



**FLYNN
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ENVIRONMENTAL CONSULTANTS

Invasive Species Management Plan

**Clare Glens River Walk Enhancement Plan,
Co. Tipperary**

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1. Introduction

1.1 Objective

The purpose of this Management Plan is to describe the methodology and management proposed for invasive alien plant species (IAPS) located within the environs of the proposed upgrade of the existing path in Clare Glen Woods, Co. Tipperary.

1.2 Project Overview

The proposed works area is situated within the woodland area in Clare Glens, located approximately 2.5km from the town of Newport. The length of the proposed path to be upgraded is approximately 1,165 m, with starting point at Grid reference: R 72996 59956 in proximity of Clare Glens Playground, and finishing point at grid reference R 74024 59071 where the bridge links the path to the existing trail on the Limerick side of Clare Glens. Works are intended to follow the existing path on the Tipperary side. The extent of the works area is illustrated in Figure 1 below.

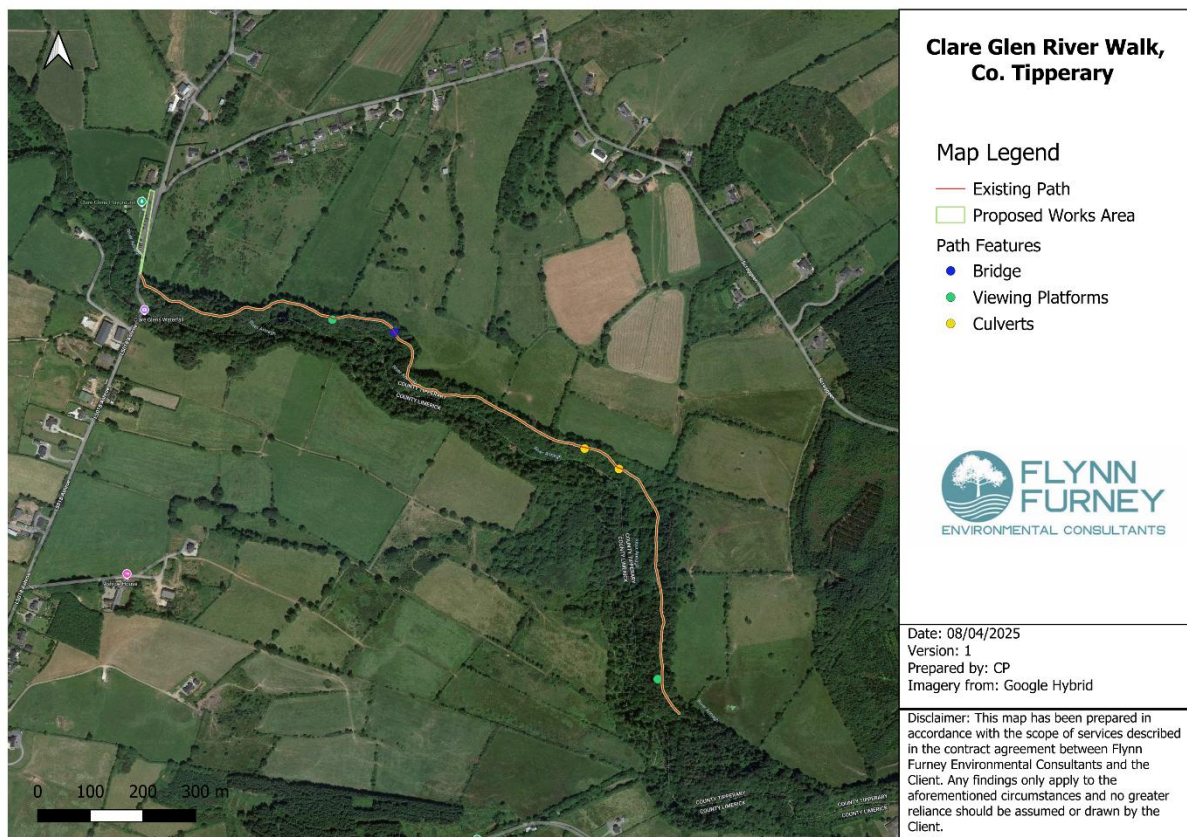


Figure 1. Details of the proposed works area in Clare Glens

2. Site Survey

2.1 Field Survey

The primary mode of survey was by direct search of the site under study following guidelines given by Smith et al, (2011), NRA (2010) & TII (2020). Field work was carried on three separate days, on the 11th and the 25th of March and the 1st of April 2025 by a team of ecologists with experience in ecological surveys, including in surveys of invasive species. Any IAPS, listed on the First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (SI374) were noted and their approximate location/extent mapped. Where relevant, descriptions of the maturity and numbers of individual plants were noted. Any other invasive species not in listed in the First Schedule was also documented.

Results from these surveys inform this this Invasive Species Management Plan.

3. Results

3.1 Overview

Two invasive alien plant species were recorded throughout the site during the survey. The only First Schedule Species noted was Rhododendron (*Rhododendron ponticum*), listed as invasive plants under the EC (Birds and Natural Habitats) Regulations 2024 (S.I. 374/2024). These regulations prohibit the introduction and dispersal of these species. Therefore, the works associated with the improvement of the path in areas where this invasive species is present must use appropriate measures to ensure its containment.

The invasive Cherry Laurel (*Prunus laurocerasus*) was also present throughout the woodland at several locations. While this species is not listed on the First Schedule articles 49 and 50 of the European Union (Invasive Alien Species) Regulations 2024 (SI 374) (as amended)) and it is therefore not subject to treatment or control under the aforementioned legislation, given the severity of its extent and the potential for its spread resulting from the removal of adjacent stands of Rhododendron, measures are also recommended for this species.

3.2 Background Information on IAPS recorded onsite (Third Schedule)

3.2.1 Rhododendron- *Rhododendron ponticum*

Species identification and ecology: One of the most infamous invasive species in Ireland, *Rhododendron* is a perennial evergreen characterized by leathery oblong leaves with pale underside and shiny upper surface. Leaves can grow up to 12 cm long and are arranged in whorls. The large clusters of mauve bell-shaped flowers appear in early summer from May to July. It is native to the Iberian and the Anatolian peninsula. Introduced for ornamental purposes in the 18th century. *Rhododendron* is a woody species and can form dense thickets in the areas it colonises. It can grow to 300 cm tall. Seeds are wind dispersed. It favours acid conditions, and it thrives in acid woodland, bogs, mires, fen and heaths. Not only it can outcompete native vegetation for space and light, but it is also a vector for *Phytophthora ramorum*, a pathogen that affects Oak trees. *Rhododendron* is toxic to some grazers like cattle and sheep.

3.2.2 Cherry Laurel – *Prunus laurocerasus*

Species identification and ecology: Cherry laurel is an introduced shrub to Ireland. It was originally introduced into gardens in Ireland where it has escaped into the wild. It is an upright evergreen woody shrub that can grow up to 800 cm in height. It has large glossy leaves, oblong in shape and leathery to the touch. The leaves are toxic if consumed as they contain cyanide. The plant flowers between April and June. Its flowers are arranged in a raceme, and are small and white, with long stamens emerging from the centre. It is classed as an invasive species as it can outcompete native plants. It is capable spreading through sexual reproduction, as well as vegetatively through layering and suckering (Reynolds, 2002).



Clare Glen River Walk, Co. Tipperary

Map Legend

- Existing Path Again
- Proposed Works Area
- Rhododendron
- Cherry Laurel



Date: 08/04/2025
Version: 1
Prepared by: CP
Imagery from: Google Hybrid

Disclaimer: This map has been prepared in accordance with the scope of services described in the contract agreement between Flynn Furney Environmental Consultants and the Client. Any findings only apply to the aforementioned circumstances and no greater reliance should be assumed or drawn by the Client.

4. DISCUSSION

4.1 Invasive species and Legislation

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)**, as amended.

Articles 49 and 50 of these latter regulations set out the legal implications associated with alien invasive plant species and Schedule 3 of the regulations lists plant 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 Third Schedule invasive species.
- Keep the plant in possession for the purpose of sale, breeding, reproduction, propagation, distribution, introduction or release.
- Keep anything from which the plant can be reproduced or propagated from without a granted licence.
- Keep any vector material - including infested soil, seeds or plant fragments from a contaminated site, for the purposes of breeding, distribution, introduction or release.

In July 2024, new regulations were enacted to address the shortcomings of previous legislation on Invasive Alien Species. **The European Union (Invasive Alien Species) Regulations 2024 (S.I. No. 374 of 2024)** introduce significant measures aimed at tackling the issue of invasive species. These regulations establish a list of Invasive Alien Species of National Concern, referred to as **First Schedule List**. The regulations specify various offenses under section 17(1), which prohibit individuals from engaging in certain activities. These activities include the introduction of invasive species into the State, breeding, importing, exporting, or transporting these species within the State—except when such transportation is part of an eradication effort. Additionally, the regulations forbid placing these species on the market, using, exchanging, or offering them for exchange, allowing them to reproduce or cultivate, and releasing them into the environment.

4.2 Specific Management

This Invasive Species Management Plan has been drawn up by Flynn Furney Environmental Consultants and is based upon best practice methodologies for the treatment of this invasive species.

The management of IAPS on this site will be overseen by a suitably qualified ecologist or environmental scientist. This management plan, appendices and revisions will be kept for records of all contractor's team members (including the site operators). This management plan is a living document and is subject to revisions as designs or projects evolve.

Environmental Restrictions

Rivers, streams, and estuaries present specific challenges regarding the management of invasive species, particularly those listed in the First Schedule of the European Union (Invasive Alien Species) Regulations 2024 (SI 374) such as Rhododendron. During the construction phase, even minor fragments of roots that enter a watercourse can unintentionally propagate the plant downstream. Additionally, the application of certain herbicides is limited near water bodies. It is important to recognize that the proliferation of invasive species may adversely affect the designated Natura 2000 site Clare Glen SAC and the adjacent Lower River Shannon SAC, which is located downstream of the proposed works area.

4.2.1 Options for Treatment of Rhododendron

Standard Rhododendron Clearance follows a 3-phase methodology, as outlined in *Irish Wildlife Manual no. 33*:

Preliminary Clearance (Phase 1 – year 1): This is the initial clearance of Rhododendrons from an infested site. It includes the cutting of large plants and the removal of all visible smaller plants. During this phase stump treatment and direct foliar treatments may be used. Clearance of seed-producing rhododendrons should be targeted first. When prioritizing blocks for clearance, consider clearing areas from outside to prevent seed dispersal.

Advanced Clearance and Final Clearance (Phase 2 – Year 1-3): This is the second visit to a site that has already undergone clearance. It is best carried out early in the year before native vegetation has grown or in May/June as flowering plants will then be easily spotted. Its purpose is for quality control as, if regrowth is found, a second visit will be required to ensure that re-treatment has been effective. Final clearance has been achieved when all mature plants that were present at the time of preliminary clearance are dead, and when systematic coverage of the site has ensured that all plants aged approximately 5 years and older have been removed.

Maintenance (Phase 3 – Year 8): All cleared sites in an area where seed input is ongoing will require management so that there is no re-infestation. Maintenance visits should be timed so that the site is kept free of seed-producing rhododendrons. If an external seed source remains, repeated systematic sweeps through the site will be required, to prevent newly established plants from reaching flowering age and setting seed.

There are a number of methods that are considered for the treatment of Rhododendron. These include;

1. Stump Treatment
2. Direct Stem (Cut Surface) Treatment

3. Foliar Spraying
4. Non-Herbicidal Methods

1. **Stump Treatment** involves the application of herbicide to cut stumps immediately upon cutting. It is suitable for use on plants of all diameters and can be carried out throughout the year (The best period is November to April but very high kill (>99%) has been achieved in all months in trials at Killarney). The risk of damage to non-target vegetation is very significantly reduced which is ideal for the Clare Glens woodland as Annex I species are present such as the Killarney fern (*Trichomanes speciosum*). As with all methods, quality control is required, and stumps will require checking 12-18 months after treatment. Treatment must be carried out in dry weather.

2. **Direct Stem (Cut Surface) Treatment**

This method involves the application of herbicide directly into the stem of a standing rhododendron. It involves making a wound in the stem of a standing plant and applying herbicide (glyphosate) directly into the plant stem. This method has the advantage that when applied to a stand of rhododendrons, it results in kill, without the need to handle brash. It has been successfully used in the UK for rhododendron control on commercial sites on a significant scale. Similar to the stump treatment, there are very minimal effects on the non-target species. However, this method would allow for the rhododendron to stay without seed production which may be beneficial as a large area would not be bare.

3. **Foliar Spraying**

This method is suitable for plants that are < 1.3 meters tall, and for treatment of regrowth from cut stumps. Dry conditions are required, and the treated plants must remain dry for at least 6 hours after application. Plants growing in waterlogged conditions may respond more slowly, this may not be ideal for the plants growing closer to the river. This method has a higher chance of affecting non-target species. This will damage vegetation and allow for the possible re-infestation of areas that are clear of vegetation.

4. **Non-herbicidal methods**

Extraction of rhododendron rootballs can effectively kill the plant. This may be done by extraction of the entire plant, or by extraction of the stump after cutting away of the stems and branches. However, the impacts on tree root systems, soil compaction, and disturbance caused by using machinery must be considered. This method is not suitable where vehicular access to a site is very difficult, such as steep slopes. Although this method is not practical for areas with steep slopes it could be used for the plants closer to the path as machinery is already being used for the construction of the path and therefore no further disturbance will be caused. Methods such as hand pulling and snipping & treating smaller plants are also an option, however are time-consuming and not ideal for larger infestations.

Site specific recommendations.

- Clearly identify and mark out infested areas. Erect signs to inform Contractors of the risk.
- The management of IAPS on this site will be overseen by a suitably qualified ecologist or environmental scientist.
- Areas to be worked in should be prioritised: during the operational phase, plants that are located directly within the footprint of the works shall be cleared using the Stump treatment methodology. If necessary, the rootballs may be extracted after treatment, taking care to limit sediment run-off.
- If necessary, any excavations within 10m of the Annagh River will be monitored by an ecologist.
- Tracking over areas where Rhododendron is established should be avoided. If unavoidable, any machinery must remain within the contaminated zone until it has been thoroughly cleaned. Any works within 5m of Rhododendron infestations, will be supervised by an ecologist to ensure biosecurity measures are followed.
- Ensure that everyone working on the site is aware of and adheres to good site hygiene. Biosecurity measures (as described in section 4.2.4) must be thoroughly followed.
- Dead material can be used to build a “**dead hedge**” along the perimeter of the area. No waste licence is required for this option as the material is being kept in-situ and being managed and thus not considered waste or surplus. Alternatively, material may be mulched or disposed of to a licenced landfill, for which a licence should be sought. Finally, dead material may be burned off-site. Rhododendron can be burnt green immediately after being cut or temporarily stored outside the treated area and burned at a later stage (ideally 1-2 years later). Where burning is envisaged, authorization from the relevant Local Authority should be sought.

4.2.2 Options for Treatment of Cherry Laurel

While Cherry Laurel is not subject to legal restrictions in Ireland, it is classified as an invasive species. The National Biodiversity Data Centre characterizes it as having a "High Risk of impact", particularly in seminatural habitats such as woodlands. If Rhododendron is treated as recommended, there is a strong likelihood that Cherry Laurel will rapidly take over the spaces previously occupied by Rhododendron without simultaneous management of these species. Consequently, this plant poses a significant threat to Clare Glens, and its management is strongly emphasized.

The same methodology and treatment options described for Rhododendron also work for Cherry Laurel, facilitating the concurrent treatment of the two species.

Below is a summary of recommendations for the treatment of Cherry Laurel.

- Clearly identify and mark out infested areas. Erect signs to inform Contractors of the risk.
- The management of IAPS on this site will be overseen by a suitably qualified ecologist or environmental scientist.
- Areas to be worked in should be prioritised: during the operational phase, plants that are located directly within the footprint of the works shall be cleared using the Stump treatment methodology. If necessary, the stumps may be extracted after treatment, taking care to limit sediment run-off.
- Any excavations within 10m of the Annagh River will be monitored by an ecologist.
- Ensure that everyone working on the site is aware of and adheres to good site hygiene. Biosecurity measures (as described in section 4.2.4) must be thoroughly followed.
- Dead material can be used to build a "dead hedge" along the perimeter of the area. Alternatively, material may be mulched or disposed of to landfill. As Cherry Laurel is not a First Schedule species, no licence is required for its disposal. Burning dead Cherry Laurel is not a feasible option as it would generate toxic fumes.

Option for post operational phase clearance:

- Following the operational phase, the relevant local authority may undertake works for a large-scale clearance of Rhododendron and Cherry Laurel in Clare Glens. Clearance works are to follow the 3-phase methodology as described above, using the direct stem treatment. This approach will help limit the quantity of areas left devoid of vegetation following treatment and minimize the volume of waste material generated. This method could be particularly beneficial for areas further from the path. For smaller stands that are closer to the path, stump clearance is recommended.
- A pre-commencement invasive species survey is recommended in advance of the large-scale clearance as to assess the presence of any new growth.

Opportunity for biodiversity net gain:

After treatment there will be a number of areas left with bare soil. Here planting of native vegetation is encouraged to minimize any colonization by non-native species such as Sitka Spruce. Species such as Oak (*Quercus Robur*), Rowan (*Sorbus aucuparia*), and Holly (*Ilex aquifolium*) are recommended to promote native regeneration, in line with the conservation objective for the habitat **Old sessile oak woods with Ilex and Blechnum in the British Isles [91A0]** present in Clare Glen SAC. Care should be taken to use only seedlings and saplings of local provenance.

4.2.2 Training for Site Staff

All contractors and on-site staff are to be made aware of the invasive nature of these plants, how to identify them and site practices. Training shall be given on Day 1 of works to include the following:

- a) Site induction.
- b) Method statement briefing.
- c) Toolbox talk for Rhododendron and Cherry Laurel (Appendix 1).
- d) Risk assessment briefing.

The toolbox talk will include the following elements:

1. The invasive nature of the plants.
2. The need for exclusion zones around the plants.
3. All machinery, vehicles and site staff operating within areas of infestation to be thoroughly checked and if necessary, cleaned prior to leaving the area to protect against further spreading of IAPS.

4.2.3 Containment

1. Areas of First Schedule IAPS infestation will be cordoned from other works areas by the Site Ecologist, in the presence of an engineer.
2. Site Staff to be aware of buffer zones when working within watercourses.
3. Any required excavation works will be undertaken under the supervision of a qualified ecologist.

4.2.4 Biosecurity Measures

1. All activities conducted within infested regions or exclusion zones must comply with the IAPS management plan and will be supervised by qualified personnel.
2. The removal of soil, vegetation, debris, or any other materials from the exclusion zone is strictly prohibited unless conducted under the direct supervision of qualified ecologist.
3. Any machinery utilized in infested areas must be thoroughly cleaned and certified as free from contaminants prior to leaving the site. Operations within and adjacent to invasive plant populations should be carefully monitored and executed with the appropriate personal protective equipment (PPE).
4. Herbicide applications are to be conducted solely by licensed and qualified operators.
5. Advisory and warning signage must be installed prior to the commencement of the treatment to minimize the risk of interference from the public.
6. Please note that a license is required from the National Parks and Wildlife Service if contaminated soil needs to be transported off-site along the road network. This applies to material being transported for the purpose of temporary storage also. It is the responsibility of the Site Ecologist to apply for this license.

4.2.5 Herbicidal treatment

- 1 A Registered Pesticide User will spray areas of infestation. Any advice on pesticides will be sought from a Registered Pesticide Advisor.
- 2 The specialist will use an approved persistent herbicide or non-persistent herbicide (e.g. glyphosate), this herbicide will be added to the knapsack sprayer (or similar) and will be diluted with water to the correct ratio as specified by the manufacturer.
- 3 The herbicide will be approved for use near watercourses.
- 4 The herbicide container will be washed out in accordance with the manufacturer's guidelines and disposed of permanently in accordance with environmental guidelines.

4.2.6 Post-construction monitoring

Where the large-scale clearance of the invasive species in Clare Glens is not undertaken, it will remain essential to continuously monitor all invasive species mentioned in the areas surrounding the path where they have been cleared. Follow-up treatment shall be undertaken as required. Post control monitoring will be carried on at least an annual basis during the defect period (8 years minimum).

The ecologist (or similar) responsible for the supervision of the invasive species works will provide a report to include the following;

- Picture survey of works.
- Drawing identifying location of invasive species area(s).
- Defects period First Schedule IAPS Management for the site.

The contractor will be responsible for the management of Third Schedule invasive plant species until handover.

5. Additional Information

All personnel will have the following:

- a) All personnel will be inducted prior to working on site.
- b) The ecologist recording the species will be a suitably competent person as defined in the works requirements.
- c) All personnel accessing site will hold a valid Safe Pass Card.
- d) All contractors and on-site staff are to be made aware of the invasive nature of plants, how to identify them and site practices.

6. Conclusions

Rhododendron and Cherry Laurel have been recorded at various locations within the study area. These species pose a significant risk to the natural environment, particularly affecting semi-natural habitats like woodlands, where they can rapidly form dense thickets and outcompete native flora. Both species can propagate through seeds or vegetatively, either by suckering from their roots or by layering when branches come into contact with sufficiently moist soil.

In Clare Glens, priority for treatment will be given to areas adjacent to the path to facilitate the necessary widening of the path itself. The recommended method for managing both species in this area is stump treatment. This zone will be clearly marked with bunting or rope, and no activities will be permitted within these buffer zones. Signage will be installed to mitigate any risks or interference from the general public. If excavation is required to remove stumps for path levelling, it will be conducted under the supervision of an ecologist.

To further improve the woodland and enhance the public experience, a large-scale treatment of invasive species throughout the woodland is also advised following the operational phase. Stem treatment is suggested for extensive infestations located away from the path, while stump treatment is appropriate for smaller stands.

It is expected that all soil and organic debris will remain on-site and be reshaped into a “dead hedge,” thus eliminating the need for off-site disposal, minimizing the risk of contamination spread, and avoiding licensing requirements. Should the removal of potentially contaminated material be necessary, it will be transported to a licensed waste facility, and a permit from the NPWS will be obtained prior to its removal.

The various control strategies that can be employed are detailed above. This management plan is a living document and is subject to revisions as designs or projects evolve, and it should always rely on the most current data in order for the contractor to apply the appropriate methodology.

7. References

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- Transport Infrastructure Ireland (2020). The Management of Invasive Alien Plant Species on National Roads – Technical Guidance.

8. Appendices

Appendix 1: Induction and Toolbox Talk

All Operatives to sign this section to verify understanding of the intended method of works and safety controls. put in place following a task talk by the supervisor in charge of works on the contents of this document:			
	Name Print	Sign	Date
01.			
02.			
03.			
04.			
05.			
06.			
07.			
08.			
09.			
10.			
Signed: (person supervising the works) For and on behalf of contractor			

Appendix 2: Sign off Sheet for IAPS Areas

Location of IAPS (chainage): Date:		
Approximate Area Excavation: (m ²)	Time started: Time finished:	Notes
Sketch map of area(s)		
Signed off by (site ecologist): Date:		

Appendix 3: Invasive Species Maps



Figure 2. Section 1



Figure 3. Section 2



Figure 4. Section 3

Appendix 5: Site Photos



Figure 5. Large stand of Cherry Laurel in flower



Figure 6. Existing path. Note the large Rhododendron stand on the right hand side of the path.



Figure 7. Existing path with large Rhododendron and Cherry Laurel infestation.