with either the established stands of Japanese knotweed and/or with the 7m buffer (considered to be potentially contaminated).

The proposed upgrade works to the L15053 road (including widening and resurfacing) have the potential to disturb Japanese knotweed stands or rhizomes, which may result in the spread of Japanese knotweed both within the Site and off-site.

The Japanese knotweed recorded along the verges of the L15054 that traverses the Site in south-west to north-east is located outside the construction footprint for the Proposed Project and will not be directly impacted by construction works. See stands marked as orange in Figure 3-1. It is not proposed to upgrade this road as part of the Proposed Project. The road will be used solely to access the southeastern section of the Site where woodland planting is proposed as part of the Biodiversity Enhancement and Management Plan (BMEP) which has been prepared for the Proposed Project. Nonetheless, the presence of Japanese knotweed along this road presents a potential pathway for indirect spread via farm and other machinery, which could subsequently introduce material to the L15053, thus resulting in further spread of Japanese knotweed throughout the Site.

Other recorded Japanese knotweed stands within the Site, i.e. those recorded in surrounding cutover habitats away from the L15053 and L15054, will not be disturbed by works associated with the Proposed Project as they lie outside of the construction footprint of the Proposed Project (see stands marked as green in Figure 3-1). These areas remain relevant only in the context of potential indirect spread.

3.2.3 Management Implications

Based on the recorded distribution of Japanese knotweed within the Site, three management risk zones have been identified within the Site. These have been marked as red for high risk, orange for medium risk and green for low risk in Figure 3-1 above and are explained below:

High Risk – Along the L15053 Road (Construction Footprint)

The highest risk is associated with Japanese knotweed stands located adjacent to the L15053 road which is proposed for upgrade as part of the Proposed Project. In several locations, the 7m buffer zone associated with these stands overlaps the proposed construction footprint. Disturbance during upgrade works to the L15053 road has the potential to:

- › Disturb Japanese knotweed resulting in its potential spread within the Site.
- › Facilitate off-site dispersal, which would constitute a breach of legal obligations (described in Section 1.2 above).

Strict biosecurity measures will be implemented in this area prior to and during construction works associated with the Proposed Project to prevent disturbance, fragmentation, soil contamination, and spread of Japanese knotweed material. Material will be excavated, moved back from the works footprint, mounded, and treated chemically over multiple years (see Section 4 for further detail).

Moderate Risk – L15054 and Adjacent Areas

While not within the construction footprint of the Proposed Project, existing stands along the L15053 could potentially be disturbed e.g. by vehicles delivering trees and personnel for woodland planting associated with the Proposed Project; and/or by farm traffic not associated with the Proposed Project. This could arise from machinery tracking over Japanese knotweed rhizome or contaminated soil and potentially introducing Japanese knotweed vector material into areas that could later be affected by construction activities. This presents a moderate risk of disturbance and spread of Japanese knotweed beyond its current distribution.

Targeted chemical treatment of these stands will be undertaken, subject to licence and necessary consents being in place, to reduce the risk of reintroduction into the main works areas.

Low Risk – Outlying and Disturbed Habitats

Low-risk areas within the Site comprise small or emerging stands within cutover bog or spoil areas which are located a significant distance from the construction footprint, with the closest low risk area located over 150m from the construction footprint. These areas are unlikely to be impacted directly by construction activities, given their distance from any proposed works. Nonetheless, treating these stands as part of a site-wide management programme will be implemented subject to licence and necessary consents being in place, to prevent future spread and minimise long-term maintenance costs.

Overall Approach

A multi-year treatment and monitoring programme will be implemented across all identified zones. While the highest priority is the high-risk construction footprint, a proactive approach to moderate- and low-risk areas will reduce the potential for future spread and associated costs over the 35-year operational lifespan of the Proposed Project.



Plate 3-1 Japanese Knotweed identified within the proposed construction footprint along the L15053 road within the Site



Plate 3-2 Japanese knotweed stand located within cutover bog habitat west of the L15053 road



Plate 3-3 Japanese knotweed stand located within the Wet grassland (GS2) habitat



Plate 3-4 Large stand of Japanese knotweed located to the east of the L15053 road within the Site



Plate 3-5 Large stand of Japanese knotweed located within the cutover bog habitat east of the L15053 road

4.

JAPANESE KNOTWEED MANAGEMENT PLAN

The Irish Water (2016) information and guidance document “TW-AMT-SOP-009 Information and Guidance Document on Japanese knotweed. Asset Strategy and Sustainability” has been consulted in the preparation of this ISMP. Measures outlined for the management of Japanese knotweed within the aforementioned document are recommended to be adopted for the management of Japanese knotweed within the Site.

A pre-commencement invasive species survey will be undertaken by a fully qualified ecologist to determine the current location and extent of Japanese knotweed within and adjacent to the Site and to identify any changes in the extent of the Japanese knotweed infestation since the surveys undertaken to inform the EIAR and NIS for the Proposed Project. Surveys shall be conducted in the summer months (June–July) when stands are most visible.

The measures outlined below shall be implemented prior to the commencement of any site clearance or construction works associated with the Proposed Project in order to prevent the disturbance and spread of Japanese knotweed on Site. These measures will be included in the contractor’s method statement.

4.1

Site Set-up

- › No ground works shall take place on site prior to the implementation of the site-specific Invasive Species Management Plan. The ISMP will ensure all measures are taken to avoid the spread of species listed on the First and Third Schedule in the course of works associated with the construction and maintenance of the Proposed Project.
- › Ensure all visitors to the Site are made aware of the location of the Japanese Knotweed recorded and are familiar with its characteristics and method of reproduction.
- › Machinery operatives and all staff will be given a Toolbox Talk by the appointed ecologist on Japanese Knotweed and the risks associated with this invasive species prior to any works commencing in any of the knotweed exclusion zones.
- › Only people familiar with, and able to identify Japanese knotweed and Japanese knotweed rhizome will be allowed to work within the 7m buffer zones surrounding visible stands.
- › All Japanese knotweed stands within and adjacent to the construction footprint along the L15053 road will be clearly marked using temporary fencing to prevent disturbance. The fencing will extend to a 7m buffer zone around the infestation (where this does not overlap with the L15053 road itself) as there is potential for root material to extend up to 7m from the infestation.
- › All material within the fenced areas will be treated as potentially contaminated.
- › No unnecessary works will take place within the fenced area. (Necessary works are considered to be those activities associated with Japanese knotweed treatment as well as upgrade works to the L15053 road).
- › In addition to the above, the stands of Japanese knotweed along the L15054 road will be clearly marked using temporary fencing to prevent disturbance. The fencing will extend to a 7m buffer zone around infestations (where these do not overlap with the L15054 or are present outside the Site).

- › Clearly defined bio-secure clean-down areas will be designated for machinery and personnel prior to any works within fenced Japanese knotweed areas commencing. These areas will be underlain with an impermeable membrane (e.g. radon barrier) to prevent contamination and will include boot washes and tracking surfaces (e.g., plywood) for machinery exiting potentially contaminated areas. The bio-secure areas will be detailed within the appointed contractor's method statement.
- › Additionally, boot washes, each equipped with a stiff brush will be installed at the entrance of the contaminated areas along the L15053 road for foot operative use.
- › A wheel-wash will be placed at the entrance of the Site along the L15053 to facilitate thorough clean down of construction vehicles and machinery before entering and leaving Site to prevent potential spread of invasive species from elsewhere, as well as spread of Japanese knotweed to areas outside of the Site (see Figure 4-1 for wheelwash location).
- › A second wheel-wash will be placed approximately 350m north on the L15053 to further reduce risk of spreading Japanese knotweed rhizome to further areas of the Site (see Figure 4-1 for second wheelwash location).
- › Ground protection mats will be used on the L15054 to minimise risk of vehicles spreading rhizome from the Japanese knotweed stands present adjacent to the road. Mats will be deployed on sections of the road which are within 7m of any Japanese knotweed stands and will be sufficiently wide to facilitate any traffic utilising the road.
- › All measures prescribed in the Japanese knotweed management plan will be incorporated into the contractor's respective method statements for works in proximity to First and Third Schedule invasive species.

4.2

Excavation of Japanese Knotweed Adjacent to the L15053

- › Excavations will be carried out under the supervision of a suitably qualified and experienced ecologists and in dry conditions to prevent the spread of rhizome fragments.
- › For stands adjacent to the proposed upgrade works to the L15053 road, Japanese knotweed material will be excavated and moved back 10m from the proposed construction footprint. The depth of the excavation will be determined by the supervising ecologist or invasive species specialist and depend on the depth of rhizome penetration.
- › Excavation will begin from the edge of the L15053 and progressing towards the centre of the Japanese knotweed stand, with inspection for rhizomes at all stages.
- › The material deemed to be contaminated with Japanese knotweed rhizome will be piled up within the fenced off Japanese knotweed areas, at a minimum distance of 10m from the proposed construction footprint.
- › Excavated material deemed free of Japanese knotweed rhizome may be stockpiled or reused.
- › Machinery and personnel working in the potentially contaminated area will undergo biosecure clean-down by exiting the fenced Japanese knotweed area through the -secure clean-down area set up for this purpose (described in Section 4.1 above) before moving to other areas as outlined in Section 4.1.
- › The fenced off Japanese knotweed areas will be subject to further, ongoing treatment as outlined in Sections 4.3 and 4.4 below.

4.3

Chemical Treatment

All Japanese Knotweed plants identified within the Site will be treated with Glyphosate based chemical herbicide. The treatment will be carried out in late summer (mid-August) to early autumn (mid-late September) for optimal treatment, when translocation of herbicide to the rhizome system is at its peak for optimal effectiveness and before plants show any yellowing of leaves or signs of dieback.

Treatment will be carried out as follows by a competent invasive species specialist:

Stem Injection Treatment of High-risk areas (adjacent to watercourses or sensitive habitats):

- › This treatment will be used for any Japanese knotweed that occurs within 5m of any drain/waterbodies or other sensitive habitat and the areas will be identified at the discretion of the appointed ecologist.
- › A specialist injection tool will be utilised to inject a high concentration of glyphosate-based herbicide (injected neat or diluted to up to 5:1) directly into each of the canes in the infestation approximately 20-30cms from the base of each cane (between the 1st and 2nd nodule).
- › This method will be carried out after the plant has flowered in late summer early Autumn (most effective mid-August to mid-September and to be carried out by the end of September) for optimal treatment, when translocation of herbicide to the rhizome system is at its peak for optimal effectiveness.

- › Monitoring and spot treatment will be required for a minimum of three years until no regrowth is observed for two consecutive growing seasons.

Foliar application of Low-Medium risk areas:

- › This treatment will **not** be used for any Japanese knotweed where it occurs within 5m of any waterbodies or other sensitive habitat and the area will be identified at the discretion of a suitably qualified ecologist.
- › A glyphosate-based herbicide will be applied to the foliage of the Japanese Knotweed plants using an appropriate spraying system, in accordance with the manufacturer's recommended dilution rates to ensure effective coverage and uptake.
- › This method will be carried out during the active growing season, typically in late summer to early autumn (most effective mid-August to mid-September and to be carried out by the end of September), when translocation of herbicide to the rhizome system is at its peak for optimal effectiveness.
- › Monitoring and spot treatment will be required for a minimum of three years until no regrowth is observed for two consecutive growing seasons.

4.4

General Biosecurity Measures

The following biosecurity measures will be adhered to during all site set-up and construction works within the Site.

- › Ensure all visitors to the site are made aware of the location of the Japanese Knotweed recorded and are familiar with its characteristics and method of reproduction.
- › Machinery operatives and all staff will be given a Toolbox Talk by the appointed ecologist on Japanese Knotweed and the risks associated with this invasive species prior to any works commencing in any of the knotweed exclusion zones.
- › Only people familiar with, and able to identify Japanese knotweed and Japanese knotweed rhizome will be allowed to work within the 7m buffer zones surrounding visible stands.
- › Clean-down will be carried out using brushes and shovels, with power washing avoided insofar as possible. This is to prevent potentially contaminated run-off spreading outside existing contaminated areas. Once machinery has been cleaned down as much as possible in the dry, the machines will be power-washed or air blasted to remove any remaining material. The machines will track out of the exclusion zone over plywood or other suitable material in order to protect the machine from potential contamination while exiting the contaminated works area.
- › Material used for tracking machinery out of the exclusion zone (e.g. plywood) will be thoroughly cleaned down under the supervision of an ecologist or invasive species specialist prior to removal off site.
- › Any potentially contaminated material removed from vehicles, machinery or PPE will be safely contained within areas fenced Japanese knotweed areas.
- › Any material or soil imported to the Site will be screened for invasive species by a suitably qualified ecologist or invasive species specialist.

4.5

Management and Monitoring

All stands of Japanese knotweed on Site, including those outside the construction footprint, will be included in a multi-year monitoring programme.

- › Annual re-surveys will be conducted during the growing season (with best survey timing in June and July) to assess regrowth and effectiveness of control measures.
- › Treatment will continue until eradication is confirmed (no regrowth for at least two growing seasons), in line with standard best practice.
- › Any newly emerging stands identified during construction will be mapped and treated following the same protocols.
- › Should another invasive species listed on the First and Third schedules be discovered on site during any ongoing survey effort, this ISMP will be updated to allow for management of these species.

5.

CONCLUSION

This bespoke management plan for the treatment of the Japanese knotweed recorded within and adjacent to the construction footprint of the Proposed Project, as outlined in this document above, has been designed to follow the guidance outlined in Section 1.3. Careful implementation of the prescribed management measures will ensure that the works are conducted within the confines of legislation as outlined in Section 1.2.

The measures that are set out in this invasive species management plan will ensure that the proposed works will not result in the spread or dispersion of Japanese knotweed or any other species listed on the 'First Schedule' of the European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024) and 'Third Schedule' of Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477 of 2011).

It should be noted that this is a live document and, is subject to review following the undertaking of detailed pre-commencement surveys prior to the commencement of the construction phase of the project. No works will be undertaken without having first undertaken detailed pre-commencement surveys (as described in Section 4) for invasive species listed on the schedules outlined above. This document will continue to be referred to and updated until all objectives of management and monitoring as outlined in Section 4.5 have been achieved.

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