

Map Code	Species	DAFOR	Data Code	Map Code	Species	DAFOR	Data Code
Ags	<u>Agrostis stolonifera</u>	..	....	Pha	<u>Phragmites australis</u>	..	....
Api	<u>Apium inundatum</u>	..	....	Pam	<u>Polygonum amphibium</u>	..	....
Cah	<u>Callitriche hamulata</u>	R-LF	....	Pal	<u>Potamogeton alpinus</u>	..	....
Cas	<u>Callitriche stagnalis</u>	inflow (E) R	....	Pbe	<u>Potamogeton berchtoldii</u>	LF (SE)	....
Cap	<u>Caltha palustris</u>	F	....	Pcr	<u>Potamogeton crispus</u>	..	....
Cxa	<u>Carex aquatilis</u>	R/L	....	Pgr	<u>Potamogeton gramineus</u>	LF	....
Cxl	<u>Carex lasiocarpa</u>	..	....	Pn	<u>Potamogeton natans</u>	F-LA	....
Cxro	<u>Carex rostrata</u>	F-LD	....	Pob	<u>Potamogeton obtusifolius</u>	..	....
Cxv	<u>Carex vesicaria</u>	..	....	Pper	<u>Potamogeton perfoliatus</u>	..	....
Elp	<u>Eleocharis palustris</u>	A-LD	....	Ppol	<u>Potamogeton polygonifolius</u>	0	....
Elc	<u>Elodea canadensis</u>	..	....	Ppra	<u>Potamogeton praelongus</u>	..	....
Era	<u>Eriophorum angustifolium</u>	0	....	Pop	<u>Potentilla palustris</u>	0	....
GlF	<u>Glyceria fluitans</u>	0	....	Rfl	<u>Ranunculus flammula</u>	A	....
Hip	<u>Hippuris vulgaris</u>	..	....	Rhe	<u>Ranunculus hederaceus</u>	..	....
Hyd	<u>Hydrocotyle vulgaris</u>	..	....	Rom	<u>Ranunculus omiophyllus</u>	..	....
Ip	<u>Iris pseudacorus</u>	..	....	Rpe	<u>Ranunculus peltatus</u>	..	....
Jb	<u>Juncus bulbosus</u>	0 LF	....	Sf	<u>Scirpus fluitans</u>	..	....
Je	<u>Juncus effusus</u>	..	....	Sl	<u>Scirpus lacustris</u>	..	....
Lm	<u>Lemna minor</u>	..	....	Scu	<u>Scutellaria galericulata</u>	..	....
Lit	<u>Littorella uniflora</u>	LD-A	....	Spa	<u>Sparganium angustifolium</u>	F-LA	....
Lob	<u>Lobelia dortmanna</u>	F-LA	....	Spe	<u>Sparganium emeresum</u>	..	....
Ma	<u>Mentha aquatica</u>	..	....	Spm	<u>Sparganium minimum</u>	..	....
Mt	<u>Menyanthes trifoliata</u>	..	....	Sub	<u>Subularia aquatica</u>	0-LF	....
Mg	<u>Mimulus guttatus</u>	..	....	Tyl	<u>Typha latifolia</u>	(bog)	....
Mm	<u>Mimulus moscatus</u>	..	....	Uti	<u>Utricularia intermedia</u>	(Pools) A	....
Mon	<u>Montia fontana</u>	inflow LA	....	Um	<u>Utricularia minor</u>	..	....
Myl	<u>Myosotis laxa/caespitosa</u>	sp. in flow R	....	Uva	<u>U. vulgaris/australis</u>	(shore) LF	....
Mys	<u>Myosotis secunda</u>	..	....	Vb	<u>Veronica beccabunga</u>	..	....
Mal	<u>Myriophyllum alterniflorum</u>	A	....	Vs	<u>Veronica scutellata</u>	marsh 0	....
Ms	<u>Myriophyllum spicatum</u>	..	....	Ef	<u>Equisetum fluviatile</u>	LA-F	....
Nas	<u>Nasturtium officinale</u>	..	....	Ep	<u>Equisetum palustre</u>	..	....
Nul	<u>Nuphar lutea</u>	..	....	Isl	<u>Isoetes lacustris</u>	deeper water LF?	....
Nup	<u>Nuphar pumila</u>	..	....	Ch	<u>Chara spp.</u>	..	....
Nulp	<u>Nuphar lutea X pumila</u>	..	....	Ni	<u>Nitella spp.</u>	(in east) F-LA	....
Na	<u>Nymphaea alba</u>	..	....	Fon	<u>Fontinalis antipyretica</u>	LF (in inflow)	....
Pa	<u>Phalaris arundinacea</u>	..	....	Pil	<u>Pilularia globulifera</u>	..	....

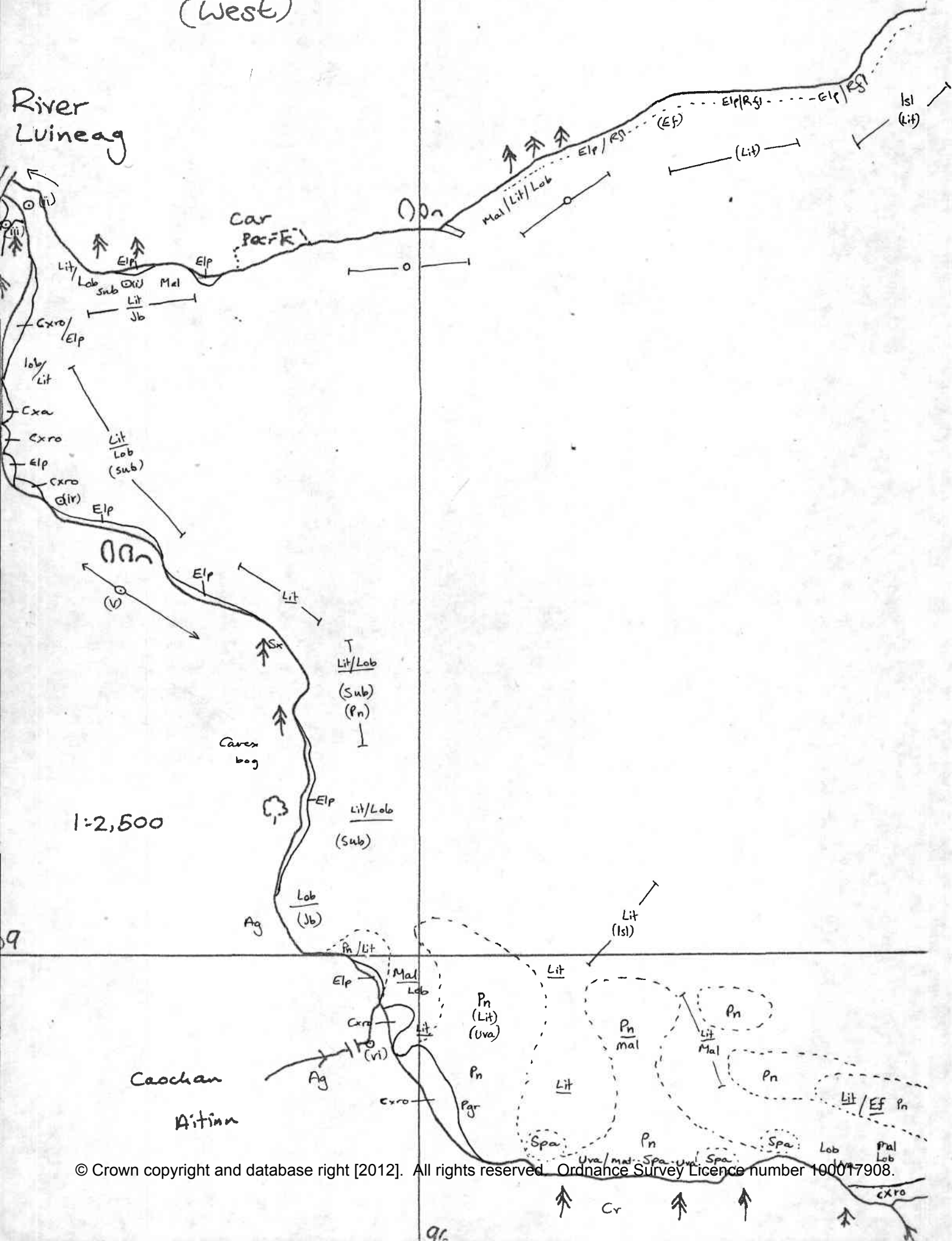
Cxa... Carex paniculata SE on shore R

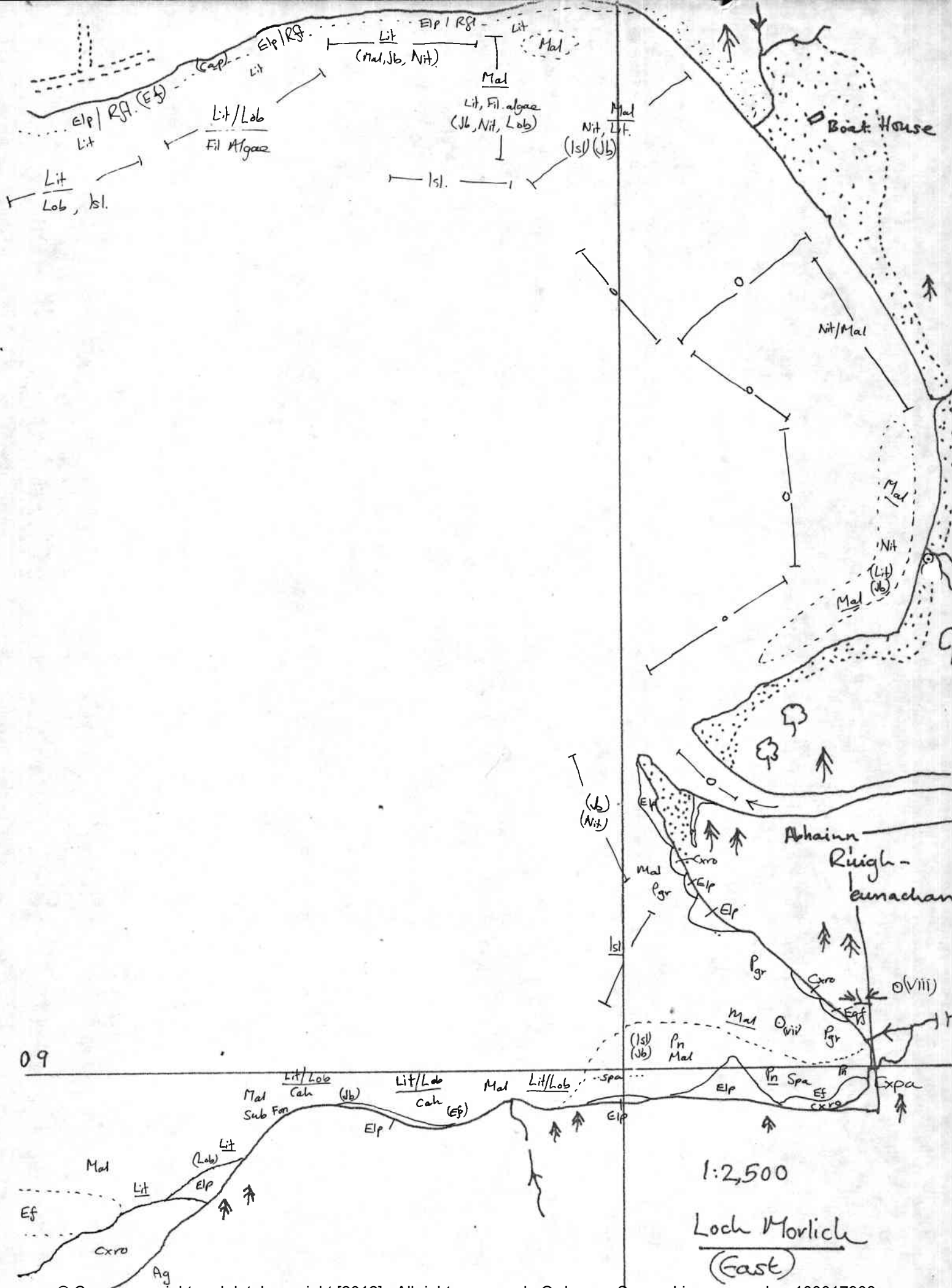
* N. flexilis
 Type Ba

Charophyte identification
 verified by Ordnance Survey Licence number 100017908.

Loch Morlich (West)

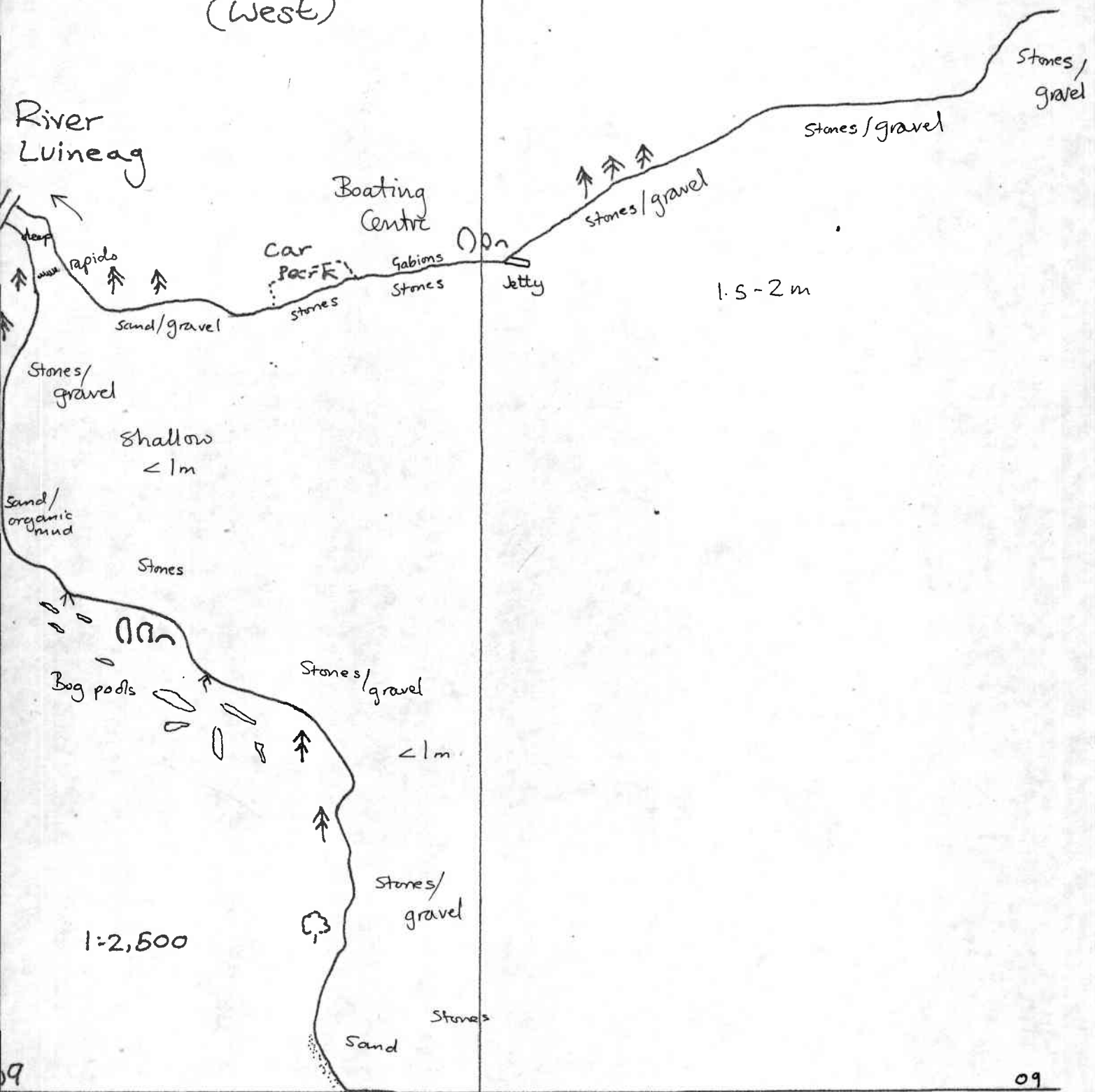
River
Luineag



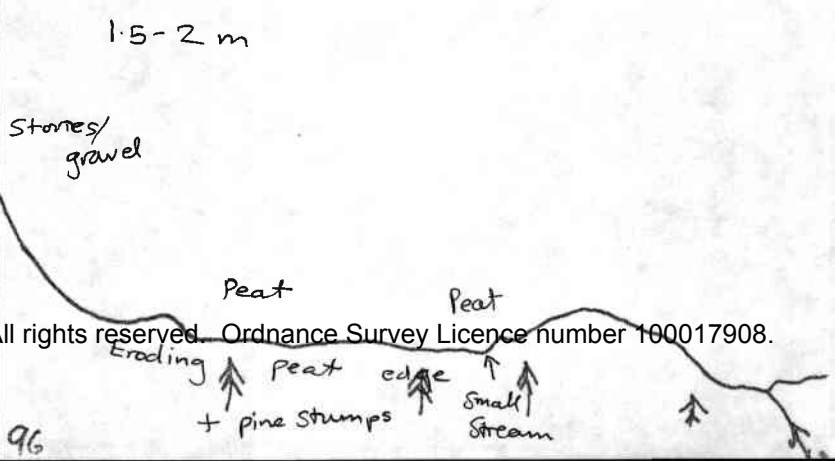


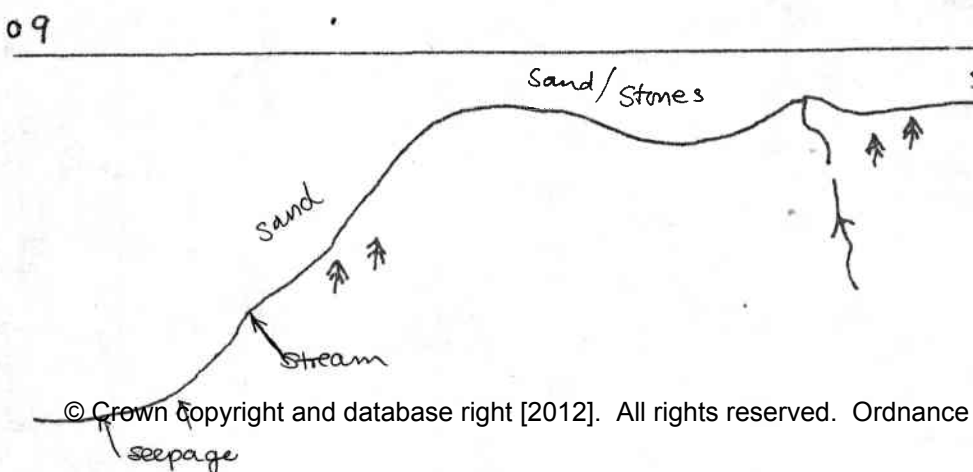
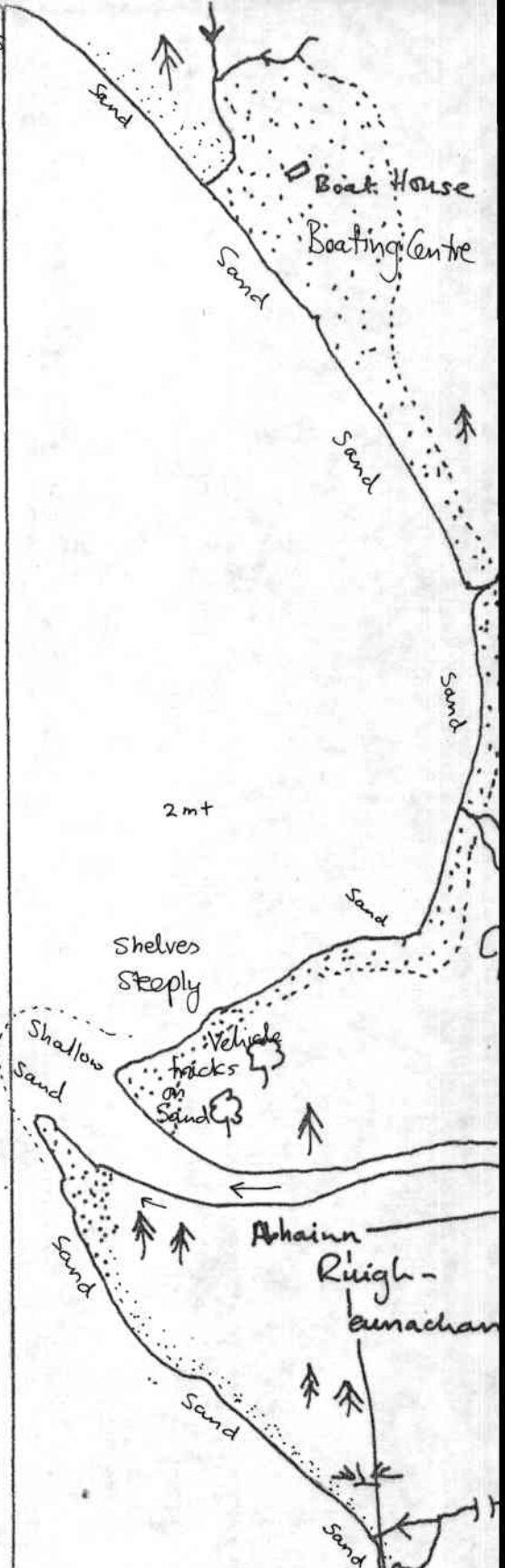
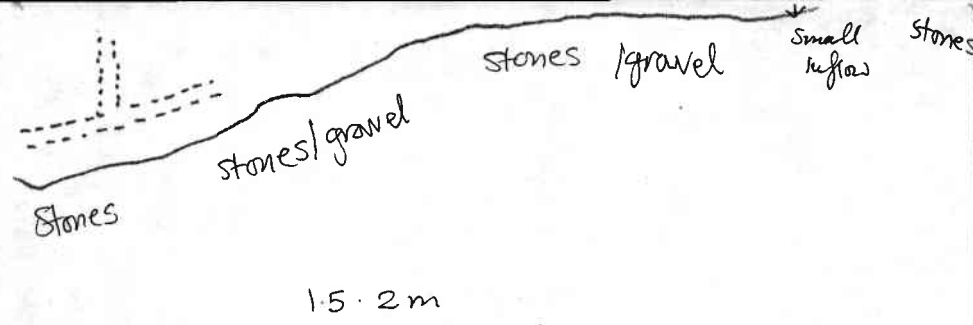
Loch Morlich
(West)

River
Luineag



Caochan
Aitinn





2mt
3mt
2mt

Shelves steeply

Vehicle tracks on Sand

Abhainn Ruigh-anachan

1:2,500

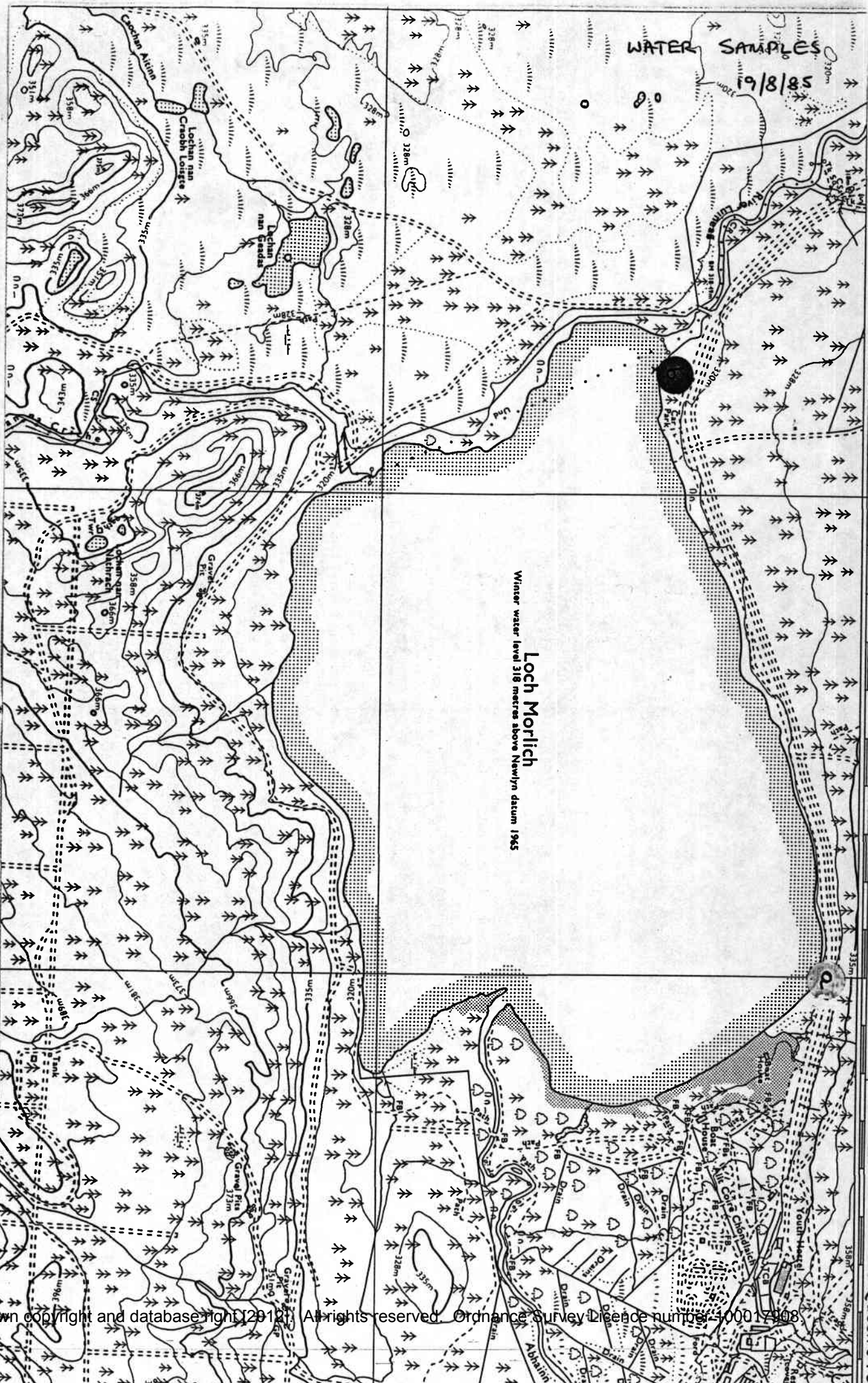
Loch Morlich
(East)

	mg/l		Mean (mg/l)	Range (mg/l) for lochs sampled
	a	b		
Phosphate PO ₄	< 0.005	< 0.005	0.013	< 0.005-0.11
			
Nitrate NO ₃	0.019	< 0.010	0.038	< 0.010-0.29
			
Ammonium NH ₄	< 0.10	< 0.10	0.102	< 0.10 -0.26
			
Silica Si	2.4	2.4	2.066	< 0.050-5.0
			
Total Phosphorus P	0.015	0.011	0.034	0.004-0.32
			
Potassium K	0.34	0.40	0.755	0.2 -2.3
			
Calcium Ca	1.9	1.7	4.23	0.24-11
			
Magnesium Mg	0.60	0.54	1.159	0.51-2.4
			
Aluminium Al	0.064	0.064	0.077	0.003-0.17
			
Alkalinity in mg/l CaCO ₃	7.0	4.5	11.76	slight-29 acidity
			
pH	c	7.2	-	4.4-7.5
Conductivity in µmhos	c	37.8	-	21-180
			

Sample a taken from NE corner 19.8.85

Sample b taken from north side of outflow 19.8.85

sample c from mid-loch 23.7.85



Loch Morlich
Winter water level 318 metres above Newlyn datum 1965

Loch Morlich

Loch type VIIIA

The loch is almost surrounded by conifer plantation with only a small band of natural pine/birch/alder/juniper woodland and heather separating it from the loch. Nearly half the edge is affected by recreation (north and east shores) The less disturbed west and south shores are also less exposed and so have broad stands of emergents and beds of *P natans* along them. There are stands of *P gramineus* and *Subularia* locally. *Carex paniculata* is rare in the SE. The bogs on the west shore have interesting pools with *Drosera anglica* and *Carex dioica*. The bird life was varied with geese, ospreys, herons and sandpipers seen. Before the water sports development there were said to have been more species breeding (RSPB). *Lycopodiella inundata* was said to have recorded (BSBI) but in spite of extensive search in the western boggy margin none was found.

Communities at Loch Morlich

Substrate	Depth	Species
Peat On south shore	0.5-1m	<i>Myriophyllum alterniflorum</i> F
		<i>Potamogeton natans</i> F
		<i>Utricularia vulgaris</i> F
		<i>Sparganium angustifolium</i> LA
Stones/gravel north and west shores	a) 0-0.25m	<i>Eleocharis palustris</i> A
		<i>Ranunculus flammula</i> A
		<i>Littorella uniflora</i> A
		<i>Caltha palustris</i> O
		<i>Equisetum fluviatile</i> O
		<i>Juncus bulbosus</i> O
	b) 0.25-1.5m	<i>Carex rostrata</i> LA
		<i>Littorella uniflora</i> A
		<i>Lobelia dortmanna</i> F
		<i>Myriophyllum alterniflorum</i> F
		<i>Subularia aquatica</i> LF (esp. where larger gravel and more continuous stones)
		<i>Juncus bulbosus</i> O
c) > 1.5m	<i>Potamogeton natans</i> R	
	<i>Isoetes lacustris</i> F	
	<i>Myriophyllum alterniflorum</i> O	
Sand East shore mostly	a) 0-0.25m	<i>Littorella uniflora</i> O
		<i>Carex rostrata</i> O-LD
		<i>Equisetum fluviatile</i> LF
		<i>Eleocharis palustris</i> F
		<i>Nitella flexilis</i> LA
	b) 0.25-1.5m	<i>Lobelia dortmanna</i> O
		<i>Littorella uniflora</i> O
		<i>Juncus bulbosus</i> O
		<i>Myriophyllum alterniflorum</i> A
		<i>Potamogeton natans</i> A
	<i>Potamogeton gramineus</i> LF	
	<i>P berchtoldii</i> LF	
	<i>Sparganium angustifolium</i> F	
	<i>Nitella flexilis</i> F-A	
	<i>Juncus bulbosus</i> O	
	<i>Lobelia dortmanna</i> O	

Target Notes for Loch Morlich

- (i) Very mixed edge community on stony substrate. Eleocharis palustris locally dominant, with Ranunculus flammulus, Juncus bulbosus, J articulatus (O), Littorella uniflora, Lobelia dortmanna, Subularia aquatica, and Caltha palustris.
- (ii) Deep pool before Bridge into Rothiemurchus Estate, with Salix aurita and Alnus glutinosa around it. Littorella uniflora is dominant on the bottom with Potamogeton natans, Myriophyllum alterniflorum, and Equisetum fluviatile.
- (iii) Back water overgrown with Carex rostrata, C nigra, Equisetum fluviatile, Sparganium sp. with some Potamogeton natans and Juncus effusus.
- (iv) More varied community influenced by runoff from bog - Potamogeton polygonifolius among Equisetum fluviatile, Eleocharis palustris and Ranunculus flammulus. Littorella and Lobelia grow further out from the shore.
- (v) A system of bog pools seeping slowly into the loch. In the pools grows Drosera anglica, Potamogeton polygonifolius and Utricularia intermedia. On the peat around the pools grows Drosera rotundifolia, Sphagnum papillosum, S capillifolium, Triglochin palustris, Pedicularis palustris, Pinguicula vulgaris, Carex dioica, Narthecium ossifragum, Eriophorum angustifolium, Juncus bulbosus and Eleocharis quinqueflora.
- (vi) Inflow stream swift and with considerable flow. Glyceria fluitans, Carex rostrata, Myriophyllum alterniflorum and Montia fontana grow in the channel.
- (vii) A species-rich bay with inflow among Carex paniculata tussocks. In the water there are dense growths of submerged and floating species. Potamogeton gramineus (F), Potamogeton berchtoldii (F), P natans (A), Lobelia (F), Littorella (F), Utricularia vulgaris (O), Myriophyllum alterniflorum (A), Sparganium angustifolium (F). Nitella flexilis (A) and further out Isoetes lacustris (F) although it occurs occasionally in amongst the other species. In the shallow edges of the bay Equisetum fluviatile, Eleocharis palustris, Carex rostrata and Montia fontana.
- (viii) Inflow contains Myosotis sp. Callitriche sp, Glyceria fluitans, Fontinalis antipyretica and Caltha palustris. In the bog just north Carex rostrata is dominant with:-
- | | |
|-----------------------------------|-----------------------------|
| <u>Veronica scutellata</u> | <u>Lychnis flos-cuculi</u> |
| <u>Viola palustris</u> | <u>Gallium palustre</u> |
| <u>Pedicularis palustris</u> | <u>Equisetum fluviatile</u> |
| <u>Eriophorum angustifolium</u> | <u>Ranunculus flammula</u> |
| <u>Juncus bulbosus</u> | <u>Luzula multiflora</u> |
| <u>Carex curta</u> | <u>Carex echinata</u> |
| <u>Potamogeton polygonifolius</u> | <u>Potentilla palustris</u> |
| <u>Carex nigra</u> | |
- (ix) Inflow with Callitriche stagnalis, Juncus articulatus, Equisetum fluviatile, Carex rostrata, Potamogeton natans and Littorella uniflora.