

# Horgan's Quay Development

## Management Plan for Invasive Species

<b>Mitigation Work Plan for Invasive Species</b>			
<b>Reason:</b> For Planning Compliance <b>Issue:</b> Rev 1			
<b>Originator</b>	<b>Reviewer</b>	<b>Approver</b>	<b>Date</b>
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## Introduction

### These works are no complete:

It is apparent that there are some invasive species on the Horgan's Quay site in multiple locations. Please see site extent below in Figure 1

We have experience in dealing with this weed and do not envisage this being an issue for the project. We have an experienced professional **Fiona Patterson an Ecologist from ARUP Engineering** on board as part of our team.

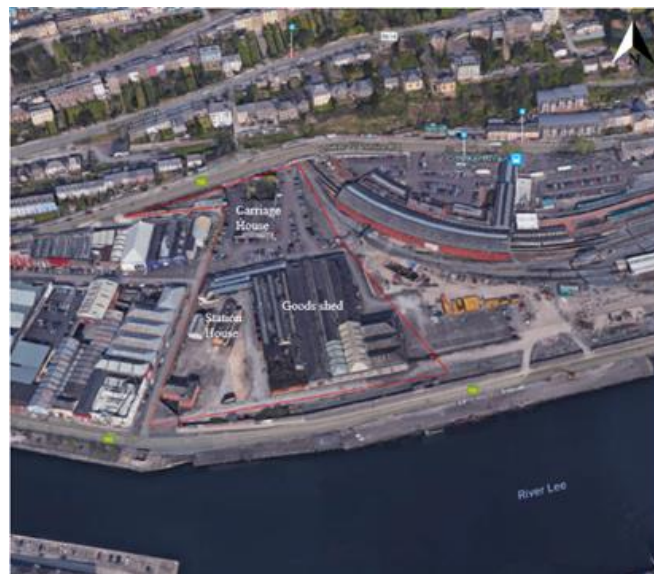


Figure 1

During the site survey, Buddleia (*Buddleia davidii*) was the only non-native plant species identified growing on the site. Strands of Buddleia were recorded throughout the site including within the derelict buildings. Buddleia is identified in the 2010 National Roads Authority guidelines *The Management of Noxious Weeds and Non-native Invasive Plant Species on National Roads* as a non-native invasive plant species. Buddleia is a medium impact invasive species which is frequently found on waste ground in urban environments and is capable of growing on walls. It can potentially cause damage to structures if not treated or removed.

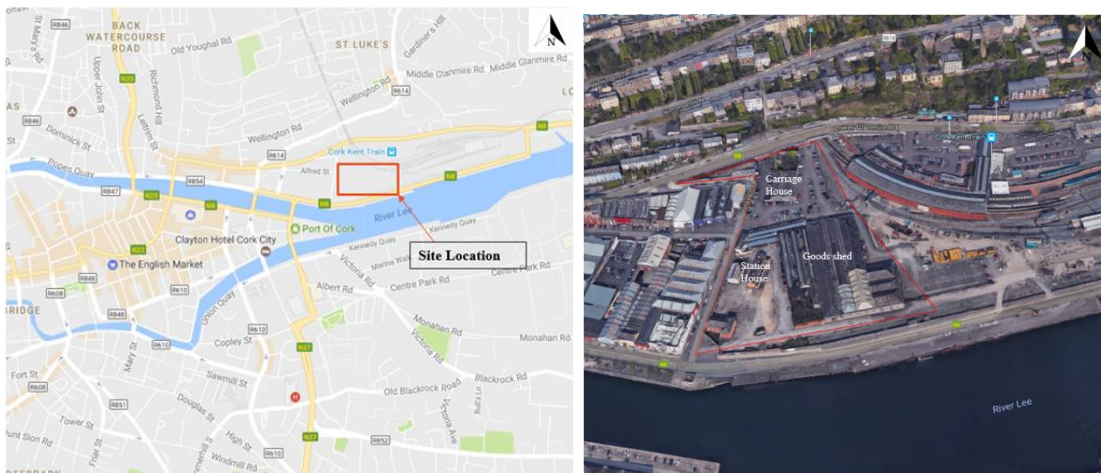
## Site Description

The site is located approximately 800m north-east of Cork City centre (**Figure 4.1**). The site is currently paved and houses a number of derelict buildings, extending to approximately 2.48 hectares. The site is bounded by Kent Station to the east, with Railway St and the Penrose Wharf commercial properties to the west. South of the site runs Horgan's Quay and the River Lee, while the north of the site is bounded by Lower Glanmire Rd. The site has approximately 195m of river frontage.

The site hosts a number of buildings of varying sizes. All of these are disused and derelict. Three of the buildings are protected structures: The Station Master's House, the Carriage Shed, and the Goods Shed. Refer to **Figure 4.2**.

There is pedestrian access to the site via a set of stairs from Lower Glanmire Rd, and vehicular access from Railway St which runs adjacent to the western boundary of the site. The parts of the site devoid of buildings are being used as overflow pay-and-display parking bays for Kent Station.

The proposed development will include the construction of a hotel, residential units, retail units and offices, incorporating the conservation of the three protected structures on the site. The existing site layout is shown in **Figure 4.2**.



The proposed development includes the following main elements:

- Demolition of two derelict buildings on the site (Now complete)
- Provision Strategic Housing Development units to the South Western portion of the site
- Retention, refurbishment and re-use of the three major protected structures on the site (the Station Master's Building, the Carriage Shed, and the Goods Depot)
- Development of a hotel and retail outlets with associated car parking facilities in the north-eastern part of the site
- Development of new office buildings to the south-eastern part of the site
- Provision of services including water main, storm water drainage, foul sewer, gas, electricity, telecommunications, etc.
- Development of pathways, open/amenity areas and landscaped areas within the site
- Internal access roads
- Associated infrastructure

## Licensing for removal of invasive plants

With regard to the removal of invasive plants from the Horgan's Quay site, please see the below information in regard to the Licence Required

### Licensing Requirement

BAM intend to remove any invasive species (as listed in the Third Schedule of the EC (Birds and Natural Habitats) Regulations 2011) and transport it to another site for disposal, therefore a license is required under Part 6 (Protection of Flora and Fauna) and specifically regulation 49 of the European Communities (Birds and Natural Habitats) Regulations 2011 to remove the species.

The entire statute book can be seen here; <http://www.irishstatutebook.ie/eli/2011/si/477/made/en/pdf>

## Licensing Authority

We will make an application directly to the National Parks and Wildlife Service (NPWS) at the contact details provided below;

Contact: Gerry Leckey [gerry.leckey@ahg.gov.ie](mailto:gerry.leckey@ahg.gov.ie) or (01) 888 3242/ Lo-Call 1890 383000

While there is currently no application form for this activity and no fee, we intend to make an application to the NPWS for a license and they will require as much information as possible on the methods of removal, transportation and treatment of the species in the form of a method statement.

- They also require information on the bio-security measures,
- A copy of the invasive species management plan and
- Details of the timeframe for carrying out the work.

This plan will form the basis of this information.

## Methods of Treatment of Invasive Weeds

There are currently 3 methods by which invasive species can be effectively eradicated from a site. These methods can be expensive, with cost increasing with infestation size and duration. Early intervention is therefore highly recommended.

- Chemical Treatment - Long-term treatment with herbicides (with active ingredient glyphosate- always follow the manufacturer's instructions carefully and consider the area you are spraying, especially near water);
- Excavation and disposal at a licensed landfill
- Excavation, deep burial and/or bunding on site prior to treatment with herbicide.

## Timeframe for carrying out the work at Horgan's Quay.

BAM Building Ltd, has been commissioned by HQ Developments to produce a method statement (or Invasive Species Management Plan) for the management of Buddleia (*Buddleia davidii*) infestation at Horgan's Quay Cork during the enabling works prior to development works taking place. It is planned to remove all of the Buddleia when we take possession of the site in August 2018 as part of the enabling works. As the long term treatment is not possible from a program perspective we intend to use the "Excavation and disposal at a licensed landfill" method on this site.

## Management Plan for Invasive Species at Horgan's Quay

### Objective

The objective of this Management Plan is to outline and communicate the required works associated with Buddleia and working in compliance with Invasive Species Ireland "Best Practice Management Guidelines".

Also to ensure that all works involving Invasive Species & associated impacted materials are undertaken in accordance with relevant best practice guidelines and legislation, thereby limiting HQ Developments (the Client) exposure arising from these works. These objectives can be outlined as follows:

- Prevent the further spread of Buddleia at the site;

- Prevent Buddleia cross contamination with non-impacted areas of the site;
- Prevent off-site transport of Buddleia material other than that disposed of under the appropriate duty of care.

## Limitations or risks to the Objectives:

Failure to implement the Management Plan may result in a liability exposure to HQ Developments (the Client). Threats and limitations to the objectives outlined above include:

- Inadequate induction of on-site personnel during the Enabling Phase.
- Inadequate identification of Buddleia material resulting in on and off-site cross contamination
- Failure to use clean down areas for footwear and site apparel at the end of each working day
- Treatment plan if required not carried out on the excavation site afterwards.

## Method of Work

### Excavation

- The depth of excavation will be determined by the Ecologist Fiona Patterson in agreement with BAM Building, however it is advised that this is kept to a minimum as far as practicable.
- A site induction will be required to identify associated risks working around Buddleia.
- Competent personal selected by BAM will supervise the site set up of the quarantine zone, haulage route and clean down area as well as all excavation works.
- Transportation routes will be agreed.
- The plant and machinery will then enter the quarantine area and will remain within this area for the duration of the works.
- For each excavator working on site a competent person will be present to inspect excavations. Due care will be taken to protect staff from open excavations and each operator will be a safe distance from the excavator whilst digging. Due care will be taken to ensure that each 'bucket' of material is not slewed outside of the defined works area and no contaminated material falls from the bucket outside of the haulage route or quarantine zone;
- On completion of the site establishment and establishing the area is free of utilities, excavation works can commence
- Detailed SWP plans of the works including risk assessments are to be undertaken by BAM.
- The material will be excavated from where it sits and transported to a designated landfill site.
- The Buddleia contaminated material will be excavated under supervision and placed into a suitable transportation vehicle.
- The transport vehicle will not be filled full and the load should be filled only 80%. For this size of excavation a dumper will be suffice. All material excavated from contaminated areas will be treated as contaminated waste. Please see details below of possible Haulage Companies and Receiver of contaminated material.
- Excavations are completed to the desired size.

## Haulers provider

Company	Details	Licence/Permit
J Ryan Haulage Ltd. (Haulier for the Knotweed Infected Soil)	Stringfield, Ballywilliam Enniscorthy Co. Wexford (051) 424715	NWCPO-10-01298-02
Wm Cyril McGuinness Ltd. (Haulier for the Invasive Vegetation)	Sunrise, Whitestown Road Rush, Co. Dublin (01)8071900	NWCPO-08-01139-02

## End Outlets

Company	Details	Licence/Permit
Rilta Environmental Ltd, (Transfer Facility for the Knotweed Infected Soil)	Block 402, Grants Drive, Greenogue Business Park, Rathcoole, County Dublin 01-4018000	W0192-03
Terminal Treatment Facility ATM Moerdijk	Vlasweg 12, 4782 PW Moerdijk, Netherlands: +31(0)168 389 289	

## Indaver Ireland

Indaver Ireland can accept Plant Tissue Vegetation under its EPA Licence. The material would be collected in palletised FIBC Bags and Brought to site under the appropriate Waste Collection Permit. Even though some soil may be in the bags stones are not acceptable. The Material itself would be energy recovered at between 850-1000 Degrees Celsius. The waste will be exported to the soil thermal treatment facility operated by ATM at Moerdijk, the Netherlands. At the facility the waste will be off-loaded and placed into storage pending thermal treatment at the soil treatment facility. The treatment process involves heating the soil to temperatures greater than 700 degrees centigrade, this thermal treatment completely destroys all organic matter within the waste.

## Mitigation & Bio Security Measures

In order to limit the possible on and off-site transport of contaminated material, it is important that bio-security protocols outlined within this management plan are adhered to. These include, but are not limited to;

- Set up and maintain a quarantine zone prior to the commencement of any works at the site. This should include a minimum 5m buffer zone from the nearest extent of identified infestation or as far as is reasonably practicable.
- A clean down area will be set up within the quarantine zone at the main access and egress point. All personnel leaving the quarantine zone must inspect and clean down all footwear and apparel to ensure that no on or off-site cross contamination occurs;
- Only personnel who have completed the induction will be permitted access to the works area.
- Following completion and inspection of the site setup, all works related plant and machinery will be permitted access to the quarantine zone. This plant and machinery must remain within the quarantine zone for the duration of the works;
- It is recommended, where possible, tracked plant and machinery are not used at the site until the Buddleia.

A competent person will supervise the clean down of the plant and machinery. An inspection for any contaminated material will be carried out at this point. The clean down and inspection is to be undertaken within the clean down



area and take place on a suitable grade membrane with the use of hand tools or pressure depending on weather conditions and ground conditions.. The inspection of the plant and machinery will include, but will not be limited to:

- Wheels and tracks (if any);
- Joints, doors and hinges;
- Excavator buckets and slews;
- Standing plates and any protruding objects.