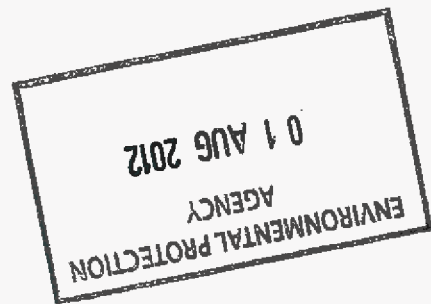
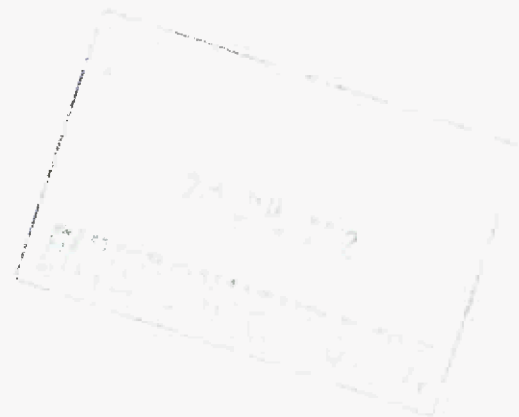


Natura Impact Statement
Remedial Works for
municipal waste at St
Mary's Park, Limerick City
Prepared for
Limerick City Council

Doherty Environmental and Minogue and Associates



This report has been prepared Doherty Environmental and Minogue and Associates with all reasonable skill, care and diligence. Information reported herein is based on the interpretation of data collected and has been accepted in good faith as being accurate and valid.

This report is prepared for Limerick City Council and we accept no responsibility to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk

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1 Introduction

Minogue and Associates and Doherty Environmental have been commissioned by Limerick City Council to undertake a Screening Assessment and prepare a Natura Impact Statement, under Article 6 of the EU Habitats Directive, of proposals to remediate an area of illegal dumping at St Mary's Park Limerick City.

The aim of this assessment is to screen for likely significant effects to European Sites occurring within the sphere of influence of the proposed works.

1.1 Background & Requirements for HDA

1.1.1 Project Description

An area behind residential houses in St Marys Park has been subject to illegal dumping over the past number of years, understood to be principally residential waste. Limerick City Council intend to remediate the site but due to its proximity to the River Shannon SAC, screening for likely significant effects on the conservation management objectives of the River Shannon SAC is required.

A risk assessment undertaken for the site ¹found the following:

Waste and soil analysis indicate that contamination is present in soils which are in direct contact with the waste

Results suggest that the waste material encountered is not having a significant impact on underlying natural soils.

Groundwater quality is generally quite good at the site. There is potential for leachate from waste material to potentially impact upon groundwater and also surface water. The severity of this risk is likely to potentially increase as the volume of the waste body increases.

Surface water results did not indicate any significant difference between water quality upstream and downstream of the site and this is consistent with previous assessments at the site.

There is no evidence of landfill gas on site apart from some evidence of low level landfill gas in deeply buried waste mainly at the southern end of the site.

Although current impacts are low, there is a high potential risk associated with the site due to its proximity to the River Shannon SAC and direct hydrological linkages between the site, surface water and the SAC.

The overall approach is as follows:

Remediation of the site requiring the segregation and removal of all mixed waste items such as plastics, wood, metal, electronic items etc. Prior to the disturbance of the waste material an earthen bund will be installed around the northern and eastern perimeter of the area of waste to be excavated and removed. This earthen bund will be installed to ensure that no

¹ Tier 2/3 Environmental Risk Assessment of illegal dump at St Marys, Limerick City. Prepared by Verde Environmental Consultants for Limerick City Council. July 2011.

surface runoff from the waste area enters drainage ditches located to the east and north of the waste dumping area.

Once the earthen bund is installed and the waste material is removed, it is considered that much of the remaining soils may be suitably categorised as inert fill if a diligent segregation process is undertaken. This will require further verification during the remediation process including consultation with the EPA.

It is clear from the description of the project that it is not necessary for the conservation management of the Lower River Shannon SAC (Site Code IE002165) or River Shannon and Fergus Estuaries SPA (Site Code IE004077).

1.1.2 Requirement for Screening Assessment

The transposition of the EU Habitats Directive Assessment by the European Communities (Natural Habitats) Regulations 1997 – 2005 (referred to as the Habitat Regulations) provide the legal basis for the protection of habitats and species of European importance in Ireland. The legislative protection of habitats and species provided by the Habitats Directive has been implemented in Ireland and throughout Europe through the establishment of a network of designated conservation areas known as the Natura 2000 (N2K) network. The N2K network includes sites designated as Special Areas of Conservation (SACs), under the EU Habitats Directive and Special Protection Areas (SPAs) designated under the EU Birds Directive. SACs are designated in areas that support habitats listed on Annex I and/or species listed on Annex II of the Habitats Directive. SPAs are designated in areas that support: 1% or more of the all-Ireland population of bird species listed on Annex I of the EU Birds Directive; 1% or more of the population of a migratory species; and more than 20,000 waterfowl. Under the Habitat Regulations all designated sites are referred to as European Sites. It is noted that, under the Habitats Regulations, the term European Site includes cSACs as well as SACs.

Articles 6(1) & (2) of the Habitats Directive set out provisions for the conservation management of European Sites. Articles 6(3) and 6(4) of this Directive set out a series of procedural steps that test whether or not a plan or project is likely to affect a European Site. Article 6(3) also establishes the requirement for a HDA:

"any plan or project not directly connected with or necessary to the management of the (European) site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implication for the site and subject to the provisions of paragraph 4 (i.e Article 6(4)), the competent national authorities shall agree to the plan or project only after having ascertained that it will not affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public".

As such any project with the potential to result in likely significant effects, either individually or in combination with other plans or projects, upon the conservation objectives of a European site must undergo an assessment of its implications on relevant European sites. In order to establish whether or not likely significant effects will arise as a result of the implementation of a project a Screening Assessment should be undertaken.

surface runoff from the waste area enters drainage ditches located to the east and north of the waste dumping area.

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As the proposed project is located within the Lower River Shannon SAC and upstream of the Shannon and Fergus Estuaries SPA it has been deemed necessary by Limerick City Council to screen this project for its potential to result in likely significant effects to the conservation objectives of these European sites.

1.1.3 Stages of the Habitats Directive Assessment

European Guidance² has outlined a staged process for the completion of a HDA.

- **Stage 1 – Screening:** This stage defines the proposed plan, establishes whether the proposed plan is necessary for the conservation management of the European site and assesses the likelihood of the plan to have a significant effect, alone or in combination with other plans or projects, upon a European site.
- **Stage 2 – Appropriate Assessment:** If a plan or project is likely to have a significant effect an Appropriate Assessment must be undertaken. In this stage the impact of the plan or project to the Conservation Objectives of the European site is assessed. The outcome of this assessment will establish whether the plan will have an adverse effect upon the integrity of the European site.
- **Stage 3 – Assessment of Alternative Solutions:** If it is concluded that, subsequent to the implementation of mitigation measures, a plan has an adverse impact upon the integrity of a European site it must be objectively concluded that no alternative solutions exist before the plan can proceed.
- **Stage 4 – Where no alternative solutions exist and where adverse impacts remain but imperative reasons of overriding public interest (IROPI) exist for the implementation of a plan or project an assessment of compensatory measures that will effectively offset the damage to the Natura site 2000 will be necessary.**

Following on from Article 6(3) of the Habitats Directive the objective of this Natura Impact Statement is to screen for Likely Significant Effects and to conclude whether or not the proposed activities are likely to result in significant adverse effects to the integrity of the European Sites occurring within the sphere of influence of the proposed project. The appraisal of adverse effects to the integrity of this Site will be established by assessing the potential impacts the proposal will have on the conservation objectives of the Sites.

1.2 Guidance Documents

The Screening Assessment was undertaken with reference to the following guidance documents on Appropriate Assessments:

- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (2009). DEHLG.
- Managing European Sites – The provisions of Article 6 of the Habitats directive 92/43/EEC. European commission (2000). (To be referred to as MN 2000).
- Assessment of Plans and Projects Significantly Affecting European sites – Methodological Guidance of the Provisions of Article 6(3) and (4) of the Habitats

² European Commission Environment DG 2001: Assessment of plans and projects significantly affecting Natura 2000 sites

directive 92/43/EEC. European Commission (2001). (To be referred to as the APP Guidelines).

- Guidance on Article 6(4) of the Habitats Directive 92/43/EEC – Clarification of the Concepts of: Alternative Solutions, Imperative reasons of Overriding Public Interest, Compensatory Measures, Overall coherence, Opinion of the Commission. European Commission (2007).
- Appropriate Assessment of Plans. Scott Wilson, Levett-Therivel sustainability Consultants, Treweek Environmental Consultants and Land Use Consultants (2006).
- Department of the Environment Heritage and Local Government (DEHGL) Circular letter SEA 1/08 & NPWS 1/08 dated 15 February, 2008.
- Department of the Environment Heritage and Local Government (DEHGL) Circular letter L8/08.

2 Screening Methodology

2.1 Introduction

The function of the Screening Assessment is to identify whether or not the proposal will have a likely significant effect on European Sites. In this context "likely" refers to the presence of doubt with regard to the absence of significant effects (ECJ case C-127/02) and "significant" means not trivial or inconsequential but an effect that has the potential to undermine the site's conservation objectives (English Nature, 1999; ECJ case C-127/02). In other words any effect which would compromise the functioning and viability of a site and interfere with achieving the conservation objectives of the site would constitute a significant effect.

The nature of the likely interactions between the proposal and the integrity of the Site will depend upon the sensitivity of the Site's qualifying features to potential impacts arising from the proposal; the current conservation status of the site; and the likely changes to water quality that will result from activities associated with the proposal, in combination with other plans and projects.

The APP Guidelines (2001) outline the stages involved in undertaking a Screening Assessment of a project that has the potential to have likely significant effects on European Sites. The methodology adopted for this Screening Assessment is informed by these guidelines and was undertaken in the following stages:

1. Define the project and determine whether it is necessary for the conservation management of European Sites;
2. Identify European Sites likely to be influenced by the project;
3. Review the project to determine if it has the potential to affect European Sites and determine whether the European Sites are vulnerable to the effects; and
4. Identify other plans or projects that, in combination with the project, have the potential to affect European Sites.

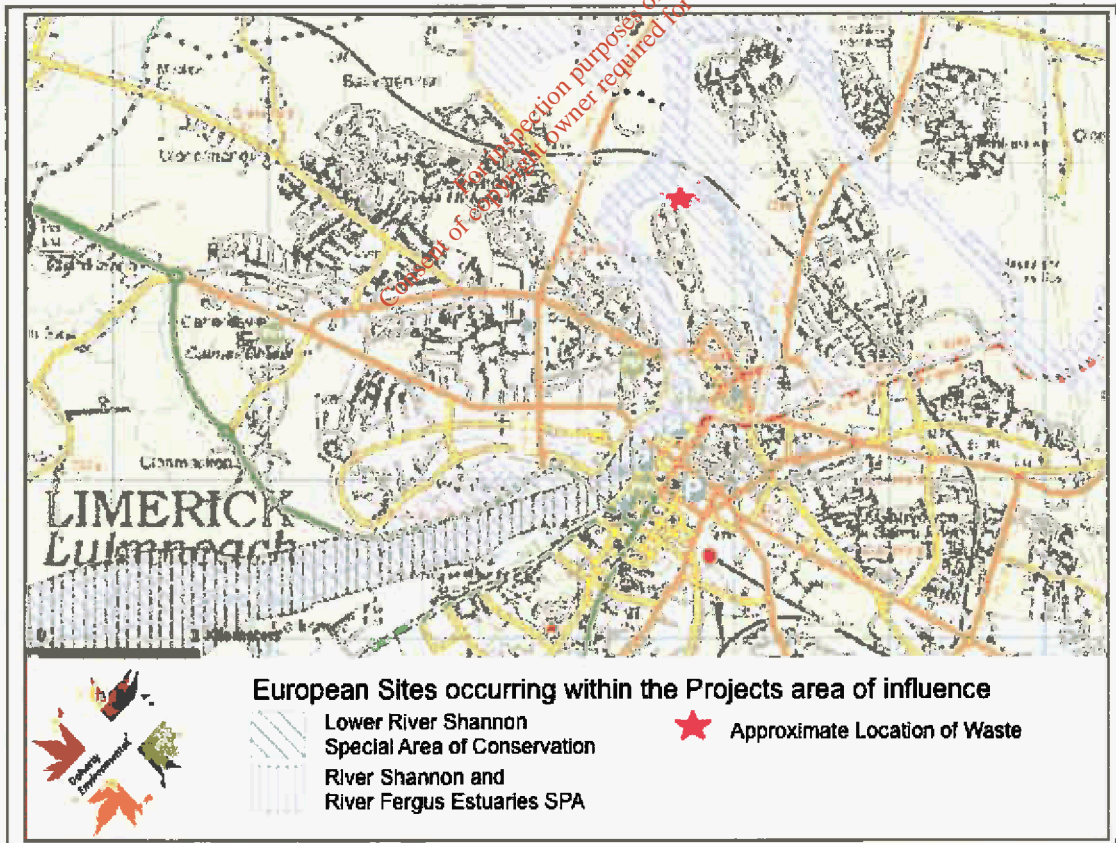
3 The Project and N2K Baseline

3.1 Definition of the Project

The project has been defined in *Section 1.1.1* and it is clear from the description of the project that it is not necessary for the nature conservation of European Sites occurring within the sphere of influence of the proposed remediation works.

3.2 Identification of European Sites

Current guidance on undertaking Habitats Directive Assessments advise that all European Sites occurring within a 15km radius of the proposed site should be included within the Screening Assessment. However considering the nature, size and location of the project it is unlikely that European Sites not hydrologically linked to the project area or that occur upstream of the project area will be effected by the proposals. Consequently it is considered that the area of influence of the proposed project is restricted to the stretches of the River Shannon adjacent to and downstream of the proposed project location. The European Sites occurring within this area of influence include the Lower River Shannon cSAC (Site Code: IE0002165) and the River Shannon and River Fergus Estuary SPA (Site Code: IE0004077). *Figure 3.1* shows the location and extent of the Lower River Shannon cSAC and the River Shannon and River Fergus Estuary SPA in relation to the proposed project area.



3.2.1 Characteristics of European Sites

A summary of the NPWS Site Synopsis for two European Sites occurring within the sphere of influence of the proposed project are outlined below.

Lower River Shannon SAC (Site Code: IE0002165)

This very large SAC stretches along the Shannon valley from Killaloe to Loop Head/Kerry Head, a distance of some 120km. This site supports a range of habitats and species and includes the lower freshwater stretches of a number of major tributaries such as the Mulkear and Feale catchments. This large site supports up to fifteen habitats listed on Annex I of the EU Habitats Directive and seven species listed on Annex II of the Directive. The complete NPWS site synopsis characterising this European site is reproduced in Appendix 1. The site is a candidate SAC selected for lagoons and alluvial wet woodlands, both habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for floating river vegetation, *Molinia* meadows, estuaries, tidal mudflats, Atlantic salt meadows, Mediterranean salt meadows, *Salicornia* mudflats, sand banks, perennial vegetation of stony banks, sea cliffs, reefs and large shallow inlets and bays all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive – Bottle-nosed Dolphin, Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Atlantic Salmon and Otter.

River Shannon and River Fergus Estuary SPA (Site Code: IE0004077)

The River Shannon and River Fergus estuaries form the largest estuarine complex in Ireland. The site comprises all of the estuarine habitats west from Limerick City and south from Ennis, extending west as far as Killadysert and Foynes on the north and south shores respectively of the River Shannon (a distance of some 25km from east to west). The site has vast expanses of intertidal mudflats which provide a rich food resource for wintering birds.

The site is the most important coastal wetland site in the country and regularly supports in excess of 50,000 wintering waterfowl, a concentration of international importance. For several bird species it is the top site in the country. Also of note is that three of the species which regularly occur are listed on Annex I of the EU Birds Directive i.e. Whooper Swan, Golden Plover and Bar-tailed Godwit. (See full reproduction of NPWS Site Synopsis for this site in Appendix 1)

Table 3.1 provides information on the following elements associated with the above N2K Sites:

- Qualifying interests;
- Site sensitivity/vulnerability;
- Current Conservation Status; and
- Threats.

The qualifying interests are the features for which each site has been designated as a N2K Site under the Habitats Regulations i.e. listed habitats, species and bird populations.

Site sensitivity/vulnerability is based on the sensitivities of the qualifying interests for which the site is designated. For instance, the Lower River Shannon has been designated for the presence of Atlantic salt marsh, among other habitats. This habitat is typically dependent on adequate grazing levels and salinity levels and is highly sensitive to hydrological changes and changes in grazing regimes.

		tide	sensitive to hydrological change. Moderate sensitivity to pollution. Changes to salinity and tidal regime. Coastal development		fishing, bait digging, removal of fauna, reclamation of land, coastal protection works and invasive species, particularly cord-grass. In addition, there is some concern over the potential impact that hard coastal defence structures may have, in combination with sea-level rise, for the long-term extent of this habitat.
		Coastal Lagoons	Surface, ground and marine water dependent. Highly sensitive to hydrological changes. Highly sensitive to pollution. Changes in salinity and tidal regime	Bad	The most damaging activity is the deliberate drainage of the largest lagoons for agricultural reasons and smaller lagoons for safety reasons. Further loss of habitat has occurred as a result of natural silting-up. The quality of the habitat has been impacted by water pollution in the form of excessive nutrient enrichment mostly from agricultural sources, but also due to effluents arising from increased urbanisation and industrial activities.
		Vegetated sea cliffs of the Atlantic and Baltic coasts	Coastal development. Erosion, over-grazing and recreation	Poor	Threats to this habitat include erosion; grazing; recreational pressures;

					development of golf courses and housing; dumping and cutting of peat. In some cases coastal protection works interfere with the natural functioning of sea cliffs, particularly those of the soft variety, which are prone to erosion. The impacts of climate change are likely to result in more cliffs being artificially consolidated or stabilised.
		Salicornia and other annuals colonizing mud and sand	Marine water dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species	Poor	Main threats and impacts: Invasive Species, Erosion and accretion.
		Atlantic salt meadows (Glaucopuccinellietalia maritimae)	Marine and groundwater dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Overgrazing, erosion and accretion	Poor	The main impacts to this habitat are overgrazing by sheep and cattle and erosion. The presence of alien species, particularly common cordgrass (<i>Spartina anglica</i>) is also a prevalent threat to this habitat throughout Ireland. There has been minor losses of this habitat due to infilling and reclamation.
		Mediterranean salt meadows (Juncetalia maritimi)	Marine and groundwater dependent. Medium sensitivity to hydrological	Poor	The most common impact to this habitat is overgrazing by cattle or sheep. There has been some minor

			change. Changes in salinity and tidal regime. Coastal development and reclamation.		losses of habitat due to infilling and reclamation.
		Watercourses of plain to montane levels with the <i>Ranuncion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation	Surface and groundwater dependent. Highly sensitive to hydrological changes. Highly sensitive to pollution.	Bad	The main threats include: eutrophication; overgrazing, excessive fertilisation; afforestation; and the introduction of invasive alien species.
		Sandbanks which are slightly covered by sea water all the time	Marine water dependent. Medium sensitivity to hydrological change. Changes in salinity and tidal regime. Infilling, reclamation, invasive species	Poor	The potential for aggregate extraction, coal extraction and wind farm development remain a threat to the integrity of sandbanks.
		Large shallow inlets and bays	Surface and marine water dependent. Low sensitivity to hydrological changes. Aquaculture, fishing and pollution.	Poor	Impacts arising from aquaculture, fishing, dumping of wastes and water pollution are considered to be the principal threats to this habitat.
		Reefs	Sensitive to disturbance. Pollution.	Poor	Main threats include: professional fishing; taking for fauna; taking for flora; water pollution; climate change; and change in species composition.
		Perennial vegetation of stony banks;	Marine water dependent. Low sensitivity to hydrological changes. Coastal development, recreation and	Poor	The main threat to this habitat is the disruption of the sediment supply, owing to the interruption of the coastal processes,

			gravel removal.		caused by developments such as car parks and coastal defence structures including rock armour and sea walls. The removal of gravel is still one of the most widespread and damaging activities directly affecting this habitat. Shingle vegetation is fragile and damage caused by trampling, horse riding and vehicles can be significant.
		Spartina swards (Spartinion maritimae);	Marine water dependent. Medium sensitivity to hydrological change. Considered an invasive species in Ireland.	Poor	As Spartina is considered to be an invasive alien species in Ireland, it is assessed in a different way to other habitats. Increases in the area and extent of this habitat are considered to be unfavourable and future expansion is considered likely.
		Molinia meadows on calcareous, peaty or clay-silt-laden soils (Molinion caerulecae);	Surface and groundwater dependent. Moderately sensitive to hydrological change. Changes in management. Changes in nutrient status	Bad	Agricultural intensification over the past century, drainage and more recently, abandonment of pastoral systems, which contributes to rank vegetation and scrub encroachment, all lead to the loss of some typical flora and to a reduction in the area of this habitat.
		Alluvial forests with Alnus glutinosa and	Surface and groundwater dependent. Highly	Bad	The area of this habitat has declined

		Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*;	sensitive to hydrological changes. Changes in management.		throughout Ireland. The main threats include Inappropriate grazing levels; invasive species; and clearance for agriculture or felling for timber.
		River Lamprey;	Surface water dependent. Highly sensitive to hydrological change	Good	The main threats to this species include channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.
		Brook Lamprey;	Surface water dependent. Highly sensitive to hydrological change	Good	The main threats to this species include channel maintenance, barriers, passage obstruction, gross pollution and specific pollutants.
		Sea Lamprey	Surface water dependent. Highly sensitive to hydrological change	Good	The main threats to this species include obstructions, impassable weirs, gross pollution, specific pollutants.
		Atlantic Salmon	Surface water dependent. Highly sensitive to hydrological change	Bad	Numerous threats impact upon this species. Some of these include: cultivation, pesticides; fertilization; pollution; water pollution; biocenotic evolution; accumulation of organic material; eutrophication; over-fishing; forest-related pressures; parasites.
		Bottle-nosed	Surface water	Good	The main threats to this species

		Dolphin	dependent Highly sensitive to hydrological change		includes by-catch in fishing gear, pollution of the marine environment and habitat degradation and increased disturbance from dolphin watching boat trips.
		Freshwater Pearl Mussel	Surface water dependent. Highly sensitive to hydrological change. Very highly sensitive to pollution.	Bad	The principal threat to this species is poor substrate quality due to increased growth of algal and macrophyte vegetation as a result of severe nutrient enrichment, as well as physical siltation.
		Otter	Surface and marine water dependent. Moderately sensitive to hydrological change. Sensitivity to pollution	Poor	A diverse range of threats and impacts current affect otters in Ireland. Some of the main threats include: use of pesticides; fertilization; vegetation removal; professional fishing (including lobster pots and fyke nets); hunting; poisoning; sand and gravel extraction; mechanical removal of peat; urbanised areas; human habitation; continuous urbanization; industrial or commercial areas; discharges; disposal of waste; drainage;

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					management of aquatic and bank vegetation for drainage purposes; removal of sediments; and canalization or modifying structures of inland water course.
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3.2.2 Conservation Management Objectives

Conservation Management Objectives have been formulated for both European Sites. These are:

For the Lower River Shannon SAC

- To maintain or restore the favourable conservation condition of Annex I habitat(s) and/or Annex II species for which the SAC has been selected. Notes that these Annex I habitats and Annex II species are outlined in Table 3.1 above;

For the Shannon and Fergus Estuaries SPA

- To maintain or restore the favourable conservation condition of the bird species listed as Special Conservation Interests for these SPAs as well as the wetlands and waterbirds supported by these SPAs; and

Specific information regarding the current conservation status of and threats to the qualifying interests of these Sites are currently unavailable. In the absence of this information an overview of the conservation status of each qualifying interest is provided from the results of Ireland's Article 17 Report to the European Commission "Status of EU Protected Habitats and Species in Ireland" (NPWS, 2008) (see Table 3.1 above). It is noted that the Article 17 report assesses the conservation status and associated threats to Annex-listed habitats and species on a countrywide basis rather than on a site by site basis.

No similar nationally-based assessment of the current conservation status and threats to the qualifying interests of SPAs has been undertaken at the time of writing.

3.3 Receiving Environment

The proposed site is located in an area behind a terrace of houses and extends approximately 400 m in length. It is located in an area between the houses and a more extensive marsh and reed sedge swamp habitat. This area is identified as being liable to flooding and is drained in a number of sections. It is located on the River Shannon. The area was visited on the morning of 13th July 2012.

King's Island (where St Marys Park is located) is dominated by building and artificial land and grassland habitats. The northeast section of the Island consists of a mosaic of marsh and reed & large sedge swamp habitat. While this marsh and reed & large sedge swamp

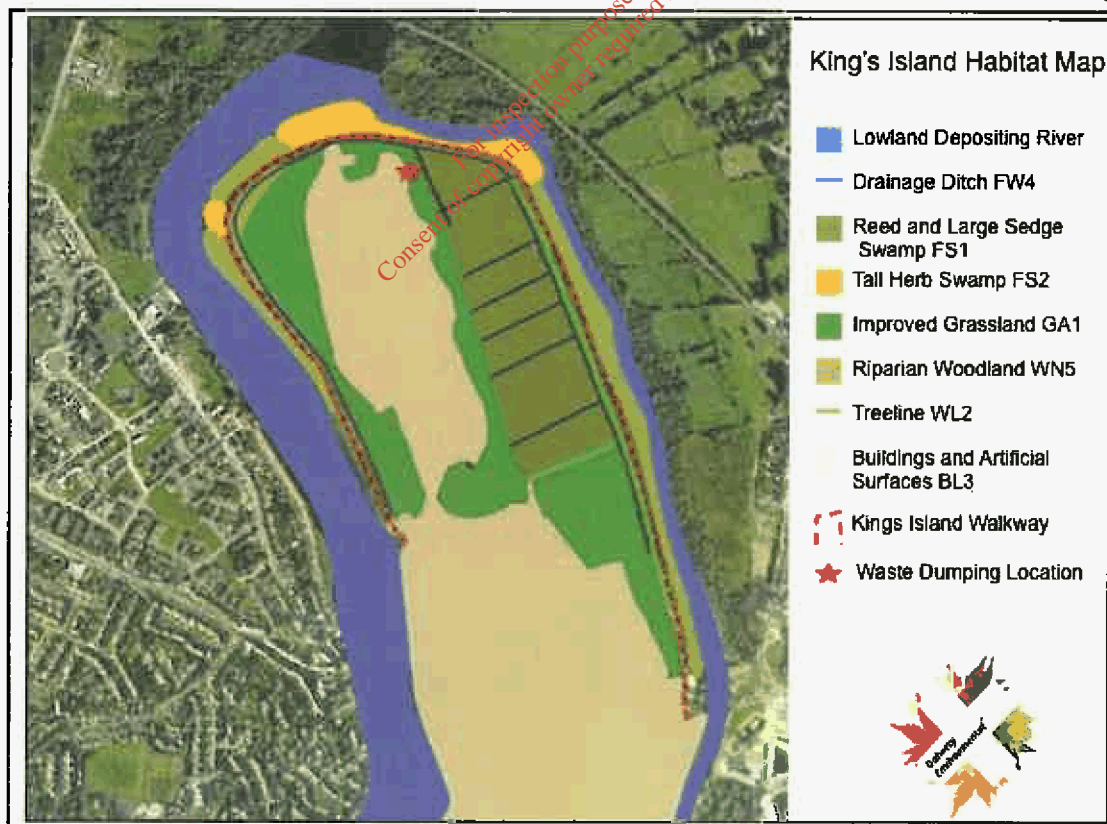
habitat forms part of the Lower River Shannon cSAC it is not listed as a qualifying interest of the cSAC. Other natural habitats of ecological value and conservation importance occur along the river side adjacent to the walkway that surrounds the estate and traverses close to the area of dumping. These include tall herb swamp and riparian woodland. The tall herb swamp which fringes the river along the northern section of King's Island is related to the Annex I listed habitat "Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels". However, the example of this habitat occurring adjacent to the walkway/cycle-path is limited in extent and has not been included as a qualifying feature of the Lower River Shannon cSAC.

The riparian woodland fringing much of the river is dominated by willow, particularly sally (*Salix cinerea* ssp. *Oleifolia*), white willow (*Salix alba*) and osier (*S. viminalis*). Ash (*Fraxinus excelsior*) and alder (*Alnus glutinosa*) also occur through the stretches of fringing woodland. The invasive Himalayan balsam (*Impatiens glandulifera*) was noted as frequently occurring throughout the riparian woodland understorey and the tall herb swamp habitat.

An existing drainage ditch network occurs in the marsh and reed swamp habitat occurring to the east and north of the waste area. The land-ward side of the perimeter walkway around Kings Island is bordered by a drainage ditch, composed of a mosaic of marsh and reed and large sedge swamp. The ditch is colonised by a range of species throughout with the eastern side dominated by willows.

All habitats occurring within and adjacent to King's Island are illustrated on the Habitat Map, Figure 3.2.

Figure 3.2: Habitat Map



The following photos show the site as photographed on 13th July 2012.

Photo 1: View south from public walkway showing area of dumping



Photo 2: View south from public walkway.



4 Screening of European Sites

Table 4.1 provides a Screening Assessment in line with EU Guidance Assessment Criteria used to examine the potential of the project to adversely impact upon the European Sites occurring within the sphere of influence of the project. A conclusion of this Screening Assessment is provided in Table 4.1.

Assessment Criteria	
Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with other plans or projects) on the Natura 2000 site by virtue of:	
Size and Scale	The project is limited in size and scale and requires the excavation, removal and remediation of a small area of illegal waste dumping.
Land-take	The proposed project does not include any land-take that is designated as part of a European Site.
Distance from Natura 2000 sites or key features of the site	The project site is located approximately 50m from the River Shannon cSAC. It is separated from the cSAC boundary by an area of marsh habitat, an existing drain, and an established paved walkway along the perimeter of Kings Island.
Excavations and Resource requirements	No excavations will be undertaken within European Sites. Similarly no resources such as aggregate or water abstraction will be required from European Sites. Any excavations for the project will be restricted to the footprint of the area of waste material at the rear of residential houses on Kings Island.
Emissions	As outlined in the Project Description (Section 1.1.1) above an earthen bund will be installed along the eastern and northern perimeter of the waste material prior to the commencement of the remediation activity. The presence of this earthen bund will ensure that no waste material, leachate or surface runoff from the area of waste dumping will enter the existing surface water drainage network within the marsh habitats to the north and west. The prevention of aqueous emissions from the waste area to the surface water drainage network will ensure that no likely significant effects to the River Shannon occur. Noise & Light Emissions resulting in Disturbance to Qualifying Species All the qualifying species of the River Shannon cSAC are dependent on the aquatic environment and all, with the exception of the Bottle-nosed dolphin, are likely to occur along the River Shannon adjacent to the proposed project area. All of these species are sensitive to changes in hydrology, water pollution and disturbance. As outlined in Section 4.1.1 above the installation of an earthen bund

	<p>surrounding the waste fill material to the north and east will ensure that no aqueous emissions derived from the waste material enter surface watercourse and harm aquatic qualifying species.</p> <p>The level of excavation machinery required during the remediation of the site will be low due to the restricted volume of waste material to be removed during the remediation phase. Remediation activities will be undertaken during the daytime hours and will not have the capacity to generate significant volumes of noise or other disturbance that will have the potential to significantly change existing baseline conditions. Therefore it is considered that the remediation process will not negatively affect qualifying species of European Sites.</p> <p>As all activity associated with the remediation will be undertaken during the daytime no disturbance associated with lighting will arise. No additional lighting to the current baseline lighting levels will be installed as part of the proposed project.</p>
Transportation requirements	The plant movements associated with the project will require low numbers of excavators and appropriate waste container vehicles to transport waste material from the project site to an approved waste disposal area.
Duration of construction, operation etc.	The duration of the project will last for a short number of weeks. It is estimated that the project operations will be completed within a six month time period.
In-Combination Effects	No other projects with the potential to interact with the proposed project will occur within the area during the duration of the excavation and remediation of the site.
Describe any likely changes to the European site arising as a result of:	
Reduction of habitat area	The proposed project will not result in a reduction of habitat area within or outwith the European Sites occurring within the sphere of influence of the project.
Disturbance of key species	<p>As noted above adverse impacts to the water quality of the River Shannon and other surface water features will be avoided by the installation of an earthen bund. This will ensure that disturbances to key species, arising from potential perturbations to water quality are avoided.</p> <p>As outlined above, under Emissions, the project will not have the potential to disturb species as a result of noise and light impacts.</p>
Habitat or species fragmentation	The project will not result in the habitat or species fragmentations.
Reduction in species density	Due to the restricted size and scale of the project and the avoidance of perturbations to water quality of surface watercourses it is considered that the excavation of waste material and the remediation of the site will not result in a reduction in species densities for qualifying and non-qualifying species.

Changes in key indicators of conservation status	A key indicator of conservation status for the River Shannon European Sites is the water quality of the river. Considering the above assessment, the project will not result in changes to key indicators of conservation status for European Sites.
Climate change	There is currently insufficient information to predict the effects of climate change on the site. It is predicted that on a national level winters will become wetter and summers drier but the effect on local precipitation is unknown.
Describe any likely impacts on the Natura 2000 Site as a whole in terms of:	
Interference with key relationships that define the structure and function of the site	<p>Both abiotic and biotic attributes interact to define the structure of the European Sites occurring within the project's sphere of influence. The principal abiotic attribute influencing the structure of the lotic environment is river flow, variability in flow regimes and unobstructed flow through the catchment.</p> <p>The key relationships that define the function of the lotic environment influencing the River Shannon European Sites is the interactions between the various trophic levels within the lotic system, the changes in the ecological communities (i.e. ecological succession) over time and the cycling of biochemical properties through the system and associated habitats.</p> <p>Biotic attributes that define the function of the lotic system include the rate of primary production and dominance of phytobenthos or macrophytes within the river channel.</p> <p>The proposed project will not have the potential to change the structure or function of the River Shannon European Sites.</p>
Describe from the above the elements of the project or plan or combination of elements, where the above impacts are likely to be significant or where the scale of magnitude of impacts is not known.	
<p>Considering the assessment outlined in this Table it is concluded that the proposed project will not have the potential to result in likely significant effects to the conservation status of the River Shannon European Sites.</p> <p>As such this Screening Assessment has resulted in a Finding of No Significant Effects and a Stage 2 Appropriate Assessment is not required.</p>	

5 Conclusion

Based on the assessment of potential impacts it is concluded that the proposal will not result in significant adverse effects to the conservation objectives of the listed European Sites. As shown in this Screening Assessment all activities associated with the proposal will not result in significant effects to these.

This Screening Assessment has resulted in a Finding of No Significant Effect to European Sites and a Stage II Appropriate Assessment is not required.

6 References

Department of the Environment Heritage and Local Government (DEHLG) (2010). *Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities*. Second Edition, February, 2010.

European Commission (2002). *Assessment of plans and projects significantly affecting European sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC*. Luxembourg.

European Commission (2006). *Explanatory Notes and Guidelines for the Assessment, Monitoring and Reporting under Article 17 of the Habitats Directive*. Luxembourg.

Fossitt J. A. (2000). *A Guide to Habitats in Ireland*. Heritage Council.

Heritage Council (2002). *Draft Habitat Survey Guidelines*. Heritage Council.

Scott Wilson, Levett-Therivel Sustainability Consultants, Treweek Environmental Consultants & Land Use Consultants (2006). *Appropriate Assessment of Plans*.

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