



**Outline Invasive Species Management Plan
for Tallaght Public Realm,
Tallaght, Dublin 24.**

Prepared for Dermot Foley Landscape Architects

On behalf of South Dublin County Council

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1 Introduction

Scott Cawley Ltd. were commissioned by Dermot Foley Landscape Architects to prepare an Outline Invasive Species Management Plan for the Tallaght Public Realm at Tallaght, Co. Dublin (Central Irish Grid Ref: O 08527 27827).

The purpose of this Outline Invasive Species Management Plan, hereafter referred to as the ISMP, is to describe the options available to manage and prevent the spread of non-native invasive plant species recorded within the proposed development site. An indication of invasive species present in the immediately surrounding area has also been provided for reference.

This ISMP is intended to be a working document, to be updated by the appointed contractor to form a detailed and final ISMP prior to any construction works associated with the proposed development occurs.

Disturbance to stands of non-native invasive plants and/ or soils contaminated with non-native invasive plant material can result in the spread of such plant species. Therefore, the implementation of the management measures set out in this plan are required to avoid any direct or indirect impacts to habitats, species and built structures and infrastructure within the locality, and to avoid committing an offence.

1.1 Technical Expertise and Relevant Guidance Documents

This ISMP has been prepared by Scott Cawley Ltd., who have extensive experience in:

- Identification of invasive species;
- Development of risk assessments for sites with invasive species;
- Mapping of affected areas of invasive species;
- Recommendations of suitable control measures to manage and eradicate invasive species, with provision for cost or time constraints that may apply;
- Supervision of contractors treating invasive species; and,
- Independent monitoring of the results of treatment measures of invasive species.

Scott Cawley Ltd. ecologists have experience in the development of large and small-scale eradication programmes for a range of invasive species, including projects near protected sites and watercourses.

1.2 Legislative Context

The *European Communities (Birds and Natural Habitats) Regulations 2011* SI 477 of 2011 (as amended) (herein “the Regulations”) contain specific provisions that govern the control of listed invasive species. It is an offence to release or allow to disperse or escape, to breed, propagate, import, transport, sell or advertise species listed on the Third Schedule of the Regulations without a licence. Of the Regulations, the two regulations that deal specifically with the Third Schedule are:

- Regulation 49: Prohibition of introduction and dispersal of certain species; and,
- Regulation 50: Prohibition on dealing in and keeping certain species.

Hence it is necessary to highlight that the following is prohibited:

- Dumping invasive species cuttings in the countryside;
- Planting or otherwise causing to grow in the wild (hence the landowner should be careful not to cause further spread);
- Disposing of invasive species at a landfill site without first informing the landfill site that the waste contains invasive species material (this action requires an appropriate licence); and,
- Moving soil in the Republic of Ireland which contains specific invasive species unless under a licence from National Parks and Wildlife Service (NPWS).

Target 4.4 of Ireland’s *National Biodiversity Action Plan 2017-2021* (DCHG, 2017) is that “*harmful invasive alien species are controlled and there is reduced risk of introduction and/or spread of new species*”.

Regulation (EU) 1143/2014 on invasive alien species (herein the “IAS Regulation”) was agreed by the European Council on 22nd October 2014 and came into force on 1st January 2015. This IAS Regulation conveys the rules to prevent, minimise and mitigate the adverse impacts of the introduction and spread (both with and without

intention) of invasive alien species on biodiversity and the related ecosystem services, as well as other adverse impacts on human health or the economy (European Commission, 2017).

The South Dublin County Council Development Plan 2016-2022 Green Infrastructure Network Policy sets out two objectives related to invasive species control:

- G2 Objective 12: To seek to control and manage non-native invasive species and to develop strategies with relevant stakeholders to assist in the control of these species throughout the County
- G2 Objective 13: To seek to prevent the loss of woodlands, hedgerows, aquatic habitats and wetlands wherever possible including requiring a programme to monitor and restrict the spread of invasive species such as those located along the River Dodder.

2 Methodology

This report and the mitigation strategies relating to each invasive plant species have been prepared with regard to the following guidance documents, where relevant:

- National Roads Authority (2010). *Guidelines on the Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads*
- Environment Agency 2010. *Managing Invasive Non-native Plants in or near Freshwater*
- National Roads Authority (2010). *The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads*.

This report has been informed by an invasive species survey carried out by Laura Higgins of Scott Cawley Ltd carried out on 6th March 2020.

The location of invasive species were recorded and photographs were taken. Areas of infestation were then digitized, and a map produced showing the indicative locations of these invasive species.

3 Limitations

The survey was carried out outside of the optimum survey period for identifying flowering plants, including invasive species. Identification of flowering plants outside of the growing season can be challenging and whilst a number of invasive species are identifiable throughout the year (e.g. Japanese Knotweed), the time of year in which the survey was undertaken must be considered alongside the results. This survey represents a snapshot of the invasive species recorded on the site at that time of survey. Invasive species may spread or become established post survey and relying on the report should consider passage of time and any activity/development that may have commenced on the site.

4 Results

Two non-native invasive species were recorded within the proposed development site and immediately surrounding area. Neither of these species are listed on the Third Schedule of the Regulations. Descriptions of the species and locations of the invasive species recorded on site are given in Table 1 below.

Table 1 Non-native invasive plant species recorded within the Tallaght Public Realm

Common Name	Scientific Name	Third Schedule Species ¹ (Y/N)	Location
Butterfly-bush	<i>Buddleja davidii</i>	N	This species was widely present throughout the Tallaght Public Realm and was particularly prevalent in the construction site located to the north of Belgard Square North.
Old man's beard	<i>Clematis vitalba</i>	N	This species was present within ornamental/ non-native shrub habitat in the SDCC carpark

Figure 1: Indicative locations of invasive species within the project boundary and immediately surrounding area.²



¹ Species listed on the Third Schedule of the *EC (Birds and Natural Habitats) Regulations 2011* (as amended).

² Butterfly bush was present widely throughout the construction site to the north of Belgard Square North. It was not practical to map each stand of butterfly-bush in this location and therefore, the entire area has been highlighted as an indicative location of butterfly-bush

General Measures to Control/Prevent the Spread of Non-Native Invasive Plant Species

4.1 Pre-Construction Survey

A pre-construction invasive species survey must be carried out prior to any construction activities (including enabling works) by a suitably qualified specialist to confirm the presence and extent of any invasive species within the proposed development site prior to the development and implementation of the final ISMP. Data collected as part of this survey will also include the approximate area of the respective colonies (m²) and a detailed description of the infestations (e.g. approximate total number of stems, pattern of growth and information on other vegetation present). This information will inform calculations of volumes of infested soils to be excavated, as part of the measures outlined below.

4.2 General Measures to Avoid Spreading Invasive Species during Construction or Soil Movement

The species noted in Table 1 are invasive and are particularly effective at colonising disturbed ground (e.g. construction sites). Some species spread by the re-growth of cut fragments or root material, they can readily re-grow in new areas if the existing stands are disturbed e.g. by machinery, people, livestock etc.

The most common ways that these species can be spread is:

- Site and vegetation clearance, mowing, hedge-cutting or other landscaping activities;
- Spread of plant fragments during the movement or transport of soil;
- Spread of plant fragments through the local surface water and drainage network;
- Contamination of vehicles or equipment with plant fragments which are then transported to other areas; and;
- Importation of soil from off-site sources contaminated with invasive species plant material.

It is preferable to eradicate invasive species prior to the onset of construction of any proposed development in close proximity. If control programmes have not been achieved before construction begins then the affected areas must be fenced off prior to and during construction in order to avoid spreading seeds or plant fragments around or off the construction site. Earthworks or machinery movement must be avoided in these areas until the relevant species have been eradicated.

If soil is imported to the site for landscaping, infilling or embankments, the contractor must gain documentation from suppliers that the material is free from invasive species.

4.2.1 Disposal of Material

If any invasive species plant material is collected (e.g. by hand-pulling or mowing), it is important that its disposal does not lead to a risk of further spread. The movement of plant material of any plants listed on the Third Schedule requires a licence from the National Parks and Wildlife Service (NPWS) under Section 49 of *the European Communities (Birds and Natural Habitats) Regulations, 2011* (as amended). Invasive species (particularly roots, flower heads or seeds) must be disposed of at licensed waste facilities or composting sites, appropriately buried, or incinerated having regard to relevant legislation, for example; Section 32 of the Waste Management Act, 1996 to 2008; Section 4 of the Air Pollution Act, 1987; relevant local authority byelaws and any other relevant legislation. All disposals must be carried out in accordance with the relevant Waste Management legislation (as per guidance from NRA, 2008).

It should be noted that some invasive species plant material or soil containing residual herbicides may be classified as either 'hazardous waste' or 'non-hazardous waste' under the terms of the Waste Management Acts, and both categories may require special disposal procedures or permissions. Advice should be sought from a suitably qualified waste expert regarding the classification of waste and the suitability of different disposal measures.

As noted above, additional specific measures for the management of Japanese knotweed cuttings or contaminated soil can be found in the UK Environment Agency document *The Knotweed Code of Practice: Managing Japanese Knotweed on development sites* (UK Environment Agency, 2013 (withdrawn 2016)), and further Japanese Knotweed specific measures are outlined in Section 5.

4.2.2 Measures to be Followed During the Application of Herbicides³

The control options for some species will require the use of herbicides, which can pose a risk to human health, to non-target plants or to wildlife. In order to ensure the safety of herbicide applicators and of other public users of the site, a qualified and experienced contractor, and qualified Herbicide Advisor, must be employed to carry out all work.

It is advised that the appointed contractor refer to the following documents, which provide detailed recommendations for the control of invasive species and noxious weeds:

- Chapter 7 and Appendix 3 of the NRA Publication: *The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads* (NRA, 2010)
- *Managing invasive non-native plants in or near fresh water* (Environment Agency, 2010)

These documents include measures to aid the identification of relevant species, with details for the timing, chemicals, methodology for chemical control, and for measures to avoid environmental damage during the use of herbicides.

It is recommended that the appointed contractor update this Outline Invasive Species Management Plan in accordance with the relevant guidelines before commencing works.

5 Species Specific Management Options for the Tallaght Public Realm⁴

5.1 Butterfly-bush *Buddleja davidii*⁵

Butterfly-bush is a highly invasive species that is widespread in urban environments. It can grow in very poor, shallow soil, along railways and even on walls and buildings. Each plant can produce up to 3 million seeds that can remain viable in the soil for many years. It creates competition for resources such as pollinators, light and space and poses a threat to native plant species. This plant is present throughout the Tallaght Public Realm.

5.1.1 Measures to Control and Eradicate Butterfly-bush⁶

Option 1: Physical control

Physical removal of butterfly-bush is only suitable for very small infestations of this species. If this is the chosen method of removal, care should be taken to remove all parts of the plant as branches are capable of re-rooting from cuttings. The plants should not be removed when in seed as there would be a risk of spreading the seeds further. Where removal of mature plants is not immediately feasible, the flower heads should be removed in June before they go to seed. It is essential to plant the ground with native species immediately following removal to prevent new seedlings taking hold.

Option 2: Chemical control

It is recommended that plants are cut back to a stump during active growth (late spring to early summer) and then immediately treated with a systemic weed killer (brushed on). Foliar application of herbicide may be adequate for smaller infestations of younger plants but must be followed up on a 6-monthly basis.

⁴ Any information provided on the use of chemicals is given on the understanding that it is a recognised treatment option, dependant on a number of criteria. Under the provisions of Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides, advice on the use of particular pesticides and their applications must only be delivered by a qualified Pesticide Advisor, appropriately trained and registered with the Department of Agriculture, Food and the Marine.

⁵ National Roads Authority (2010). *The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads*.

⁶ Any information provided on the use of chemicals is given on the understanding that it is a recognised treatment option, dependant on a number of criteria. Under the provisions of Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides, advice on the use of particular pesticides and their applications must only be delivered by a qualified Pesticide Advisor, appropriately trained and registered with the Department of Agriculture, Food and the Marine.



Plate 1: Butterfly-bush within the Tallaght Public Realm

5.2 Old Man's Beard *Clematis vitalba*⁷

Old man's beard, also known as traveller's joy, is a climber that is found in hedgerows, roadsides, riverbanks and woodland throughout Ireland. The vine can form dense thickets blanketing trees and shrubs and shading out native vegetation. It can cause trees to break or collapse under the weight and prevents regeneration of native vegetation by blocking out light.

5.2.3 Measures to Control and Eradicate Old Man's Beard⁸

Option 1: Physical control

Small seedlings can be easily pulled by hand. Larger stems have to be cut, the roots grubbed out and the material removed so it cannot take root again.

Option 2: Chemical control

The vines should be cut back to ground level in winter or spring and the subsequent regrowth should be foliar sprayed using glyphosate or other systemic herbicide. For larger specimens, the vine can be cut at the base and herbicide brushed on the cut.



Plate 2: Old man's beard within the Tallaght Public Realm

5 Conclusion

This Outline Invasive Species Management Plan provides measures to prevent the spread of invasive species and measures to control and eradicate invasive species recorded within the proposed development site. Prior to the implementation of this plan, a re-survey of the Tallaght Public Realm should be carried out to confirm the extent of the invasive species at the time of treatment and to ensure there are no new invasive species present. Control

⁷ National Roads Authority (2010). The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads

⁸ Any information provided on the use of chemicals is given on the understanding that it is a recognised treatment option, dependant on a number of criteria. Under the provisions of Directive 2009/128/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for Community action to achieve the sustainable use of pesticides, advice on the use of particular pesticides and their applications must only be delivered by a qualified Pesticide Advisor, appropriately trained and registered with the Department of Agriculture, Food and the Marine.

measures suggested within this report should be implemented by a qualified licenced invasive species treatment specialist. The proposed development site should be monitored after control measures have been implemented and monitoring will take place for a minimum of three years following construction. Any regrowth of invasive species will be subsequently treated as detailed in this report.