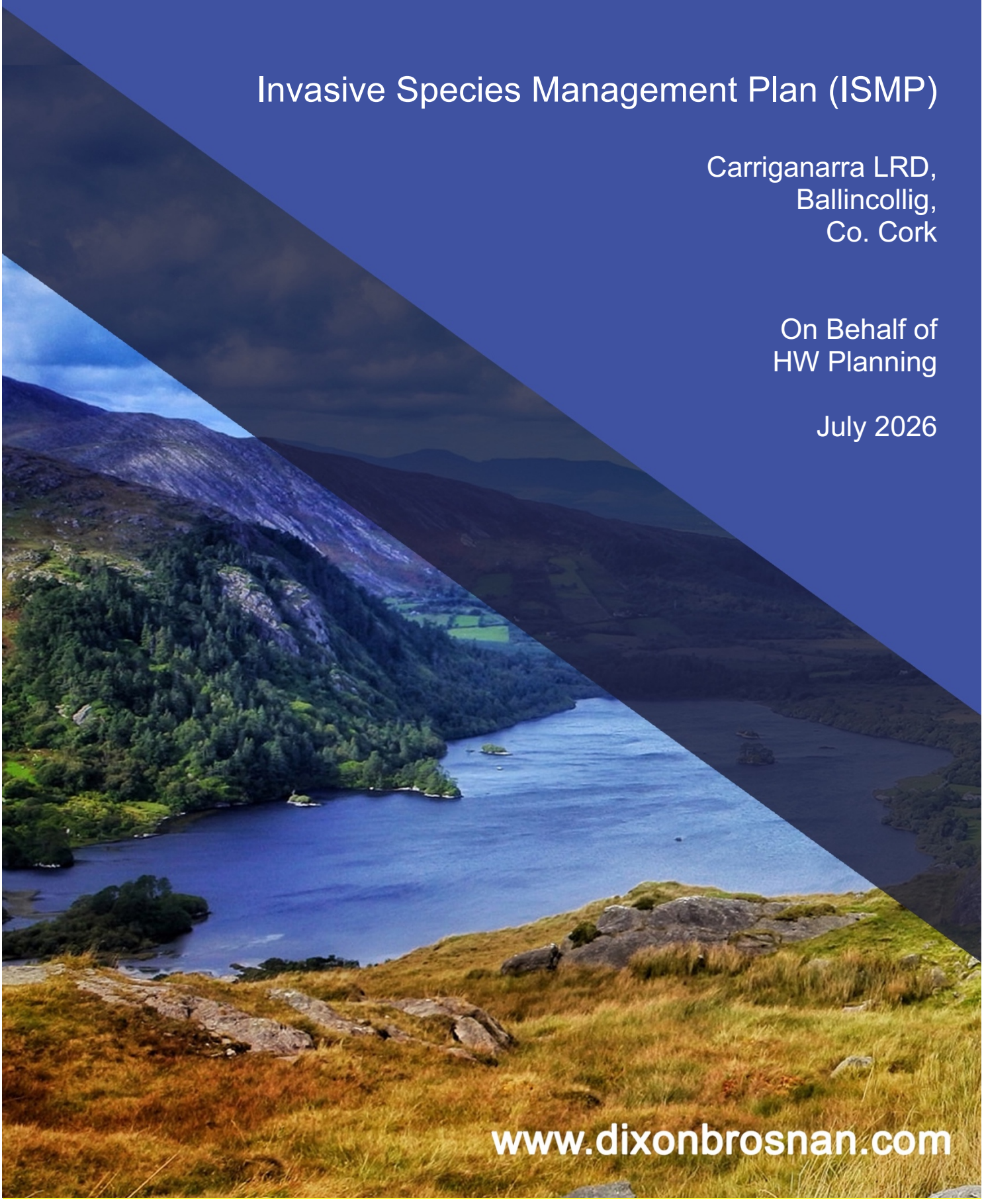
DixonBrosnan
environmental consultants

Invasive Species Management Plan (ISMP)

Carriganarra LRD,
Ballincollig,
Co. Cork

On Behalf of
HW Planning

July 2026



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1. Introduction

DixonBrosnan Environmental Consultants were commissioned to develop an invasive species management plan (ISMP) at the site of a proposed large scale residential development (LRD) at Carriganarra, Ballincollig.

Following the submission of the initial planning application, Cork City Council requested the following information on invasive species.

5. Montbretia (low risk) and Sycamore (medium risk) shall be added to the invasive, alien plant species section in Section 8.3.5 of the main EIAR because these species were reported as per Appendix 8.2. Mitigation measures to remove/manage such invasive species shall be included in the assessment.

This report was prepared by Carl Dixon MSc (Ecological Monitoring). Carl Dixon MSc (Ecology) is a senior ecologist who has over 25 years' experience in ecological and water quality assessments. Carl Dixon holds an Honours Degree (BSc) in Ecology and a Masters (MSc) in Ecological Monitoring from UCC. He is a senior ecologist who has over 25 years' experience in ecological assessment. Prior to setting up DixonBrosnan Environmental Consultants in 2000, Carl set up and ran Core Environmental Services which included Rural Environmental Protection Scheme (REPS) planning for landowners and ecological assessments. Carl has particular experience in freshwater ecology including electrofishing fish stock assessments and water quality assessments. He also has considerable experience in habitat mapping and mammal ecology including survey work and reporting in relation to badgers and bats. Other competencies include surveys for invasive species and bird surveys. Carl has extensive experience with regards to EIAR and NIS mitigation and impact assessment. He has particular experience in large-scale industrial developments with extensive experience in complex assessments as part of multi-disciplinary teams. Such projects include gas pipelines, incinerators, electrical cable routes, oil refineries and quarries.

2. Invasive species within Proposed Development Site

2.1 Legislation

Non-native plants are defined as those plants which have been introduced outside of their native range by humans and their activities, either purposefully or accidentally. Invasive non-native species are so-called as they typically display one or more of the following characteristics or features: (1) prolific reproduction through seed dispersal and/or re-growth from plant fragments; (2) rapid growth patterns; and, (3) resistance to standard weed control methods.

Where a non-native species displays invasive qualities and is not managed it can potentially: (1) out compete native vegetation, affecting plant community structure and habitat for wildlife; (2) cause damage to infrastructure including road carriageways, footpaths, walls and foundations; and, (3) have an adverse effect on landscape quality.

The National Biodiversity Data Centre's (NBDC) online database provides data on the distribution of species within 10km grid squares. The site of the proposed development lies within 10km grid square (hectad) W66 of Ordnance Survey Ireland's National Grid System.

The NBDC lists a number of high impact invasive species which have been recorded within hectad W66 (**Table 1**).

Table 1. NBDC list of high impact invasive species recorded in W66

Species group	Species name
Bird	Canada Goose (*Branta canadensis*)
Flatworm (Turbellaria)	New Zealand Flatworm (*Arthurdendyus triangulatus*)
Flowering plant	Canadian Waterweed (*Elodea canadensis*)
Flowering plant	Cherry Laurel (*Prunus laurocerasus*)
Flowering plant	Japanese Knotweed (*Fallopia japonica*)
Flowering plant	*Rhododendron ponticum*
Insect - beetle (Coleoptera)	Harlequin Ladybird (*Harmonia axyridis*)
Terrestrial mammal	American Mink (*Neovison vison*)
Terrestrial mammal	Brown Rat (*Rattus norvegicus*)
Terrestrial mammal	Coypu (*Myocastor coypus*)
Terrestrial mammal	Ferret (*Mustela putorius subsp. furo*)
Terrestrial mammal	Raccoon (*Procyon lotor*)
Terrestrial mammal	Sika Deer (*Cervus nippon*)

NBDC 06/01/25

The control of invasive species in Ireland comes under the Wildlife (Amendment) Act 2000, where it states that

'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.'

The Birds and Natural Habitats Regulations 2011 (SI 477 of 2011), Section 49(2) prohibits the introduction and dispersal of species listed in the Third Schedule, which includes Japanese Knotweed, as follows: "any person who plants, disperses, allows or causes to disperse, spreads or otherwise causes to grow [….] shall be guilty of an offence."

2.2 Invasive Species within Proposed Development site

This assessment is based on surveys at the proposed development site. Site surveys were largely carried out between January 2024 and January 2026. An additional botanical survey was completed on the 3rd of July 2024. During these site visits the site was surveyed for invasive species (Wyse *et al.,* 2016; Stace 2019).

The proposed development site is dominated by grassland habitats, with patchy mature and semi-mature treeline/hedgerows as well as areas of woodland, scrub and recolonizing bare ground.

No third schedule species were recorded within the proposed development site.

Several other invasive non-native species Buddleia *Buddleia davidii*, Wild clematis *Clematis vitalba*, Montbretia *Crocosmia* × *crocosmiiflora* and Sycamore *Acer pseudoplatanus* were recorded within the proposed development site. These species were recorded largely within scrub and recolonizing areas within the site (See **Figure 1**). The principal legislation relevant to invasive alien species includes the European Communities (Birds and Natural Habitats) Regulations 2011, as amended, and the European Union (Invasive Alien Species) Regulations 2024. These instruments prohibit specified activities that could result in the introduction, transport, reproduction, spread or release of listed invasive alien species, except where undertaken under an appropriate licence or permit. Species identified within the proposed development site, namely Buddleja, Traveller's-joy, Montbretia and Sycamore, are not included in the relevant statutory schedules. However, appropriate management is proposed to prevent their further spread and to respond to the request of Cork City Council. Water fern *Azolla filiculoides*, which has been recorded upstream of the site, is a regulated invasive alien species and specific aquatic biosecurity measures will therefore apply.

Buddleia was recorded in a scattered distribution within scrub, woodland and recolonising habitats around the farmyard. This is a deciduous shrub up to 5m tall with long arching branches and lilac flowers (though occasionally white or purple) in long pyramidal dense panicles. No precise studies have been done on the level of impact of *Buddleja davidii,* likely due to its long history of naturalisation but it is likely to displace native plants where it is present. Buddleia can colonise a wide range of habitats including grasslands scrub and woodland. Buddleia is listed as a medium impact listed species by the NBDC. Under the right ecological conditions these species may have an impact on the conservation goals of a European site or impact on a water body achieving good/high ecological status under the Water Framework Directive (Directive 2000/60/EC). Buddleia is also included in the TII Publication Management of Invasive Alien Plant Species on National Roads – Technical Guidance GE-ENV-01105 (TII, 2020) as this species has been shown to have an adverse impact on landscape quality, native biodiversity or infrastructure; and is likely to be encountered during road schemes.

Wild Clematis is recorded within scrub, treelines and woodland habitats. This is a deciduous climber can grow up to 30m in length, leaves pinnate & opposite, flowers in dense white clusters (and is hence known as old man's beard). Generally, it appears to be more vigorous in its introduced range than in native regions. No impacts documented in Ireland but considered a serious pest in New Zealand and listed as a weed in North America. Described in Hill *et al.,* (2001) "*Vines can climb the tallest forest trees, forming a dense, light-absorbing canopy that suppresses all vegetation beneath it. Clematis vitalba can be so vigorous that the weight of foliage and stems breaks the supporting trees, reducing once-healthy forest to a low, long-lived thicket of vines scrambling over stumps and log".* The NBDC notes that under the right ecological conditions these species may have an impact on the conservation goals of a European site or impact on a water body achieving good/high ecological status under the Water Framework Directive (Directive 2000/60/EC). This species is classified as a medium impact species by the NBDC. Wild Clematis is also included in the TII Publication Management of Invasive Alien Plant Species on National Roads – Technical Guidance GE-ENV-01105 (TII, 2020) as these species has been shown to have an adverse impact on landscape quality, native biodiversity or infrastructure; and is likely to be encountered during road schemes.

Montbretia was recorded along the northern boundary of the site in an areas of dry meadow and grassy verge. This appears to be escaping from nearby gardens. Crocosmia species are easily recognised when in flower by the distinct shape and colour of their flower heads, all are non-native. The hybrid montbretia, with relatively short stems and orange flowers, has established in the wild and is considered an invasive non-native species. A number of other ornamental Crocosmia species are grown in gardens and other landscaped areas. When not in flower, Crocosmia species are more difficult to identify. Montbretia was originally created in France from parent plants of South African origin. Introduced to Ireland and as a garden plant, it has spread rapidly both naturally and through the disposal of garden waste. Montbretia can completely dominate habitat where it grows, sometimes excluding native plant species. Montbretia is listed as a low impact listed species by the NBDC. The species spreads mainly by rhizomes, rarely by seed. Montbretia is also included in the TII Publication Management of Invasive Alien Plant Species on National Roads – Technical Guidance GE-ENV-01105 (TII, 2020) as this species has been shown to have an adverse impact on landscape quality, native biodiversity or infrastructure; and is likely to be encountered during road schemes.

Sycamore was recorded throughout the site at various stages of maturity. In total 11 mature and semi-mature Sycamore were recorded as well as being the dominant species in a number of treelines and hedgerows. Full details on the locations of Sycamore are provided in the GeoTree Tree survey which accompanies this planning application. Sycamore was introduced to Ireland centuries ago. Its environmental impact is a complex mix of habitat creation and biodiversity displacement, which varies depending on location. It is considered invasive in some areas, particularly in woodlands and semi-natural habitats, where it can spread rapidly and outcompete native species. Its ability to self-seed prolifically allows it to establish dense stands that may alter woodland composition. In some areas, particularly along river banks, Sycamore can cast a heavy shade preventing colonising by native species. Sycamore is classified as medium impact species by the NBDC. In Ireland, Sycamore is naturalised and widely planted. Within the proposed development site, mature and semi-mature Sycamore provide important part of the structure of treelines and hedgerows providing foraging/commuting habitat for local fauna.

Mature and semi-mature Sycamore forming part of treelines and hedgerows earmarked for retention will not be removed solely on the basis of their non-native status. Their removal would reduce the structure of retained treelines and ecological connectivity. Sycamore identified for removal under the approved arboricultural proposals may be removed to facilitate the development, but the ISMP does not require any additional removal of established trees. Sycamore will not be included in the proposed landscaping scheme. Seedlings and young saplings establishing within newly created habitats or becoming dominant within retained treelines will be removed selectively during the landscape establishment and monitoring period. Replacement and supplementary planting will use appropriate native tree and shrub species.

It is noted that DixonBrosnan have recorded the invasive water fern (*Azolla* sp.) along the Lisheens Stream (a tributary of the Maglin North Stream) upstream of the proposed development site. No signs of Azolla have been recorded on the Maglin North Stream where it adjoins the proposed development site. This species is a Third Schedule listed species under Regulations 49 & 50 in the European Communities (Birds and Natural Habitats) Regulations 2011. Azolla filiculoides is a heterosporous, floating fern up to 2.5 cm in diameter. The plants are dark green to reddish and float on the water surface, either individually or in mats, which

can reach a thickness of up to 20 cm. Individual plants consist of two-lobed leaves and rhizomes. The lower lobes of the leaves are usually larger than the upper (reviewed in Hussner 2010). Two preliminary risk assessments were previously carried out for Ireland, as follows. A stage one and two risk assessment as part of Ireland's National Plant Conservation Strategy – Target 10 - Managing Invasive Alien Species (Botanic Gardens 2007); and a prioritisation risk assessment as part of the Risk Analysis and Prioritisation for Invasive and Non-native Species in Ireland and Northern Ireland (Kelly *et al.* 2013). The former identified Azolla filiculoides as one of the thirteen “most significant invasive plants in Ireland” and the latter assessment designed the plant as a ‘high risk’ invasive species.



Figure 1. Location of invasive species within proposed development site (Scattered distribution)

3. Invasive species treatment/management

3.1 Site Hygiene

The following measures shall be implemented during all invasive species treatment, vegetation clearance, earthworks and landscaping operations to prevent the introduction or spread of invasive or non-native plant material within or beyond the proposed development site. These measures replace the existing general site-hygiene provisions.

Prior to the commencement of works, the locations and extents of invasive species will be confirmed by the project ecologist or Ecological Clerk of Works (ECoW). Identified stands will be clearly demarcated where they occur within or immediately adjoining the works area. No disturbance, tracking of machinery, temporary storage of materials or stockpiling of soil will be permitted within demarcated areas except where required as part of the approved treatment works.

All site personnel whose activities could disturb invasive plant material will receive a toolbox talk as part of the site induction. This will identify the species present, their locations, the means by which they may be spread, the applicable exclusion areas and the procedures to be followed where a previously unrecorded invasive species is encountered.

The following site-hygiene measures will apply:

- Machinery, vehicles, tools, footwear and personal protective equipment will be inspected before entering and leaving areas containing invasive species.
- Soil, vegetation, seeds, corms, rhizomes and other organic material will be removed from machinery and equipment before these are moved to another part of the site or taken off site.
- Cleaning will take place within a designated area on an impermeable or otherwise suitable surface, located away from watercourses, surface-water drains and retained habitats.
- Cleaning will proceed from the upper parts of machinery towards the undercarriage, wheels, tracks, buckets and other areas where soil or plant fragments may become lodged.
- Material arising from cleaning will be collected and managed as potentially contaminated material. Wash water, sediment and plant fragments will not be allowed to enter the Maglin North Stream, surface-water drainage system or adjoining habitats.
- Vehicles used to transport invasive plant material or contaminated soil will be suitably contained or securely covered to prevent material being lost during transport.
- Invasive plant material will not be chipped for reuse, composted, incorporated into topsoil, used as mulch or otherwise reused within landscaping areas unless the ECoW has confirmed that this presents no risk of regeneration or spread.
- Imported topsoil, subsoil, planting material and mulch will be obtained from a reputable source and visually inspected to ensure that it is free from invasive plant material.
- Soil or vegetation originating within an invasive-species treatment area will not be moved to an uncontaminated part of the site unless its management has been approved by the ECoW.

The method of handling and disposal will be determined on a species-specific basis. Material containing viable seeds, corms, rhizomes, roots or stems capable of regeneration will be placed directly into suitable sealed containers or covered vehicles. Where material is removed from the site, it will be transported by an appropriately authorised contractor to a facility authorised to accept the relevant waste. The receiving facility will be contacted in advance to confirm acceptance, and waste-transfer and disposal records will be retained by the contractor. On-site burning or burial will not be undertaken as a routine disposal method.

Where treatment involves herbicide, the product will be authorised for the intended use and applied strictly in accordance with the approved label and manufacturer’s instructions. Herbicide application will be undertaken by a suitably trained and registered professional user.

Particular care will be taken adjacent to the Maglin North Stream, retained treelines, hedgerows and other sensitive habitats. Foliar spraying will be avoided where there is a material risk of spray drift onto retained vegetation or into a watercourse, and targeted application methods will be used where practicable.

All equipment used within or adjoining the Maglin North Stream will be subject to aquatic biosecurity procedures. Visible mud, vegetation and organic material will be removed before equipment is cleaned and, where required, disinfected. Cleaning and disinfection will take place away from the stream, and disinfectant or contaminated wash water will not be discharged to the watercourse or surface-water drainage system.

Any new or suspected occurrence of an invasive species identified during construction will be reported immediately to the ECoW. Works capable of disturbing or spreading the plant will cease locally until the species has been identified, the affected area demarcated and appropriate treatment and biosecurity measures agreed. Records of inspections, treatment, machinery cleaning, material transport and disposal will be maintained for inclusion in the project's environmental records

3.2 Pre-construction Survey

A targeted invasive species survey will be completed by a suitably qualified ecologist during the appropriate identification season and as close as practicable to the commencement of enabling works. The survey will confirm species identification, map the full extent of each stand, identify any newly established species and assign a unique reference number to each infestation. The survey results, treatment schedule and constraints map will be issued to the contractor before vegetation clearance or soil disturbance begins. This survey should be completed during the growing season.

In addition to the advance treatment works and pre-construction survey, when the works areas become available to the contractor for enabling works, areas identified as requiring specific invasive species treatment will be demarcated and the designated control measures implemented at the earliest possible stage to reduce the risk of spread along the proposed scheme or beyond the land take.

Those involved in the application of herbicides/pesticides will be competent to do so and, consequently, will have sufficient training, experience and knowledge in the area of herbicides/pesticides application.

All staff involved in the application of herbicides/pesticides will have received appropriate training, which may include achieving competency certification in the safe use of herbicides/pesticides through a National Proficiency Tests Council registered assessment centre or achieving an appropriate FETAC award in this area.

4. Buddleia

As noted in **Section 2** of this report, there is no statutory obligation to remove Buddleia. However, Buddleia will be removed as part of the pre-construction/construction works. In areas where Buddleia is located in habitats earmarked for retention e.g. hedgerow/treeline, Buddleia should be removed with great care. The following treatment methods are recommended.

Buddleia is straightforward to control using a mixture of mechanical removal and herbicide treatment.

Buddleia is a plant that favours disturbed sites, physical grubbing of plants can provide ideal conditions for the germination of seeds. Therefore, care needs to be taken to ensure re-vegetation of controlled areas is undertaken swiftly. The branches of Buddleia are capable of rooting as cuttings, so care should also be taken to ensure material is disposed of in a manner to avoid this risk.

As mature plants occur within the proposed works area, the preferred method of treatment is cutting back to a basal stump or grubbing out followed by chemical treatment. Herbicide applications will take into account sensitive receptors such the location of the Maglin North Stream and locally important habitats such as treelines/heddgerows and must only be applied in line with manufacturers recommendations.

Recommended practice for the application of herbicides requires cutting back of plants to a basal stump during active growth (late spring to early summer) which is then treated (brushed on) immediately with a systemic weed killer mix (Starr *et al*, 2003). Foliar application of triclopyr or glyphosate may be adequate for limited infestations of younger plants but should be followed up at 6 monthly interval until the supervising ecologist can certify that the plant is no longer extant within the works area.

5. Wild Clematis

As noted in **Section 2** of this report, there is no statutory obligation to remove Wild Clematis. It is noted that this plant is present on a number of mature and semi-mature trees earmarked for retention and removal of Wild Clematis within these areas will be made on a case-by-case basis with the aim of protecting mature and semi-mature trees. However, should it be concluded that Wild Clematis at the proposed development site should be removed, the following treatment methods will be used.

Old man's beard can be controlled both mechanically and using herbicides, although typically its control relies on a combination of both, i.e. cut-stump application.

A number of chemicals have been used effectively against Old man's beard, including glyphosate and triclopyr, although control invariably takes more than one year. Foliar application of herbicides should be undertaken while the plant is actively growing. Due to the sheer biomass of vegetation that the plant can produce, it may be difficult to access infested sites to implement control measures. For large, extensive infestations of Old man's beard, chemical treatment should be carried out in June or July when the plant is growing vigorously and in full leaf, using specialised spraying equipment to target the tall canopy layer. The purpose of this is to minimise the amount of herbicide that will reach the host tree or shrubs underneath.

At newly infested sites, small seedlings can be manually pulled, preferably during damp conditions (i.e. during winter or spring). The seedlings should be collected for composting, adopting the biosecurity measures. Where isolated mature aerial vegetation is present, the vines should be manually pulled and bagged. The thin stems that remain rooted in the soil may now be manually pulled and removed for composting in a biosecure manner, along with the aerial vegetation. Where Old man's beard has only recently invaded an area and not yet

produced dense foliage, the aerial vegetation may be cut and left to die. The roots and seedlings left in the ground may then be removed manually or treated with herbicide.

For combined treatment of dense infestations of mature aerial Old man's beard vegetation, the vines should be cut back to around 10cm above ground level and the cut stems that remain in the ground immediately painted with a concentrated dose of approved herbicide. They may also be dug from the ground and removed for composting, if this is practicable. The aerial vines can be left hanging to die naturally. This method will minimise the impact on the host plant that the plant is covering. For large old specimens, the stem or trunk can be cut at the base with a straight horizontal cut and herbicide applied immediately to the cut stump. The aerial vegetation should be left *in situ* until it is dead. Cut and treated stumps can resprout and must be monitored and retreated, as necessary.

6. Montbretia

As noted in **Section 2** of this report, there is no statutory obligation to remove Montbretia. Montbretia can invade most low-growing habitats such as wet grasslands, gardens, hedgerows, pastures, waste areas and roadsides.

The most effective time to remove montbretia is before the flowering/seeding season.

Infestations of Montbretia can be effectively treated with herbicide during the active growing season. Due to the potential for re-infestation from seeds, corms and/or rhizome fragments, regular monitoring and follow-up treatment, as dictated by the monitoring, will be required over a number of years.

Physical control of Montbretia is difficult as individual corms easily break from their chains and can result in ready re-infestation or further spread. Where infestations are limited in extent, the entire stand can be excavated and buried or disposed of to a licensed landfill or incineration facility under licence. The most effective time to remove Montbretia is before the flowering/seeding season. The corms are very hardy and are not suitable for composting. Due to the potential for re-infestation from corms, regular follow-up will be required over a number of years to deal with any re-growth.

7. Sycamore

Sycamore trees identified for removal under the approved development layout and arboricultural proposals may be felled to facilitate the development. No additional removal of mature or semi-mature Sycamore is required under this ISMP unless a tree is subsequently identified as unsafe or its removal is otherwise required under the approved plans.

The following management measures will apply:

- Sycamore will not be included in the proposed landscape planting scheme.
- New tree and shrub planting will comprise appropriate native species suitable for the site and local conditions.
- Sycamore seedlings and young saplings occurring within construction areas will be removed during vegetation clearance.

- Seedlings and young regeneration within retained treelines, hedgerows and newly created habitats will be selectively controlled where they are becoming locally dominant or suppressing the establishment of native planting.

- Cut material containing viable seed will be collected and managed in a manner that prevents seed dispersal.

The objective of this management approach is not to eradicate Sycamore from the site, but to retain the ecological and structural value of established trees while preventing its unnecessary planting or excessive regeneration within retained and newly created habitats. This provides a proportionate response to the species' medium-impact classification and avoids unnecessary loss of mature tree cover.

8. Azolla

Azolla was not recorded within the proposed development site. However is has previously been recorded on the Lisheen Stream (a tributary of the Maglin North Stream). The following biosecurity measures should be followed to prevent this species spreading into the site.

All work adjoining the Maglin North Stream should be conducted with thoroughly dry or disinfected equipment.

Check and Clean all visible aquatic plants, animals, mud, and other organic material from equipment and gear at the sampling location. If a new occurrence of an invasive plant is identified the project ecologist/EcoW will be consulted.

When departing from site, drain all water from all equipment and gear that came in contact or held water. This should include tubs, buckets, boots, etc, and all other items that could serve as potential water holdings for aquatic species.

All PPE should be visually inspected and any attached vegetation or debris removed. Where appropriate, the gear should be wiped down with a cloth soaked in 1% solution of Virkon Aquatic or another proprietary disinfection product. Alternatively, a 5% solution (100 ml / 20 litre solution) of chlorine bleach should be used. Rubber gloves must be worn when undertaking this procedure. Alternatively, personal gear may be steam cleaned or dried thoroughly for five days after cleaning with soap and water.

Construction machinery and large equipment being used in the vicinity of the stream must be cleaned using high-pressure steam cleaning before and after use. If it is not possible to steam clean the equipment, a normal power hose must be used. After cleaning visually inspect the equipment to ensure that all adherent material and debris has been removed.

It is recommended to apply disinfectant to the undercarriage and wheels of the vehicle after steam cleaning or power hosing.

9. Conclusions

No third schedule invasive species were recorded within the proposed development site during the surveys undertaken to date. Buddleia, Wild clematis, Montbretia and Sycamore were recorded and will be managed in accordance with the species-specific measures set out in this ISMP. Buddleia and Montbretia within affected areas will be removed and subject to

follow-up monitoring. Wild clematis will be controlled selectively where it is affecting retained trees or occurs within the works footprint.

Mature and semi-mature Sycamore forming part of retained treelines and hedgerows will not be targeted for removal solely because of its non-native status. Sycamore removal will be limited to trees identified for removal under the approved development and arboricultural proposals. No Sycamore will be planted as part of the landscaping scheme, and seedlings or young regeneration will be selectively controlled during construction works where necessary to prevent dominance within retained or newly created habitats.

Water fern *Azolla filiculoides* has not been recorded within the proposed development site or the adjoining section of the Maglin North Stream, although it has previously been recorded upstream. Pre-construction inspection and aquatic biosecurity measures will therefore be implemented for works adjoining the stream. The ISMP will be updated where the pre-construction survey identifies a material change in the distribution or status of invasive species. Implementation will be supervised by the ECoW, with treatment, waste disposal and monitoring records maintained for the duration of the management programme.

Appendix 1. Species management outline

Species	Status at site	Management objective	Proposed treatment	Monitoring
Buddleia	Scattered plants	Remove from works areas and control in retained habitats	Grub out or cut-stump treatment, depending on location	Minimum three growing seasons
Wild clematis	Treelines, scrub and woodland	Selective control where affecting retained trees or works	Hand-pull seedlings; cut-stump treatment for established plants	Minimum three growing seasons
Montbretia	Northern boundary	Eradicate identified stand	Excavate complete corm and rhizome system; controlled disposal	Minimum three growing seasons
Sycamore	Mature trees and regeneration	Retain established trees but prevent further spread	Retain approved trees; remove seedlings/saplings where necessary; no new planting	Sycamore seedlings and young saplings occurring within construction areas will be removed during vegetation clearance.
Water fern	Not recorded within site; known upstream	Prevent introduction or spread	Aquatic biosecurity and stop-work contingency	NA