

APPENDIX 4

Ecological Survey

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**Composting facility for
King Tree Services Ltd,**

Coolbeg, Co Wicklow

Pl. Ref. 04/1076

Additional information - Flora and Fauna

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Report prepared for Kiaran O'Malley & Co Ltd

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By

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1. INTRODUCTION

The site is situated in the western part of an existing gravel pit where storage piles of overburden have become colonised by gorse. It is relatively elevated, sloping down through planted trees on the western side to a small stream. There is also a drop on the east to the pit itself. Fields and a marl hole form the southern boundary.

The area was visited in August 2004 to describe the flora and fauna of the site and assess its level of ecological importance. The survey was a walkover to the pattern of a Phase I Habitat Survey (JNCC 1990) using the habitat types of the Heritage Council publication (Fossitt 2000).

2. HABITATS & VEGETATION

The predominant habitat on site is gorse scrub (WS1 in Fossitt 2000) but it has been cleared along the eastern side to form a road so that recolonising bare ground (ED3) is also present. Within the gorse there are a few grassy clearings with a vegetation of dry meadows and grassy verges (GS2). Adjacent areas supply deciduous scrub, arable crops (BC1) and an overgrown man-made pond (FL8) while a hedgerow (WL1) runs south to a side road.

2.1 Intact scrub area

Gorse *Ulex europaeus* occurs in fairly pure stand though with some bramble *Rubus fruticosus* and willow *Salix cinerea*. The ground flora is limited by shade but in places there is a little wood sage *Teucrium scorodonia*, red fescue *Festuca rubra*, shining St John's wort *Hypericum pulchrum* and violet *Viola riviniana*. Natural clearings in the stand are often marked by rose-bay *Chamerion angustifolium*, hogweed *Heracleum sphondylium*, marsh thistle *Cirsium palustre* or wild angelica *Angelica sylvestris* while the grassier parts consist of Yorkshire fog *Holcus lanatus*, cocksfoot *Dactylis glomerata*, creeping buttercup *Ranunculus repens* and greater birdsfoot trefoil *Lotus pedunculatus*.

2.2 Cleared tracks

The site is reached by a newly cleared road from the north-eastern end which then extends southwards close to the boundary. Apart from a little regenerating gorse on the surface there are plants that grow as weeds in agricultural crops and some also associated with gravel pits in general. The former include

Cirsium arvense
C. vulgare
Atriplex patula
Crepis capillaris
Papaver dubium
Centaurea nigra
Polygonum aviculare

creeping thistle
spear thistle
orache
hawksbeard
long-headed poppy
knapweed
knotgrass

These are mixed with field horsetail *Equisetum arvense*, coltsfoot *Tussilago farfara*, spring vetch *Vicia sativa*, catsear *Hypochoeris radicata*, black medick *Medicago lupulina*, dyer's rocket *Reseda luteola* and wild carrot *Daucus carota*.

2.3 Arable crop

South-east of the site a tillage field occurs which had wheat stubble at the time of the visit. The field margins contain a variety of other plants, some of which grow also on spoil banks close to the gravel pit. The tall-growing white goosefoot *Chenopodium album*, creeping thistle *Cirsium arvense* and scutch *Elytrigia repens* are frequent here but there is also

Sisymbrium officinale
Fumaria spp
Stachys sylvatica
Lamium purpureum
Capsella bursa-pastoris
Anagallis arvensis
Viola arvensis

hedge mustard
fumitory species
hedge woundwort
red deadnettle
shepherd's purse
scarlet pimpernel
field pansy

2.4 Adjacent habitats

The former sandpit contains bare and revegetated areas with a flora that is tending to become calcareous grassland. Scattered butterfly bush *Buddleja davidii* and grey willow *Salix cinerea* are present in the open areas with sandwort *Arenaria serpyllifolia*, American willowherb *Epilobium ciliatum* and scentless mayweed *Tripleurospermum inodorum*. Colonisation proceeds through sweet vernal grass *Anthoxanthum odoratum*, hairgrass *Aira caryophyllea*, New Zealand willowherb *Epilobium brunnescens*, centaury *Centaureum erythraea*, yellow wort *Blackstonia perfoliata* and small hawkbit *Leontodon saxatilis* to a closed cover of common bent *Agrostis capillaris*, wild carrot *Daucus carota*, birdsfoot trefoil *Lotus corniculatus*, dog daisy *Leucanthemum vulgare* and yellow trefoil *Trifolium dubium*. Lower or puddled ground attracts a few wetland plants, especially the rushes *Juncus articulatus*, *J. inflexus*, *J. effusus* or *J. bufonius*.

The marl hole at the southern end of the site is surrounded by hawthorn scrub with a few larger trees. A little fool's watercress *Apium nodiflorum* and sweet grass *Glyceria*

fluitans occur around the edges with some pondweed *Potamogeton natans*. Oak and ash occur in nearby hedges though alder is predominant higher up the stream valley below the site.

3. FAUNA

The site itself supports rabbits with pygmy shrew very likely. There was evidence of badger and fox having visited the area but no sign of a sett although the cover may conceal this. The site is generally unsuitable for bats though a little feeding may take place on the western side where taller trees and bushes occur.

The bird fauna is more diverse with a number of field and hedgerow species partly dependant on the site. Linnet, blackbird, robin and dunnock are likely to breed in the gorse with willow warbler, long-tailed tit, greenfinch, goldfinch, bullfinch and yellowhammer spending some time there but breeding in deciduous cover to the west and south. A pair of swallows was nesting in an old quarry building while moorhen was seen on the pond. Heron and mallard have been recorded here previously (EIA of N11 Rathnew to Arklow Road Improvement).

A good population of butterflies was present in August with common blue, wall, speckled wood, meadow brown frequent and painted lady, tortoiseshell and peacock in lesser numbers. The insects are mostly associated with the disused sandpit rather than the gorse of the site.

4 EVALUATION

The site contains typical habitats for the area with a selection of the expected species of plant and animal. All of the organisms are common (see Asher *et al* 2000, Preston *et al* 2002) and not of significant ecological value. There are features of more interest in the adjacent areas where a good amount of diversity occurs in the old quarry and marl hole.

There are no designations applying to the habitats or species occurring on site though the badger and most of the bird species are protected under the Wildlife Act 1976. The yellowhammer is a bird of conservation concern (Newton *et al* 1999) as it has declined considerably in Ireland. It remains common in Wicklow however.

5. IMPACT OF DEVELOPMENT

Site preparation will require gorse clearance and surface levelling before the construction of the composting facility. This will mean that all habitat on site will be

removed and replaced by paving, buildings or compost windrows. The impact on the present flora and fauna will be complete but in view of the relatively low value of the ecology it cannot be considered a significant impact on anything more than a local scale. Impacts on surrounding habitats will be very small.

A positive impact to wildlife will be the increase in small compost flies which may increase the feeding value of the site for swallows and bats.

6. MITIGATION MEASURES

The site will be examined after gorse clearance to check that a badger sett does not exist. If one is found, the National Parks & Wildlife conservation ranger will be notified and the animals trapped and released elsewhere under his guidance.

Peripheral planting will be done with native shrubs and trees to maximise the feeding and cover value to wildlife.

References

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