1987 ~~SUTHERLAND~~/CAITHNESS LOCH SURVEY

NDO 619

Loch name CALDER Estate * No. BN3.

Grid reference ND 072 603. Date surveyed 17TH SEPTEMBER 1987

Loch size 383.5 ha. Altitude 60 m Surveyor's name S. BELL, R. A. DALTON
Catchment size 2680.0 ha

Water colour Colourless Water clarity Clear

Loch type IX (3b) Catchment Geology OLD RED SANDSTONE
NO obvious edge type stands of S9/2 & S19/2 or S10/2 occur.

* SEVERAL OWNERS, CONTACT VIA L. CALDER FISHING ASSOCIATION % HARPERS FISHING SHOP, SINCLAIR ST. : THURSO.

Substrate types (underline main type, tick others present)

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

Uses and Damage

USE		AREA AFFECTED	DAMAGE
Water abstraction	✓	see map. HRC Water	Supply.
Sewage inflow			
Agricultural pollution			
Edge trampling by livestock		north-west shore - cattle present	
Forestry - vehicles			
- run off		On west shore - possibly some run off	
Fishing (Edge/boat)	✓ ✓	Boats available for hire from contact address above.	
Shooting (Cartridges)		Possibly in SW corner.	
Others			

Fauna

Birds
Mallard
Greylag geese
Redshank
Lapwing
Snipe

Mammals

Molluscs

Dragonflies
Sympetrum danae
Aeshna juncea

Inlet

Species diversity Conductivity 24.6 µmhos

Edge: 20

pH : 7.3 (Griffin 60) 7.3

Open Water 11 Total 29 species.

To 1115 8.5°C

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SUBMERGED AND FLOATING SPECIES

Map code		DAFOR
Api	Apium inundatum*	
✓Cah	Callitriche hamulata	O
Cher	Callitriche hermaphroditica**	
Cpla	Callitriche platycarpa	
✓Cas	Callitriche stagnalis	LF
✓Hip	Hippuris vulgaris	.D...
Hyd	Hydrocotyle vulgaris	
Isl	Isoetes lacustris	
Iss	Isoetes setacea **	
✓Jb	Juncus bulbosus var. fluitans	O
Lm	Lemna minor (* in NW)	
Lit	Littorella uniflora	
Mal	Myriophyllum alterniflorum	
Msp	Myriophyllum spicatum	
Na	Nymphaea alba	
Nup	Nuphar pumila	
Pil	Pilularia globulifera**	
Pam	Polygonum amphibium	
Pal	Potamogeton alpinus	
Pbe	Potamogeton berchtoldii	
Pcr	Potamogeton crispus*	
✓Pfil	Potamogeton filiformis**	LA
Pfr	Potamogeton friesii**	
✓Pgr	Potamogeton gramineus	LA
✓Pn	Potamogeton natans	O
Pxn	Potamogeton X nitens	
Pob	Potamogeton obtusifolius	
Ppec	Potamogeton pectinatus	
Pper	Potamogeton perfoliatus	
Ppra	Potamogeton praelongus**	
✓Ppol	Potamogeton polygonifolius	O
Ppu	Potamogeton pusillus*	
Ra	Ranunculus aquatilis	
✓Rtr	Ranunculus trichophyllus	O
Sf	Scirpus fluitans	
✓Spa	Sparganium angustifolium	LD
Sub	Subularia aquatica**	
Uti	Utricularia intermedia	
Um	Utricularia minor	
Uva	Utricularia vulgaris/australis	
Une	Utricularia neglecta	
Zan	Zannichellia palustris	
Cha	Chara sp	
✓Nit	Nitella sp *	LF
Fon	Fontinalis antipyretica	
Lob	Lobelia dortmanna	

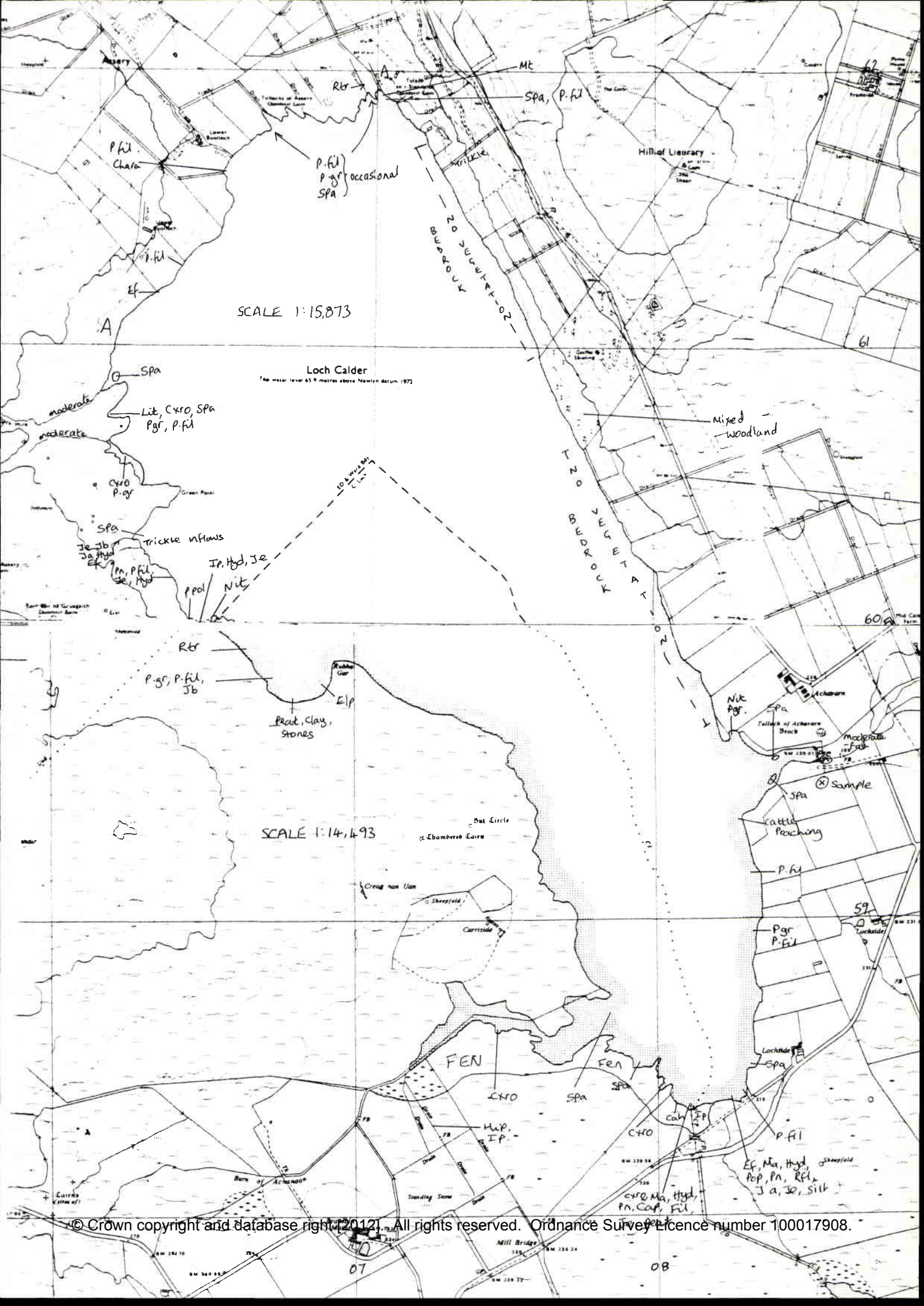
* N. flexilis var. flexilis

Charophyte identification verified by J.M. Moore

Site name CALDER Gr ND 072603 No. BN3

EMERGENT AND EDGE SPECIES:

	Map code		DAFOR
	Ags	Agrostis stolonifera	.....
✓	Cap	Caltha palustris	O
	Cxa	Carex aquatilis**	.....
	Cxl	Carex lasiocarpa	.....
	Cxli	Carex limosa	.....
✓	Cxn	Carex nigra	LA
✓	Cxro	Carex rostrata	LD
	Cxv	Carex vesicaria	.....
✓	Elp	Eleocharis palustris	LF
✓	Era	Eriophorum angustifolium	LA
✓	Glf	Glyceria fluitans	O
✓	Hip	Hippuris vulgaris	O/LF
✓	Hyd	Hydrocotyle vulgaris	A
✓	Ip	Iris pseudacorus	O
✓	Ja	Juncus articulatus	O
✓	Jb	Juncus bulbosus	O
✓	Je	Juncus effusus	LA
✓	Lit	Littorella uniflora	LF
	Lyc	Lycopodiella inundata**	.....
	Lyp	Lythrum portula	.....
✓	Ma	Mentha aquatica	LA
✓	Mt	Menyanthes trifoliata	LA - 1 patch
	Mg	Mimmulus guttatus	.....
	Mon	Montia fontana	.....
✓	Myl	Myosotis laxa/caespitosa	F
	Msc	Myosotis scorpioides	.....
	Nas	Nasturtium officinale	.....
	Pa	Phalaris arundinacea	.....
	Pha	Phragmites australis	.....
	Pam	Polygonum amphibium	.....
✓	Pop	Potentilla palustris	F
✓	Rfl	Ranunculus flammula	O
	Ris	Rorippa islandica	.....
	Sl	Scirpus lacustris	.....
	Sper	Sparganium erectum	.....
	Spem	Sparganium emersum	.....
	Vb	Veronica beccabunga	.....
	Vaa	Veronica anagallis-aquatica*	.....
✓	Vs	Veronica scutellata	O
✓	Ef	Equisetum fluviatile	LF
	Ep	Equisetum palustre	.....
	Fil	Filipendula ulmaria	LA
		Salix aurivulata	R
		Galium palustre	LA
		C. demissa	O
		C. panicea	LF
		Achillea ptarmica	O
		Senecio aquaticus	O
		Epilobium palustre	O
		Angelica sylvestris	O
		Pedicularis palustris	O



LOCH CALDER GR: ND 072603 N° BN3 17.09.1987

Several areas of species rich marsh and fen occurred producing the high species diversity for the loch. The vegetation was unevenly distributed and much of the exposed eastern shore was barren of plant life.

The areas marked Fen A on the map occur on the North and North western shores. Main species present include Juncus effusus, Mentha aquatica, Hydrocotyle vulgaris, Juncus articulatus, Potentilla palustris, Caltha palustris, Galium palustre, Eriophorum angustifolium, Myosotis caespitosa, Veronica scutellata, Carex rostrata, Ranunculus flammula, Equisetum fluviatile, Pedicularis palustris, Eleocharis palustris, Senecio aquaticus, Epilobium palustre, Juncus bulbosus, and Glyceria fluitans., Potamogeton gramineus occurs frequently stranded on the mud.

These species are also present in the fen area occurring at the southern end of the loch, with the addition of Hippuris vulgaris. Several drainage ditches dissect this area.

The area of shore between Rubha Gar to the North shore of the inlet at Brawlbin Mains was not surveyed