

STANDING AND FLOWING WATER HABITATS (FRESHWATER AND BRACKISH WATER EXCLUDING ESTUARIES AND SALT MARSHES)

CST OW2 (2nd edition)

4.

NAME OF SITE

LOCH OF GIRLSTA

FULL GRID REF.

H 4 3 3 5 2 0

RECODER'S NAME

Conductivity: 150 μ hos

DATE OF VISIT TO SITE

Day 26 Month 7 Year 86

RECORD NUMBER
(leave blank)

C NEWBOLD

864

ADULT DRAGONFLIES (ODONATA)

BIRDS

FISH

OTHER INFORMATION

Platycnemis pennipes
Ceriagrion tenellum
Erythromma najas
Coenagrion armatum
hasulatum
mercuriale
puella
punctatum

Enallagma cyathigerum
Pyrrhosoma nymphula
Ischnura elegans
pumilio

Lestes dryas
sponsa

Agrius splendens
vigo

Gomphus vulgatissimus
Brachytron pratense

Aeschna cyanea
grandis
isosceles

Anax imperator
Cordulegaster boltonii

Cordulia aenea
Somatochlora arctica

Oxygastra curtisii
Orthetrum cancellatum

Libellula depressa
lutea

Sympetrum flaveolum
fonscolombii

nigrescens
sanguineum

striolatum
vulgarum

Leucorrhinia dubia

Barbel
Bleak
Bream—Common
—Silver

Bulthead
Burbot

Carp—Common
—Crucian

Chub
Charr

Dace
Goldeneye

Grayling
Gudgeon

Lamprey—Brook

—River

Loach—Spined

—Stone

Rudd
Ruffe (Pope)

Coot
Black-headed Gull

Pink-footed Goose

Canada Goose

Mute Swan

Water Rail

Tern

Kingfisher

Dipper

Bearded Tit

Reed Warbler

Grey Wagtail

Other Species:

Tench

Stickleback—9/10-spined

—3-spined

Other species:

Rudd
Ruffe (Pope)
Salmon
Tench
—Stone

Other species:

AMPHIBIA

Great Crested Newt (Triturus cristatus)

Smooth Newt (Triturus vulgaris)

Palmate Newt (Triturus helveticus)

Common Toad (Bufo bufo)

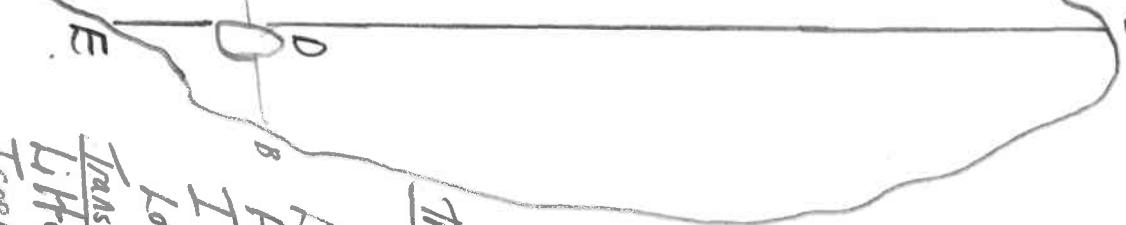
Natterjack Toad (Bufo calamita)

Common Frog (Rana temporaria)

Edible Frog (Rana esculenta)

Marsh Frog (Rana ridibunda)

Other species:



Transect AB (1)

Myrophylloides olitoriflorum
Littorella uniflora (by C only)

Forticula antipryresca
Isoetes lacustris
Lobelia dortmanna

Transect CD (2)

Littorella uniflora (by C only)

Isoetes lacustris

Nitella opaca (agg)

Transect DE as AB (3)

1997 LOCH INVENTORY: SHETLAND ISLANDS

Code Hu4528 Name Loch of Girista Grid Ref Hu 433523
 Date 2/9/97 Surveyors MB/OLC Estate
 Area 96.10 ha Altitude 20 m Catchment ha Geology 24
 Water colour Colourless Clarity clear Boat used Secchi disc depth 3.15 m
 Loch type 3 Edge type(s) (NVC codes)
 Status Loch of Girista SSS I Access 1 Road/houses present (underline)
 Land use % Open water Semi-natural Forestry Agriculture

Substrate types (underline main type, tick others present)

Bedrock <input checked="" type="checkbox"/>	Silt (<0.1mm diam.) <input checked="" type="checkbox"/>
Boulders (>30cm max. diam.) <input checked="" type="checkbox"/>	Organic mud
<u>Stones</u> (5-30cm diam.)	Peat <input checked="" type="checkbox"/>
Gravel (4-50mm diam.) <input checked="" type="checkbox"/>	Artificial embankment <input checked="" type="checkbox"/>
Sand (0.1-4mm diam.) <input checked="" type="checkbox"/>	

USES AND DAMAGE

Use	Observations
Adjacent forestry	.....
Agricultural pollution	.....
Edge trampling	<u>Site open to stock</u>
Fishing (edge/boat)	.....
Litter	.....
Shooting	.....
Water abstraction	<u>Water abstracted for fish-hatchery. Now more restricted</u>

SURROUNDING LAND USE:

Sheep-grazed pasture. Small amount semi-improved.

FAUNA				
Mammals	Birds	Reptiles Amphibians	Fish	Dragonflies & other invertebrates
SPECIES DIVERSITY			RARE SPECIES	
Edge	<u>14</u>	Scarce (*)	.....	Alkalinity <u>0.12</u> meq/l
Open water	<u>13</u>	Red Data Book (**)	.....	Conductivity <u>235</u> μ S/cm
Total	<u>23</u>			p.H. <u>6.46</u>

1997 SHETLAND ISLANDS LOCH INVENTORY: AQUATIC PLANT SPECIES LIST

Code HU4528. Site name Loch of Girliesto. Grid ref HU433523. Date 2/9/97.

EMERGENT & EDGE SPECIES

Map code	Species	DAFOR	Other edge species	
Ags	<u>Agrostis stolonifera</u>	Q/LF	Cxd <u>Carex viridula</u> ssp. <u>oedocarpa</u> (=C. demissa)	F
Ber	<u>Berula erecta</u>	.....	Cxe <u>Carex echinata</u>	o/LF
Cas	<u>Callitrichia stagnalis</u>	Q/LA	Cxp <u>Carex panicea</u>	F/LA
Cap	<u>Caltha palustris</u>	Q	Cxpa <u>Carex paniculata</u>	Q
Cxa	<u>Carex aquatilis</u>	.....	Gp <u>Galium palustre</u>	
Cxli	<u>Carex limosa</u>	.....	Sa <u>Senecio aquaticus</u>	
Cxn	<u>Carex nigra</u>	F/LA	Tp <u>Triglochin palustre</u>	
Cxro	<u>Carex rostrata</u>	.....	Vp <u>Viola palustris</u>	o/LF
Ca	<u>Catabrosa aquatica</u>	.....	
Des*	<u>Deschampsia setacea</u>	.....	
Elac	<u>Eleocharis acicularis</u>	.....	
Elm	<u>Eleocharis multicaulis</u>	.....	
Elp	<u>Eleocharis palustris</u>	R		
Eqq	<u>Eleocharis quinqueflora</u>	.....	
Elu	<u>Eleocharis uniglumis</u>	.....	
Erf	<u>Equisetum fluviatile</u>	.....	
Eqp	<u>Equisetum palustre</u>	.....	
Eqxl	<u>Equisetum x litorale</u>	.....	
Era	<u>Eriophorum angustifolium</u>	LA		
Gld	<u>Glyceria declinata</u>	.....	
Glf	<u>Glyceria fluitans</u>	.....	
Hip	<u>Hippuris vulgaris</u>	.....	
Hyd	<u>Hydrocotyle vulgaris</u>	F/LA		
Ip	<u>Iris pseudacorus</u>	.....	
Jac	<u>Juncus acutiflorus</u>	.....	
Ja	<u>Juncus articulatus</u>	F/LA		
Jb	<u>Juncus bulbosus</u>	F		
Jc	<u>Juncus conglomeratus</u>	.....	
Je	<u>Juncus effusus</u>	F		
Lit	<u>Littorella uniflora</u>	F/LA		
Ma	<u>Mentha aquatica</u>	.....	
Mt	<u>Menyanthes trifoliata</u>	.....	
Mg	<u>Mimulus guttatus</u>	.....	
Mi	<u>Mimulus sp.</u>	.....	
Mon	<u>Montia fontana</u>	Q/LF		
MyI	<u>Myosotis laxa</u>	.....	
Msc	<u>Myosotis scorpioides</u>	.....	
Msec	<u>Myosotis secunda</u>	.....	
Pam	<u>Persicaria amphibia</u>	.....	
Pha	<u>Phalaris arundinacea</u>	.....	
Phr	<u>Phragmites australis</u>	.....	
Pop	<u>Potentilla palustris</u>	.....	
Rfl	<u>Ranunculus flammula</u>	F/LA		
Rh	<u>Ranunculus hederaceus</u>	.....	
Roi	<u>Rorippa islandica</u>	.....	
Rm	<u>Rorippa microphylla</u>	.....	
Rna	<u>Rorippa nasturtium-aquaticum</u>	.....	
Rxs	<u>Rorippa x sterilis</u>	.....	
Sl	<u>Schoenoplectus lacustris</u>	.....	
Sper	<u>Sparganium erectum</u>	.....	
Vaa	<u>Veronica anagallis-aquatica</u>	.....	
Vb	<u>Veronica beccabunga</u>	.....	
Vxl	<u>Veronica x lackschewitzii</u>	.....	
Vs	<u>Veronica scutellata</u>	R/LQ		

SPECIES TOTAL

14

Note: * = Scarce plants (occurring in 16-100 10x10km squares in Great Britain) known to occur in the Scottish Environment Protection Agency North Region.

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1997 SHETLAND ISLANDS LOCH INVENTORY: AQUATIC PLANT SPECIES LIST

Code HU4528 Site name Loch of Girsta Grid ref HU433523 Date 2/9/97

SUBMERGED & FLOATING SPECIES

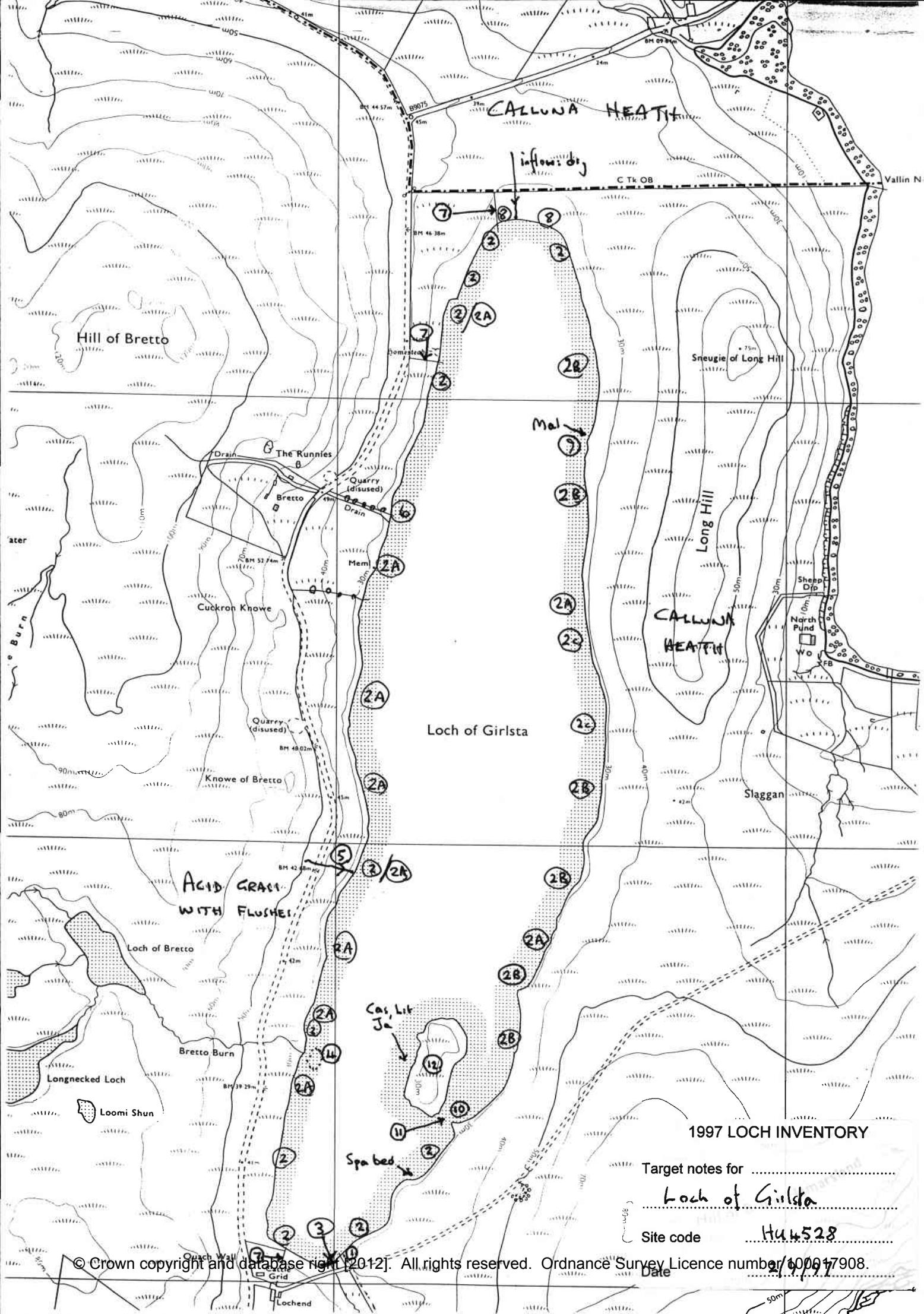
Map code	Species	DAFOR	Map code	Species	DAFOR
Api	<i>Apium inundatum</i>	.....	Chavi	<i>Chara sp. virgata</i>	R
Cah	<i>Callitrichia hamulata</i>	.....	Nitflagg	<i>Nitella sp. flexilis agg sterile</i>	R/LF
Cher	<i>Callitrichia hermaphroditica</i>	Wash up			.....
Cpla	<i>Callitrichia platycarpa</i>	.....			.....
Cas	<i>Callitrichia stagnalis</i>	O			.....
Ca	<i>Callitrichia sp.</i>	.....			.....
Ela	<i>Elatine hexandra</i>	.....			13
Ef	<i>Eleogeton fluitans</i>	.....		
Fon	<i>Fontinalis antipyretica</i>	F			
Hip	<i>Hippuris vulgaris</i>	.....		
Hyd	<i>Hydrocotyle vulgaris</i>	O/LA			
Ise*	<i>Isoetes echinospora</i>	.....		
Isl	<i>Isoetes lacustris</i>	.....		
Jb	<i>Juncus bulbosus</i>	F			
Lm	<i>Lemna minor</i>	.....		
Lit	<i>Littorella uniflora</i>	F/LA			
Lob	<i>Lobelia dortmanna</i>	.....		
Mal	<i>Myriophyllum alterniflorum</i>	R			
Msp	<i>Myriophyllum spicatum</i>	.....		
Na	<i>Nymphaea alba</i>	.....		
Pam	<i>Persicaria amphibia</i>	.....		
Pal	<i>Potamogeton alpinus</i>	.....		
Pbe	<i>Potamogeton berchtoldii</i>	R			
Pfil*	<i>Potamogeton filiformis</i>	.....		
Pfr	<i>Potamogeton friesii</i>	.....		
Pxg	<i>Potamogeton x gessnacensis</i>	.....		
Pgr	<i>Potamogeton gramineus</i>	.....		
Pn	<i>Potamogeton natans</i>	R/LA			
Pxn	<i>Potamogeton x nitens</i>	.....		
Ppec	<i>Potamogeton pectinatus</i>	.....		
Pper	<i>Potamogeton perfoliatus</i>	.....		
Ppol	<i>Potamogeton polygonifolius</i>	O/LF			
Ppra	<i>Potamogeton praelongus</i>	.....		
Ppu	<i>Potamogeton pusillus</i>	.....		
Pr**	<i>Potamogeton rutilus</i>	.....		
Pxz	<i>Potamogeton x zizii</i>	.....		
Rb	<i>Ranunculus baudotii</i>	.....		
Rtr	<i>Ranunculus trichophyllus</i>	.....		
Ruc*	<i>Ruppia maritima</i>	.....		
Rum	<i>Ruppia cirrhosa</i>	.....		
Spa	<i>Sparganium angustifolium</i>	R/LF			
Spn	<i>Sparganium natans</i>	.....		
Sp	<i>Sparganium sp.</i>	.....		
Sub	<i>Subularia aquatica</i>	.....		
Uti	<i>Utricularia intermedia</i>	.....		
Um	<i>Utricularia minor</i>	.....		
Uo	<i>Utricularia ochroleuca</i>	.....		
Us	<i>Utricularia stygia</i>	.....		
Uva	<i>Utricularia vulgaris/australis agg.</i>	.....		
Ut	<i>Utricularia sp.</i>	.....		
Zan	<i>Zannichellia palustris</i>	.....		
....			
....			
....			

Potamogeton identification
verified by C. D. PrestonCharophyte identification
verified by N.F. Stewart

Specimens:	
<i>Chara sp.</i>	virgata 192/97
<i>Nitella sp.</i>	x flexilis agg sterile 193/97
<i>Potamogeton sp.</i>	Pbe 316/97
<i>Utricularia sp.</i>	

Note: * = Scarce plants (occurring in 16-100 10x10km squares in Great Britain) known to occur in the Scottish Environment Protection Agency North Region.

** = Red Data Book Species (occurring in ≥15 10x10km squares in Great Britain) known to occur in the Scottish Environment Protection Agency North Region.



Adjacent land: sheep-grazed pasture, mostly *Calluna* heath to north and east. The northern part of the western shore has a mosaic of acid grass and *Calluna* heath. Most of the land adjacent to the western shore is acid grassland with some patches of mire (*Eri* + *Tric* over *Sphagnum*). There are frequent flushed areas just above the shoreline here with *Ja*, *Hyd* + small sedges. In the south there are some small fields which are semi-improved.

The aquatic vegetation is confined to the shallow margin. It is fairly consistent throughout with abundant Lit, frequent Jb + Rfl, locally frequent Ja + Fon, and other species only occasional. Except for sheltered bay to east of Island, see TN ⑩ below

The shoreline/drawdown-zone vegetation is also dominated by Lit, along with Ja + Rfl, which are frequent to abundant throughout. The small sedges Cxp, Crd and Cra are frequent and locally abundant, especially on the western shore where there is some flushing and the shoreline veg is more spp-rich. Fon is locally abundant along the waterline, while Hyd is frequent and locally abundant further back. The draw-down zone is quite wide in parts (water is abstracted for nearby fish hatchery)

- ① Track to boat-launching area, with 8 boats.
- ② Fairly wide draw-down zone (to c 10m) with stone + gravel substrate: Lit, Ags, Ja, Jb, Hyd, Rfl, Crd, Cxp, Cra, *Potentilla anserina* (local) (Vp), (Mo), (Cal)
Shallow water inshore: Jb, Lit, Rfl, Ja, Vs, Fon, Mal
Deeper water offshore has no veg.
- ②A As ② but with narrower draw-down zone and narrower inshore vegetated zone.
Draw-down zone with larger stones and more boulders.
- ②B As ② but draw-down zone less spp-rich: Ja, Rfl + Lit co-dom., Cxp(F) Crd(F)
Je (F at back of shore)
- ②C As ② but larger stones of substrate support much sparser veg.
- ③ Stone dam (<1m) and sluice to outlet. Outflow: narrow stream over stones with Cap, Alopecurus gen., Ja..., dry at time of survey
- ④ 2m burn, fast flow over stones and boulders. Bed of Pn just offshore.
- ⑤ Narrow inflow (surface water from road?)
- ⑥ Fence/wall into loch. No definite inflow. Seepage inflow through flushes: Ping vulg, Ppol, small sedges, Hyd, Jb, Ja...
- ⑦ Fence + wall into loch.
- ⑧ Beach (gravel, sand, stones, boulders) with no veg. Inshore veg sparse: Jb (LF), Rfl (Lo) Callitrichia sp, (Ppol), Lit (LF) over stones and gravel.
- ⑨ Gravel/stone bar. Mal growing in tree.
- ⑩ Aquatic veg in sheltered bay: Jb, spa, Nit flex, (chara), (Callitrichia sp) (Pbe).
- ⑪ Sheep can gain access to island here across rocky "causeway"
- ⑫ Sheep-grazed island - *Calluna* heath. There is usually a wide draw-down zone, of mud and stones with scattered boulders which supports a dense, short-grazed sward of Lit, Hyd, Cas, Rfl, Ja + bryophytes. Shallow water around the island has: Hyd, Lit, Cas, Jb, Rfl, Ja + much filamentous algae.