

Laois Esker survey 2005

Volume II: Appendices

Report prepared for Laois Heritage Forum

An Action of the Laois Heritage Plan 2002-2006



The Ridge Graveyard, Portlaoise, is on "The Ridge of Portlaoise" esker

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Appendix 1 Esker systems in County Laois

<i>Esker system name</i>	<i>Esker system number</i>	<i>Overall area of system (hectares)</i>	<i>Number of segments</i>	<i>Individual segment notation</i>	<i>Area of individual segments (ha)</i>	<i>Habitat map number</i>
Cloonagh esker	1	5.12	1	1a	5.12	1, 2
Portlaoise esker ("The Ridge of Portlaoise" or "Ridge of Maryborough")	2	112.12	24	2a	0.87	3
				2b	2.38	4
				2c	4.97	5
				2d	1.93	5
				2e	1.31	5
				2f	2.75	6
				2g	1.15	7
				2h	13.63	7, 8, 9
				2i	7.14	8, 9
				2j	0.90	9
				2k	0.59	10
				2l	8.22	10, 11, 12
				2m	2.10	11, 12
				2n	1.42	12
				2o	8.81	13, 14
				2p	9.39	14, 15, 16
				2q	10.49	17, 18
				2r	3.64	18, 20
				2s	4.98	23
				2t	14.92	24, 25
				2u	4.10	25
				2v	0.82	28
				2w	5.22	28, 29
				2x	0.39	29
Ballytegan esker	3	8.25	2	3a	6.29	19
				3b	1.95	21
Borris Little esker	4	4.37	1	4a	4.37	21
Ballyroan esker	5	2.06	2	5a	1.54	22
				5b	0.52	26
Ballymooney-Derry- west Timahoe esker	6	34.14	14	6a	0.98	24
				6b	0.45	24
				6c	2.36	27
				6d	1.50	27
				6e	1.70	27
				6f	1.88	34
				6g	8.76	34, 35
				6h	8.45	38, 39
				6i	2.06	35
				6j	0.76	39
				6k	1.52	39
				6l	0.78	39
				6m	1.16	38

<i>Esker system name</i>	<i>Esker system number</i>	<i>Overall area of system (hectares)</i>	<i>Number of segments</i>	<i>Individual segment notation</i>	<i>Area of individual segments (ha)</i>	<i>Habitat map number</i>
				6n	1.78	
Raheenduff Little esker	7	1.76	1	7a	1.76	38
Stradbally esker	8	25.75	4	8a	5.61	30
				8b	5.63	31
				8c	6.52	32
				8d	8.00	33
Timahoe esker	9	61.88	5	9a	10.81	34, 35
				9b	30.04	35, 36, 37
				9c	16.19	40
				9d	4.32	40
				9e	0.52	40

Appendix 2 Plant species recorded from eskers in County Laois

Plant species		Esker segment (only segments from which species were recorded are listed); gyard=Ridge graveyard																															
		2b	2c	2d	2e	2g/h	2i	2o	2p	2q	2r	2s	2t	2u	2v	2w	2ya	3a	4a	5a	6b	6c	6d	6f	6g	6h	6m	7a	8a	8b	9a	9b	9c
Agrimony	<i>Agrimonia eupatoria</i>										x	x																				x	
Alder	<i>Alnus glutinosa</i>											x											x		x								x
American willowherb	<i>Epilobium ciliatum</i>																														x		
Annual meadow grass	<i>Poa annua</i>				x			x								x																	
Apple	<i>Malus domestica</i>																															x	
Ash	<i>Fraxinus excelsior</i>	x	x	x	x	x		x	x	x	x	x	x	x			x	x	x	x	x	x		x	x		x	x	x	x	x	x	
Aspen	<i>Populus tremula</i>								x																x								
Autumn hawkbit	<i>Leontodon autumnalis</i>																								x							x	
Barren strawberry	<i>Potentilla sterilis</i>				x			x	x															x			x				x	x	
Beech	<i>Fagus sylvatica</i>	x						x	x		x	x	x	x						x				x			x	x	x	x	x		
Bird's-foot trefoil	<i>Lotus corniculatus</i>	x	x	x	x			x	x	x	x	x					x	x	x					x	x					x	x	x	
Bittersweet	<i>Solanum dulcamara</i>										x																						
Black medick	<i>Medicago lupulina</i>	x		x	x			x	x		x	x				x								x	x					x	x	x	
Black poplar	<i>Populus nigra</i>										x																			x			
Black spleenwort	<i>Asplenium adiantum-nigrum</i>										x																					x	
Blackthorn	<i>Prunus spinosa</i>	x	x		x			x	x	x		x	x				x	x					x			x	x	x		x	x	x	
Bladder campion	<i>Silene vulgaris</i>								x	x	x																				x		
Blue fleabane	<i>Erigeron acer</i>										x																					x	
Bluebell	<i>Hyacinthoides non-scripta</i>																																
Box	<i>Buxus sempervirens</i>											x																					
Bracken	<i>Pteridium aquilinum</i>	x	x					x	x	x																							
Bramble	<i>Rubus fruticosus</i> agg.	x	x	x	x	x		x	x	x	x	x	x	x	x	x																	
Branched bur-reed	<i>Sparganium erectum</i>																										x						
Broad buckler-fern	<i>Dryopteris dilatata</i>																																
Broad-leaved dock	<i>Rumex obtusifolius</i>											x														x						x	
Broad-leaved willowherb	<i>Epilobium montanum</i>																																
Brooklime	<i>Veronica beccabunga</i>																																
Buckthorn	<i>Rhamnus cathartica</i>	x	x									x																				x	
Bugle	<i>Ajuga reptans</i>																																
Bulbous buttercup	<i>Ranunculus bulbosus</i>																																
Bulrush	<i>Typha latifolia</i>																																
Burdock	<i>Arctium minus</i>												x	x																			
Burnet rose	<i>Rosa pimpinellifolia</i>																																
Burnet-saxifrage	<i>Pimpinella saxifraga</i>																																
Bush vetch	<i>Vicia sepium</i>	x	x																														
Butcher's-broom	<i>Ruscus aculeatus</i>																																
Carlina thistle	<i>Carlina vulgaris</i>																																
Changing forget-me-not	<i>Myosotis discolor</i>																																
Cherry laurel	<i>Prunus laurocerasus</i>																																
Chickweed	<i>Stellaria media</i>																																
Cock's-foot	<i>Dactylis glomerata</i>	x	x	x	x	x																											
Colt's-foot	<i>Tussilago farfara</i>																																
Columbine	<i>Aquilegia vulgaris</i>																																
Common bent grass	<i>Agrostis capillaris</i>	x	x	x	x	x																											

Common name	Scientific name	2b	2c	2d	2e	2g/h	2l	2o	2p	2q	2r	2s	2t	2u	2w	g	3a	4a	5b	6c	6d	6f	6g	6h	6m	7a	8a	8b	9a	9b	9c
Field scabious	<i>Knautia arvensis</i>	x			x		x	x	x	x	x			x	x		x						x					x		x	
Field wood-rush	<i>Luzula campestris</i>	x						x		x	x							x					x								
Field-rose	<i>Rosa arvensis</i>										x							x													
Floating sweet-grass	<i>Glyceria fluitans</i>																							x							
Flowering currant	<i>Ribes sanguineum</i>																													x	
Fool's watercress	<i>Apium nodiflorum</i>																														
Garden rose	<i>Rosa sp. (cultivar)</i>																							x							
Garlic mustard	<i>Alliaria petiolata</i>							x	x		x				x					x			x	x							
Germander speedwell	<i>Veronica chamaedrys</i>	x		x	x	x		x	x	x	x					x							x	x	x	x	x	x	x	x	
Glaucous sedge	<i>Carex flacca</i>	x	x					x	x	x		x	x			x	x	x					x	x				x		x	
Goat willow	<i>Salix caprea</i>								x	x								x						x						x	
Goldenrod	<i>Solidago vigaurea</i>							x	x	x																					
Gooseberry	<i>Ribes uva-crispa</i>																											x			
Gorse	<i>Ulex europaeus</i>	x	x	x	x			x		x					x		x			x	x		x	x	x			x		x	
Great mullein	<i>Verbascum thapsus</i>									x	x																		x	x	
Great willowherb	<i>Epilobium hirsutum</i>		x						x															x				x		x	
Greater celandine	<i>Chelidonium majus</i>									x																					
Greater plantain	<i>Plantago major</i>			x		x			x	x										x				x			x	x			
Greater stitchwort	<i>Stellaria holostea</i>									x	x												x		x						
Ground elder	<i>Aegopodium podagraria</i>							x			x		x													x					
Ground ivy	<i>Glechoma hederacea</i>				x	x				x		x	x		x								x	x	x	x	x	x	x	x	
Groundsel	<i>Senecio vulgaris</i>															x															
Guelder-rose	<i>Viburnum opulus</i>									x						x		x													
Hairy bittercress	<i>Cardamine hirsuta</i>																x							x							
Hairy brome	<i>Bromopsis ramosa</i>							x		x	x													x		x				x	
Hairy sedge	<i>Carex hirta</i>	x		x																			x								
Hard rush	<i>Juncus inflexus</i>								x		x													x						x	
Hard shield-fern	<i>Polystichum aculeatum</i>										x																			x	
Hart's-tongue fern	<i>Phyllitis scolopendrium</i>							x	x	x	x													x		x			x	x	
Hazel	<i>Corylus avellana</i>	x	x	x		x		x	x	x	x	x	x		x		x		x	x			x	x	x	x	x	x	x	x	
Heath speedwell	<i>Veronica officinalis</i>				x																			x						x	
Heath spotted-orchid	<i>Dactylorhiza maculata</i>									x						x															
Hedge bindweed	<i>Calystegia sepium</i>				x					x														x	x		x			x	
Hedge mustard	<i>Sisymbrium officinale</i>				x	x			x	x	x													x						x	
Hedge woundwort	<i>Stachys sylvatica</i>								x	x		x												x	x	x	x		x	x	
Herb robert	<i>Geranium robertianum</i>	x			x	x	x		x	x	x	x					x						x	x	x	x	x	x	x	x	
Hoary willowherb	<i>Epilobium parviflorum</i>																							x	x						
Hogweed	<i>Heracleum sphondylium</i>	x		x		x			x	x							x	x	x					x	x	x	x	x		x	
Holly	<i>Ilex aquifolium</i>	x						x	x	x		x	x						x					x		x			x	x	
Honeysuckle	<i>Lonicera periclymenum</i>								x	x	x	x	x	x										x	x		x	x	x	x	
Horse chestnut	<i>Aesculus hippocastanum</i>	x													x									x							
Irish whitebeam	<i>Sorbus hibernica</i>										x	x							x												
Ivy	<i>Hedera helix</i>	x			x	x	x		x	x	x				x		x	x						x	x		x	x	x	x	
Ivy broomrape	<i>Orobanchae hederae</i>					x		x	x	x																					
Japanese knotweed	<i>Fallopia japonica</i>																							x							
Kidney-vetch	<i>Anthyllis vulneraria</i>								x	x									x											x	
Knotgrass	<i>Polygonum aviculare</i>					x			x	x															x						

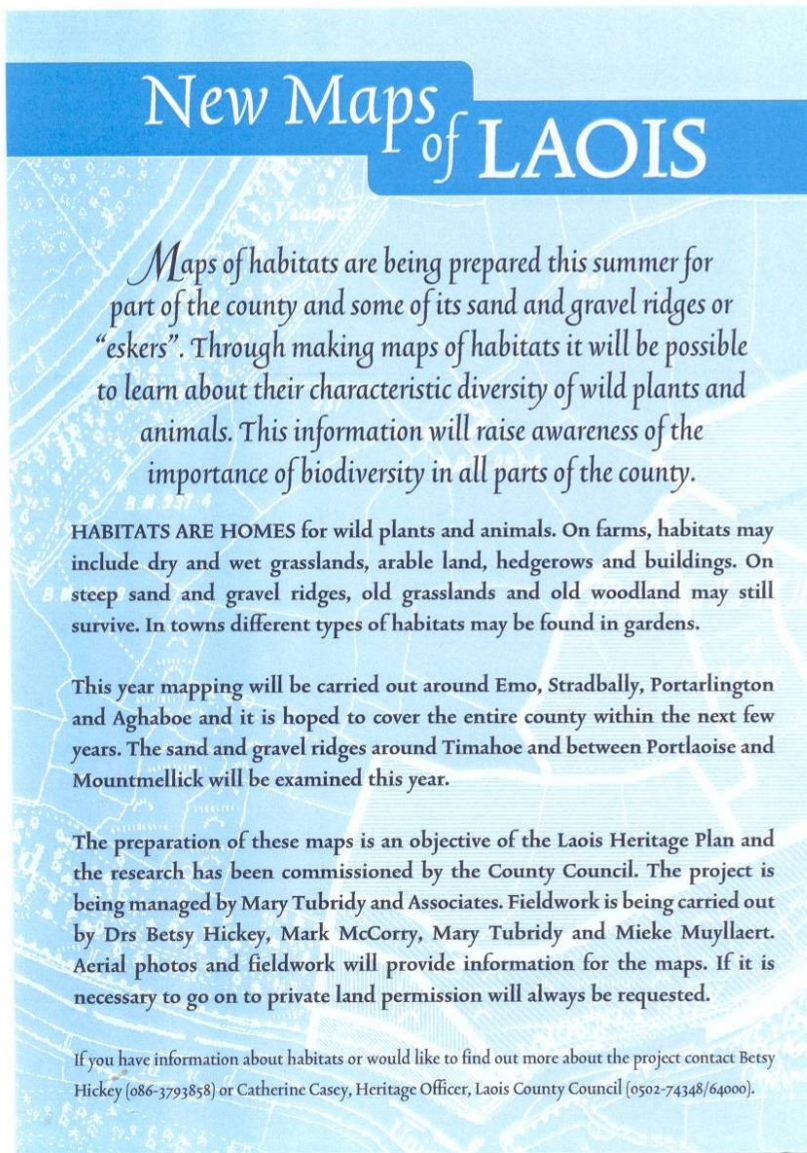
Common name	Scientific name	2b	2c	2d	2e	2g/h	2i	2l	2o	2p	2q	2r	2s	2t	2u	2w	g ya	3 a	4 a	5 b	6 c	6 d	6f	6g	6h	6m	7a	8 a	8 b	9 a	9 b	9c
Laburnum	<i>Laburnum anagyroides</i>											x																				
Lady-fern	<i>Athyrium filix-femina</i>																													x		
Lady's bedstraw	<i>Galium verum</i>	x	x	x	x				x	x	x	x	x	x		x	x		x	x				x	x				x	x		
Lady's mantle	<i>Alchemilla filicaulis</i>											x																		x		
Lady's mantle	<i>Alchemilla sp.</i>																				x											
Lady's mantle	<i>Alchemilla xanthochlora</i>			x																												
Lady's smock	<i>Cardamine pratensis</i>																								x							
Lesser hawkbit	<i>Leontodon saxatilis</i>		x						x	x	x		x				x	x			x										x	
Lesser spearwort	<i>Ranunculus flammula</i>																															
Lesser stitchwort	<i>Stellaria graminea</i>			x													x															x
Lesser trefoil	<i>Trifolium dubium</i>									x				x					x	x	x			x	x							
	<i>Cupressocyparis leylandii x</i>										x																					
Lilac	<i>Syringa vulgaris</i>								x	x						x											x					
Lime	<i>Tilia cordata</i>														x																	
Long-headed poppy	<i>Papaver dubium</i>																								x							
	<i>Asplenium trichomanes</i>																															x
Maidenhair spleenwort																																
Male fern	<i>Dryopteris filix-mas</i>								x	x					x												x		x	x		
Maple species	<i>Acer sp.</i>																															x
Marsh cudweed	<i>Gnaphalium uliginosum</i>								x																							
Marsh foxtail	<i>Alopecurus geniculatus</i>														x																	
Marsh thistle	<i>Cirsium palustre</i>																															x
Marsh woundwort	<i>Stachys palustre</i>																								x							
Meadow buttercup	<i>Ranunculus acris</i>			x	x				x					x							x				x	x						x
Meadow sweet	<i>Filipendula vulgaris</i>		x						x	x															x	x						
Meadow thistle	<i>Cirsium dissectum</i>																								x							
Meadow vetchling	<i>Lathyrus pratensis</i>	x	x	x	x				x	x	x	x					x				x											x
Mock-orange	<i>Philadelphus sp.</i>																											x				x
Mountain ash	<i>Sorbus aucuparia</i>			x																												
Mouse-ear chickweed	<i>Cerastium fontanum</i>			x	x					x	x				x	x					x				x	x			x	x	x	x
Mouse-ear hawkweed	<i>Pilosella officinarum</i>				x				x	x	x	x	x				x				x				x	x						x
Mugwort	<i>Artemesia vulgaris</i>										x																					
Narrow-fruited water- cress	<i>Rorippa microphylla</i>																															
Nettle-leaved bellflower	<i>Campanula trachelium</i>								x	x	x			x																		
Nettle-leaved bellflower	<i>Urtica dioica</i>				x	x			x	x	x			x	x							x		x	x	x	x	x	x	x	x	x
Nipplewort	<i>Lapsana communis</i>			x					x	x	x	x										x		x	x	x	x					x
Old-man's beard	<i>Clematis vitalba</i>																								x	x						x
Opposite-leaved golden saxifrage	<i>Chrysosplenium oppositifolium</i>																					x										
Orchid	<i>Orchid species</i>									x																						x
Osier	<i>Salix viminalis</i>									x																x						x
Pedunculate oak	<i>Quercus robur</i>			x	x				x		x	x	x	x	x	x							x	x	x			x	x	x	x	
Perforate St. John's-wort	<i>Hypericum perforatum</i>	x	x						x	x	x	x													x	x						x
Pignut	<i>Conopodium majus</i>			x						x	x																					
Pineapple weed	<i>Matricaria discoidea</i>																															
Poplar	<i>Populus sp.</i>															x																
Portugal laurel	<i>Prunus lusitanica</i>																															x
Prickly sow-thistle	<i>Sonchus asper</i>									x																						x

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Primrose	<i>Primula vulgaris</i>			x	x			x	x	x	x	x	x			x					x	x					x	x	x	x			
Privet	<i>Ligustrum vulgare</i>	x	x	x		x		x	x		x	x							x	x					x	x					x	x	
Purple loosestrife	<i>Lythrum salicaria</i>																								x								
Pyramidal orchid	<i>Anacamptis pyramidalis</i>											x	x	x		x																	
Quaking grass	<i>Briza media</i>	x	x			x		x	x	x	x	x				x			x	x	x			x	x					x	x		
Ragwort	<i>Senecio jacobaea</i>		x	x	x	x		x	x	x			x			x	x	x			x			x	x		x		x	x	x	x	
Raspberry	<i>Rubus idaeus</i>																								x								
Red bartsia	<i>Odontites vernus</i>			x	x				x	x		x												x	x		x		x			x	
Red clover	<i>Trifolium pratense</i>	x		x	x	x		x	x	x	x	x	x			x	x	x	x	x	x			x	x				x	x	x	x	
Red fescue	<i>Festuca rubra</i>	x	x	x	x	x		x	x	x	x	x	x			x	x	x	x	x	x			x	x	x	x			x	x	x	
Redcurrant	<i>Ribes rubrum</i>											x																					
Redshank	<i>Polygonum persicaria</i>										x														x								
Reed canary-grass	<i>Phalaris arundinacea</i>		x																														
Remote sedge	<i>Carex remota</i>																					x							x			x	
Rhododendron	<i>Rhododendron ponticum</i>																											x					
Ribwort plantain	<i>Plantago lanceolata</i>	x	x	x	x	x		x	x	x	x	x				x	x	x	x	x	x			x	x				x	x	x	x	
Rosebay willowherb	<i>Chamerion angustifolium</i>	x	x																					x	x				x			x	
Rough hawkbit	<i>Leontodon hispidus</i>			x																													
Rough meadow grass	<i>Poa trivialis</i>			x	x													x	x													x	
Rustyback fern	<i>Ceterach officinarum</i>																															x	
Rye grass	<i>Lolium perenne</i>			x	x	x		x	x			x	x	x		x		x		x	x			x	x		x		x			x	
Sally	<i>Salix cinerea</i>	x	x	x	x	x		x		x										x	x			x	x	x		x	x	x	x	x	
Scaly male-fern	<i>Dryopteris affinis</i>	x			x			x	x	x														x					x				
Scarlet pimpernel	<i>Anagallis arvensis</i>								x																x								
Scots pine	<i>Pinus sylvestris</i>								x	x		x												x					x				
Selfheal	<i>Prunella vulgaris</i>			x		x		x	x	x		x	x	x		x				x	x			x	x				x	x	x	x	
Sharp-flowered rush	<i>Juncus acutiflorus</i>												x												x							x	x
Sheep's-fescue	<i>Festuca ovina</i>															x																	
Shepherd's-purse	<i>Capsella bursa-pastoris</i>										x							x															
Silver fir	<i>Abies alba</i>																															x	x
Silverweed	<i>Potentilla anserina</i>	x			x			x	x	x															x	x		x	x			x	x
Sitka spruce	<i>Picea sitchensis</i>																															x	
Slender St. John's-wort	<i>Hypericum pulchrum</i>		x							x		x													x	x			x			x	
Smooth hawk's-beard	<i>Crepis capillaris</i>							x			x						x																
Smooth meadow grass	<i>Poa pratensis</i>			x		x																x											
Smooth sow-thistle	<i>Sonchus oleraceus</i>		x														x								x								
Snowberry	<i>Symphoricarpos albus</i>					x		x									x								x		x					x	
Soapwort	<i>Saponaria officinalis</i>																																x
Soft rush	<i>Juncus effusus</i>											x																					x
Soft shield-fern	<i>Polystichum setiferum</i>			x				x	x	x						x									x		x	x	x	x	x	x	
Spear thistle	<i>Cirsium vulgare</i>					x		x	x	x															x	x		x		x	x	x	x
Spindle	<i>Euonymus europaeus</i>										x														x	x		x	x	x	x	x	x
Spring sedge	<i>Carex caryophylla</i>					x							x																				x
Square-stalked St. John's-wort	<i>Hypericum tetrapterum</i>	x																															
Stonewort	<i>Chara sp.</i>																									x							
Sweet vernal grass	<i>Anthoxanthum odoratum</i>	x						x	x	x	x		x													x		x				x	x
Sycamore	<i>Acer pseudoplatanus</i>		x					x	x	x	x	x	x	x											x	x		x				x	x

Common name	Scientific name	2b	2c	2d	2e	2g/h	2i	2o	2p	2q	2r	2s	2t	2u	2v	g ya	3a	4a	5b	6c	6d	6f	6g	6h	6m	7a	8a	8b	9a	9b	9c	
Tansy	<i>Tanacetum vulgare</i>							x																								
Teasel	<i>Dipsacus fullonum</i>																						x									
Thyme-leaved sandwort	<i>Arenaria serpyllifolia</i>					x					x																			x		
Thyme-leaved speedwell	<i>Veronica serpyllifolia</i>																x															
Timothy	<i>Phleum pratense</i>	x		x	x					x		x	x			x	x			x			x	x		x			x	x		
Tormentil	<i>Potentilla erecta</i>																														x	
Tufted forget-me-not	<i>Myosotis laxa</i>																							x								
Tufted hair-grass	<i>Deschampsia cespitosa</i>		x	x																									x			
Tufted vetch	<i>Vicia cracca</i>	x	x		x			x	x	x	x								x					x					x			
Tutsan	<i>Hypericum androsaemum</i>							x	x	x														x						x		
Upright brome	<i>Bromopsis erecta</i>															x																
Upright hedge-parsley	<i>Torilis japonica</i>				x	x		x	x	x													x	x		x		x	x		x	
Violet	<i>Viola sp.</i>		x		x			x	x	x		x	x			x	x		x	x			x		x	x	x	x	x	x		
Wall Cotoneaster	<i>Cotoneaster horizontalis</i>																														x	
Wall lettuce	<i>Mycelis muralis</i>									x														x								
Wall rue	<i>Asplenium ruta-muraria</i>																														x	
Water horsetail	<i>Equisetum fluviatile</i>																															
Water mint	<i>Mentha aquatica</i>																								x					x		
Water plantain	<i>Alisma plantago-aquatica</i>																								x							
Water-cress	<i>Rorippa nasturtium-aquaticum</i>																								x							
Weld	<i>Reseda luteola</i>							x	x															x	x						x	
White clover	<i>Trifolium repens</i>		x	x	x			x	x	x	x	x	x		x	x		x	x	x			x	x			x	x	x	x	x	
White poplar	<i>Populus alba</i>									x																						
White willow	<i>Salix alba</i>																								x							
Whitebeam	<i>Sorbus aria</i>							x																								
Whitethorn	<i>Crataegus monogyna</i>	x	x	x	x	x		x		x	x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x	x	x	x	x	
Wild carrot	<i>Daucus carota</i>	x	x	x	x	x		x	x	x		x					x	x	x				x	x	x					x		
Wild cherry	<i>Prunus avium</i>																										x			x		
Wild marjoram	<i>Origanum vulgare</i>	x				x		x	x	x																						
Wild plum	<i>Prunus domestica</i>								x	x	x																					
Wild radish	<i>Raphanus raphanistrum</i>																x															
Wild strawberry	<i>Fragaria vesca</i>							x	x	x	x	x						x					x	x					x	x	x	
Willow hybrid	<i>Salix x multinervis</i>	x	x																					x	x							
Wilson's honeysuckle	<i>Lonicera nitida</i>									x															x							
Winter cress	<i>Barbarea vulgaris</i>																							x								
Wood avens	<i>Geum urbanum</i>			x	x	x		x	x	x	x	x		x								x		x	x	x	x	x	x	x	x	
Wood dock	<i>Rumex sanguineus</i>			x	x	x		x	x	x													x	x								
Wood false-brome	<i>Brachypodium sylvaticum</i>	x		x	x			x	x	x	x	x						x					x	x					x	x	x	
Wood melick	<i>Melica uniflora</i>			x				x	x	x																						
Wood sanicle	<i>Sanicula europaea</i>			x				x	x	x		x	x										x									
Wood sedge	<i>Carex sylvatica</i>									x			x																x	x	x	
Wood sorrel	<i>Oxalis acetosella</i>								x	x														x								x
Wood speedwell	<i>Veronica montana</i>			x		x				x													x									
Wych elm	<i>Ulmus glabra</i>							x	x	x	x	x	x	x	x									x						x	x	
Yarrow	<i>Achillea millefolium</i>	x	x	x	x	x		x	x	x													x	x						x	x	

Common name	Scientific name	2b	2c	2d	2e	2g/h	2l	2o	2p	2q	2r	2s	2t	2u	2w	g	3	4	5	6	6	6	6	6	6	6	7a	8	8	9	9
Yellow oat-grass	<i>Trisetum flavescens</i>				x			x				x	x		x	x		x												x	x
Yellow pimpernel	<i>Lysimachia nemorum</i>																				x										x
Yellow rattle	<i>Rhinanthus minor</i>												x																		
Yellow-wort	<i>Blackstonia perfoliata</i>								x																						
Yew	<i>Taxus baccata</i>								x					x	x						x								x		
Yorkshire fog	<i>Holcus lanatus</i>	x		x	x			x	x	x	x	x	x		x	x	x			x	x			x	x	x	x		x	x	x

Appendix 3 Information leaflet



New Maps of LAOIS

Maps of habitats are being prepared this summer for part of the county and some of its sand and gravel ridges or “eskers”. Through making maps of habitats it will be possible to learn about their characteristic diversity of wild plants and animals. This information will raise awareness of the importance of biodiversity in all parts of the county.

HABITATS ARE HOMES for wild plants and animals. On farms, habitats may include dry and wet grasslands, arable land, hedgerows and buildings. On steep sand and gravel ridges, old grasslands and old woodland may still survive. In towns different types of habitats may be found in gardens.

This year mapping will be carried out around Emo, Stradbally, Portarlinton and Aghaboe and it is hoped to cover the entire county within the next few years. The sand and gravel ridges around Timahoe and between Portlaoise and Mountmellick will be examined this year.

The preparation of these maps is an objective of the Laois Heritage Plan and the research has been commissioned by the County Council. The project is being managed by Mary Tubridy and Associates. Fieldwork is being carried out by Drs Betsy Hickey, Mark McCorry, Mary Tubridy and Mieke Muyllaert. Aerial photos and fieldwork will provide information for the maps. If it is necessary to go on to private land permission will always be requested.

If you have information about habitats or would like to find out more about the project contact Betsy Hickey (086-3793858) or Catherine Casey, Heritage Officer, Laois County Council (0502-74348/64000).

Appendix 4 Available past plant records from some of the 1km squares covering eskers

1=from Laois vice county records, mostly atlas records 1997-2000

	Includes a number of 1km squares in the vicinity of Portlaoise	Mountmellick bog	Portlaoise	Grantstown townland	Dunamase rock and wood	North of Timahoe, parallel ridges	Aghnahilly, east of Dunamase	West of Dunamase, woodland	Part of Park lower and Grange lower	
	N40 mixed	N4603	N4798	S3380	S5298	S5391	S5497	S5498	S5597	
<i>Acer pseudoplatanus</i>			1	1	1	1			1	Sycamore
<i>Achillea millefolium</i>			1	1			1		1	Yarrow
<i>Achillea ptarmica</i>							1			Sneezewort
<i>Aegopodium podagraria</i>			1	1						Ground-elder
<i>Agrimonia eupatoria</i>				1					1	Agrimony
<i>Agrostis capillaris</i>									1	Common Bent
<i>Agrostis stolonifera</i>			1	1						Creeping Bent
<i>Ajuga reptans</i>			1							Bugle
<i>Alliaria petiolata</i>			1							Garlic Mustard
<i>Alnus glutinosa</i>	1			1						Alder
<i>Alopecurus pratensis</i>			1							Meadow Foxtail
<i>Anagallis arvensis</i> subsp. <i>arvensis</i>									1	Scarlet Pimpernel
<i>Anagallis tenella</i>	1									Bog Pimpernel
<i>Andromeda polifolia</i>		1								Bog-rosemary
<i>Angelica sylvestris</i>			1						1	Wild Angelica
<i>Anthoxanthum odoratum</i>			1					1		Sweet Vernal-grass
<i>Anthriscus sylvestris</i>			1							Cow Parsley
<i>Aphanes arvensis</i>									1	Parsley-piert
<i>Apium nodiflorum</i>			1						1	Fool's-water-cress
<i>Arabidopsis thaliana</i>			1							Thale Cress
<i>Arctium minus</i>			1	1	1				1	Lesser Burdock
<i>Arenaria serpyllifolia</i> subsp. <i>serpyllifolia</i>			1							Thyme-leaved Sandwort
<i>Arrhenatherum elatius</i>	1		1	1					1	False Oat-grass
<i>Artemisia vulgaris</i>				1					1	Mugwort
<i>Arum maculatum</i>			1	1	1	1	1	1		Lords-and-Ladies
<i>Asplenium ruta-muraria</i>			1						1	Wall-rue
<i>Asplenium trichomanes</i>			1	1					1	Maidenhair Spleenwort

	Includes a number of 1km squares in the vicinity of Portlaoise	Mountmellick bog	Portlaoise	Grantstown townland	Dunamase rock and wood	North of Timahoe, parallel ridges	Aghnahilly, east of Dunamase	West of Dunamase, woodland	Part of Park lower and Grange lower	
<i>Atriplex patula</i>									1	Common Orache
<i>Barbarea vulgaris</i>			1							Winter-ress
<i>Bellis perennis</i>			1				1		1	Daisy
<i>Betula pubescens</i>	1	1		1	1	1		1		Downy Birch
<i>Blechnum spicant</i>						1				Hard-fern
<i>Brachypodium sylvaticum</i>			1	1	1	1	1	1	1	False-brome
<i>Brassica napus</i>			1							Rape
<i>Briza media</i>	1							1		Quaking-grass
<i>Bromopsis ramosa</i>				1						Hairy-brome
<i>Bromus hordeaceus</i> subsp. <i>hordeaceus</i>			1							Common Soft-brome
<i>Calluna vulgaris</i>		1		1					1	Heather
<i>Calystegia sepium</i>				1					1	Hedge Bindweed
<i>Capsella bursa-pastoris</i>			1						1	Shepherd's-purse
<i>Cardamine pratensis</i>			1	1						Cuckooflower
<i>Carex disticha</i>	1									Brown Sedge
<i>Carex elata</i>			1							Tufted-sedge
<i>Carex flacca</i>	1		1	1						Glaucous Sedge
<i>Carex nigra</i>				1						Common Sedge
<i>Carex panicea</i>		1		1						Carnation Sedge
<i>Carex pseudocyperus</i>				1						Cyperus Sedge
<i>Carex remota</i>				1						Remote Sedge
<i>Carex rostrata</i>				1						Bottle Sedge
<i>Carex viridula</i> subsp. <i>brachyrrhyncha</i>			1	1						Long-stalked Yellow-sedge
<i>Carex viridula</i> subsp. <i>oedocarpa</i>			1							Common Yellow-sedge
<i>Centaurea nigra</i>	1			1			1	1	1	Common Knapweed
<i>Centranthus ruber</i>			1							Red Valerian
<i>Cerastium fontanum</i>			1						1	Common Mouse-ear
<i>Cerastium tomentosum</i>			1							Snow-in-summer
<i>Ceterach officinarum</i>				1			1		1	Rustyback
<i>Chenopodium album</i>									1	Fat-hen
<i>Chrysosplenium oppositifolium</i>			1	1						Opposite-leaved Golden-saxifrage
<i>Circaea lutetiana</i>						1	1	1		Enchanter's-nightshade

	Includes a number of 1km squares in the vicinity of Portlaoise	Mountmellick bog	Portlaoise	Grantstown townland	Dunamase rock and wood	North of Timahoe, parallel ridges	Aghnahilly, east of Dunamase	West of Dunamase, woodland	Part of Park lower and Grange lower	
<i>Cirsium arvense</i>			1	1					1	Creeping Thistle
<i>Cirsium dissectum</i>	1			1			1			Meadow Thistle
<i>Cirsium palustre</i>			1	1						Marsh Thistle
<i>Cirsium vulgare</i>			1						1	Spear Thistle
<i>Cladium mariscus</i>				1						Great Fen-sedge
<i>Clinopodium vulgare</i>									1	Wild Basil
<i>Cochlearia danica</i>			1							Danish Scurvygrass
<i>Conium maculatum</i>				1						Hemlock
<i>Conopodium majus</i>			1							Pignut
<i>Cornus sanguinea</i>			1							Dogwood
<i>Corylus avellana</i>			1	1	1	1	1	1	1	Hazel
<i>Crataegus monogyna</i>			1	1	1	1		1	1	Hawthorn
<i>Crepis capillaris</i>			1	1					1	Smooth Hawk's-beard
<i>Crepis vesicaria</i>			1							Beaked Hawk's-beard
<i>Cymbalaria muralis</i>			1	1						Ivy-leaved Toadflax
<i>Cynosurus cristatus</i>									1	Crested Dog's-tail
<i>Dactylis glomerata</i>	1		1	1	1	1		1	1	Cock's-foot
<i>Dactylorhiza fuchsii</i>	1			1						Common Spotted-orchid
<i>Daucus carota</i>			1	1					1	Carrot
<i>Deschampsia cespitosa</i> subsp. <i>cespitosa</i>	1		1	1						Tufted Hair-grass
<i>Dipsacus fullonum</i>				1						Wild Teasel
<i>Drosera anglica</i>		1								Great Sundew
<i>Drosera rotundifolia</i>		1								Round-leaved Sundew
<i>Dryopteris affinis</i>			1				1			Scaly Male-fern
<i>Dryopteris dilatata</i>			1	1						Broad Buckler-fern
<i>Dryopteris filix-mas</i>			1	1	1	1	1	1	1	Male-fern
<i>Elytrigia repens</i>				1					1	Common Couch
<i>Epilobium hirsutum</i>	1			1					1	Great Willowherb
<i>Epilobium montanum</i>				1						Broad-leaved Willowherb
<i>Epilobium parviflorum</i>				1					1	Hoary Willowherb
<i>Equisetum arvense</i>	1		1						1	Field Horsetail
<i>Equisetum fluviatile</i>			1							Water Horsetail

	Includes a number of 1km squares in the vicinity of Portlaoise	Mountmellick bog	Portlaoise	Grantstown townland	Dunamase rock and wood	North of Timahoe, parallel ridges	Aghnahilly, east of Dunamase	West of Dunamase, woodland	Part of Park lower and Grange lower	
<i>Erica tetralix</i>		1								Cross-leaved Heath
<i>Eriophorum angustifolium</i>		1		1						Common Cottongrass
<i>Eriophorum vaginatum</i>		1								Hare's-tail Cottongrass
<i>Erophila verna</i>			1							Common Whitlowgrass
<i>Euonymus europaeus</i>				1					1	Spindle
<i>Euphorbia helioscopia</i>				1					1	Sun Spurge
<i>Euphorbia peplus</i>			1						1	Petty Spurge
<i>Euphrasia officinalis</i> agg.	1								1	Eyebright
<i>Fagus sylvatica</i>			1			1	1		1	Beech
<i>Fallopia convolvulus</i>				1						Black-bindweed
<i>Festuca arundinacea</i>				1						Tall Fescue
<i>Festuca rubra</i>			1	1						Red Fescue
<i>Filipendula ulmaria</i>			1	1			1		1	Meadowsweet
<i>Fragaria vesca</i>			1	1	1		1	1	1	Wild Strawberry
<i>Fraxinus excelsior</i>			1	1	1		1			Ash
<i>Fumaria muralis</i>				1						Common Ramping-fumitory
<i>Fumaria officinalis</i>									1	Common Fumitory
<i>Galium aparine</i>			1	1	1	1	1	1	1	Cleavers
<i>Galium palustre</i>			1	1						Marsh-bedstraw
<i>Galium verum</i>			1			1		1	1	Lady's Bedstraw
<i>Geranium robertianum</i>			1	1	1	1	1	1	1	Herb-Robert
<i>Geum rivale</i>								1		Water Avens
<i>Geum urbanum</i>			1	1	1	1		1	1	Wood Avens
<i>Glechoma hederacea</i>			1	1		1			1	Ground-ivy
<i>Gymnadenia conopsea</i>	1								1	Fragrant Orchid
<i>Hedera helix</i>			1	1	1	1	1	1	1	Ivy
<i>Helictotrichon pubescens</i>									1	Downy Oat-grass
<i>Heracleum sphondylium</i>			1		1				1	Hogweed
<i>Hieracium murorum</i> agg.									1	Hawkweed
<i>Hippuris vulgaris</i>				1						Mare's-tail
<i>Holcus lanatus</i>	1		1		1					Yorkshire-fog
<i>Hyacinthoides non-scripta</i>			1		1					Bluebell
<i>Hydrocotyle vulgaris</i>				1						Marsh Pennywort

	Includes a number of 1km squares in the vicinity of Portlaoise	Mountmellick bog	Portlaoise	Grantstown townland	Dunmase rock and wood	North of Timahoe, parallel ridges	Aghnahilly, east of Dunmase	West of Dunmase, woodland	Part of Park lower and Grange lower	
Hypericum perforatum				1					1	Perforate St John's-wort
Hypericum pulchrum	1		1	1					1	Slender St John's-wort
Hypericum tetrapterum			1	1						Square-stalked St John's-wort
Hypochaeris radicata			1	1					1	Cat's-ear
Ilex aquifolium			1	1		1	1			Holly
Iris pseudacorus			1	1					1	Yellow Iris
Juncus acutiflorus				1						Sharp-flowered Rush
Juncus articulatus		1	1	1						Jointed Rush
Juncus bulbosus				1						Bulbous Rush
Juncus conglomeratus									1	Compact Rush
Juncus effusus			1	1						Soft-rush
Juncus inflexus	1		1	1					1	Hard Rush
Knautia arvensis									1	Field Scabious
Lamium purpureum				1					1	Red Dead-nettle
Lapsana communis			1	1					1	Nipplewort
Lathyrus linifolius									1	Bitter-vetch
Lathyrus pratensis			1	1					1	Meadow Vetchling
Leontodon saxatilis				1						Lesser Hawkbit
Ligustrum vulgare			1	1					1	Wild Privet
Linum catharticum	1			1					1	Fairy Flax
Lolium multiflorum									1	Italian Rye-grass
Lolium perenne			1						1	Perennial Rye-grass
Lonicera periclymenum			1	1					1	Honeysuckle
Lotus corniculatus				1					1	Common Bird's-foot-trefoil
Lycopus europaeus				1						Gypsywort
Lythrum salicaria			1	1						Purple-loosestrife
Matricaria discoidea			1	1					1	Pineappleweed
Medicago lupulina			1						1	Black Medick
Mentha aquatica	1		1	1					1	Water Mint
Mentha arvensis									1	Corn Mint
Mentha suaveolens x longifolia = M. x rotundifolia									1	False Apple-mint

	Includes a number of 1km squares in the vicinity of Portlaoise	Mountmellick bog	Portlaoise	Grantstown townland	Dunamase rock and wood	North of Timahoe, parallel ridges	Aghnahilly, east of Dunamase	West of Dunamase, woodland	Part of Park lower and Grange lower	
<i>Molinia caerulea</i>	1		1	1				1		Purple Moor-grass
<i>Myosotis scorpioides</i>									1	Water Forget-me-not
<i>Nymphaea alba</i>				1						White Water-lily
<i>Odontites vernus</i>						1			1	Red Bartsia
<i>Origanum vulgare</i>									1	Wild Marjoram
<i>Oxalis acetosella</i>			1		1		1	1		Wood-sorrel
<i>Papaver dubium</i> subsp. <i>dubium</i>									1	Long-headed Poppy
<i>Papaver rhoeas</i>									1	Common Poppy
<i>Persicaria hydropiper</i>									1	Water-pepper
<i>Persicaria lapathifolia</i>									1	Pale Persicaria
<i>Persicaria maculosa</i>			1						1	Redshank
<i>Petasites fragrans</i>				1						Winter Heliotrope
<i>Petasites hybridus</i>			1	1						Butterbur
<i>Phalaris arundinacea</i>			1						1	Reed Canary-grass
<i>Phleum pratense</i>	1								1	Timothy
<i>Phragmites australis</i>	1			1						Common Reed
<i>Phyllitis scolopendrium</i>			1						1	Hart's-tongue
<i>Pilosella officinarum</i>						1				Mouse-ear-hawkweed
<i>Pimpinella saxifraga</i>									1	Burnet-saxifrage
<i>Pinus sylvestris</i>			1						1	Scots Pine
<i>Plantago lanceolata</i>			1						1	Ribwort Plantain
<i>Plantago major</i>			1						1	Greater Plantain
<i>Poa annua</i>			1						1	Annual Meadow-grass
<i>Poa pratensis</i>			1	1					1	Smooth Meadow-grass
<i>Polygonum aviculare</i>									1	Knotgrass
<i>Polygonum cognatum</i>									1	Indian Knotgrass
<i>Polypodium vulgare</i>									1	Polypody
<i>Polystichum setiferum</i>			1				1	1	1	Soft Shield-fern
<i>Potamogeton natans</i>				1						Broad-leaved Pondweed
<i>Potentilla anserina</i>	1		1	1			1		1	Silverweed
<i>Potentilla erecta</i>	1	1	1	1						Tormentil
<i>Potentilla palustris</i>				1						Marsh Cinquefoil
<i>Potentilla reptans</i>	1		1	1					1	Creeping Cinquefoil

	Includes a number of 1km squares in the vicinity of Portlaoise	Mountmellick bog	Portlaoise	Grantstown townland	Dunamase rock and wood	North of Timahoe, parallel ridges	Aghnahilly, east of Dunamase	West of Dunamase, woodland	Part of Park lower and Grange lower	
<i>Potentilla sterilis</i>			1	1						Barren Strawberry
<i>Primula veris</i>			1					1		Cowslip
<i>Prunella vulgaris</i>			1				1		1	Selfheal
<i>Prunus spinosa</i>			1	1		1	1		1	Blackthorn
<i>Pteridium aquilinum</i>			1	1				1	1	Bracken
<i>Pulicaria dysenterica</i>	1								1	Common Fleabane
<i>Quercus petraea</i>					1					Sessile Oak
<i>Ranunculus acris</i>			1						1	Meadow Buttercup
<i>Ranunculus flammula</i>	1			1						Lesser Spearwort
<i>Ranunculus repens</i>			1	1	1				1	Creeping Buttercup
<i>Ranunculus trichophyllus</i>	1		1	1						Thread-leaved Water-crowfoot
<i>Reseda luteola</i>			1						1	Weld
<i>Rhinanthus minor</i>									1	Yellow-rattle
<i>Rhododendron ponticum</i>				1						Rhododendron
<i>Rosa arvensis</i>				1					1	Field-rose
<i>Rosa canina</i>				1	1				1	Dog-rose
<i>Rosa sherardii</i>				1						Sherard's Downy-rose
<i>Rubus caesius</i>					1	1				Dewberry
<i>Rubus fruticosus</i> agg.			1	1			1	1	1	Bramble
<i>Rubus idaeus</i>			1	1						Raspberry
<i>Rumex acetosella</i>									1	Sheep's Sorrel
<i>Rumex conglomeratus</i>									1	Clustered Dock
<i>Rumex crispus</i>			1						1	Curled Dock
<i>Rumex obtusifolius</i>			1	1						Broad-leaved Dock
<i>Rumex sanguineus</i>			1	1						Wood Dock
<i>Sagina procumbens</i>			1						1	Procumbent Pearlwort
<i>Salix aurita</i>	1	1		1						Eared Willow
<i>Salix caprea</i>			1	1					1	Goat Willow
<i>Salix cinerea</i> subsp. <i>oleifolia</i>			1	1					1	Rusty Willow
<i>Salix fragilis</i>			1						1	Crack-willow
<i>Salix repens</i>				1						Creeping Willow
<i>Salix viminalis</i>				1					1	Osier
<i>Sambucus nigra</i>			1						1	Elder

	Includes a number of 1km squares in the vicinity of Portlaoise	Mountmellick bog	Portlaoise	Grantstown townland	Dunamase rock and wood	North of Timahoe, parallel ridges	Aghnahilly, east of Dunamase	West of Dunamase, woodland	Part of Park lower and Grange lower	
<i>Samolus valerandi</i>				1						Brookweed
<i>Saponaria officinalis</i>			1	1						Soapwort
<i>Schoenoplectus lacustris</i> subsp. <i>tabernaemontani</i>				1						Grey Club-rush
<i>Schoenus nigricans</i>	1			1						Black Bog-rush
<i>Scrophularia nodosa</i>									1	Common Figwort
<i>Sedum album</i>									1	White Stonecrop
<i>Senecio jacobaea</i>			1				1	1	1	Common Ragwort
<i>Senecio vulgaris</i>			1						1	Groundsel
<i>Sherardia arvensis</i>									1	Field Madder
<i>Sinapis arvensis</i>			1	1					1	Charlock
<i>Sisymbrium officinale</i>			1						1	Hedge Mustard
<i>Smyrniolum olusatrum</i>				1						Alexanders
<i>Solanum dulcamara</i>			1	1						Bittersweet
<i>Sonchus arvensis</i>	1			1					1	Perennial Sow-thistle
<i>Sonchus asper</i>			1						1	Prickly Sow-thistle
<i>Sonchus oleraceus</i>			1	1					1	Smooth Sow-thistle
<i>Sparganium erectum</i>	1		1	1					1	Branched Bur-reed
<i>Spergula arvensis</i>									1	Corn Spurrey
<i>Stachys palustris</i>				1					1	Marsh Woundwort
<i>Stachys sylvatica</i>			1	1						Hedge Woundwort
<i>Stellaria holostea</i>			1	1					1	Greater Stitchwort
<i>Stellaria media</i>			1						1	Common Chickweed
<i>Succisa pratensis</i>	1			1			1	1	1	Devil's-bit Scabious
<i>Taraxacum officinale</i> agg.			1						1	Dandelion
<i>Thymus vulgaris</i>									1	Garden Thyme
<i>Tilia platyphyllos</i> x <i>cordata</i> = <i>T. x europaea</i>									1	Lime
<i>Torilis japonica</i>				1					1	Upright Hedge-parsley
<i>Tragopogon pratensis</i>									1	Goat's-beard
<i>Trifolium campestre</i>									1	Hop Trefoil
<i>Trifolium dubium</i>			1						1	Lesser Trefoil
<i>Trifolium hybridum</i>									1	Alsike Clover
<i>Trifolium pratense</i>	1		1						1	Red Clover
<i>Trifolium repens</i>			1					1	1	White Clover
<i>Trisetum flavescens</i>									1	Yellow Oat-grass

	Includes a number of 1km squares in the vicinity of Portlaoise	Mountmellick bog	Portlaoise	Grantstown townland	Dunamase rock and wood	North of Timahoe, parallel ridges	Aghnahilly, east of Dunamase	West of Dunamase, woodland	Part of Park lower and Grange lower	
<i>Tussilago farfara</i>				1					1	Colt's-foot
<i>Typha latifolia</i>	1		1	1						Bulrush
<i>Ulex europaeus</i>	1			1			1		1	Gorse
<i>Ulmus glabra</i>			1		1					Wych Elm
<i>Urtica dioica</i>			1	1	1	1		1	1	Common Nettle
<i>Veronica anagallis-aquatica</i>									1	Blue Water-Speedwell
<i>Veronica beccabunga</i>			1	1						Brooklime
<i>Veronica chamaedrys</i>			1				1		1	Germander Speedwell
<i>Veronica montana</i>			1	1						Wood Speedwell
<i>Veronica persica</i>			1						1	Common Field-speedwell
<i>Viburnum opulus</i>	1			1						Guelder-rose
<i>Vicia sepium</i>			1	1					1	Bush Vetch
<i>Vinca major</i>									1	Greater Periwinkle
<i>Viola odorata</i>									1	Sweet Violet
<i>Viola riviniana</i>				1					1	Common Dog-violet