Enviroguide CONSULTING

INVASIVE SPECIES ASSESSMENT REPORT

FOR

PROPOSED RESIDENTIAL DEVELOPMENT

AT

WHITECHURCH ROAD,

RATHFARNHAM,

DUBLIN 14

ON BEHALF OF

DUNGREY LTD.

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TABLE OF CONTENTS

LIST OF FIGURES

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1 INTRODUCTION

Enviroguide Consulting was commissioned by Dungrey Ltd to undertake a walkover Invasive Species Assessment of the Site located at Whitechurch Road, Rathfarnham, Dublin 14.

2 METHODOLOGY

Enviroguide Ecologist Rozalyn O'Hora carried out walkover invasive species surveys of the Site on the 12th of August and 23rd of September 2021 and the 18th of July 2022.

The Site was walked and searched for invasive plant species, with particular focus on those species which are listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011). The locations of invasive and/or non-native plant species encountered were recorded on a Site map during the field surveys. Photographs of the Site and species recorded were taken.

3 PROPOSED DEVELOPMENT

3.1 Site Description

The Site is located at Whitechurch Road, Rathfarnham, Dublin 14. Whitechurch Road bounds the Site to the west, residential dwellings and their associated open spaces bound the Site to the south and east and Loreto high school bounds the Site to the north.

3.2 Development Description

The Proposed Development shall provide for the demolition of two existing habitable structures on Site including a bungalow (Silveracre), an existing cottage (No. 6 Whitechurch Road) and a row of several derelict structures / cottages located along the eastern boundary of the Site. It is proposed to construct 22 no. 4 bed 4 storey units ranging in size from 197 sq.m to 214 sq.m, all with associated private balcony/terrace areas.

Vehicular and pedestrian access is provided via a new entrance onto Whitechurch Road. The Proposed Developemnt shall provide for 44 no. car parking spaces, a new single storey bicycle storage shed and provision of bin storage to be provided at the front curtilage of the dwelling for all terraced units, all boundary treatment, all site services and all associated Site development and landscaping works.

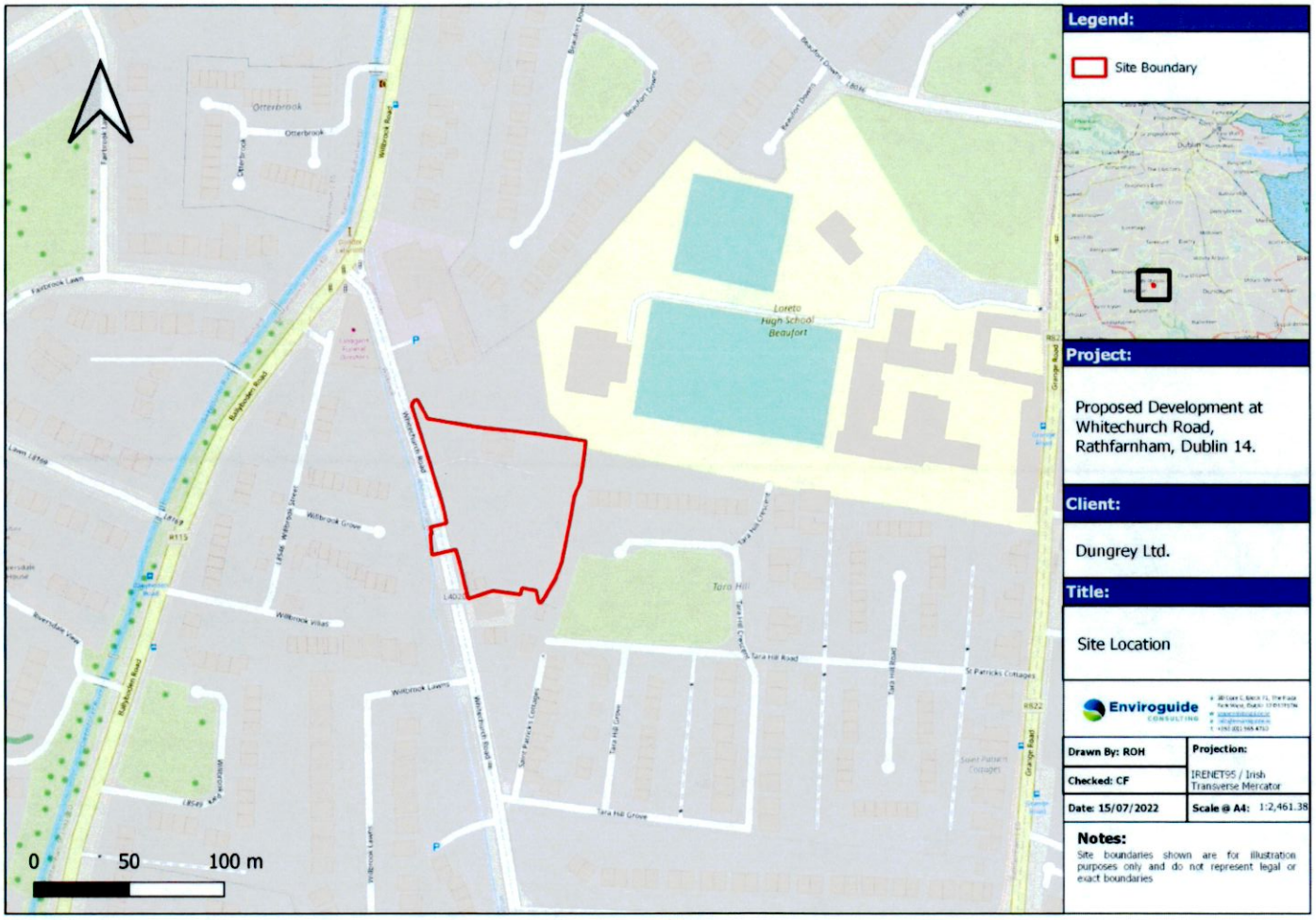

Figure 1 Site location

Figure 2 Cherry Laurel hedgerow (right) and Cotoneaster hedgerow (left) forming part of the landscaping for Silveracre Bungalow.

Figure 3 Example of a stand of Butterfly Bush at the Site of the Proposed Development.

Figure 4 Red-osier Dogwood observed along the bank of the Whitechurch Stream.

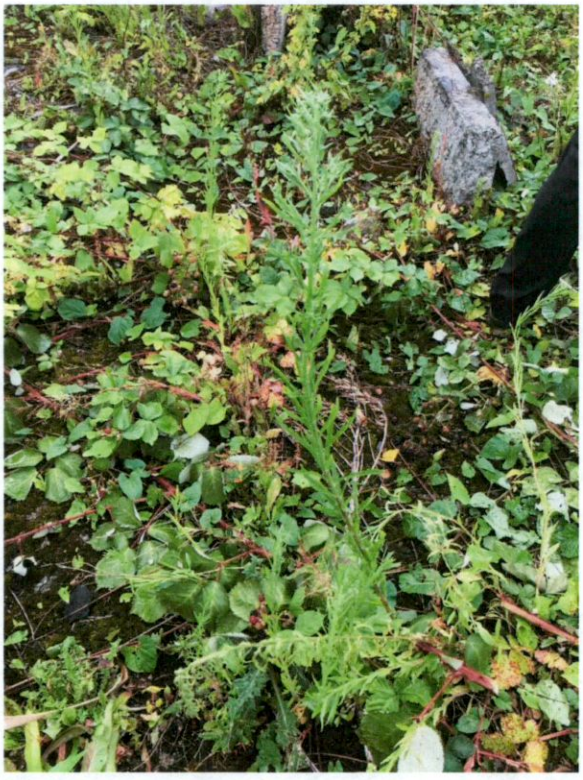

Figure 5. Bilboa's fleabane observed within the old stone walls to the west of the Site.

4 RESULTS

4.1 Habitats

The habitats encountered and identified at the Site have been classified and coded as per Fossitt (2000).

The predominant habitat at the Site is *GS2 – Dry Meadows and Grassy Verges*. The previously maintained *GA2 – Amenity Grasslands* on Site have evolved into GS2 habitat due to lack of management. Typical species present here include Daisy *Bellis perennis*, Self-heal *Prunella vulgaris*, Creeping Buttercup *Ranunculus repens*, White clover *Trifolium repens*, Nettle *Urtica dioica*, Dandelion *Taraxacum* spp., Dock *Rumex* spp., Knotgrass *Polygonum corniculatus*, Willowherb *Epilobium ciliatum*, Redshank *Persicaria maculosa* and Ragwort *Jacobaea vulgaris*.

BL3 – Buildings and Artificial Surfaces habitat was recorded at the north and south of the Site and consists of the residential properties on Site, sheds, concrete block walls and a roadway. *BL1 – Stone Walls and Other Stonework* habitat was recorded at the southwest of the Site and consists of the remnants of old buildings and boundary walls, plant species growing within the cracks of these walls include Great Willowherb *Epilobium hirsutum*, Herb Robert *Geranium robertianum* and Butterfly bush *Buddleja davidii.* Sections of *ED3 – Recolonising Bare Ground* habitat are present throughout the Site where previously artificial surfaces of tarmac and concrete have been colonised by vegetation.

A strip of ornamental planting *BC4 - Flower Beds and Borders* and a section of planted *WS3 – Ornamental/non native shrub* habitat are present within the front garden of Silveracre bungalow on Site. Due to a lack of management, these habitats have become overgrown since the 2021 surveys. Species recorded here include Cranesbill *Geranium* spp., Cherry Plum *Prunus cerasifera*, Ivy *Hedra helix*, Shrubby cinquefoil *Potentilla fruticosa*, and Bindweed *Calystegia sepium*.

WS1 – Scrub habitat is present in the south-west of the Site. Dominant species here include Bramble *Rubus fruticosus*, Ivy *Hedra helix*, Ragwort *Jacobaea vulgaris*, Bindweed *Calystegia sepium* and Nettle *Urtica dioica*. A planted WL1 – Hedgerow lies to the north of the Site along the entrance roadway to the bungalow. This hedgerow consisted of planted *Cotoneaster* spp. and Cherry Laurel *Prunus laurocerasus*. A small section of a more natural hedgerow lies in the south of the Site. Species present within this hedgerow include Elder *Sambucus nigra*, Bramble *Rubus fruticosus* and Bindweed *Calystegia sepium*.

The redline boundary extends to the west to enable works including the construction of a surface water sewer with an outfall to the Whitechurch Stream. This *FW1 – Eroding/Upland River* has very little instream vegetation and is largely shaded by the western riverbank vegetation consisting of Willow *Salix* spp, Ash *Fraxinus excelsior* and Sycamore *Acer pseudoplatanus*. The eastern bank was dominated by *Red-osier Dogwood Cornus sericea,* Nettle *Urtica dioica* and Bindweed *Calystegia* sepium.

A strip of land to the east of the Site boundary was also surveyed on the 18th of July 2022. This area was classified as *WS1 – Scrub* habitat and is dominated by Bramble *Rubus fruticosus*, Ivy *Hedra helix* and Bindweed *Calystegia sepium*. Two non-native species were identified within this strip of land, Sycamore saplings *Acer pseudoplatanus* and Butterfly-bush *Buddleja davidii.*

4.2 Invasive Species

Non-native species in Ireland have been assessed and assigned an impact rating of either 'High', 'Medium' or 'Low' impact based on a number of factors that determine a species' potential to become established in this country and have significant impacts (Kelly *et al.*, 2013). Invasive species can also be rated as an 'Amber-list species', which signifies a 'Medium' impact potential or established invasive species that may pose a threat to conservation goals (Invasive Species Ireland).

One 'Low impact' invasive plant was recorded.

- Bilbao's Fleabane *Conyza floribunda* was recorded within the old stone walls to the west of the Site. Bilboa's Fleabane is listed by the National Biodiversity Data Centre as a non-native species with a low risk of impact.

Four 'Medium impact' invasive plants were recorded.

- Butterfly Bush *Buddleja davidii* was present in small numbers at the Site and within the strip of scrub habitat running adjacent to the redline boundary of the east.. Butterfly Bush is an 'Amber-list' species' according to Invasive Species Ireland, which is a Medium Impact species that may pose a risk to conservation goals (Kelly et al., 2013). However, the risk of Butterfly Bush is "uncertain", as its impact on conservation goals remains uncertain due to lack of data showing impact (or lack of impact).
- *Cotoneaster* was found within the landscaped section of the Site adjacent to Silveracre Bungalow in the form of a planted hedgerow.
- Red-osier Dogwood *Cornus sericea* was present along the eastern riverbank of the Whitechurch Stream where works are required for the installation of the surface water headwall. Red-osier Dogwood is an 'Amber-list' species' according to Invasive Species Ireland, which is a Medium Impact species which may pose a risk to conservation goals (Kelly et al., 2003).
- Sycamore *saplings Acer pseudoplatanus* were found within the old stone walls to the west of the Site and within the scrub habitat to the east of the redline boundary. Sycamore can outcompete native flora, however Sycamore has been shown to support a wide range of lichens and other species (Leslie, 2005).

One 'high impact' invasive species was recorded at the Site.

- Cherry Laurel *Prunus laurocerasus* was recorded at the Site in the form of a planted hedgerow adjacent to Silveracre Bungalow. Cherry Laurel can outcompete native flora by forming thick stands.

No species listed on the Third Schedule of the European Communities (Birds and Natural Habitats) Regulations (S.I. 477 of 2011) including Japanese Knotweed (*Reynoutria japonica*) were recorded at the Site.

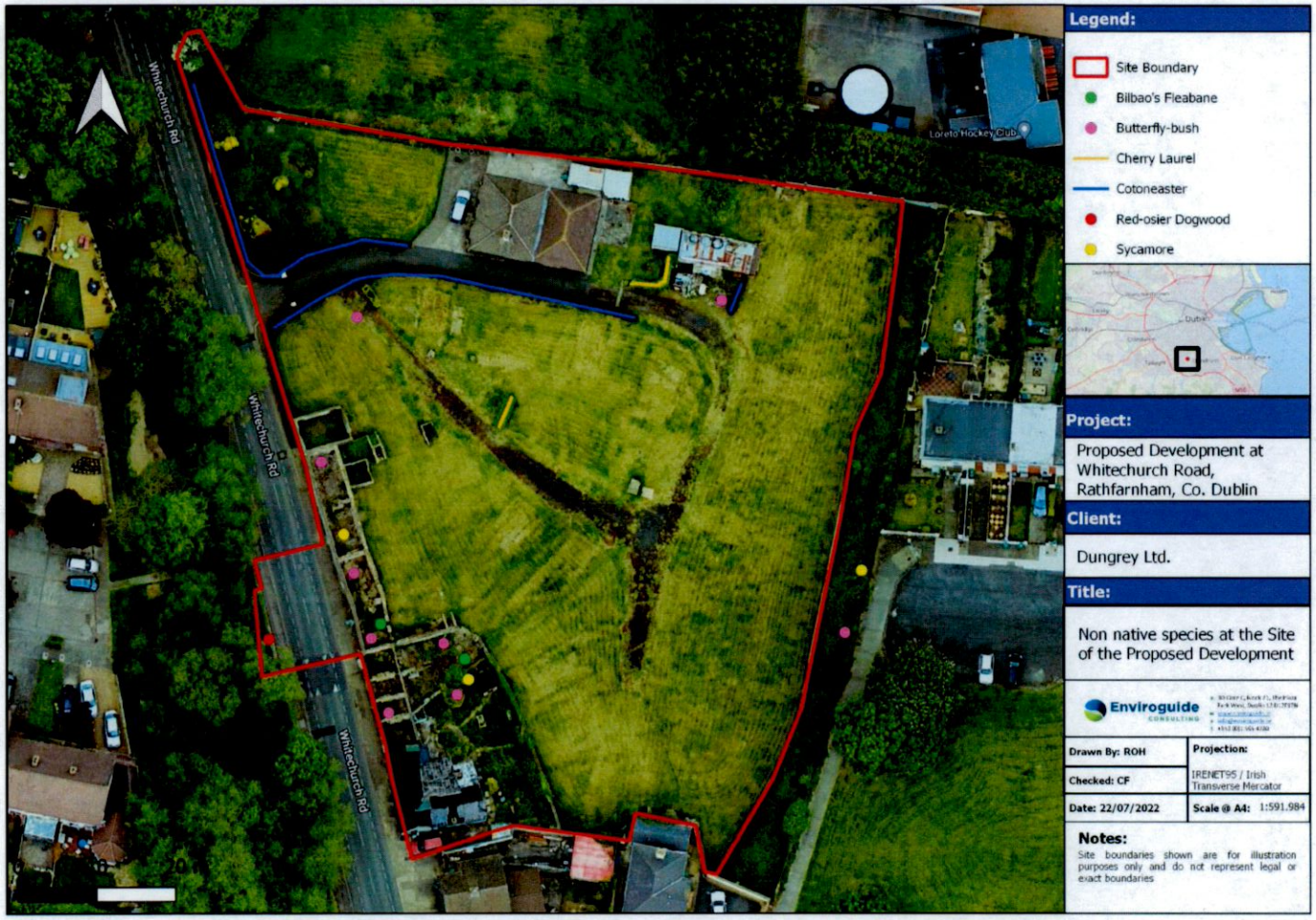

Figure 6 Non-native species recorded on the Site of the Proposed Development.

5 CONCLUSIONS AND RECOMMENDATIONS

It is noted that vegetation removal will take place outside of the breeding bird season (outside period: March to August inclusive), to ensure that no nesting birds are disturbed, or nests/eggs destroyed during the proposed works. **Removal of vegetation within the above period could lead to offences as laid out in the Wildlife Acts 2000 and amended**. Should vegetation removal during the season be unavoidable, the hedgerow in question will be surveyed for breeding activity and nests by a suitably qualified ecologist immediately prior to removal, with the presence of any nests/activity noted and measures put in place to protect the nest until the young birds have fledged. If possible, however, it is recommended that any vegetation supporting a nest be left until either the young birds have fledged or until after August 31st.

As the presence of the 'High impact' invasive Cherry Laurel at the Site was limited and the ecological impact of Butterfly Bush, Bilboa's fleabane, Cotoneaster, Sycamore and Red-osier Dogwood are currently uncertain and limited at the Site, there is no cause for significant concern.

However, it is recommended that non-native/invasive flora species recorded at the Site are controlled/removed as per the appropriate best-practice guidelines. Removal and disposal should be carried out in accordance with appropriate guidelines such as TII (formerly NRA) *Guidelines on The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads* (2010), with consideration given to the prevention of spread of these plants.

The following outlines how the invasive Cherry Laurel, Butterfly Bush and Cotoneaster recorded at the Site will be treated.

Prior to undertaking any construction works adjacent to the Whitechurch stream, and certainly if a growing season passes between grant of planning permission and commencement of works, it is recommended that a suitably qualified specialist will undertake a preconstruction invasive species survey, within the appropriate botanical survey season (April to September) of the area of works.

5.1 Butterfly Bush

Butterfly Bush can be controlled via chemical means, but as there is not a significant amount of this floral species within the Site physical removal is recommended.

The following is extracted from NRA (2010) guidelines:

Buddleia (also known as the butterfly bush) is a member of the Buddlejaceae *family. It is very fast growing and can reach 2m in its first year, producing flowers and setting seed.*

It colonises bare ground very rapidly and can quickly form mono-typic stands.

As buddleia is a plant that favours disturbed sites, physical grubbing of plants can provide ideal conditions for the germination of seeds. Care needs to be taken to ensure revegetation 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.

Physical Control

Management methods such as digging it out are applicable only to minor infestations at the initial stage of invasion. Hand-picking of young plants is feasible but should be undertaken with care to avoid soil disturbance which can give rise to a flush of new seedling. Grubbing of mature stands as a sole

attempt at control is not recommended for the same reason. After uprooting, it is essential to plant the ground in order to prevent a flush of new seedling growth.

When it is cut, Buddleia grows back from the stump very vigorously. Mowing of young plants does not provide control as they re-sprout with vigour. Where removal of mature plants is not feasible in the short term, the flower heads should be cut off in June before seed set.

Chemical Control

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 intervals. At this point it must be restressed that all Plant Protection Products must be used in accordance with the product label and with Good Plant Protection Practice as prescribed in the European Communities (Authorization, Placing on the Market, Use and Control of Plant Protection Products) Regulations, 2003 (S.I. No. 83 of 2003). Again, it should be noted that it is an offence to use Plant Protection Products in a manner other than that specified on the label. The methods just outlined are not in accordance with the product label and so it will be necessary to discuss the use of such methods with the Pesticides Control Service with a view to seeking approval under the derogation procedures provided under the Plant Protection Regulations.

5.2 Cherry Laurel

The following is extracted from Maguire et al. (2008) Best Practice Management Guidelines Rhododendron *Rhododendron ponticum* and Cherry Laurel *Prunus laurocerasus*:

Cherry Laurel is a dense thicket forming invasive ever-green shrub of gardens, parks and woodlands from South West Asia. The leaves are thick and laurel-like, poisonous with cyanide, the white flowers are produced on upright spiked and are succeeded in autumn by blackish cherry-like fruits which should not be eaten.

Cut and remove stems by hand or chainsaw, cutting as close to the ground as possible to remove above ground growth. Chip or remove the cut material from the area to allow for effective follow-up work and prevent regrowth.

Digging the stumps out. The effectiveness of this technique is increased by removing all viable roots. This can be done manually or with a tractor and plough. To avoid regrowth, stumps should be turned upside down and soil should be brushed off roots.

Cherry laurel can be controlled via chemical means, but as there is not a significant amount of this floral species within the Site, mechanical removal is recommended.

5.3 Cotoneaster spp.

The Garry Oak Ecosystems Recovery Team (2005) in British Columbia provides the following recommendations for control of Cotoneaster:

Physical Control

To lessen site disturbance, remove cotoneaster plants when soil is moist, and immediately replant disturbed soil with desirable native species to prevent re-infestation. If cotoneaster plants are removed before the fruit ripens, any fruit that fall to the ground will be unlikely to spread viable seed.

Large plants can be removed with equipment; cut off limbs first, then dig out the base with a shovel or backhoe. Roots can penetrate deep into rock crevices, requiring extensive excavation. Ensure stumps and shallow roots are completely removed, as both can re-sprout.

Because seeds from the seed bank can germinate and re-infest the site, management efforts should include seedling removal as required.

Chemical Control

Cotoneaster can also be controlled chemically via herbicide application. However, given the scale of the Cotoneaster spp. stands at the Site (planted hedgerows) mechanical removal is recommended for this species at this Site.

To kill small cotoneaster shrubs and control regrowth, treat with glyphosate, using a wiping type of herbicide applicator (weed wiper) or hand-held spray. For large shrubs, cut branches to the stump and paint with glyphosate. It may be beneficial to rough up and expose the bark and paint it with glyphosate.

5.4 Disposal of Invasive Plant Materials

TII (2010) recommend the following with regard general disposal of invasive flora species:

Where cut, pulled or mown noxious weed or non-native invasive plant material arises, its disposal should not lead to a risk of further spread or pose a risk of poisoning to livestock in the case of ragwort. Particular care should be taken near watercourses as water is a fast medium for the dispersal of plant fragments and seeds. Material that contains flower heads or seeds should be disposed of either by composting or burial at a depth of no less than 0.5m in the case of noxious weeds, or by incineration (having regard to relevant legislation, including: Section 32 of the Waste Management Act, 1996 to 2008; Section 4 of the Air Pollution Act, 1987; and relevant local authority byelaws) or disposal to licensed landfill in the case of non-native invasive species.

5.5 Site Hygiene (Biosecurity)

Standard best practise construction measures can play an integral role in the prevention of invasive species transmission off-site. TII (2010) recommend the following with regard best practise site hygiene when dealing with invasive plant matter:

All vehicles and equipment that have been used in control operations should be cleaned once control work in that section has been completed. On leaving each individual site, any tracked machinery, excavators (including buckets), trailers, dumper trucks, etc., should be thoroughly cleaned within a designated area to prevent the spread of material. It is important to remove soil which may contain seeds and plant fragments which otherwise could be transported along the road corridor as works are being undertaken. This also includes footwear, tools, etc.

As such, the following Biosecurity Protocol will be in place for the duration of the works, to maintain good site hygiene and ensure no invasive flora species are spread to and/or from the Site. The preparation of this site-specific hygiene regime has taken into account the nature of the invasive flora species recorded at the Site, and their respective impact ratings. It is noted that no significant invasive flora species i.e., those listed in the Third Schedule of *European Communities (Birds and Natural Habitats) Regulations* 2011 (SI 477 of 2011, as amended) e.g., Japanese Knotweed, were recorded at the Site.

Biosecurity Protocol:

- All soils/materials being introduced to the Site will be sourced from a certified invasive flora-free source site, to ensure no introduction of invasive plant materials to the Site occurs.
- Personnel working on or between sites will ensure their clothing and footwear are cleaned, ensuring they are visually free from soil and organic debris, in order to prevent inadvertent spread of invasive plant material.
- Where possible tracked vehicles should not be used within an area of infestation.
- All vehicles leaving the Site and/or transporting infested soil/materials must be thoroughly pressure-washed in a designated wash-down area before being used for other work. Mud and organic debris will not be allowed accumulate on tyres, wheels or under wheel arches.
- All vehicles containing invasive plant materials for transportation and disposal offsite will be suitably secured with tarpaulins etc., to ensure no inadvertent dissemination of invasive materials en-route.
- Works should be planned to avoid double handling of infected plants materials/soils as far as possible to reduce the risk of spread.
- All vehicles entering or leaving the Site will have been suitably checked and pressure-washed to ensure no introduction of invasive flora to and from the Site. Measures such as a drive through hygiene bath or footbaths will be considered where appropriate.
- Designated wash-down area to be located away from sensitive receptors such as watercourses, ditches, drains etc.
- Material/water left after vehicles have been pressure-washed must be contained, collected and disposed of appropriately (These waters **must not** under any circumstances be discharged to drains, ditches or waterbodies).
- All chemicals used for the control of non-native species should be stored and used in a responsible manner

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