

**Roger Goodwillie & Associates
TERRESTRIAL ECOLOGY**

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1. INTRODUCTION

The proposed development is an enlargement of an existing recycling facility which is situated in agricultural land north-west of Killarney at a height of about 98m OD. It was visited in August 2004 to describe the existing ecology and assess its value, and to discuss the impact of the enlargement. Some of the necessary stream and stormwater treatment works appears to have been undertaken already.

The site is described in terms of a Phase I Habitat Survey (JNCC 1990) using the habitat types of the Heritage Council publication (Fossitt 2000). The fieldwork consisted of a walkover to examine the flora and vegetation and the vertebrate life present.

2. HABITATS & VEGETATION

The site is level and based on a peaty soil so that most fields are surrounded or cut across by drains. Some of the area has been reclaimed to pasture - improved agricultural grassland (GA1 in Fossitt 2000) - while there is also a coniferous plantation (WD4), wet grassland (GS4), drainage ditch (FW4) or stream and a treeline (WL1) along the road on the SE boundary. Existing activities occur in a yard with some unpaved ground to the north-east which is recolonising bare ground (ED3).

2.1 Improved grassland

The site is roughly triangular in shape and the northern half consists of fairly intensively managed grassland dominated by ryegrass *Lolium perenne* and rough meadowgrass *Poa trivialis* but with some meadow foxtail *Alopecurus pratensis*, timothy *Phleum pratense* and a few plants of soft rush *Juncus effusus*. It is grazed by cattle and is pipe-drained into a marginal ditch along the northern side. It has no vegetation of interest.

2.2 Wet grassland

A small section of the site south-west of the existing building is still in grass though it has been planted recently with small conifers on ridges. It has mineral soil and slopes down to the conifer area. Grasses *Holcus lanatus*, *Arrhenatherum elatius*, *Agrostis stolonifera* and soft rush *Juncus effusus* form the bulk of the vegetation with such more obvious species as

Lathyrus pratensis

Rumex acetosa

Cirsium palustre

Scrophularia auriculata

meadow vetchling

sorrel

marsh thistle

water figwort

Calystegia sepium
Stachys palustris
Stellaria graminea
Lotus pedunculatus
Galium palustre

bindweed
marsh woundwort
field stitchwort
greater birdsfoot trefoil
marsh bedstraw

2.3 Drainage ditch

This field runs eastward into a seasonally wet channel on a shaley subsoil in which bog stitchwort *Stellaria uliginosa* and lesser spearwort *Ranunculus flammula* are found. Typical annual species also grow there, for example

Persicaria hydropiper
P. maculosa
Cardamine flexuosa
Juncus bufonius
Gnaphalium uliginosum

water pepper
redshank
wavy bittercress
toad rush
cudweed

This enters the stream which flows NE through the site in a new channel. (The former course was altered to move it away from the buildings). The established channels lie within the conifers and on each side of the grassland field described in 2.1. Some of the same plants occur here: water purslane *Lythrum portula* is an additional species grows in mud at the edge of the forest. There are more perennials in well-lit situations, for example field and water horsetails *Equisetum arvense*, *E. fluviatile*, sweet grass *Glyceria fluitans*, water mint *Mentha aquatica* and tufted hairgrass *Deschampsia cespitosa*, usually with some alder *Alnus glutinosa* and grey willow *Salix cinerea*.

Water from the site flows eastwards on low gradients to the Glanooragh River which then turns NW and descends to enter the Laune 5km above Killorglin.

2.4 Treelines

Trees occur along the ditches on both the NE and SE boundaries of the site. Alder *Alnus glutinosa* dominates in the wet ground but there is some planted Italian alder *A. cordata* on the southern side as well as ash *Fraxinus excelsior*, birch *Betula pubescens*, hawthorn *Crataegus monogyna*, holly *Ilex aquifolium*, elder *Sambucus nigra* and rowan *Sorbus aucuparia*. The ground flora is split between dry-ground and aquatic species, for example

Rubus fruticosus
Lonicera periclymenum
Pteridium aquilinum
Hedera helix
Digitalis purpurea
Alliaria petiolata
Torilis japonica

bramble
honeysuckle
bracken
ivy
foxglove
garlic mustard
hedge mustard

Urtica dioica
Angelica sylvestris
Epilobium hirsutum

nettle
wild angelica
great willowherb

Hemlock *Conium maculatum* and welsh poppy *Meconopsis cambrica* occur along the southern margin, the latter derived probably from garden planting.

2.5 Conifer plantation

The trees are of the order of 20 yrs old and have achieved a closed canopy so that ground vegetation is limited. However at the edges of clearings or along the margins ferns are quite common, especially *Athyrium filix-femina*, *Blechnum spicant* and *Dryopteris dilatata*. An almost-overgrown clearing within the trees maintains some moorgrass *Molinia caerulea* and common gorse *Ulex europaeus* while bramble *Rubus fruticosus*, foxglove *Digitalis purpurea* and bittercress *Cardamine flexuosa* are scattered throughout. Most of the ground is covered by conifer needles but there is a little moss - *Thuidium tamariscinum* and *Atrichum undulatum*.

2.6 Bare ground and loose soils

Considerable excavation of the stream channel beside the lagoon on the northern side of the central road has yielded bare peat which like the ground beside the paved areas is being colonised by a suite of agricultural weeds such as

Sinapis arvensis
Chenopodium album
Atriplex patula
Senecio vulgaris
Stellaria media
Matricaria discoidea
Tripleurospermum inodorum
Sisymbrium officinale
Rumex obtusifolius
Coronopus didymus

charlock
white goosefoot
orache
groundsel
chickweed
pineapple weed
scentless mayweed
hedge mustard
broad-leaved dock
swine's cress

A line of dead Sitka spruce still stands beside this drain, killed probably by soil being pushed onto their root area.

3. FAUNA

There was no evidence of large mammals in the area though foxes would be likely to visit at times as would the hare and badger. Pygmy shrew were heard at the edge of the conifers while brown rat and house mouse probably frequent the built areas. The

tree cover of conifers does not suit bats but a few animals are likely to feed in the marginal trees on the southern boundary.

The bird fauna was more diverse, probably because of the presence of the larger area of trees to the west which acts as a local reservoir of wildlife. In this way birds may visit the site but are not solely dependant on it. Large birds in this category were hooded crow, rook, magpie, pheasant and woodpigeon. The rooks were feeding in the grassland field where, west of the development area, there were also three mallard. Small species that are generally associated with trees included blackbird, robin, wren, blue tit, coal tit, goldcrest, bullfinch, linnnet and redpoll.

Butterflies seen were meadow brown, peacock and small white.

4. EVALUATION

The site supports typical communities and species for the heavy soils of north Kerry and west Limerick. It has none of the diversity associated with the lakes and hills of Killarney and, as far as is known, no rare species either of plant or animal.

4.1 Designations

The area is not included by any ecological designation (pNHA, cSAC or SPA) and has no features that make this likely in future. It does not support habitats or species with special listing in the EU Habitats Directive nor birds included in Annex I of the Birds Directive. Most of the bird species have general protection under the Wildlife Act 1976.

5. IMPACT OF DEVELOPMENT

A general enlargement of the facility and improvement of the stormwater treatment system will have very limited impacts on the existing ecology of the area. The creation of a small reedbed and percolation area will tend to diversify the invertebrate fauna as they are replacing existing intensive grassland. The increase in building and paved area will occupy the hard stand already created and not cover current habitat.

Neither impact can be regarded as significant on a regional scale. Even locally the changes in plant and animal life will scarcely be noticed because of the persistence of large areas of the present habitats outside the site boundaries.

Water quality will be improved in the medium term by the proposed arrangements though there may be additional suspended matter released during construction. This has probably largely occurred with the placement of hard core and stream alterations done recently.