

APPENDIX 10.6

MANAGED GRASSLAND EAST OF FIDDLER'S FERRY POWER STATION LAGOONS

BASELINE DESCRIPTION AND EVALUATION

1. INTRODUCTION – GENERAL DESCRIPTION

- 1.1 The managed grassland to the east of Fiddler's Ferry Power Station Lagoon A (JNCC Habitat Survey Map 7, & Figure 7) is separated from the disused St. Helens Canal in the north by a wire fence. To the south of the grassland is a narrow and remaining strip of Cuerdley Saltmarsh which was extensive before the construction of the lagoons. Beyond the saltmarsh is the River Mersey.
- 1.2 The field covers about 18 hectares and slopes down fairly steeply to the St. Helens Canal in the north and Cuerdley Saltmarsh in the south. The Fiddler's Ferry farm buildings are immediately east of the field unit.
- 1.3 Approximately 70% of the field area is grassland; the remainder consists of tall-herb communities, reedbed, open water and Bramble underscrub.

2. DESCRIPTION OF THE GRASSLAND

- 2.1 The most abundant species in the grassland include Creeping Fescue (*Festuca rubra*), Yarrow (*Achillea millefolium*), Common Couch-grass (*Elytrigia repens*), Cut-leaved Crane's-bill (*Geranium dissectum*) and Smooth-stalked Meadow-grass (*Poa pratensis*) (**Table 1**). These grass species are characteristic of mesotrophic grassland. Other frequent herbs include Common Vetch (*Vicia sativa*), Common Knapweed (*Centaurea nigra*), Coltsfoot (*Tussilago farfara*), Cowslip (*Primula veris*), Silverweed (*Potentilla anserina*), Ribwort Plantain (*Plantago lanceolata*), Ox-eye Daisy (*Leucanthemum vulgare*) and Wild Carrot (*Daucus carota*). The Cowslip is more frequent in the southern part of the field.
- 2.2 There are patches within the dense grassland, particularly in the areas closer to Lagoon A, where species more characteristic of calcareous grassland occur. These include Rough Hawkbit (*Leontodon hispidus*), Weld (*Reseda luteola*), Hairy Tare (*Vicia hirsuta*), Southern Marsh Orchid (*Dactylorhiza praetermissa*) and Black Medick (*Medicago lupulina*). These plants have colonised where the tipping of calcareous PFA has occurred in the past.
- 2.3 The varied species composition of the grassland indicates that it is a mosaic of the MG1a False Oat-grass coarse grassland (Creeping Fescue sub-community) and the MG1e False Oat-grass coarse grassland (Common Knapweed sub-community) of the NVC with localised patches of species more characteristic of a calcareous (CG) grassland community.
- 2.4 Near the central area of the grassland is a mound of tipped material. This has been colonised by tall-herbs including Creeping Thistle (*Cirsium arvense*), Broad-leaved Dock (*Rumex obtusifolius*), Common Nettle (*Urtica dioica*) and Great Willowherb (*Epilobium hirsutum*).

- 2.5 The slope in the north of the field, which has a north-western aspect and falls to the St. Helens Canal, has wetter characteristics. Towards the lower part of the slope the soil becomes wetter which accounts for the occurrence of wetland communities here. Of note is a strip of Common Reed (*Phragmites australis*) along the base of the slope. This vegetation is tall and dense, and provides good cover for bird and other vertebrate species.
- 2.6 There is a complex mosaic of dense tall-herb communities and scattered shrubs which are concentrated at the eastern end of the slope. The chief species include Bramble underscrub and Rosebay Willowherb (*Chamerion angustifolium*) on the brow of the slope with patches of Hemlock Water Dropwort (*Oenanthe crocata*), Great Willowherb, Common Nettle and associated Cleavers (*Galium aparine*), Reed Canary-grass (*Phalaris arundinacea*), Bulrush (*Typha latifolia*) and Common Reed further down the slope.
- 2.7 Amongst the above plant communities are other species associated with wetter ground including Red Campion (*Silene dioica*), Marsh Hawk's-beard (*Crepis paludosa*), Southern Marsh Orchid and Curled Dock (*Rumex crispus*). Along the fence there are scattered Goat Willow (*Salix caprea*), Elder (*Sambucus nigra*) and Rowan (*Sorbus aucuparia*) with Hawthorn shrubs entwined with Bittersweet (*Solanum dulcamara*).
- 2.8 The slope down to Cuedley Salt-marsh is colonised by Bramble underscrub with the Common Reed community present in a strip along the foot of the slope. There is a row of scattered Goat Willow and Hawthorn (*Crataegus monogyna*) shrubs at the base of the slope.
- 2.9 NVC plant communities represented in this mosaic, in order of decreasing abundance, include:-
- i. S4 Common Reed tall swamp community
 - ii. OV26 Great Willowherb tall-herb community
 - iii. W24 Bramble-Yorkshire Fog underscrub
 - iv. S28 Reed Canary-grass tall-fen community
 - v. OV24 Common Nettle-Cleavers tall-herb community
 - vi. OV27 Rosebay Willowherb tall-herb community
 - vii. S12 Bulrush tall-swamp community

TABLE OF SPECIES

TABLE 1. THE PLANT SPECIES COMPOSITION OF THE GRASSLAND TO THE EAST OF THE POWER STATION LAGOONS

Site map: north-east
Grid square: 555860

Survey date: 05/06/02
Total vegetation cover = 120%

Scientific name	Common name	Abundance	Cover
Woody species			
<i>Crataegus monogyna</i>	Hawthorn	LA	2%
<i>Quercus robur</i>	Pendunculate Oak	O	<1%
<i>Salix caprea</i>	Goat Willow	LA	2%
<i>Sambucus nigra</i>	Elder	LF	<1%
<i>Sorbus aucuparia</i>	Rowan	R	<1%
Monocotyledon species			
<i>Agrostis stolonifera</i>	Creeping Bent	VLF	<1%
<i>Arrhenatherum elatius</i>	False Oat-grass	LA	10%
<i>Brachypodium pinnatum</i>	Tor grass	LA	5%
<i>Bromus hordeaceus</i>	Soft Brome	VLF	<1%
<i>Calamagrostis epigejos</i>	Bushgrass	LF	2%
<i>Cynosurus cristatus</i>	Crested Dogstail	VLF	<1%
<i>Dactylis glomerata</i>	Cocksfoot	LF	<1%
<i>Dactylorhiza praetermissa</i>	Southern Marsh Orchid	LF	<1%
<i>Elytrigia repens</i>	Common Couch-grass	LA	10%
<i>Festuca arundinacea</i>	Tall Fescue	LF	<1%
<i>Festuca ovina</i>	Sheep's Fescue	LA	5%
<i>Festuca rubra</i>	Creeping Fescue	LD/LA*	60%
<i>Holcus lanatus</i>	Yorkshire Fog	LA	3%
<i>Phalaris arundinacea</i>	Reed Canary-grass	VLA	<1%
<i>Phragmites australis</i>	Common Reed	LD	2%
<i>Poa annua</i>	Annual Meadow-grass	LF	<1%
<i>Poa pratensis</i>	Smooth-stalked Meadow-grass	LA	10%
<i>Poa trivialis</i>	Rough-stalked Meadow-grass	LA	5%
<i>Typha latifolia</i>	Bulrush	VLA	<1%
Dicotyledon species			
<i>Achillea millefolium</i>	Yarrow	LA	3%
<i>Anthriscus sylvestris</i>	Cow Parsley	VLF	1%
<i>Arctium minor</i>	Lesser Burdock	VLF	<1%
<i>Centaurea nigra</i>	Common Knapweed	VLF	<1%
<i>Centaurea scabiosa</i>	Greater Knapweed	VLF	<1%
<i>Cerastium fontanum</i>	Common Mouse-ear	VL	<1%
<i>Chamerion angustifolium</i>	Rosebay Willowherb	VLF	<1%
<i>Cirsium arvense</i>	Creeping Thistle	VF	2%
<i>Cirsium vulgare</i>	Spear Thistle	VLF	<1%
<i>Daucus carota</i>	Wild Carrot	LF	<1%
<i>Epilobium hirsutum</i>	Great Willowherb	LA	3%
<i>Epilobium montanum</i>	Broad-leaved Willowherb	VLF	<1%
<i>Equisetum arvense</i>	Field Horsetail	VLA	<1%
<i>Galium aparine</i>	Cleavers	LA	3%
<i>Geranium dissectum</i>	Cut-leaved Crane's-bill	VA*	1%
<i>Heracleum spondylium</i>	Hogweed	LF	<1%
<i>Leontodon hispidus</i>	Rough Hawkbit	LF	<1%

Continued

TABLE 1 CONTINUED

Scientific name	Common name	Abundance	Cover
<i>Leucanthemum vulgare</i>	Ox-eye Daisy	VLF	<1%
<i>Linaria vulgaris</i>	Common Toadflax	LF	<1%
<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	LF	<1%
<i>Lupinus nootkatensis</i>	Lupin	VL	<1%
<i>Medicago lupulina</i>	Black Medick	VLA	<1%
<i>Oenanthe crocata</i>	Hemlock Water Dropwort	LF	<1%
<i>Plantago lanceolata</i>	Ribwort Plantain	LF	<1%
<i>Plantago major</i>	Greater Plantain	R	<1%
<i>Potentilla anserine</i>	Silverweed	LF	1%
<i>Primula veris</i>	Cowslip	LF	<1%
<i>Pulicaria dysenterica</i>	Common Fleabane	LF	<1%
<i>Ranunculus acris</i>	Meadow Buttercup	LF	<1%
<i>Ranunculus repens</i>	Creeping Buttercup	LF	<1%
<i>Reseda lutea</i>	Weld	VLF	<1%
<i>Rubus fruticosus</i>	Bramble	LA	3%
<i>Rumex acetosa</i>	Common Sorrel	VL	<1%
<i>Rumex crispus</i>	Curled Dock	LF	<1%
<i>Rumex obtusifolius</i>	Broad leaved Dock	LF	<1%
<i>Senecio jacobaea</i>	Ragwort	VL	<1%
<i>Silene dioica</i>	Red Campion	VLF	<1%
<i>Solanum dulcamara</i>	Bittersweet	VLF	<1%
<i>Sonchus arvensis</i>	Perennial Sow-thistle	VL	<1%
<i>Sonchus asper</i>	Prickly Sow-thistle	R	<1%
<i>Sonchus oleraceus</i>	Smooth Sow-thistle	VL	<1%
<i>Taraxacum officinale</i>	Dandelion	O	<1%
<i>Tragopogon pratensis</i>	Goat's-beard	VL	<1%
<i>Trifolium pratense</i>	Red Clover	LF	<1%
<i>Trifolium repens</i>	White Clover	VLF	<1%
<i>Tripleurospermum maritimum</i>	Sea Mayweed	VL	<1%
<i>Tussilago farfara</i>	Coltsfoot	VLF	<1%
<i>Urtica dioica</i>	Common Nettle	LA/VLD	10%
<i>Vicia hirta</i>	Hairy Tare	VL	<1%
<i>Vicia sativa</i>	Common Vetch	LF	2%

Key to abbreviations: D = Dominant, COD = Co-dominant, A = Abundant, F = Frequent, O = Occasional, L = Local/locally, R = Rare, V = Very, * = constant species.