

1997 LOCH INVENTORY: SOUTH EAST SCOTLAND*

Code NN 8303 Name LOCH FREUCHIE Grid Ref NN 861375Date 17/9/97 Surveyors OLL CC Estate CADOGAN ESTATES LTD GAME KEEPER?
STAN RICHESArea 35.0 ha Altitude 260 m Catchment ha Geology 19Water colour COLOURLESS Clarity CLEAR Boat used YES Secchi disc depth 2.65 mLoch type 5a Edge type(s) S4a S9a S19b (NVC codes)Status LOCH FREUCHIE MEADOWS SSSI Access 2a Road/houses present (underline)

Land use % Open water Semi-natural Forestry Agriculture

Substrate types (underline main type, tick others present)

Bedrock
 Boulders (>30cm max. diam.)
 Stones (5-30cm diam.)
 Gravel (4-50mm diam.)
 Sand (0.1-4mm diam.)
 Silt (<0.1mm diam.)
 Organic mud
 Peat
 Artificial embankment

USES AND DAMAGE
Observations

Use	Observations
Adjacent forestry	.....
Agricultural pollution	.....
Edge trampling	.....
Fishing (edge/boat)	<u>Bank and boat fishing for trout</u>
Litter	.....
Shooting	<u>shot gun cartridge on shore</u>
Water abstraction	.....

SURROUNDING LAND USE:

SHEEP GRABING
ARABLE
DECIDUOUS WOODLAND

FAUNA

Mammals	Birds	Reptiles Amphibians	Fish	Dragonflies & other invertebrates
			<u>Pike</u>	

SPECIES DIVERSITY

Edge 16.....Open water 21.....Total 35.....

RARE SPECIES

Scarce (*) Nup.....

Red Data Book (**)

WATER CHEMISTRY

Alkalinity 0.3 meq/lConductivity 56 µS/cmp.H. 6.5.....

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* Includes Angus, City of Edinburgh, Clackmannanshire, Dundee City, East Lothian, Falkirk, Fife, Midlothian, Perth & Kinross, Scottish Borders, Stirling and West Lothian unitary authorities.

1997 SOUTH EAST SCOTLAND LOCH INVENTORY: AQUATIC PLANT SPECIES LIST

Code NN 8303 Site name LOCH FREUCHIE Grid ref NN 864375 Date 17/9/97

EMERGENT & EDGE SPECIES

Map code	Species	DAFOR	Map code	Species	DAFOR
Ac	<i>Acorus calamus</i>	.....	Ma	<i>Mentha aquatica</i>	.....
<u>Ags</u>	<u><i>Agrostis stolonifera</i></u>	<u>o</u>	Mt	<i>Menyanthes trifoliata</i>	.....
Al	<i>Alisma lanceolatum</i>	.....	Mg	<i>Mimulus guttatus</i>	.....
Apa	<i>Alisma plantago-aquatica</i>	.....	Ml	<i>Mimulus luteus</i>	.....
Apn	<i>Apium nodiflorum</i>	.....	Mm	<i>Mimulus moschatus</i>	.....
Bar	<i>Baldellia ranunculoides</i>	.....	Mi	<i>Mimulus sp.</i>	.....
Ber	<i>Berula erecta</i>	.....	Mon	<i>Montia fontana</i>	.....
Bom	<i>Bolboschoenus maritimus</i>	.....	<u>Myl</u>	<u><i>Myosotis laxa</i></u>	<u>o</u>
Bu	<i>Butomus umbellatus</i>	.....	Msc	<i>Myosotis scorpioides</i>	.....
Cal	<i>Calla palustris</i>	.....	Msec	<i>Myosotis secunda</i>	.....
Cab	<i>Callitriche brutia</i>	.....	Mst*	<i>Myosotis stolonifera</i>	.....
Cas	<i>Callitriche stagnalis</i>	.....	Oa	<i>Oenanthe aquatica</i>	.....
<u>Cap</u>	<u><i>Caltha palustris</i></u>	<u>..F..</u>	Oc	<i>Oenanthe crocata</i>	.....
Cxat	<i>Carex acuta</i>	.....	Of	<i>Oenanthe fistulosa</i>	.....
Cxaf	<i>Carex acutiformis</i>	.....	Pam	<i>Persicaria amphibia</i>	.....
Cxa	<i>Carex aquatilis</i>	.....	Ph	<i>Persicaria hydropiper</i>	.....
Cxl	<i>Carex lasiocarpa</i>	.....	Pha	<i>Phalaris arundinacea</i>	.....
Cxli	<i>Carex limosa</i>	.....	<u>Phr</u>	<u><i>Phragmites australis</i></u>	<u>..LP..</u>
<u>Cxn</u>	<u><i>Carex nigra</i></u>	<u>..F..</u>	<u>Pop</u>	<u><i>Potentilla palustris</i></u>	<u>..o/LF..</u>
Cxri	<i>Carex riparia</i>	.....	<u>Rfl</u>	<u><i>Ranunculus flammula</i></u>	<u>..F..</u>
<u>Cxro</u>	<u><i>Carex rostrata</i></u>	<u>..F/LA..</u>	Rh	<i>Ranunculus hederaceus</i>	.....
Cxv	<i>Carex vesicaria</i>	.....	RI	<i>Ranunculus lingua</i>	.....
Ca	<i>Catabrosa aquatica</i>	.....	Ro	<i>Ranunculus omiophyllus</i>	.....
Civ*	<i>Cicuta virosa</i>	.....	Rr	<i>Ranunculus reptans</i>	.....
Clm	<i>Cladium mariscus</i>	.....	Rs	<i>Ranunculus sceleratus</i>	.....
Des*	<i>Deschampsia setacea</i>	.....	Roa	<i>Rorippa amphibia</i>	.....
Elac	<i>Eleocharis acicularis</i>	.....	Roi	<i>Rorippa islandica</i>	.....
Elm	<i>Eleocharis multicaulis</i>	.....	Rm	<i>Rorippa microphylla</i>	.....
<u>Elp</u>	<u><i>Eleocharis palustris</i></u>	<u>..o/LF..</u>	Rna	<i>Rorippa nasturtium-aquaticum</i>	.....
Elq	<i>Eleocharis quinqueflora</i>	.....	Rxs	<i>Rorippa x sterilis</i>	.....
Elu	<i>Eleocharis uniglumis</i>	.....	Rxh	<i>Rumex hydrolapathum</i>	.....
<u>Eql</u>	<u><i>Equisetum fluviatile</i></u>	<u>..o</u>	Scp**	<i>Scheuchzeria palustris</i>	.....
Eqp	<i>Equisetum palustre</i>	.....	Sl	<i>Schoenoplectus lacustris</i>	.....
Eqxl	<i>Equisetum x litorale</i>	.....	St	<i>Schoenoplectus tabernaemontani</i>	.....
Era	<i>Eriophorum angustifolium</i>	.....	Spem	<i>Sparganium emersum</i>	.....
Gld	<i>Glyceria declinata</i>	.....	Sper	<i>Sparganium erectum</i>	.....
<u>Glf</u>	<u><i>Glyceria fluitans</i></u>	<u>..o/LF..</u>	Ta	<i>Typha angustifolia</i>	.....
Glm	<i>Glyceria maxima</i>	.....	Tl	<i>Typha latifolia</i>	.....
Gln	<i>Glyceria notata</i>	.....	Vaa	<i>Veronica anagallis-aquatica</i>	.....
Glxp	<i>Glyceria x pedicellata</i>	.....	Vb	<i>Veronica beccabunga</i>	.....
Hip	<i>Hippuris vulgaris</i>	.....	Vc	<i>Veronica catenata</i>	.....
Hyd	<i>Hydrocotyle vulgaris</i>	.....	Vs	<i>Veronica scutellata</i>	.....
Ip	<i>Iris pseudacorus</i>	.....		
Iv	<i>Iris versicolor</i>	.....		SPECIES TOTAL	<u>..16..</u>
<u>Jac</u>	<u><i>Juncus acutiflorus</i></u>	<u>..F/LA..</u>			
Jaa*	<i>Juncus alpinoarticulatus</i>	.....		Other edge species	
<u>Ja</u>	<u><i>Juncus articulatus</i></u>	<u>..F..</u>	<u>Cxd</u>	<u><i>Carex viridula ssp. oedocarpa (=C.demissa)</i></u>	<u>o/LF</u>
<u>Jb</u>	<u><i>Juncus bulbosus</i></u>	<u>..o</u>	<u>Cxe</u>	<u><i>Carex echinata</i></u>	<u>R</u>
Jc	<i>Juncus conglomeratus</i>	.....	<u>Cxp</u>	<u><i>Carex panicea</i></u>	<u>o/LF</u>
<u>Je</u>	<u><i>Juncus effusus</i></u>	<u>..o/LF..</u>	Cxpa	<i>Carex paniculata</i>	.....
Lim*	<i>Limosella aquatica</i>	.....	<u>Gp</u>	<u><i>Galium palustre</i></u>	<u>o</u>
<u>Lit</u>	<u><i>Littorella uniflora</i></u>	<u>..F/LA..</u>	Sa	<i>Senecio aquaticus</i>	.....
Lyc*	<i>Lycopodiella inundata</i>	.....	Tp	<i>Triglochin palustre</i>	.....
Lyt*	<i>Lysimachia thyrsoiflora</i>	.....	Vp	<i>Viola palustris</i>	<u>o</u>
Lyp	<i>Lythrum portula</i>	.....		
Lys	<i>Lythrum salicaria</i>	.....		

Note: * = Scarce plants (occurring in 16-100 10x10km squares in Great Britain) known to occur in the Scottish Environment Protection Agency East & West Regions.
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 ** = Red Data Book Species (occurring in >15 10x10km squares in Great Britain) known to occur in the Scottish Environment Protection Agency East & West Regions.

1997 SOUTH EAST SCOTLAND LOCH INVENTORY: AQUATIC PLANT SPECIES LIST

Code NN 8303 Site name LOCH FAEUCHIE Grid ref NN 864375 Date 17/3/97

SUBMERGED & FLOATING SPECIES

Map code	Species	DAFOR	Map code	Species	DAFOR
Api	<i>Apium inundatum</i>	.....	Pxn	<i>Potamogeton x nitens</i>	.....
Apd	<i>Aponogeton distachyos</i>	.....	Pob	<i>Potamogeton obtusifolius</i>	.....
Af	<i>Azolla filiculoides</i>	.....	Pxo	<i>Potamogeton x olivaceus</i>	.....
Bar	<i>Baldellia ranunculoides</i>	.....	Ppec	<i>Potamogeton pectinatus</i>	.....
<u>Cah</u>	<u><i>Callitriche hamulata</i></u>	<u>o</u>	<u>Pper</u>	<u><i>Potamogeton perfoliatus</i></u>	<u>o/LF</u>
Cher	<i>Callitriche hermaphroditica</i>	.....	<u>Ppol</u>	<u><i>Potamogeton polygonifolius</i></u>	<u>R/LF</u>
Cao	<i>Callitriche obtusangula</i>	.....	Ppra	<i>Potamogeton praelongus</i>	.....
Cpla	<i>Callitriche platycarpa</i>	.....	Ppu	<i>Potamogeton pusillus</i>	.....
Cas	<i>Callitriche stagnalis</i>	.....	Pxsa	<i>Potamogeton x salicifolius</i>	.....
Ca	<i>Callitriche sp.</i>	.....	Pxsp	<i>Potamogeton x sparganiifolius</i>	.....
Ced	<i>Ceratophyllum demersum</i>	.....	Pxsu	<i>Potamogeton x suecicus</i>	.....
Crh	<i>Crassula helmsii</i>	.....	Pt*	<i>Potamogeton trichoides</i>	.....
Ela	<i>Elatine hexandra</i>	.....	Pxz	<i>Potamogeton x zizii</i>	.....
Elh*	<i>Elatine hydropiper</i>	.....	Ra	<i>Ranunculus aquatilis</i>	.....
Ef	<i>Eleogiton fluitans</i>	.....	Rb	<i>Ranunculus baudotii</i>	.....
<u>Ec</u>	<u><i>Elodea canadensis</i></u>	<u>o/LF</u>	Rc	<i>Ranunculus circinatus</i>	.....
En	<i>Elodea nuttallii</i>	.....	Rf	<i>Ranunculus fluitans</i>	.....
<u>Fon</u>	<u><i>Fontinalis antipyretica</i></u>	<u>o/LA</u>	Rxk	<i>Ranunculus x kelchoensis</i>	.....
Grd	<i>Groenlandia densa</i>	.....	Rp	<i>Ranunculus peltatus</i>	.....
Hip	<i>Hippuris vulgaris</i>	.....	Rpse	<i>Ranunculus penicillatus</i>	.....
Hmr	<i>Hydrocharis morsus-ranae</i>	.....		ssp. <i>pseudofluitans</i>	.....
Hyd	<i>Hydrocotyle vulgaris</i>	.....	Rtr	<i>Ranunculus trichophyllus</i>	.....
Ise*	<i>Isoetes echinospora</i>	.....	Rum	<i>Ruppia maritima</i>	.....
<u>Is</u>	<u><i>Isoetes</i> sp.</u>	<u>o/LF</u>	Sas	<i>Sagittaria sagittifolia</i>	.....
<u>Jb</u>	<u><i>Juncus bulbosus</i></u>	<u>F/LA</u>	<u>Spa</u>	<u><i>Sparganium angustifolium</i></u>	<u>o/LA</u>
Lam	<i>Lagarosiphon major</i>	.....	Spem	<i>Sparganium emersum</i>	.....
Lg	<i>Lemna gibba</i>	.....	Spn	<i>Sparganium natans</i>	.....
Lm	<i>Lemna minor</i>	.....	Sp	<i>Sparganium sp.</i>	.....
Lt	<i>Lemna trisulca</i>	.....	Spp	<i>Spirodela polyrhiza</i>	.....
<u>Lit</u>	<u><i>Littorella uniflora</i></u>	<u>A</u>	Sta	<i>Stratiotes aloides</i>	.....
<u>Lob</u>	<u><i>Lobelia dortmanna</i></u>	<u>o</u>	<u>Sub</u>	<u><i>Subularia aquatica</i></u>	<u>R</u>
Lun	<i>Luronium natans</i>	.....	Uti	<i>Utricularia intermedia</i>	.....
Lyp	<i>Lythrum portula</i>	.....	Um	<i>Utricularia minor</i>	.....
<u>Mal</u>	<u><i>Myriophyllum alterniflorum</i></u>	<u>A</u>	Uo	<i>Utricularia ochroleuca</i>	.....
Msp	<i>Myriophyllum spicatum</i>	.....	Us	<i>Utricularia stygia</i>	.....
Nf*	<i>Najas flexilis</i>	.....	<u>Uva</u>	<u><i>Utricularia vulgaris/australis</i> agg.</u>	<u>F</u>
Nua	<i>Nuphar advena</i>	.....	Ut	<i>Utricularia sp.</i>	.....
Nul	<i>Nuphar lutea</i>	.....	Zan	<i>Zannichellia palustris</i>	.....
<u>Nup*</u>	<u><i>Nuphar pumila</i></u>	<u>R</u>			
Nus	<i>Nuphar x spenneriana</i>	.....	Cha	<i>Chara sp.</i>	.....
Na	<i>Nymphaea alba</i>	.....	<u>Nitflagg</u>	<u><i>Nitella sp. flexilis</i> agg. sterile</u>	<u>o</u>
Nyp	<i>Nymphoides peltata</i>	.....		
Pam	<i>Persicaria amphibia</i>	.....		
Pil*	<i>Pilularia globulifera</i>	.....		
<u>Pal</u>	<u><i>Potamogeton alpinus</i></u>	<u>BLF</u>			
<u>Pbe</u>	<u><i>Potamogeton berchtoldii</i></u>	<u>o/LA</u>			
Pcol*	<i>Potamogeton coloratus</i>	.....		
Pcom*	<i>Potamogeton compressus</i>	.....		
Pxco	<i>Potamogeton x cooperi</i>	.....		
<u>Pcr</u>	<u><i>Potamogeton crispus</i></u>	<u>R</u>			
Pfil*	<i>Potamogeton filiformis</i>	.....		
Pfr	<i>Potamogeton friesii</i>	.....		
<u>Pgr</u>	<u><i>Potamogeton gramineus</i></u>	<u>R/LF</u>			
Plu	<i>Potamogeton lucens</i>	.....		
<u>Pn</u>	<u><i>Potamogeton natans</i></u>	<u>o/LA</u>			

SPECIES TOTAL 21

Other species not included in total:

Sphag *Sphagnum sp.*

Potamogeton identification verified by C. D. Preston

Specimens:	
<i>Chara sp.</i>	
<i>Nitella sp.</i>	<i>N. flexilis</i> 27.1.97
<i>Potamogeton sp.</i>	Pgr 329/97; Pper 400/97; Ppra 401/97; Pcr 402/97; Pbe 404/97
<i>Utricularia sp.</i>	Uva 42/97

Utricularia
Charophyte identification verified by N.F. Stewart

Potamogeton specimens identified by C.D. Preston

ALL 5/97
All correct except 401 = *P. alpinus*

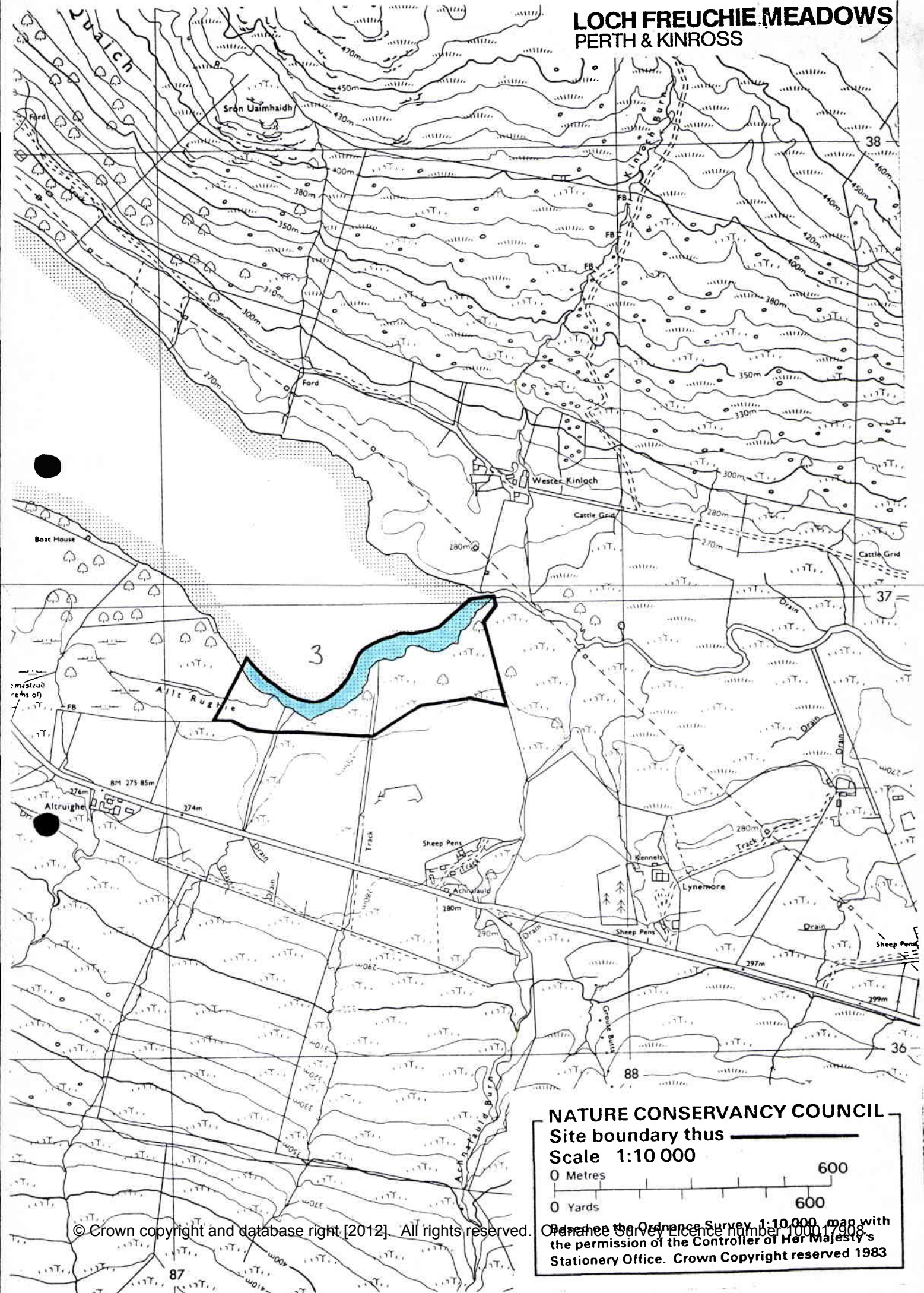
Note: * = Scarce plants (occurring in 16-100 10x10km squares in Great Britain) known to occur in the Scottish Environment Protection Agency East & West Regions.


** = Red Data Book Species (occurring in 245 10x10km squares in Great Britain) known to occur in the Scottish Environment Protection Agency East & West Regions.

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All species names follow those in Stace 1997

LOCH FREUCHIE MEADOWS PERTH & KINROSS



NATURE CONSERVANCY COUNCIL
 Site boundary thus 
 Scale 1:10 000
 0 Metres 600
 0 Yards 600

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LOCH FREUCHIE MEADOWS SSSI

Perth and Kinross District

Tayside Region

PLANNING AUTHORITY: As above

File Ref: NN 83/2

NATIONAL GRID REFERENCE: NN 876368

AREA (hectares/acres): 9.31/23.0

O.S. 1:50,000 SHEET NO: 52
1:25,000 SHEET NO: NN 83
1:10,000 SHEET NO: NN 83 NE

DESCRIPTION:

BOTANICAL:

This area of lowland neutral grassland of the Northern hay meadow type is a particularly good example of a habitat type which is rare in the District. A small area of willow carr adds to the natural diversity and interest of the site. The meadow contains an above average number of plant species including a number of local distribution in Perth and Kinross District.

3 LOCH FREUCHIE NN865374

PREVIOUS NOTIFICATIONS:

Previously notified in 1979.

REMARKS:

Boundary amended with a net increase of 1.5 hectares.

Nature Conservation Review Grade 2.

DATE: February 1985

- W/ Copse
- Orchard
- Coniferous trees
- Non-coniferous trees

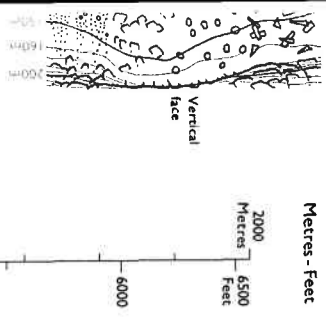
- Chalk pit, clay pit or quarry
- Gravel pit
- Sand pit
- Refuse or slag heap
- Sand
- Shingle
- Sloping wall
- Lake, loch or pond

gion or Islands Area (Scotland)

by (Wales)
 Borough or European Assembly
 on only on sheets containing areas
 published at larger scales)
 shown only where there is no publication
 at larger scales)

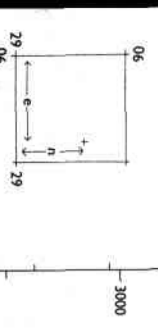
FEATURES

CONVERSION SCALE



- Post Office
- Public Convenience
- Public House
- Stone
- Spring
- Telephone Call Box
- Telephone Call Post
- Town Hall
- Well
- Youth hostel

EXAMPLE from
 sheet TQ 02 NE

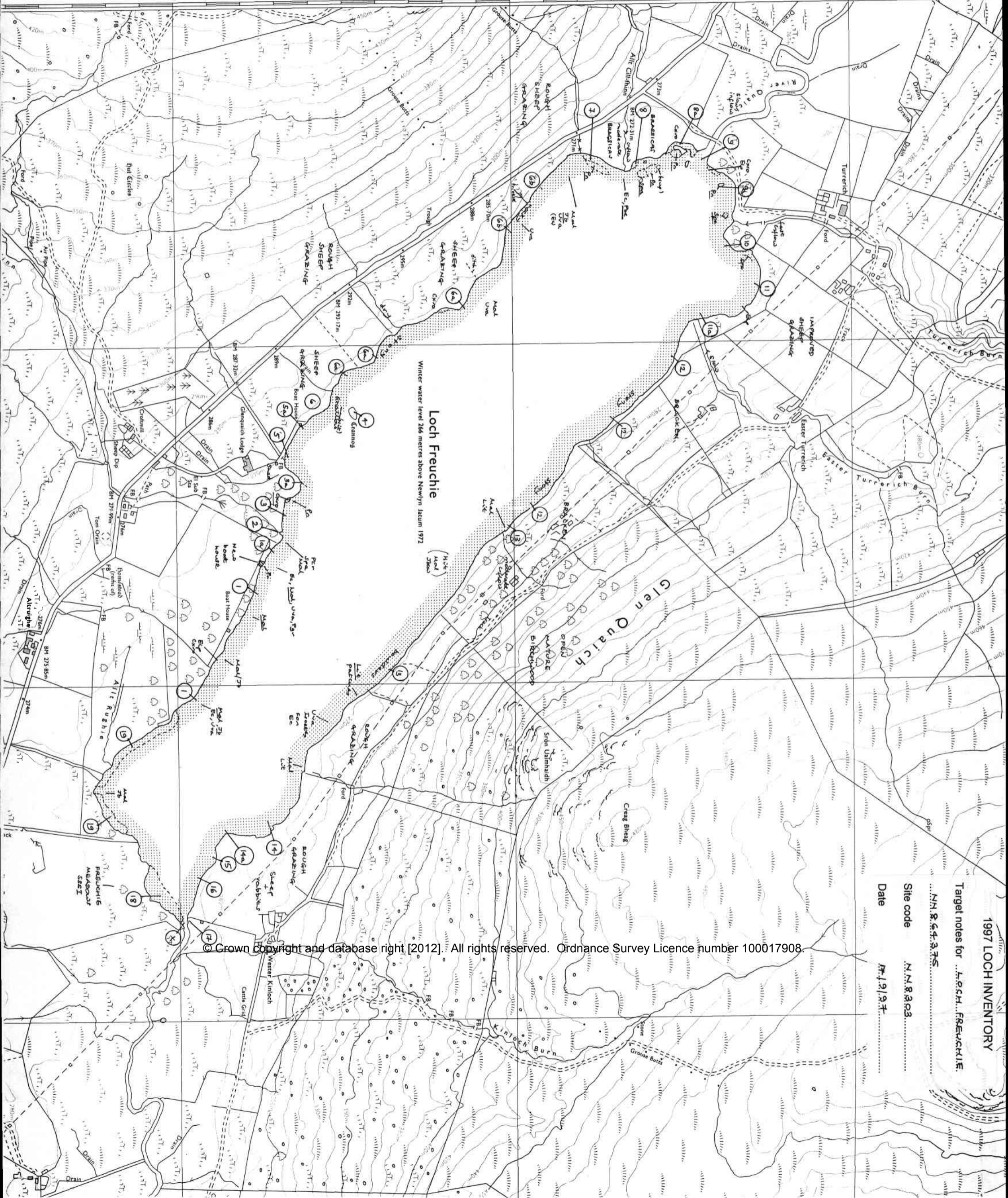


followed by the

39

38

37



Loch Freuchie
 Winter water level 266 metres above Newlyn datum 1972

Glen Quach

1997 LOCH INVENTORY

Target notes for ...**Loch Freuchie**...

NH 8.54.3.75

Site code NH 8.3.03

Date 17.12.97

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Loch Freuchie is a large upland loch set in a steep grazed and deciduous wooded catchment. The southern end of the loch and the associated meadow form the Loch Freuchie Meadows SSSI.

- ① Wave washed stony/shingle shoreline with sparse vegetation: Ja, Jc, Cxd, Rfl, Agr. The water level was high at the time of survey resulting in drowned edge plants: Jac, Elp, Cxp, Cxn, Gp, Cxe, Cap, Jb(t), Myl, Pru vulg, Cxro. Shallow water: Jb(a), Lit(a), Elp, Cah, (Gff) Cxro. [Isosts sp, Ec, Lit, Ppa, Ppr, Mal, Uva, Pbe washed up] Offshore in deeper water: Pn, Jb(a), Mal, (Ec), Nitella flexilis.
- ①a 'Drowned' loch shoreline with exposed wave washed shore and sheltered zone with Cxro, Cxn, Jac, Elp as emergents.
- ② Wide slow, stony inflow channel (3m wide) with stands of Cxro at mouth of inflow. On shore: Cxro, Elp, Cap, Pop, Rfl, Lotus corn, Gp, Salix sp, Jc, Fili um, Desch cap, Mentha sp, Elyf, Narthus str.
- ③ Willow backed shoreline with occ. Cxro stands + Jc, Rfl as ① with Mal, Lit(a), occ. Elyf, Jb(a), Agr offshore. Loch edge: Cxd, Salix seedlings, Seric jac, Cxn, Myl. Shallow water: gently shelving, stony + Lit(a), Jb(a), occ. (Lob), occ. (Elp). Small Pn bed + Uva, spa over gently shelving substratum (Jb(a), (Mal), (Sub)).
- ③a collapsed, partly submerged wall: Jb(a), Pn.
- ④ Crannog with Lanix euro, Ple lan, carpa rot. Wetted island edge: Cap, Gp, Agr, Fili um, Jc, Cxn, (Elyf) Cxro, Rfl. Shallow water: boulders + stones + sparse Lit(a), Fon, Mal, Uva.
- ⑤ Bay fringed by Jac, Cxn & drowned Moln caer. Shallow water with stones/silt + Lit(a), Lob, Jb(a), Mal, sparse Elp stand. [Pbe, Ppr, Uva washed up]
- ⑤a By boat house: Cxro stand + Pgr, Uva.
- ⑥ Emergent beds of Jac, Desch cap, Cxro, Elp, Uva. Shallow water with stones + fine sand + Lit(a), Lob, Jb(a), Mal.
- ⑥a Narrow emergent strip as ⑥ + Uva, Isosts sp, Jb(a). Deeper water: Mal, Uva.
- ⑥b Drowned Cxn, Cxd, Ja, Achi pbr, Jc along loch edge. Shallow water with boulders + no vegetation. Offshore (Mal, Uva).
- ⑦ Loch edge with 'drowned' Cxp, Cxd, Rfl, Jb(t), Cxn - stony + gently shelving. Large Pn bed offshore + Jb(a), Mal, (Ec). Deeper water off Pn bed: Jb(a), (Palp), Pbe, Ec. Ppr forming dense beds.
- ⑧ Sandy bay with a mosaic of aquatic beds of vegetation: Palp, spa Ppr: Pn + Jb (Hup). Open water with Jb(a), Ec. Small sheltered bay + Cxro, Elyf, Rfl, (Pop), Desch flex, Gp, Jac grading to Jb(a), Cxro, Elp, Elyf in shallow water.

TARGET NOTES.....

- 8a) sheltered bay with emergent stand of Cxro grading to Pn + Epf, Jb(a), Spa, Uva, Gfy over sand in shallow water. No bar - end of bay: Efp, Epf, Mal, Lit(a), Jb(a).
Open water: Jb(a), Mal, Ppr.
- 9) Sandy shallows in front of inflow channel: (Gfy) (Cal) with Mal, Jb(a) offshore.
- 9a) Open stony beach backed by Salix sp, Alnus gut + Fili ulm, Cap, Rumex obt, Je, Desch cesp, Ran rep, Cxn, Potr etc. Popular bank fishing site. Offshore: Pn, Spa, Mal, Ec, Jb(a).
- 10) Stony loch fringe with drowned bed of Cxro, Jac, Jkt, Agf, Ckd, Fili ulm, Je, Ja.
Shallow open water stands + no vegetation.
- 11) Well vegetated bay fringed by Je, Cxn, Cxro, Jac, Efp, Lit(a), Jb, Mal.
Deeper water with upa bed + Jb(a), Ec, Ppr, Uva, Mal.
- 11a) End of bay + Ob(a), Mal, Pbe, (Spa).
- 12) Gravel beach/boulders with occ. Jac clumps + Je, Ckd, Cap, Rfl + occ. Efp, Fon + Lit(a) between stones. Offshore (Nitella flexilis, Isaete sp, Mal), Ec, Pbe.
- 13) Loch fringe + Jac, Nardus str, Yp, Cyn crist, Linum cat, Pot ercta, Ckd, Pum vulg.
Offshore stony with limited vegetation: occ. (Nitella flexilis), Mal, Lit(a).
- 14) Shallow stony bay edged by boulders + occ. Salix sp, Jac.
Shallow water with Lit(a). Deeper water: Mal, Uva, Jb(a).
- 14a) Fon, Cap, Rfl, Efp, Agf, Cxro, Ppp, Myl. Offshore: Lit, Lob.
- 15) Small bay: Cxro, Efp, Cap, Agf, Cap, Jac - rounded boulders/sand.
- 16) Rounded boulders in loch shallows with patches of Lit(a).
- 17) Bank by outflow: Desch cesp, Betula sp, Fili ulm, Angel sylv, Hole lan, Succi prat, Carex nig, Salix scrub, Yall off, drowned Cxro, Je, Carex oval, Cap.
By channel: Ppal, Ec, Ppr, Pgr, Lit(a).
- 18) Stony bay with large emergent bed: Cxro, Efp, Lit, small willows over a sand/stone substrate.
- 19) Large dense stands of Pn with Pgr, Jka, Uva, Mal offshore.
- x) Water sample collection point.