

Biodiversity Enhancement Plan



Proposed Public Park, Remediation and Restoration Works

Finisklin Closed Landfill

On behalf of
Sligo County Council





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Finisklin Closed Landfill
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1 INTRODUCTION

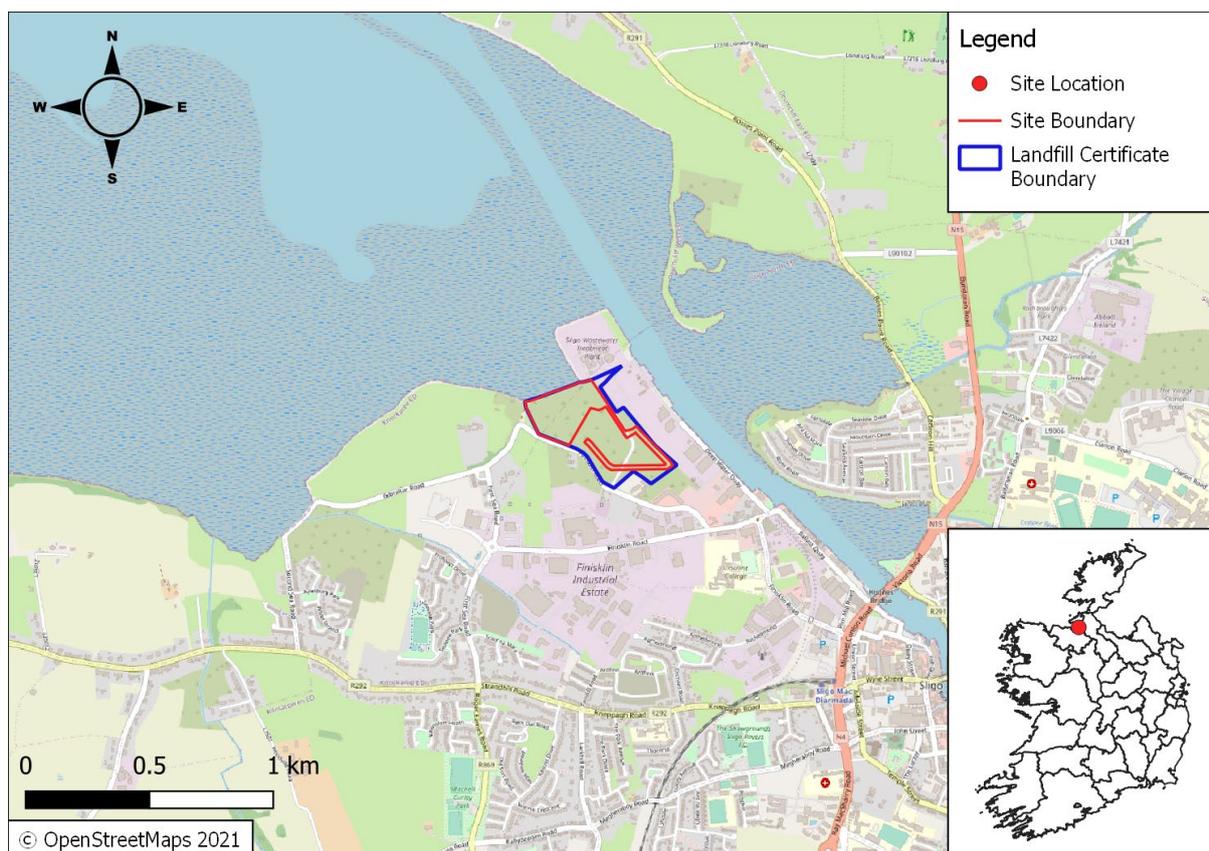
1.1 Background

Malone O'Regan Environmental (MOR) was commissioned by Sligo County Council (SCC) ('the Applicant') to prepare a Biodiversity Enhancement Plan (BEP) in respect of proposed remediation works and development of a sub-urban park ("the Proposed Development") at the closed Finisklin landfill, Co. Sligo.

The scope of the proposed remediation works has been agreed with the Environmental Protection Agency (EPA) and are required to comply with the Certificate of Authorisation (CoA) that was issued by the EPA to SCC on the 13th of September 2018. The Proposed Development of a new public park on a portion of the former landfill will provide an important new amenity to the local community.

The Proposed Development is located within a closed landfill approximately 1.5 km northwest of Sligo City Centre on the southern shores of the Garavogue River / Estuary. The location of the Proposed Development ('the Site') is shown in Figure 1-1 (Grid reference: G 67732 37069).

Figure 1-1: Site Location



1.2 Purpose of the BEP

The purpose of this BEP is to provide details of biodiversity enhancement measures that will be incorporated into proposed landscaping works onsite.

This BEP was prepared to supplement the planning application from a biodiversity perspective and should be read in conjunction with the principal documents submitted (i.e. Natura Impact Statement and Landscape Design Plan).

1.3 Site Context

The Site, which covers an area of ca. 6.27 hectares (ha), is located within the ca.13ha of closed landfill area at Finisklin, just northwest of Sligo town. The proposed works form part of the remediation strategy required for the management of the closed landfill in compliance with the conditions of the CoA as well as the provision of a new public park.

The Site is bordered to the north by Sligo Harbour / Garavogue Estuary and the Sligo Wastewater Treatment Plant (WWTP), to the east by commercial / industrial facilities located on Deepwater Berths Road, to the south by further commercial / industrial facilities and to the west by Finisklin Road and Far Finisklin cul-de-sac along which there are residential properties. The former landfill is now well vegetated with a mix of grassland and scrub habitats onsite. See Figure 1-2 below.

Figure 1-2: Site Location and Surrounding Area



1.4 Description of the Proposed Development

The Proposed Development will consist of the remediation works and development of a new park located on the closed Finisklin Landfill site. The total area of the Site will be 6.27ha, which the majority namely 4.8ha, will comprise of a new public park. The proposed works will include the following:

- Remediation works including the installation of six (6No) biowindows, one (1No) bioactive trench and increasing the thickness of the landfill capping layer within a localised portion of the Site, these remediation works have been agreed with the EPA in accordance with requirements of COA H0006-01;
- Provision of a ca. 4.8 ha public park including 1,000m of a 3.5m wide walking track;
- Construction of an 18m² viewing platform;

- Construction of a ca. 750 m² car park, including 27 No. of car parking spaces and 10No. of bicycle parking spaces;
- Demolition of a 4m² single story concrete block hut;
- Modifications to the existing site entrance and provision of new gates;
- Provision of a new pedestrian entrance; and,
- Associated ancillary works including land grading, drainage works, landscaping, fencing and seating areas.

All proposed remediation works have been agreed with the EPA (MOR, October 2020). These works will address the potential risk of landfill gas migration to offsite properties surrounding the Site, albeit no current risks exist. As the volume of gas being generated at the Site is low, a biofilter venting system i.e., venting biowindows and interceptor trenches, are considered the most appropriate remediation technique for the specific requirements at the Site. The measures are required under the conditions of CoA H0006-01. Refer to drawing P803 submitted with this application for further details.

1.5 Legislation Policy Context Guidance

Biodiversity loss in Ireland has accelerated in recent decades predominately due to human induced activities, resulting in increased damage to habitats, loss of species, reduced abundance of wildlife and degradation of our surrounding environment.

1.6 National Planning Context

The National Planning Framework - Project Ireland 2040 (Ireland, 2018) states the following objectives, in relation to Biodiversity:

National Policy Objective 59:

‘Enhance the conservation status and improve the management of protected areas and protected species by:

- *Implementing relevant EU Directives to protect Ireland’s environment and wildlife;*
- *Integrating policies and objectives for the protection and restoration of biodiversity in statutory development plans;*
- *Developing and utilising licensing and consent systems to facilitate sustainable activities within Natura 2000 sites;*
- *Continued research, survey programmes and monitoring of habitats and species.’*

National Policy Objective 60:

‘Conserve and enhance the rich qualities of natural and cultural heritage of Ireland in a manner appropriate to their significance.’

1.7 Sligo County Development Plan 2017-2023

The Sligo County Development Plan 2017-2023 (SCC, 2017) states the following objectives, in relation to biodiversity:

Policy P-NCODS-7:

‘Integrate biodiversity considerations into Local Authority plans, programmes and activities where appropriate.’

Policy P-INV-1:

‘Prevent and control the spread of invasive plant and animal species within the county.’

1.8 Ireland National Biodiversity Action Plan 2017-2021

The National Biodiversity Action Plan (NWPS, 2017) sets out strategic objectives that lay out a clear framework for Ireland's approach to biodiversity and demonstrates Ireland's commitment to protect our biodiversity and also halt against decline.

Objective 4 of the Action Plan aims to:

'Conserve and restore biodiversity and ecosystem services in the wider countryside.'

Target 4.4 of the Action Plan aims to:

'Harmful invasive alien species are controlled and there is reduced risk of introduction and/or spread of new species'

2 BIODIVERSITY ENHANCEMENT MEASURES

As part of the landscaping works for the Proposed Development, there are opportunities to introduce biodiversity enhancement measures onsite. It is hoped that these enhancement measures will increase the capability of the habitats onsite to support local flora and fauna.

2.1 Enhancement Planting

2.1.1 Species Rich Grassland / Wildflower Planting

As per the Landscape Plan, on areas where soil will be deposited, the existing scrub vegetation will be removed and these areas will be re-seeded with a species rich grassland. This grassland will aid in promoting biodiversity and will be in keeping with the All Ireland Pollinator plan (NBDC, 2021).

The precise seed mix will be tailored by a wildflower specialist following final soil tests to achieve maximum diversity and pollinator benefits on the Site.

2.1.2 Tree Planting

As per the Landscape Plan, there will be cluster planting of tree whips on areas where soil will be deposited in order to establish upper-level vegetation.

2.2 Hibernacula and Habitat Piles

Hibernacula and habitat piles are a valuable habitat and support a range of biodiversity including, insects, amphibians and small mammals. These habitats act as refuges and hibernation sites for amphibians as well as a host of other species of invertebrates and small mammals.

Hibernacula and habitat piles can be created through the placement of either piles of rocks or logs around the margins of the wetland areas / onsite waterbodies and adjacent to drainage ditches. It is proposed to create these enhancement measures using the material generated by the vegetation clearance works onsite. Refer to examples below in Figure 2-1 and Figure 2-2.

Figure 2-1: Typical hibernaculum and cross section

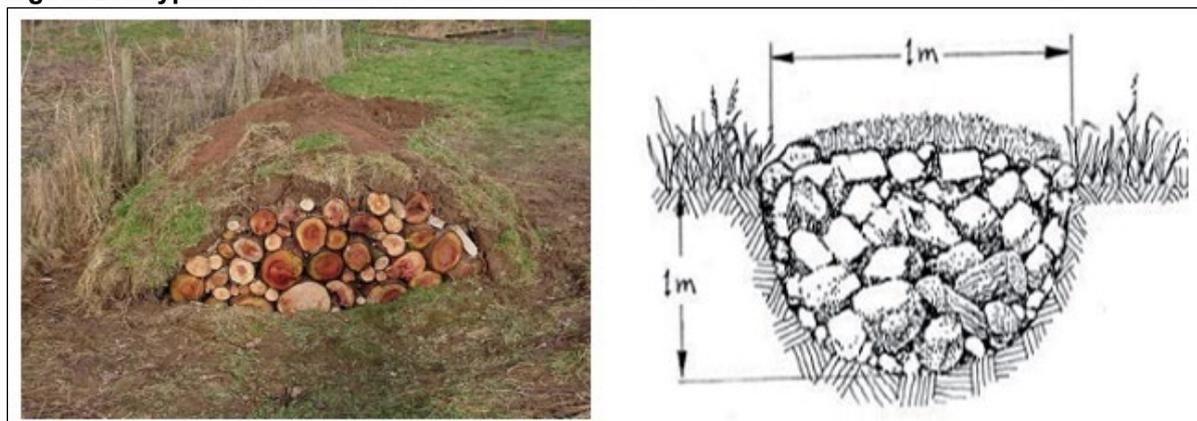


Figure 2-2:Habitat Piles



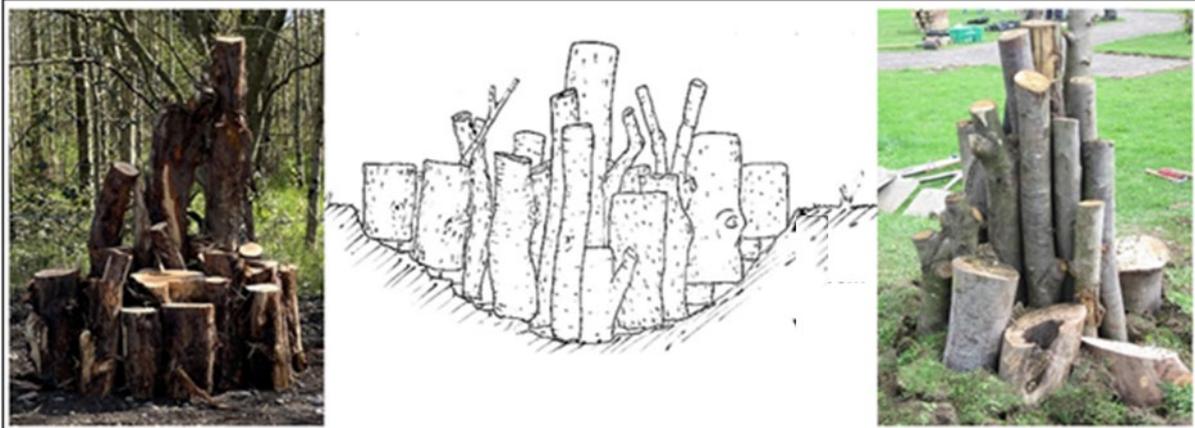
2.3 Stag Beetle Pyramids

The primary purpose of stag beetle pyramids, also referred to as log pyramids, is to provide additional habitat space for small organisms, fungi, insects and other invertebrates (see Figure 2-3).

They can be built from a variety of broadleaved tree species; however, the logs should have a minimum thickness equivalent to an adult's arm. Where possible, the material for these stag beetle pyramid will be sourced from the vegetation clearance works onsite. Dead wood provides habitat for beetles, centipedes, woodlice, and spiders, and can act as shelter for solitary bees, which are crucial for pollination. Logs should be placed in areas that experience shade, and with soil built up around the base in order to prevent the dead wood from drying out. Pesticide use in these areas should be restricted.

Stag beetle pyramids can be built in a variety of sizes and therefore, can be used by a range of fauna, such as toads who can also use these artificial habitats for hibernation or breeding. These pyramids are also known to be beneficial to foraging mammals and basking reptiles. It is proposed to create these enhancement measures using the material generated by the vegetation clearance works onsite.

Figure 2-3: Stag Beetle Pyramids



2.4 Bird Boxes

A variety of bird nest boxes designed to attract a variety of nesting bird species will be erected on suitable trees within the Proposed Development area.

General bird boxes designed to cater for a variety of species will be used, the number and location of which will be specified by an ecologist. Refer to examples provided in Figure 2-4.

Figure 2-4 Bird Box Examples



2.5 Interpretive Signage

Interpretive signs will be installed onsite, which will provide an educational tool for people utilising the park. The signs will include details on local wildlife and points of interest in the locality. See the Landscape Plan submitted with this application for further information.

Figure -: Interpretive Sign Examples



3 IMPLEMENTATION AND AFTERCARE

A suitably qualified Ecologist will be appointed to supervise the implementation of the habitat creation works and undertake monitoring and assessments for the Site. Ecological inspections will take place following the completion of habitat creation works to confirm the works have been completed in line with measures detailed within this BEP, the NIS and the Landscape Plan

3.1 Monitoring

An assessment will be completed in years 1 and 5 by the project Ecologist to verify that the measures outlined in the Landscape Plan have been completed and to assess their effectiveness. This will include a review of the BEP and include revisions to reflect the conditions on the ground and will be updated as necessary. Following this, the Ecologist will submit a report to the Planning Authority. The following information will be included within the report:

- Information on the vegetation composition and structure, i.e. number of positive indicator species and cover of negative indicator species;
- Management prescriptions;
- Information on identification of non-native invasive plant species onsite; and,
- Information on the condition of native trees and shrubs onsite.

Following the assessment in year 5, a report will be submitted to the Planning Authority summarising the status of the created habitat. The report will also outline the recommendations for both future management options and monitoring works.

3.1.1 Invasive Species

Japanese Knotweed (*Fallopia japonica*) is present onsite. This is an ongoing issue that is currently being treated by SCC in line with Policy P-INV-1 (SCC, 2017). It is understood that these works will continue until the Site is fully remediated.

In order to mitigate and prevent any further spread of Japanese Knotweed onsite, an updated Japanese Knotweed Survey and Management Plan specific for the Proposed Development will be prepared in advance of the works commencing.

4 CONCLUSIONS

In summary, it is considered that the implementation of this BEP will be an important part of the Proposed Development to ensure that in the long-term, the benefits to flora and fauna will be maximised. It can be concluded that the implementation of the measures outlined will support the protection and enhancement of the environmental quality of the area.

5 REFERENCES

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