

APPENDIX 1

DATA TABLES

Appendices 1.1-1.2: Datasets used and excluded from classification exercise.

Appendices 1.3-1.7: Summary data for classification of Countryside Stewardship Scheme (CSS), ESA plots (ESAP) and ESA quadrats (ESAQ).

Appendices 1.8-1.13: Summary data from power analysis of Countryside Stewardship Scheme (CSS), ESA plots and ESA quadrats.

Appendix 1.1. Main grassland and upland data sets utilised in data classification.*N* = no. of quadrats or plots

ESA	Type	Baseline Year	Re-survey Years			<i>N</i> ¹	<i>N</i> ²
Avon	P	1993				44	
Blackdown Hills	P	1994, 1995				37	
Broads	Q	1987	1990	1994		330	330
Clun	P	1993, 1994	1996			60	29
Cotswold Hills	P	1995				44	
Dartmoor	P	1994, 1995	1997			70	33
Exmoor	P	1993	1996			49	24
Lake District	P	1993	1994	1996		9	9
North Kent Marshes	P	1993				33	
Pennine Dales (Validation)	Q	1987	1990	1995		310	302
Shropshire Hills	P	1995				32	
Somerset Levels	Q	1988	1990	1995		497	497
Somerset Levels	P	1995	1995	1998		25	25
South Downs	Q	1987	1990	1994		134	134
South Wessex Downs	P	1993	1996			52	50
South West Peak	P	1993, 1994	1996			67	28
Suffolk River Valleys	Q	1988	1991	1993	1996	95	95
Test Valley	Q	1988	1991	1995		145	144
Upper Thames Tributaries	P	1995	1995			40	
West Penwith	P	1993	1996			29	29

¹ Baseline year, ² Baseline and re-survey years

Appendix 1.2. AE scheme datasets excluded from classification.

ESA/Scheme	Type
Breckland	Conservation Headlands Uncropped Wildlife Strips* Lowland Heath*
Broads	Ditches
Dartmoor	Heather Biomass
Exmoor	Heather Biomass
Habitat Scheme	Salt-marsh Transects Set-aside Water-fringe
Lake District	Heather Biomass
North Kent Marshes	Ditches
North Peak	Heather regeneration Heather Biomass
Pennine Dales	Indicative (includes Extension)*
Shropshire Hills	Heather Biomass
Somerset Levels	Ditches
South Downs	Arable Reversion
South West Peak	Heather Biomass
West Penwith	Lowland Heath Burning Lowland Heath Grazing*

* = data not available on AEMA database at time of analysis.

Appendix 1.3. Number of quadrats/plots in each scheme by main NVC type.

Community type		CSS	ESAP	ESAQ	Total	% of total
A	Aquatic	1	0	0	1	<0.1
CG	Calicolous grassland	29	52	59	140	5
H	Heaths	20	27	0	47	2
M	Mires	42	60	44	146	5
MC	Maritime cliff	5	0	0	5	<0.5
MG	Mesotrophic grassland	310	365	1,414	2,089	76
OV	Other vegetation	69	0	47	116	4
S	Swamps	7	0	29	36	1
SD	Sand dune	8	0	1	9	<0.5
SM	Salt-marsh	7	1	0	8	<0.5
U	Calcifugous & montane	22	84	17	123	4
W	Woodland & scrub	13	2	3	18	<1
Total		533	591	1614	2738	100

Appendix 1.4. Number of quadrats/plots in each scheme by NVC.

	Community	CSS	ESAP	ESAQ	Total
A1	<i>Lemna gibba</i> community	1	0	0	1
CG1	<i>Festuca ovina</i> – <i>Carlina vulgaris</i> grassland	1	0	0	1
CG2	<i>Festuca ovina</i> – <i>Avenula pratensis</i> grassland	17	36	0	53
CG3	<i>Bromus erectus</i> grassland	7	5	39	51
CG4	<i>Brachypodium pinnatum</i> grassland	0	2	16	18
CG5	<i>Bromus erectus</i> – <i>Brachypodium pinnatum</i> grassland	0	6	0	6
CG6	<i>Avenula pubescens</i> grassland	1	3	3	7
CG9	<i>Sesleria albicans</i> – <i>Galium sternerii</i> grassland	0	0	1	1
CG10	<i>Festuca ovina</i> – <i>Agrostis capillaris</i> – <i>Thymus praecox</i> grassland	3	0	0	3
H1	<i>Calluna vulgaris</i> – <i>Festuca ovina</i> heath	2	0	0	2
H2	<i>Calluna vulgaris</i> – <i>Ulex minor</i> heath	6	0	0	6
H3	<i>Ulex minor</i> – <i>Agrostis curtisii</i> heath	1	0	0	1
H4	<i>Ulex gallii</i> – <i>Agrostis curtisii</i> heath	1	20	0	21
H7	<i>Calluna vulgaris</i> – <i>Scilla verna</i> heath	2	0	0	2
H8	<i>Calluna vulgaris</i> – <i>Ulex gallii</i> heath	2	0	0	2
H9	<i>Calluna vulgaris</i> – <i>Deschampsia flexuosa</i> heath	6	0	0	6
H10	<i>Calluna vulgaris</i> – <i>Erica cinerea</i> heath	0	1	0	1
H12	<i>Calluna vulgaris</i> – <i>Vaccinium myrtillus</i> heath	0	6	0	6
M6	<i>Carex echinata</i> – <i>Sphagnum recurvum/auriculatum</i> mire	2	1	1	4
M10	<i>Carex dioica</i> – <i>Pinguicula vulgaris</i> mire	1	1	0	2
M13	<i>Schoenus nigricans</i> – <i>Juncus subnodulosus</i> mire	0	0	3	3
M15	<i>Scirpus cespitosus</i> – <i>Erica tetralix</i> wet heath	3	14	0	17
M16	<i>Erica tetralix</i> – <i>Sphagnum compactum</i> wet heath	2	1	0	3
M17	<i>Scirpus cespitosus</i> – <i>Eriophorum vaginatum</i> blanket mire	0	5	0	5
M19	<i>Calluna vulgaris</i> – <i>Eriophorum vaginatum</i> blanket mire	2	0	0	2
M21	<i>Narthecium ossifragum</i> – <i>Sphagnum papillosum</i> valley mire	1	0	0	1
M22	<i>Juncus subnodulosus</i> – <i>Cirsium palustre</i> fen-meadow	10	0	2	12
M23	<i>Juncus effusus/acutiflorus</i> – <i>Galium palustre</i> rush-pasture	11	22	10	43
M24	<i>Molinia caerulea</i> – <i>Cirsium dissectum</i> fen-meadow	0	0	2	2
M25	<i>Molinia caerulea</i> – <i>Potentilla erecta</i> mire	6	16	9	31
M27	<i>Filipendula ulmaria</i> – <i>Angelica sylvestris</i> mire	0	0	17	17
M28	<i>Iris pseudacorus</i> – <i>Filipendula ulmaria</i> mire	4	0	0	4
MC9	<i>Festuca rubra</i> – <i>Holcus lanatus</i> maritime grassland	4	0	0	4
MC11	<i>Festuca rubra</i> – <i>Daucus carota</i> spp. <i>gummifer</i> maritime grassland	1	0	0	1
MG1	<i>Arrhenatherum elatius</i> grassland	22	4	34	60
MG3	<i>Anthoxanthum odoratum</i> – <i>Geranium sylvaticum</i> grassland	2	0	2	4
MG4	<i>Alopecurus pratensis</i> – <i>Sanguisorba officinalis</i> grassland	7	3	0	10
MG5	<i>Cynosurus cristatus</i> – <i>Centaurea nigra</i> grassland	68	52	0	120
MG6	<i>Lolium perenne</i> – <i>Cynosurus cristatus</i> grassland	106	144	230	480
MG7	<i>Lolium perenne</i> leys an related grassland	48	63	549	660
MG8	<i>Cynosurus cristatus</i> – <i>Caltha palustris</i> grassland	1	12	32	45
MG9	<i>Holcus lanatus</i> – <i>Deschampsia cespitosa</i> grassland	10	35	94	139
MG10	<i>Holcus lanatus</i> – <i>Juncus effusus</i> grassland	26	39	312	377
MG11	<i>Festuca rubra</i> – <i>Agrostis stolonifera</i> – <i>Potentilla anserina</i> grassland	17	3	99	119
MG12	<i>Festuca arundinacea</i> grassland	3	0	12	15
MG13	<i>Agrostis stolonifera</i> – <i>Alopecurus geniculatus</i> grassland	0	10	50	60

OV8	<i>Veronica persica</i> – <i>Alopecurus myosuroides</i> community	1	0	0	1
OV9	<i>Matricaria perforata</i> – <i>Stellaria media</i> community	1	0	0	1
OV10	<i>Poa annua</i> – <i>Senecio vulgaris</i> community	3	0	0	3
OV13	<i>Stellaria media</i> – <i>Capsella bursa-pastoris</i> community	1	0	0	1
OV15	<i>Anagallis arvensis</i> – <i>Veronica persica</i> community	1	0	0	1
OV18	<i>Polygonum aviculare</i> – <i>Chamomilla suaveolens</i> community	1	0	0	1
OV19	<i>Poa annua</i> – <i>Matricaria perforata</i> community	3	0	5	8
OV20	<i>Poa annua</i> – <i>Sagina procumbens</i> community	2	0	0	2
OV21	<i>Poa annua</i> – <i>Plantago major</i> community	9	0	0	9
OV22	<i>Poa annua</i> – <i>Taraxacum officinale</i> community	2	0	0	2
OV23	<i>Lolium perenne</i> – <i>Dactylis glomerata</i> community	21	0	1	22
OV24	<i>Urtica dioica</i> – <i>Galium aparine</i> community	7	0	2	9
OV25	<i>Urtica dioica</i> – <i>Cirsium arvense</i> community	6	0	6	12
OV26	<i>Epilobium hirsutum</i> community	4	0	24	28
OV27	<i>Epilobium angustifolium</i> community	1	0	9	10
OV28	<i>Agrostis stolonifera</i> – <i>Ranunculus repens</i> community	4	0	0	4
OV37	<i>Festuca ovina</i> – <i>Minuartia verna</i> community	2	0	0	2
S4	<i>Phragmites australis</i> swamp and reed-beds	1	0	0	1
S5	<i>Glyceria maxima</i> swamp	1	0	3	4
S7	<i>Carex acutiformis</i> swamp	0	0	1	1
S12	<i>Typha latifolia</i> swamp	1	0	0	1
S18	<i>Carex otrubae</i> swamp	0	0	1	1
S19	<i>Eleocharis palustris</i> swamp	0	0	12	12
S22	<i>Glyceria fluitans</i> water-margin vegetation	0	0	2	2
S26	<i>Phragmites australis</i> – <i>Urtica dioica</i> tell-herb fen	4	0	0	4
S28	<i>Phalaris arundinacea</i> tall-herb fen	0	0	10	10
SD6	<i>Ammophila arenaria</i> mobile dune community	1	0	1	2
SD7	<i>Ammophila arenaria</i> – <i>Festuca rubra</i> semi-fixed dune community	1	0	0	1
SD8	<i>Festuca rubra</i> – <i>Galium Verum</i> fixed dune grassland	3	0	0	3
SD12	<i>Carex arenaria</i> – <i>Festuca ovina</i> – <i>Agrostis capillaris</i> dune	1	0	0	1
SD17	<i>Potentilla anserina</i> – <i>Carex nigra</i> dune-slack	2	0	0	2
SM10	Transitional low-marsh vegetation	2	0	0	2
SM14	<i>Halimione portulacoides</i> salt-marsh community	1	0	0	1
SM16	<i>Festuca rubra</i> salt-marsh community	2	0	0	2
SM23	<i>Spergularia marina</i> – <i>Puccinellia distans</i> salt-marsh community	1	0	0	1
SM28	<i>Elytrigia repens</i> salt-marsh community	1	1	0	2
U1	<i>Festuca ovina</i> – <i>Agrostis capillaris</i> – <i>Rumex acetosella</i> grassland	3	3	11	17
U2	<i>Deschampsia flexuosa</i> grassland	1	5	0	6
U3	<i>Agrostis curtisii</i> grassland	0	6	0	6
U4	<i>Festuca ovina</i> – <i>Agrostis capillaris</i> – <i>Galium saxatile</i> grassland	7	47	4	58
U5	<i>Nardus stricta</i> – <i>Galium saxatile</i> grassland	7	17	0	24
U6	<i>Juncus squarrosus</i> – <i>Festuca ovina</i> grassland	0	0	2	2
U20	<i>Pteridium aquilinum</i> – <i>Galium saxatile</i> community	4	6		10
W6	<i>Alnus glutinosa</i> – <i>Urtica dioica</i> woodland	2	0	0	2
W8	<i>Fraxinus excelsior</i> – <i>Acer campestre</i> – <i>Mercurialis perennis</i> woodland	1	0	0	1
W23	<i>Ulex europaeus</i> – <i>Rubus fruticosus</i> scrub	6	0	3	9
W24	<i>Rubus fruticosus</i> – <i>Holcus lanatus</i> underscrub	1	0	0	1
W25	<i>Pteridium aquilinum</i> – <i>Rubus fruticosus</i> underscrub	3	2	0	5

**Appendix 1.5. Number of quadrats/plots in each scheme by CVS Aggregate Class.
Unclassified records are bare ground/water etc.**

CVS Aggregate Class		CSS	ESAP	ESAQ	Total
I	Crops/Weeds	8	0	1	9
II	Tall Grassland/Herb	40	1	66	107
III	Fertile Grassland	115	99	601	815
IV	Infertile Grassland	280	344	928	1552
V	Lowland Wooded	8	0	0	8
VI	Upland Wooded	23	20	1	44
VII	Moorland Grass/Mosaic	34	64	17	115
VIII	Heath/Bog	21	63	0	84
	Unclassified	4	0	0	4
Total		533	591	1614	2738

Appendix 1.6. Number of quadrats/plots in each scheme by CVS Vegetation Class.

Aggregate Class	CVS	Vegetation Class	CSS	ESAP	ESAQ	Total
	0		4	0	0	4
I	3	Cereal crops with scattered grass weeds	4	0	0	4
I	4	Mixed crops with broad-leaved weeds	1	0	0	1
I	5	Cereal crops with mixed weeds	0	0	1	1
I	6	Weedy leys/undersown cereal crops	3	0	0	3
V	7	Fertile open hedges/crop boundaries	2	0	0	2
V	8	Fertile hedges/boundaries	1	0	0	1
II	9	Fertile tall grassland/open crop hedges	5	0	14	19
II	10	Tall grassland/herb boundaries	3	0	24	27
II	11	Stream-sides within crops	3	0	3	6
II	12	Fertile roadsides	0	0	1	1
II	13	Lowland neutral roadsides	0	1	0	1
II	14	Low roadsides/crop boundaries	16	0	4	20
II	15	Lowland stream-sides	0	0	2	2
II	17	Lowland wetland/stream-sides	0	0	2	2
II	18	Fertile shaded stream-sides	1	0	0	1
II	19	Fertile stream-sides/wetland tall herb	0	0	2	2
V	21	Species-rich lowland hedges	1	0	0	1
II	22	Fertile wood edges/stream-sides	1	0	0	1
III	23	Fertile grassland	12	5	6	23
V	24	Dry base-rich woodland	1	0	0	1
II	25	Shaded grassland/hedges	1	0	2	3
III	27	Rye-grass roadsides	6	0	3	9
II	28	Fertile tall herb/grassland	10	0	12	22
III	29	Rye-grass grassland	2	2	66	70
III	30	Fertile mixed grassland	80	69	484	633
III	31	Rye-grass/clover grassland	15	23	42	80
IV	32	Gravel reed-beds by stream-sides	6	0	5	11
IV	33	Wet neutral grassland	2	0	5	7
IV	34	Mixed grassland/scrub/hedges	8	0	1	9
V	35	Diverse base-rich woodland/hedges	1	0	0	1
IV	37	Neutral grassland/scrub	2	1	0	3
IV	38	Fertile/neutral grassland on roadsides	16	4	6	26
IV	40	Rye-grass/Yorkshire-fog grassland	113	164	411	688
IV	41	Species-rich stream-sides/wet grassland	8	4	20	32
V	42	Woodland on heavy soils	2	0	0	2
IV	43	Rye-grass/bent grass grassland	34	18	141	193
IV	44	Calcareous grassland	38	67	76	181
VI	45	Shaded rushy stream-sides	3	0	1	4
VI	46	Species-rich wooded stream-sides	1	0	0	1
IV	47	Species-rich neutral grassland	5	0	0	5
IV	48	Marsh/stream-sides	1	6	15	22
VI	49	Neutral/acidic woodland patches	4	0	0	4
IV	51	Wet rushy grassland	24	51	219	294
IV	52	Neutral grassland	11	13	2	26

IV	53	Species-rich neutral/acid grassland/scrub	2	2	4	8
IV	54	Marsh/fen	7	2	10	19
IV	55	Wet neutral/acid rush grassland	0	2	6	8
IV	56	Species-rich neutral/acid grassland	3	10	7	20
VII	57	Enriched acid grassland/moorland grass flushes	7	5	9	21
VII	58	Species-rich moorland grass stream-sides/flushes	1	6	0	7
VII	60	Acid grassland/stream-sides/flushes	3	3	2	8
VII	61	Species-rich acid grassland	3	5	1	9
VI	62	Woodland on podzolic soils	6	0	0	6
VII	63	Herb-rich stream-sides/acid grassland	0	4	0	4
VI	64	Bracken/acid grassland	9	20	0	29
VII	65	Herb-rich acid grassland/heath	3	1	0	4
VII	67	Moorland grass	5	8	3	16
VII	71	Herb-rich moorland grass/heath	0	1	0	1
VII	72	Herb-rich moorland grass/heath	2	0	0	2
VII	73	Rushy moorland grass/stream-sides on peat soils	5	13	0	18
VII	74	Inundated stream-sides/flushes	2	4	0	6
VII	80	Moorland grass/heath on podzolic soils	3	14	2	19
VIII	82	Wet heath/bog	0	4	0	4
VIII	84	Rush heath/moorland grass	2	0	0	2
VIII	87	Moorland grass/bog on peaty gley/peat soils	3	9	0	12
VIII	88	Moorland grass/heath/bog	3	11	0	14
VIII	89	Dry heath on podzolic soils	3	2	0	5
VIII	90	Wet heath/moorland grass on variable soils	3	25	0	28
VIII	93	Montane heath on podzolic soils	0	2	0	2
VIII	94	Sphagnum bog	0	1	0	1
VIII	95	Crowberry blanket bog	4	0	0	4
VIII	98	Cotton grass bog	3	5	0	8
VIII	99	Saturated bog	0	3	0	3
VIII	100	Inundated bog/wetland	0	1	0	1

Appendix 1.7.

Comparison of CSS data classified by BAP habitat at time of field survey (rows) and by NVC in this project (columns). AcG = Acid grassland, BMW = Broad-leaved, mixed and yew woodland, CalG = calcareous grassland, CFGM = coastal and floodplain grazing marsh, Coastal VS = coastal vegetated shingle, DSH = dwarf shrub heath, FMS = fen, marsh and swamp, ILRock = inland rock, ImG = improved grassland, LCalG = lowland calcareous grassland, LDAG = lowland dry acid grassland, Lsed = littoral sediment, NeG = neutral grassland, PMGRP = purple moor grass and rush pasture, SLRock = supra littoral rock, SLsed = supra littoral sediment, UCalG = upland calcareous grassland, X = unclassified.

by NVC	AcG	BMW	Bogs	Bracken	CalG	DSH	FMS	ILRck	ImG	Lsed	NeG	SLRock	SLsed	Water	X	Total
by field survey																
AcG/Bracken/DSH	1															1
AcG/FMS													1			1
Ac/Upland heath	1															1
AcG	9					2	3		1		2	1				2
AcG/Bracken	1															1
Arable&Hort									4		7			1	7	19
Blanket Bog							1									1
BMW		1			1		1				1				2	6
BMW/AcG																
BMW/Bracken						2										2
BMW/CalG											2					2
BMW/DSH				1												1
BMW/LDAG/DSH						1										1
BMW/LCalG					1						1					2
BMW/NeG									1		1					2
Bogs							1									1
Bracken	1					1										2
Bracken/Lowland heath															1	1
CalG					2						7					9
CalG/AcG											1					1
Cereal field margins							7		5	1	10	1	1		11	36
CFGM							2				3					5
Coastal VS										1						1
DSH	1					2						1				4
FMS							3				2					5
Fens							5				2					7
Fens/Reedbeds													1			1
ImG	2	1		1	1		4		33		69		1		27	139
ImG/Arable&Hort											1					1
ImG/BMW									1		2	1			2	6
ImG/BMW/Bracken				1												1
ImG/Bracken																
ImG/Fens											1					1
ImG/NeG											1					1
ILRock					1											1
LCalG					20		1				18				1	40
LDAG	4					3							1		1	9
LDAG/DSH	1															1

contd.

	AcG	BMW	Bogs	Bracken	CalG	DSH	FMS	ILRck	ImG	Lsed	NeG	SLRock	SLSed	Water	X	Total
LDAG/Lowland heath						1										1
LDAG/Upland heath			1			2									1	4
Lowland hay meadows									1		10					11
Lowland heath						5						1			1	7
Lsed										3						3
NeG									1		5		1		2	9
PMGRP							1				1					2
Reedbeds							5				1					6
SLSed										1			2			3
Spring & Flush	1						7	1			4					13
UCalG					2			1								3
UCalG/AcG																
UCalG/FMS											1					1
Upland heath			1			1					1					3
Wet Wood		1					2									3
X					1		4		1	1	2				1	10
Grand Total	22	3	2	3	29	20	47	2	48	7	156	5	8	1	59	412

Appendix 1.8.

Mean and standard deviation of species richness, Ellenberg N value, Nu and G scores for each of the NVC classes. Data are derived from four sources: CSS data, ESA quadrat data (scores calculated on presence/absence and Domin basis) and ESA plot data (32 nest and 16 nest data at optimal scale).

Species richness

NVC	CSS		ESA quadrat		ESA plot32		ESA plot16	
	mean	sd	mean	sd	mean	sd	mean	sd
CG2					29.38	4.15	29.86	4.30
CG3			31.38	6.39				
H4					6.55	1.49	6.42	1.34
M23					11.85	3.92	11.78	3.76
MG1	21.45	10.35	19.18	9.44				
MG5	32.85	9.77			19.61	4.38	19.71	4.34
MG6	19.84	5.75	19.30	4.91	12.87	3.46	13.05	3.57
MG7	15.13	6.30	12.64	5.58	9.17	2.76	9.20	2.82
MG8			26.19	4.62				
MG9			19.45	7.60	12.95	4.12	12.88	4.22
MG10	15.88	5.39	13.94	5.88	10.34	3.57	10.37	3.63
MG11			11.09	4.61				
MG13			10.40	3.23				
OV23	20.00	7.19						
OV26			8.38	4.85				
U4					10.45	3.63	10.63	3.68

British Ellenberg N

NVC	CSS		ESA quadrat		ESA plot32		ESA plot16	
	mean	sd	mean	sd	mean	sd	mean	sd
CG2					3.42	0.37	3.41	0.37
CG3			3.75	0.32				
H4					1.87	0.24	1.86	0.25
M23					3.83	0.67	3.84	0.65
MG1	5.76	0.79	5.16	0.97				
MG5	4.50	0.40			4.38	0.39	4.41	0.40
MG6	5.14	0.32	4.66	0.31	5.03	0.38	5.03	0.39
MG7	5.72	0.36	5.36	0.52	5.68	0.38	5.68	0.39
MG8			4.20	0.21				
MG9			4.76	0.51	5.05	0.51	5.04	0.51
MG10	5.42	0.56	5.18	0.47	5.44	0.51	5.44	0.51
MG11			5.53	0.39				
MG13			5.43	0.51				
OV23	5.71	0.34						
OV26			6.24	0.74				
U4					3.10	0.78	3.11	0.80

Nu score										
NVC	CSS		ESA quadrat				ESA plot32		ESA plot16	
	mean	sd	p/a		Domin		mean	sd	mean	sd
			mean	sd	mean	sd				
CG2							-0.531	0.105	-0.509	0.096
CG3			-0.438	0.116	-0.435	0.136				
H4							-0.911	0.105	-0.906	0.100
M23							-0.218	0.219	-0.222	0.197
MG1	0.290	0.283	0.058	0.319	0.031	0.291				
MG5	-0.133	0.150					-0.206	0.131	-0.206	0.123
MG6	0.124	0.115	-0.090	0.144	-0.102	0.135	0.027	0.112	0.014	0.109
MG7	0.223	0.143	0.100	0.152	-0.007	0.163	0.132	0.099	0.125	0.095
MG8			-0.217	0.103	-0.230	0.112				
MG9			-0.076	0.178	-0.092	0.178	-0.026	0.113	-0.030	0.115
MG10	0.228	0.186	0.126	0.161	0.005	0.193	0.127	0.097	0.120	0.086
MG11			0.244	0.154	-0.036	0.203				
MG13			0.234	0.165	0.136	0.235				
OV23	0.256	0.094								
OV26			0.531	0.344	0.583	0.330				
U4							-0.437	0.218	-0.412	0.208

G score										
NVC	CSS		ESA quadrat				ESA plot32		ESA plot16	
	mean	sd	p/a		Domin		mean	sd	mean	sd
			mean	sd	mean	sd				
CG2							0.382	0.052	0.370	0.045
CG3			0.261	0.099	0.226	0.100				
H4							-0.183	0.112	-0.194	0.157
M23							0.124	0.121	0.119	0.111
MG1	-0.144	0.176	-0.018	0.279	-0.006	0.306				
MG5	0.212	0.120					0.332	0.126	0.327	0.125
MG6	0.213	0.135	0.337	0.102	0.306	0.142	0.295	0.119	0.281	0.114
MG7	0.114	0.141	0.250	0.130	0.180	0.163	0.216	0.137	0.206	0.135
MG8			0.228	0.100	0.231	0.106				
MG9			0.095	0.151	0.080	0.174	0.067	0.112	0.073	0.121
MG10	0.008	0.174	0.167	0.160	0.124	0.180	0.100	0.139	0.082	0.137
MG11			0.158	0.146	0.151	0.185				
MG13			0.123	0.168	0.169	0.198				
OV23	0.161	0.117								
OV26			-0.484	0.205	-0.550	0.279				
U4							0.206	0.111	0.185	0.105

Appendix 1.9.

Mean and standard deviation of species richness, Ellenberg N value, Nu and G scores for each of the CVS classes. Data are derived from four sources: CSS data, ESA quadrat data (scores calculated on presence/absence and Domin basis) and ESA plot data (32 nest and 16 nest data).

Species richness

CVS	CSS		ESA quadrat		ESA plot32		ESA plot16	
	mean	sd	mean	sd	mean	sd	mean	sd
10			4.50	1.93				
29			6.83	2.24				
30	15.18	6.74	10.14	3.57	8.86	2.78	8.89	2.83
31			10.81	3.78	8.78	2.30	8.91	2.35
40	23.45	6.73	19.42	4.74	14.40	4.19	14.51	4.29
41			15.20	5.05				
43	15.62	4.79	13.27	3.15				
44	40.03	10.98	31.01	5.93	25.70	6.41	26.05	6.50
51	26.88	10.02	20.68	6.43	15.69	5.12	15.79	5.24
64					8.65	2.19	8.78	2.14
90					6.70	1.38	6.69	1.38

British Ellenberg N

CVS	CSS		ESA quadrat		ESA plot32		ESA plot16	
	mean	sd	mean	sd	mean	sd	mean	sd
10			6.78	0.56				
29			5.98	0.41				
30	5.75	0.34	5.60	0.32	5.67	0.29	5.67	0.29
31			5.40	0.42	5.68	0.45	5.66	0.46
40	5.03	0.36	4.79	0.30	4.99	0.37	5.00	0.37
41			5.26	0.31				
43	5.07	0.46	4.96	0.35				
44	4.17	0.33	3.85	0.41	3.59	0.48	3.58	0.49
51	4.58	0.42	4.48	0.36	4.65	0.42	4.65	0.42
64					2.87	0.45	2.88	0.49
90					1.82	0.20	1.83	0.23

Nu score

CVS	CSS		ESA quadrat				ESA plot32		ESA plot16	
	mean	sd	p/a		Domin		mean	sd	mean	sd
			mean	sd	mean	sd				
10			0.702	0.317	0.690	0.359				
29			0.169	0.149	-0.037	0.212				
30	0.300	0.147	0.215	0.137	0.000	0.215	0.161	0.113	0.146	0.103
31			0.110	0.133	-0.011	0.188	0.113	0.101	0.111	0.117
40	0.078	0.136	-0.030	0.136	-0.045	0.127	-0.001	0.116	-0.012	0.117
41			0.176	0.134	0.197	0.144				
43	0.076	0.175	0.011	0.157	-0.024	0.164				
44	-0.275	0.126	-0.393	0.172	-0.400	0.187	-0.483	0.143	-0.465	0.135
51	-0.039	0.134	-0.110	0.163	-0.110	0.171	-0.063	0.122	-0.068	0.117
64							-0.506	0.140	-0.465	0.167
90							-0.911	0.097	-0.912	0.076

G score

CVS	CSS		ESA quadrat				ESA plot32		ESA plot16	
	mean	sd	p/a		Domin		mean	sd	mean	sd
			mean	sd	mean	sd				
10			-0.462	0.266	-0.506	0.343				
29			0.256	0.118	0.120	0.217				
30	0.100	0.150	0.181	0.153	0.138	0.180	0.133	0.121	0.120	0.113
31			0.329	0.127	0.227	0.171	0.313	0.100	0.276	0.094
40	0.226	0.113	0.292	0.122	0.250	0.155	0.290	0.139	0.284	0.130
41			-0.031	0.182	0.111	0.269				
43	0.121	0.120	0.263	0.118	0.220	0.140				
44	0.188	0.147	0.263	0.110	0.233	0.122	0.352	0.089	0.345	0.085
51	0.079	0.133	0.135	0.156	0.126	0.175	0.143	0.109	0.133	0.107
64							0.157	0.168	0.112	0.169
90							-0.110	0.160	-0.122	0.185

Appendix 1.10.

Mean and standard deviation of species richness, Ellenberg N value, Nu and G scores for each of the Broad habitats. Data are derived from four sources: CSS data, ESA quadrat data (scores calculated on presence/absence and Domin basis) and ESA plot data (32 nest and 16 nest data at optimum scale). AG = Acid Grassland, CG = Calcareous Grassland, DSH = Dwarf Shrub Heath, FMS = Fen, Marsh and Swamp, IG = Improved Grassland, NG = Neutral Grassland.

Species richness

Broad Habitat	CSS		ESA quadrat		ESA plot32		ESA plot16	
	mean	sd	mean	sd	mean	sd	mean	sd
AG	17.91	6.77			9.46	3.20	9.56	3.25
CG	39.45	10.68	32.02	6.22	26.92	5.97	27.36	6.06
DSH	10.70	6.67			7.19	1.77	7.14	1.79
FMS	21.51	11.63	15.05	8.42	12.21	4.08	12.17	3.97
IG	15.13	6.30	12.64	5.58	9.17	2.76	9.20	2.82
NG	23.76	11.87	15.06	7.15	15.06	6.22	15.13	6.30

British Ellenberg N

Broad Habitat	CSS		ESA quadrat		ESA plot32		ESA plot16	
	mean	sd	mean	sd	mean	sd	mean	sd
AG	3.30	0.61			2.92	0.79	2.92	0.80
CG	3.93	0.42	3.73	0.34	3.44	0.39	3.43	0.39
DSH	2.71	0.62			1.98	0.31	1.97	0.31
FMS	4.94	1.24	5.24	1.17	3.69	0.81	3.69	0.80
IG	5.72	0.36	5.36	0.52	5.68	0.38	5.68	0.39
NG	5.08	0.73	5.12	0.60	4.91	0.63	4.92	0.63

Nu score

Broad Habitat	CSS		ESA quadrat				ESA plot32		ESA plot16	
	mean	sd	p/a		Domin		mean	sd	mean	sd
			mean	sd	mean	sd				
AG	-0.489	0.226					-0.492	0.220	-0.484	0.221
CG	-0.360	0.143	-0.440	0.135	-0.445	0.155	-0.526	0.119	-0.505	0.114
DSH	-0.587	0.218					-0.857	0.135	-0.852	0.133
FMS	0.071	0.412	0.147	0.444	0.191	0.461	-0.271	0.276	-0.274	0.256
IG	0.223	0.143	0.100	0.152	-0.007	0.163	0.132	0.099	0.125	0.095
NG	0.071	0.262	0.096	0.213	-0.018	0.211	-0.039	0.182	-0.045	0.174

G score

Broad Habitat	CSS		ESA quadrat				ESA plot32		ESA plot16	
	mean	sd	p/a		Domin		mean	sd	mean	sd
			mean	sd	mean	sd				
AG	0.134	0.183					0.184	0.123	0.171	0.121
CG	0.211	0.157	0.280	0.097	0.250	0.099	0.367	0.070	0.358	0.067
DSH	-0.128	0.224					-0.113	0.157	-0.139	0.175
FMS	-0.118	0.219	-0.260	0.299	-0.221	0.409	0.134	0.122	0.129	0.112
IG	0.114	0.141	0.250	0.130	0.180	0.163	0.216	0.137	0.206	0.135
NG	0.088	0.191	0.143	0.170	0.123	0.192	0.175	0.163	0.167	0.164

Appendix 1.11.

Mean and standard deviation of species richness, Ellenberg N value, Nu and G scores for each of the Priority habitats. Data are derived from four sources: CSS data, ESA quadrat data (scores calculated on presence/absence and Domin basis) and ESA plot data (32 nest and 16 nest data at optimum scale). LCG = Lowland Calcareous Grassland, LDAG = Lowland Dry Acid Grassland, LM = Lowland Meadows.

Species richness

Priority Habitat	CSS		ESA quadrat		ESA plot32		ESA plot16	
	mean	sd	mean	sd	mean	sd	mean	sd
LCG	40.77	10.23	32.12	6.22	26.92	5.97	27.36	6.06
LDAG					9.87	3.50	10.00	3.54
LM	31.75	9.94	26.19	4.62	20.26	4.67	20.41	4.62

British Ellenberg N

Priority Habitat	CSS		ESA quadrat		ESA plot32		ESA plot16	
	mean	sd	mean	sd	mean	sd	mean	sd
LCG	3.99	0.38	3.75	0.32	3.44	0.39	3.43	0.39
LDAG					3.00	0.87	3.01	0.88
LM	4.55	0.42	4.20	0.21	4.42	0.37	4.44	0.38

Nu score

Priority Habitat	CSS		ESA quadrat		ESA plot32		ESA plot16			
	mean	sd	mean	sd	mean	sd	mean	sd		
LCG	-0.341	0.135	-0.434	0.129	-0.439	0.149	-0.526	0.119	-0.505	0.114
LDAG							-0.471	0.239	-0.451	0.234
LM	-0.114	0.160	-0.217	0.103	-0.230	0.112	-0.182	0.131	-0.181	0.125

G score

Priority Habitat	CSS		ESA quadrat		ESA plot32		ESA plot16			
	mean	sd	mean	sd	mean	sd	mean	sd		
LCG	0.195	0.154	0.277	0.096	0.248	0.098	0.367	0.070	0.358	0.067
LDAG							0.188	0.132	0.172	0.123
LM	0.200	0.123	0.228	0.100	0.231	0.106	0.288	0.143	0.282	0.143

Appendix 1.12. Summary from repeat ESA quadrat data.

<i>n</i>	NVC	Richness		Ellenberg N		G p/a		Nu p/a		G Domin		Nu Domin	
		corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff
117	CG3	0.66	5.74	0.74	0.236	0.77	0.064	0.70	0.084	0.83	0.060	0.71	0.111
48	CG4	0.59	5.46	0.82	0.205	0.75	0.053	0.92	0.059	0.54	0.063	0.86	0.084
30	M23	0.38	4.26	0.58	0.259	0.63	0.101	0.60	0.104	0.75	0.091	0.50	0.176
46	M27	0.77	4.02	0.70	0.404	0.26	0.218	0.13	0.190	0.12	0.393	-0.13	0.194
96	MG1	0.94	3.80	0.94	0.327	0.68	0.193	0.90	0.136	0.69	0.223	0.88	0.136
680	MG6	0.80	3.40	0.75	0.277	0.57	0.101	0.78	0.115	0.48	0.122	0.60	0.146
1499	MG7	0.79	3.86	0.82	0.317	0.53	0.137	0.71	0.138	0.48	0.144	0.49	0.194
96	MG8	0.66	4.33	0.57	0.240	0.47	0.105	0.66	0.091	0.38	0.120	0.74	0.112
257	MG9	0.90	3.63	0.92	0.256	0.64	0.123	0.85	0.114	0.42	0.158	0.78	0.134
768	MG10	0.78	4.16	0.81	0.316	0.62	0.135	0.72	0.136	0.31	0.190	0.27	0.243
267	MG11	0.76	3.29	0.76	0.295	0.37	0.174	0.67	0.138	0.03	0.230	0.14	0.277
29	MG12	0.69	4.11	0.42	0.329	0.53	0.093	0.30	0.119	0.74	0.105	0.60	0.112
141	MG13	0.66	3.71	0.87	0.299	0.52	0.133	0.71	0.155	0.08	0.210	0.39	0.316
36	OV25	0.01	3.45	0.54	0.486	0.13	0.201	0.34	0.193	0.12	0.149	0.35	0.223
108	OV26	0.80	2.70	0.49	0.559	0.34	0.284	0.39	0.255	0.47	0.271	0.49	0.264
54	OV27	0.55	6.93	0.88	0.552	0.74	0.215	0.83	0.220	0.75	0.198	0.81	0.247
27	S19	0.51	3.62	0.84	0.243	0.86	0.096	0.66	0.129	0.76	0.182	0.75	0.124
28	S28	0.70	2.53	0.52	0.492	0.52	0.291	0.26	0.220	0.62	0.356	0.21	0.322
63	U1	0.36	4.71	0.53	0.593	0.34	0.161	0.50	0.212	0.47	0.208	0.54	0.243
	mean	0.65	4.09	0.71	0.352	0.54	0.151	0.61	0.148	0.48	0.183	0.53	0.193

<i>n</i>	CVS	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff
72	9	0.46	3.38	0.56	0.537	0.55	0.173	0.40	0.216	0.53	0.170	0.51	0.217
126	10	0.43	3.33	0.43	0.536	0.17	0.311	0.42	0.280	0.35	0.312	0.45	0.292
24	14	0.35	2.43	-0.05	0.307	0.16	0.192	0.12	0.167	0.01	0.134	-0.20	0.175
39	28	0.33	5.29	0.69	0.592	0.76	0.245	0.66	0.188	0.76	0.265	0.56	0.202
123	29	0.47	3.51	0.60	0.375	0.23	0.160	0.42	0.170	0.39	0.178	0.20	0.256
1248	30	0.67	3.37	0.65	0.330	0.49	0.150	0.53	0.150	0.17	0.200	0.24	0.270
136	31	0.52	4.53	0.73	0.413	0.38	0.180	0.42	0.207	0.43	0.184	0.20	0.252
24	32	0.75	2.26	0.39	0.480	0.30	0.185	0.75	0.132	0.24	0.256	0.74	0.124
1192	40	0.71	4.15	0.76	0.250	0.65	0.110	0.79	0.100	0.54	0.130	0.68	0.130
46	41	0.56	4.73	0.59	0.339	0.42	0.166	0.53	0.155	-0.01	0.272	0.21	0.224
426	43	0.67	3.27	0.78	0.296	0.58	0.121	0.78	0.119	0.57	0.130	0.74	0.145
228	44	0.67	5.43	0.86	0.216	0.80	0.065	0.89	0.077	0.76	0.077	0.85	0.101
25	48	0.86	2.68	0.79	0.272	0.79	0.103	0.18	0.122	0.40	0.222	0.36	0.150
599	51	0.81	4.12	0.81	0.256	0.77	0.102	0.80	0.106	0.65	0.135	0.67	0.145
24	53	-0.01	5.64	0.57	0.623	0.51	0.156	0.32	0.205	0.37	0.242	0.24	0.255
21	54	0.06	7.68	0.60	0.482	0.70	0.167	0.63	0.179	0.83	0.160	0.38	0.320
21	56	0.72	3.93	0.19	0.920	0.72	0.086	0.28	0.346	0.59	0.147	0.36	0.366
	mean	0.53	4.10	0.58	0.425	0.53	0.157	0.53	0.172	0.44	0.189	0.42	0.213

		Richness		Ellenberg N		G p/a		Nu p/a		G Domin		Nu Domin	
<i>n</i>	Broad Habitat	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff
78	AciGra	0.65	4.96	0.42	0.733	0.39	0.153	0.54	0.254	0.47	0.197	0.55	0.271
177	CalGra	0.63	5.72	0.80	0.223	0.77	0.063	0.81	0.079	0.76	0.067	0.78	0.103
203	FenMarSwa	0.90	3.66	0.88	0.534	0.59	0.252	0.81	0.245	0.57	0.303	0.74	0.273
1499	ImpGra	0.79	3.86	0.82	0.320	0.53	0.140	0.71	0.140	0.48	0.140	0.49	0.190
1660	NeuGra	0.87	3.95	0.88	0.300	0.58	0.140	0.82	0.130	0.33	0.190	0.49	0.240
	mean	0.78	4.26	0.76	0.398	0.58	0.142	0.75	0.161	0.52	0.170	0.62	0.204
<i>n</i>	Priority Habitat	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff	corr	sd-diff
174	LCG	0.62	5.76	0.78	0.224	0.77	0.063	0.79	0.080	0.76	0.068	0.76	0.104
72	LDAG	0.65	5.05	0.62	0.594	0.37	0.157	0.70	0.207	0.46	0.199	0.67	0.233
96	LM	0.66	4.33	0.57	0.240	0.47	0.105	0.66	0.091	0.38	0.120	0.74	0.112
	mean	0.64	5.05	0.66	0.352	0.53	0.108	0.71	0.126	0.54	0.129	0.72	0.150

Appendix 1.13. Summary from repeat ESA plots.

	Species richness 32		Species richness 16		Ellenberg N 32		Ellenberg N 16		G score 32		G score 16		Nu score 32		Nu score 16	
<i>n</i>	corr	SD-diff	corr	SD-diff	corr	SD-diff	corr	SD-diff	corr	SD-diff	corr	SD-diff	corr	SD-diff	corr	SD-diff
NVC																
36 CG2	0.72	3.15	0.64	3.54	0.97	0.09	0.97	0.09	0.78	0.03	0.53	0.05	0.93	0.04	0.90	0.04
22 MG6	0.91	1.66	0.87	2.03	0.91	0.18	0.90	0.21	0.84	0.06	0.77	0.07	0.88	0.06	0.83	0.07
31 U4	0.90	1.41	0.86	1.52	0.98	0.16	0.98	0.15	0.76	0.08	0.77	0.07	0.94	0.07	0.91	0.09
CVS																
27 40	0.47	4.24	0.57	4.01	0.85	0.22	0.86	0.21	0.78	0.12	0.82	0.10	0.87	0.07	0.86	0.07
47 44	0.87	3.01	0.81	3.55	0.98	0.10	0.98	0.10	0.86	0.04	0.79	0.05	0.92	0.05	0.90	0.05
25 51	0.60	5.09	0.55	5.31	0.90	0.15	0.88	0.17	0.71	0.10	0.55	0.12	0.74	0.09	0.84	0.07
Broad Habitat																
57 AG	0.91	1.20	0.90	1.27	0.97	0.15	0.97	0.16	0.81	0.07	0.71	0.09	0.93	0.07	0.90	0.09
39 CG	0.80	3.20	0.73	3.72	0.97	0.08	0.97	0.09	0.85	0.03	0.72	0.05	0.92	0.04	0.88	0.04
23 DSH	0.72	1.57	0.74	1.58	0.98	0.07	0.98	0.06	0.90	0.07	0.94	0.06	0.94	0.05	0.94	0.05
57 NG	0.79	4.41	0.78	4.46	0.95	0.19	0.94	0.21	0.72	0.11	0.75	0.11	0.90	0.09	0.88	0.09
Priority Habitat																
39 LCG	0.80	3.20	0.73	3.72	0.97	0.08	0.97	0.09	0.85	0.03	0.72	0.05	0.92	0.04	0.88	0.04
39 LDAG	0.92	1.31	0.89	1.42	0.97	0.17	0.98	0.17	0.83	0.07	0.76	0.08	0.94	0.07	0.92	0.09
30 LM	0.53	5.73	0.49	5.80	0.94	0.14	0.93	0.15	0.80	0.12	0.74	0.13	0.90	0.08	0.90	0.08