

1- INTRODUCTION

The purpose of this report is to describe the ecology of the area proposed for the future development of Corranure landfill and to assess any features of interest in the flora and fauna.

The site was visited in May 2003 and is described below in terms of habitats. Notes on the fauna are included at the end.

2. DESCRIPTION OF AREA

The site lies in drumlin country where low rounded hills create an undulating topography with a north or north-west grain. Streams form part of the north-eastern and western boundaries and both flow north into the Annalee and Erne catchment. The soil is heavy so that the fields become full of rushes if not mown regularly, and are generally used for extensive grazing.

The habitats on site are predominantly wet grassland (GS4 in Fossitt 2000) with earth banks (BL2) between the fields, usually with hedgerows (WL1). In places there are drainage ditches (FW4), an artificial pond (FL8) and, around an old farmstead -recolonising bare ground (ED3). The streams are eroding/upland in character (FW1) and that on the north-eastern end has cut a sizeable valley where oak-ash-hazel woodland (WN2) is developing.

2.1 Wet grassland

Though apparently dominated by rushes *Juncus effusus*, most of the fields still have an equal if not greater content of grasses, especially meadow foxtail *Alopecurus pratensis*, Yorkshire fog *Holcus lanatus*, rough-stalked meadowgrass *Poa trivialis* and sweet vernal grass *Anthoxanthum odoratum*. Mixed with these are sorrel *Rumex acetosa*, marsh ragwort *Senecio aquaticus*, broad-leaved dock *Rumex obtusifolius*, purple loosestrife *Lythrum salicaria*, greater birdsfoot trefoil *Lotus pedunculatus*, creeping buttercup *Ranunculus repens* and meadow buttercup *R. acris*. The general character of the vegetation suggests that it has been subject to some mowing and fertilisation (by slurry). The soil is subject to poaching so that wet, puddled patches may arise anywhere, on paths, at the entrance to fields or even on mid slopes. Here sweet grass *Glyceria fluitans*, bog stitchwort *Stellaria uliginosa*, brooklime *Veronica beccabunga*, wild angelica *Angelica sylvestris* and lesser spearwort *Ranunculus flammula* are characteristic.

A low area just south of the western extremity of the site adds tufted hairgrass *Deschampsia cespitosa*, yellow flag *Iris pseudacorus*, great willowherb *Epilobium*

hirsutum, meadow vetchling *Lathyrus pratensis*, tufted vetch *Vicia cracca*, marsh bedstraw *Galium palustre* and meadowsweet *Filipendula ulmaria*, species that are also found around some of the hedgerows and ditches.

2.2 Field boundaries

A ditch and bank occurs around every field, often colonised or planted with hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa*, bramble *Rubus fruticosus*, grey willow *Salix cinerea* and gorse *Ulex europaeus*. A major hedge occurs along the north-western boundary where quite large ash *Fraxinus excelsior* are joined by holly *Ilex aquifolium*, honeysuckle *Lonicera periclymenum* and wild roses *Rosa canina* and *R.cf sherardii*. Here also the hedge flora is well developed with the following species

<i>Digitalis purpurea</i>	foxglove
<i>Vicia sepium</i>	bush vetch
<i>Veronica chamaedrys</i>	germander speedwell
<i>Dryopteris filix-mas</i>	male fern
<i>Conopodium majus</i>	pignut
<i>Potentilla sterilis</i>	barren strawberry
<i>Viola riviniana</i>	common violet
<i>V.reichenbachiana</i>	early violet
<i>Plantago lanceolata</i>	ribwort plantain
<i>Stellaria holostea</i>	greater stitchwort
<i>Oxalis acetosella</i>	wood sorrel
<i>Primula vulgaris</i>	primrose

These species variously recur in other field boundaries but where woody species are absent there is a different, heathy component in the flora e.g.

<i>Potentilla erecta</i>	tormentil
<i>Hypericum pulchrum</i>	shining St John's wort
<i>Luzula campestris</i>	field woodrush
<i>Succisa pratensis</i>	devilsbit
<i>Pedicularis sylvestris</i>	lousewort
<i>Hypochoeris radicata</i>	catsear
<i>Calliargon cuspidatum</i>	a moss
<i>Rhytidiadelphus squarrosus</i>	„

23 Wetlands

A pond has been created recently south of the centre of the north-eastern boundary to act as a sediment basin for roadworks above. This retains water at most times and has been much colonised by sweet grass *Glyceria fluitans* and *G.declinata* with yellowcress

Rorippa palustris and water starwort *Callitriche stagnalis* also. Around the edges marsh foxtail *Alopecurus geniculatus*, toad rush *Juncus bufonius* and curled dock *Rumex crispus* are frequent and these spread up the drainage track to some extent with much

<i>Stellaria uliginosa</i>	bog stitchwort
<i>Montia fontana</i>	blinks
<i>Cerastium glomeratum</i>	sticky mouse-ear
<i>C. fontanum</i>	common mouse-ear
<i>Myosotis discolor</i>	changing forget-me-not
<i>Veronica serpyllifolia</i>	thyme-leaved speedwell
<i>V. beccabunga</i>	brooklime
<i>Capsella bursa-pastoris</i>	shepherd's purse

Drainage ditches elsewhere are generally characterised by willowherbs *Epilobium hirsutum*, *E. parviflorum*, soft rush *Juncus effusus*, sharp-flowered rush *J. acutiflorus*, tufted hairgrass *Deschampsia cespitosa* and field horsetail *Equisetum arvense* and other plants of wet grassland.

The streams do not have a distinct flora as such though the one at the north-eastern corner has cut such a valley that it attracts a varied woodland flora, described below.

2.4 Woodland

A fringe of hazel woodland covers the valley side of the stream in the north-eastern corner of the site and is contiguous with a larger area on the other side, outside this site. The ground below the trees is used for shelter by animals and is steep in places but a significant flora survives in protected sites including many of the hedge plants but also

<i>Prunus spinosa</i>	blackthorn
<i>Cardamine flexuosa</i>	wavy bittercress
<i>Lysimachia nemorum</i>	yellow pimpernel
<i>Ranunculus jicaria</i>	celandine
<i>Sanicula europaea</i>	wood sanicle
<i>Orchis mascula</i>	early purple orchid
<i>Brachypodium sylvaticum</i>	false brome
<i>Fragaria vesca</i>	wild strawberry
<i>Dryopteris affinis</i>	male fern
<i>D. dilatata</i>	buckler fem
<i>Plagiomnium undulatum</i>	a moss
<i>Atrichum undulatum</i>	”
<i>Fissidens</i> sp	”
<i>Plagiochila asplenoides</i>	a liverwort

2.5 Recolonising ground

An abandoned house/shed occur in the west centre with piles of loose material around it and some bare trampled ground. These support such typical species as nettle *Urtica dioica*, creeping thistle *Cirsium arvense*, pineapple weed *Matricaria discoidea*, wild turnip *Brassica rapa* and ragwort *Senecio jacobaea*. Elsewhere there is a partially modified field at the southern end where there has been some scraping of the surface. Soft rush *Juncus effusus*, marsh ragwort *Senecio aquaticus*, Yorkshire fog *Holcus lanatus*, creeping buttercup *Ranunculus repens* and white clover *Trifolium repens* are returning to the area while crested dogtail *Cynosurus cristatus*, red fescue *Festuca rubra*, common bent *Agrostis capillaris* and hoary willowherb *Epilobium parviflorum* are also widespread.

3. FAUNA

The mammal fauna of the site is limited to the Irish hare and fox which occur in open surroundings though wood mice are present in the hazel woodland and also probably some of the hedges. Pygmy shrew would be expected but were not heard on this visit. No evidence of badger was encountered though the animal is likely to occur as a visitor during feeding. Likewise there were no frogs seen though they are very likely to occur in places.

The bird fauna is made up of a segment typical of open fields, i.e. woodpigeon and meadow pipit and also a group of hedge birds. The latter are robin, wren, dunnock, willow warbler, long-tailed tit, reed bunting and redpoll. Sedge warblers were also present in the bushes close to ditches or streams. In winter snipe and additional meadow pipit would be the commonest birds in the fields but the ground is not suitable for waders, other than an occasional curlew.

4. EVALUATION

The site contains species typical of drumlin country and very widely distributed in Cavan and adjacent parts of Roscommon, Meath and Longford. There are no habitats or species of significant interest in a county sense though the stream valley in the north-eastern corner retains a good selection of woodland organisms and is locally valuable.

4.1 Designations

The site is not included in any designated area and is unlikely to be so in the future. Likewise it does not contain habitats or species listed as of special interest by the EU Habitats Directive (92/43/EEC) or by the Birds Directive (79/409/EEC). There are no

plants included in the Flora Protection Order 1999 though most of the bird species have general protection under the Wildlife Act 1976.

5. CONCLUSION

The best features in terms of flora and fauna are located at each side of the northern third of the site where the stream woodland occurs on the east and a well-grown hedge/treeline on the west.

Otherwise there are no items of significant interest that need be taken into account in the planning of an extension area for the landfill.

Reference

Fossitt, J.A. 2000 *A guide to habitats in Ireland*. Heritage Council.

For inspection purposes only.
Consent of copyright owner required for any other use.

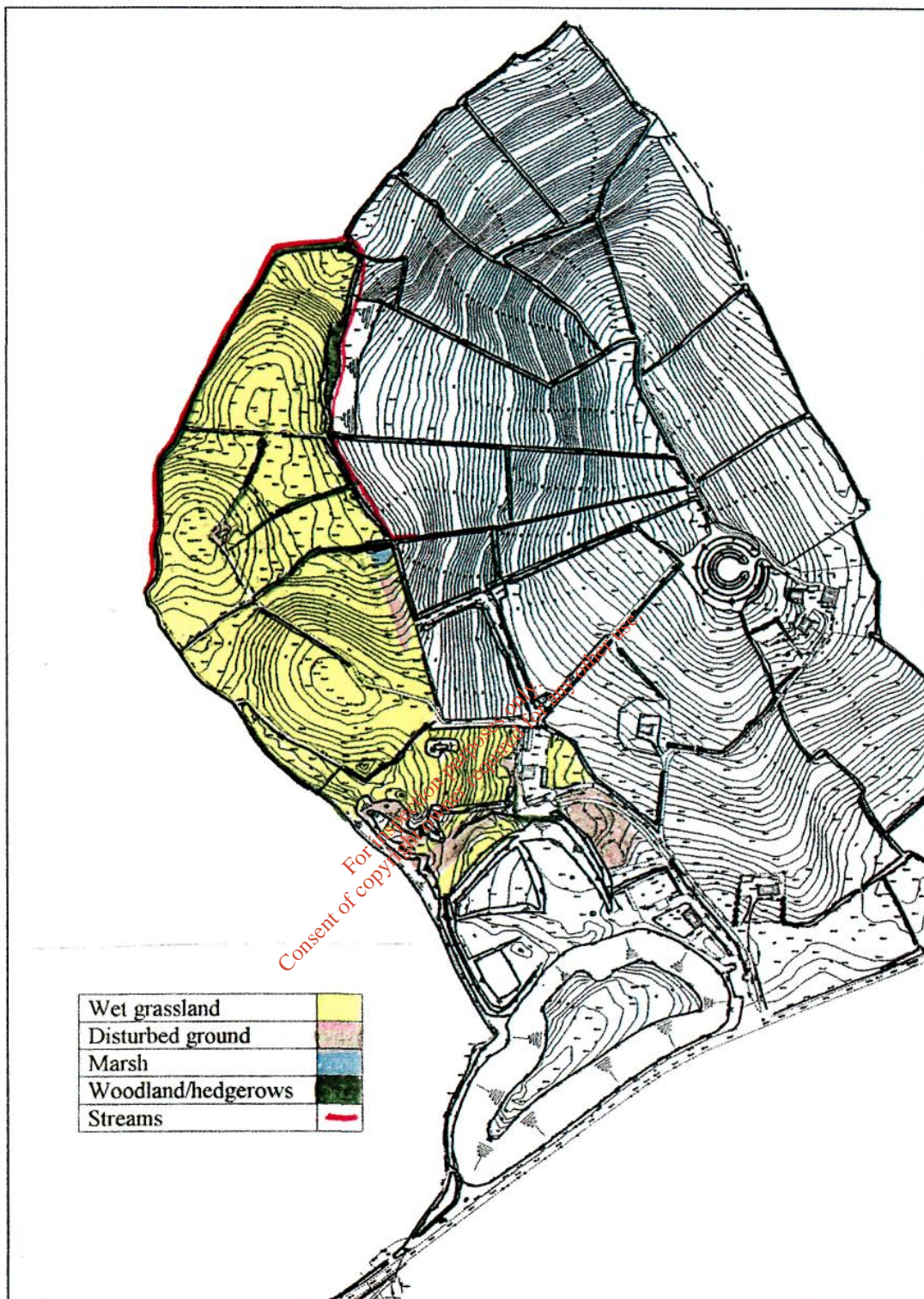


Fig.1 Habitat Map
(Prepared by Roger Goodwillie)

*Updated Ecological Impact
Assessment of Corranure
Landfill – August 2008*

For inspection purposes only.
Consent of copyright owner required for any other use.

Prepared by: Claire Keogh, M.Sc Environmental Science

Introduction

The conservation of natural habitats, similar to other measures that protect and enhance the environment, is essential for long-term sustainable development. The continuing decline of natural habitats and the threats posed to certain species was a major concern of the European Union environmental policy that led to the compilation of the Habitats Directive in 1992. As a result of this and further environmental legislation flora and fauna studies are now required as part of the Environmental Impact Statement. This study of the ecological significance of the Corranure landfill site was previously undertaken in 2003 for Cavan County Council. The study was undertaken to assess the ecological significance of the site in terms of the flora and fauna present. The site in 2008 is comparable to that of 2003 with the majority of the information regarding the habitats remaining the same. The site was visited on the 6th of August 2008. The following report establishes the baseline ecological conditions of the site and also identifies the potential ecological impacts of the proposed land development. It aims to provide a general evaluation of the habitats and the natural conservation value of the site.

Desk Study

Initially a desk study was undertaken to obtain information on the site, the likely habitats that would be present on such a site, and to delineate the various topographical features. Information was obtained from the previous ecological report that formed part of the EIS that was submitted during 2003, and the Heritage Council website which included information on national and local heritage sites. It also provided information on habitats that are present in Ireland. Classification of the wildlife habitats was assisted by the Heritage Council's 'A Guide to the Habitats in Ireland'.

Existing Environment

The following information was submitted in the 2003 ecological report regarding the existing environment and remains the same. "The site lies in drumlin country where low rounded hills create an undulating topography with a north or north-west grain. Streams form part of the north-eastern and western boundaries and both flow north into the Annalee and Erne catchment. The soil is heavy so that the fields become full of rushes if not mown regularly, and are generally used for extensive grazing."

The area is comprised principally of gley soils (50%) with associated acid brown earths (40%) and inter-drumlin peat and peaty gleys (10%). These primarily originate from the Ordovician Period consisting of Silurian shale, sandstone glacial till. “The habitats on site are predominantly wet grassland with earth banks between the fields, hedgerows in places and drainage ditches, and, around an old farmstead - recolonising bare ground. The streams are eroding/upland in character and that on the north-eastern end has cut a sizeable valley where oak-ash-hazel woodland is developing.”



Figure 1 - abandoned house/shed occurs in the west centre of the site

Habitats

Overall the flora and fauna are typical of a wet grassland site. On the whole the site consists of wet grassland with hedgerows providing boundaries in the fields, and small woodland to the north east of the site. There have been no significant changes to the plants present in these habitats and a comprehensive list is provided in the 2003 report.

The majority of the proposed development site consists of wet grassland with various rushes and grasses present. Throughout the site hedgerows surround every field. The hedgerows are characteristic of any wet grassland.

Elsewhere there are partially modified fields to the East of the site where borough pits have been created by Cavan County Council prior to the acquisition of the landfill by Oxigen (Figure 1, 2). These borough pits are situated in the proposed area where the Biological Treatment Facility (BTF) and the Materials Recovery Facility (MRF) are to be constructed. These fields have been disturbed since the 2003 Ecological Assessment of the site. There will be a minor addition to the borough pit where the MRF site will be situated (see Figure 2), to the East of the site. This will involve the removal of a hedgerow.

Re-routing of the existing surface water drainage system onsite has been undertaken since the take over of the landfill by Oxigen. This included upgrading and the extension of the existing drains and will incorporate the placement of settlement ponds at intervals along the route. This new system bypassed the previous existing system and involves all of the surface water draining to the one area with only one emission point into the stream. Also this will greatly reduce any form of siltation entering the streams.

The fauna of the site encompasses mammal and bird fauna, of which a list of both can be seen in the 2003 report. The following additions to the fauna were noted:

- Rabbits, grey squirrels and field mice were not noted in the previous report but would be expected to be seen in a habitat such as this.
- Crows, pigeons, swallows and starlings were encountered during the site visit. Swallows and starlings are seasonal birds and as such were not noted during the previous 2003 report.



Figure 2 – site where the MRF will be located



Figure 3– site where the BTF will be situated

Conclusion

Due to the location of the development it is not thought that a significant impact on the flora and fauna in the area will transpire. As stated earlier prior to the arrival of Oxigen at Corranure landfill, borogh pits had been previously dug by the County Council in the proposed area for the Biological Treatment and the Materials Recovery facilities. This in turn would lead to the conclusion that any disturbance to the habitats present in Corranure would have already been created due to extensive digging having already occurred, thus providing a major reduction on any disruption to the flora and fauna present. These previous disturbances significantly decrease the overall environmental impact on the flora and fauna present in that section of the proposed development.

*For inspection purposes only.
Consent of copyright owner required for any other use.*