

ND 4901

Loch name Echna Loch Island Burray No. 1
 Grid Reference ND475966 Date surveyed 22nd Sept 86
 Loch size 8.56 ha. Altitude < 5m m Secchi disk depth - m
 Water colour orange tint Loch level up ? cm? down - cm
 Adjacent wetland None
 Loch status - Type 7A
4

Substrate types

Bedrock	Sand (0.1-4mm diameter) ✓
Boulders (> 30cm max diameter) ✓	✓ Silt (< 0.1mm diameter)
Stones (5-30cm diameter) ✓	Organic mud (black and smelly)
Gravel (4-50mm diameter) ✓	Peat
	Artificial embankment

Uses and Damage

USE	AREA AFFECTED	DAMAGE
Water abstraction	.....	.....
Sewage inflow	.....	.....
Agricultural pollution	.....? .. <u>Probably cattle manure? Algal blooms</u> .. <u>fair</u> ..	.....
Edge trampling: animals	..... <u>cattle trampling east + west edge</u> .. <u>fair amount</u> ..	.....
: people	.....	.....
Fishing	.....	.....
Shooting	.....	.....
Others	.....	.....

Fauna

Birds	Mammals	Molluscs	Dragonflies
<u>2 14 Swans (Mute)</u> <u>Redshank</u> <u>Moorhen</u> <u>Pied Wagtail</u>		<u>Potamopyrgus jenkinsi</u>	

Water chemistry

Water sample taken No. 1 Time spent on site 1 1/2 hrs
 Conductivity 505

Species checklist for

.... Echna Loch . ND4901... NO IVb

Edge S19a

Map code	Species	DAFOR	Map code	Species	DAFOR
Ags	<u>Agrostis stolonifera</u>	Marsh Edge .A...	Pha	Phragmites australis	.....
Api	Apium inundatum	.....	Pam	<u>Polygonum amphibium</u> Marsh afflow. sub ¹ end	..R..
Cah	Callitriche hamulata	.....	Pbe	Potamogeton berchtoldii	.....
Cher	<u>Callitriche hermaphrodita</u>	..A.?	Pcr	Potamogeton crispus	.....
Cpla	Callitriche platycarpa	.....	Pfil	<u>Potamogeton filiformis</u> washed up.	..?..A
Cas	Callitriche stagnalis	.....	Pfr	Potamogeton friesii	.....
Cap	<u>Caltha palustris</u>	Edge/Marsh ..F..	Pgr	Potamogeton gramineus	.....
Cxn	<u>Carex nigra</u>	Marsh ..F..	Pn	<u>Potamogeton natans</u> washed up	?O...
Cxro	<u>Carex rostrata</u>	Edge ..O..	PXn	Potamogeton X nitens	.....
Elp	<u>Eleocharis palustris</u>	Edge A/D.	Pob	Potamogeton obtusifolius	.....
Era	Eriophorum angustifolium	.....	Ppec	Potamogeton pectinatus	.....
GlF	<u>Glyceria fluitans</u>	..O..	Pper	Potamogeton perfoliatus	.....
Hip	Hippuris vulgaris	.....	Ppol	Potamogeton polygonifolius	.....
Hyd	<u>Hydrocotyle vulgaris</u>	Marsh edge LA P./L.D.	Ppu	Potamogeton pusillus	.....
Ip	Iris pseudacorus	.....	Pop	<u>Potentilla palustris</u> marsh	F.....
Ja	<u>Juncus articulatus</u>	Edge .A..	Ra	Ranunculus aquatilis	.....
Jb	Juncus bulbosus	.....	Rb	Ranunculus baudotii	.....
Je	<u>Juncus effusus</u>	Marsh .f...	Rf1	<u>Ranunculus flammula</u> edge	F.....
Lm	Lemna minor	.....	Rhe	Ranunculus hederaceus	.....
Lit	<u>Littorella uniflora</u>	..O..	Rtr	Ranunculus trichophyllus	.....
Ma	Mentha aquatica	.....	Ris	Rorippa islandica	.....
Mt	Menyanthes trifoliata	.....	Sf	Scirpus fluitans	.....
Mg	Mimulus guttatus	.....	Sl	Scirpus lacustris	.....
Mon	Montia fontata	.....	St	Scirpus tabernaemontani	.....
Myl	<u>Myosotis laxa/caespitosa</u>	..O..	Spa	Sparganium angustifolium	.....
Msc	Myosotis scorpioides	.....	Spe	Sparganium erectum	.....
Mal	<u>Myriophyllum alterniflorum</u>	..O.?	Uti	Utricularia intermedia	.....
Msp	Myriophyllum spicatum	.....	Um	Utricularia minor	.....
Nas	Nasturtium officinale	.....	Uva	Utricularia vulgaris/australis	.....
Pa	<u>Phalaris arundinacea</u>	Marsh .O..	Une	Utricularia neglecta	.....

Map code	Species	DAFOR	
Vb	Veronica beccabunga	.....	..... <i>Cardamine patensis</i>
Vaa	Veronica anagallis-aquatica	.....	..... <i>Juncus bufonius</i>
Vs	Veronica scutellata	.....	..... <i>Zani. Zannichellia palustris</i>
Ef	Equisetum fluviatile	.....	..... washed up? 0?
Ep	<u>Equisetum palustre</u> , Marsh	.LA..	.....
Cha	<u>Chara spp.</u>	.F..	.....
Nit	Nitella spp.	.....	.....
Fon	Fontinalis antipyretica

No Charophyte specimen collected for verification

ECHNA LOCH
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Vegetation Map



SEA

Nettles, Couch grass
Hobsons lamatus
Pop, Ep

Hyd, Cap, Rfl.
Ja, Ags

Ja, Cap, Rfl.
Hyd, Ags.

+ Cap, Rfl.
Hyd

(1a) Rfl, Cxn

Ja (1a) Cxn, Cap

ELP Lit, Cap, Ja, Hyd, Rfl

Cha

Cha

Je

(1a) Cap, Hyd

Je

ELP Ags

Ja

Cxn

(1) ELP Ags Ja nettles

J. buf.
Pam,
Cardamine.

+ R, Cxn,
Pop
Cxn, Je

(1a)

Cap ELP

Cxn Rfl

Loch-house

ow

(1a) Rfl, Cap

Hyd

(1a) Ags, Je, Cxn

Ja, Cap, Rfl.

ELP

Je EP

Ra, Pop

ow

TEL. Ex.

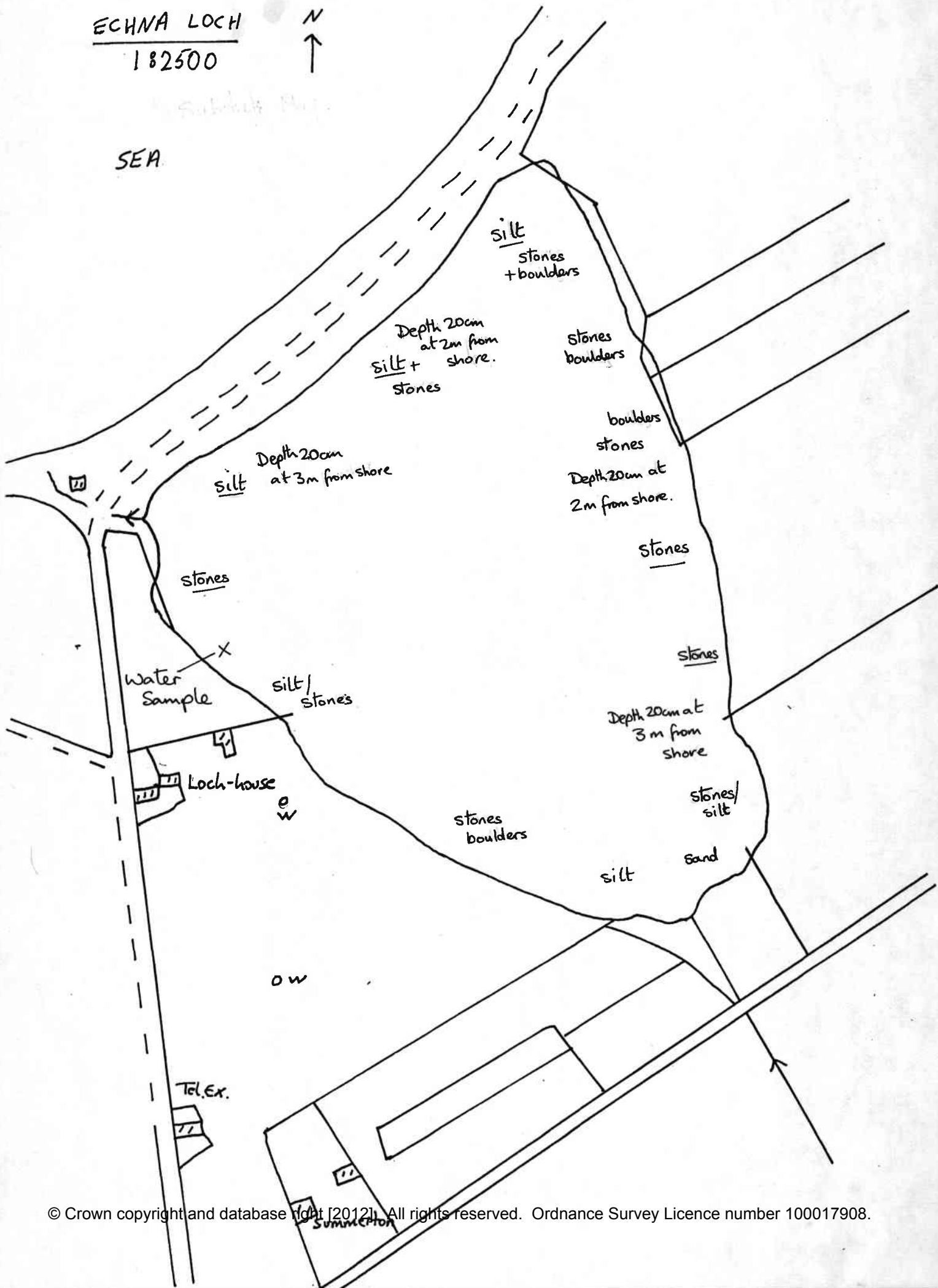
Substrate Map

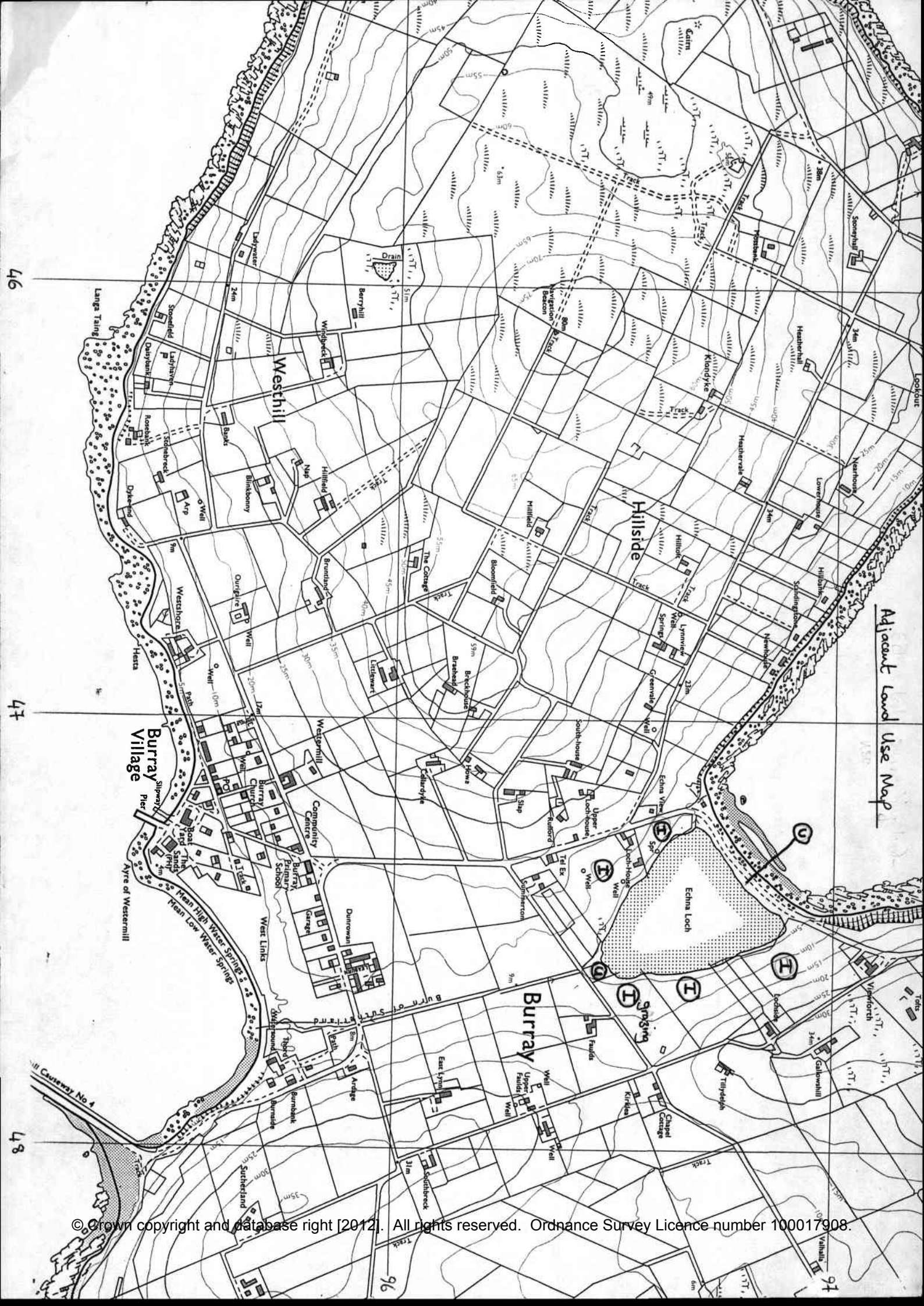
ECHNA LOCH

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SEA





Adjacent Land Use Map

1. ECHNA LOCH

Plant Communities

Loch Type IVb

7A

1. Marsh - unimproved land

Two areas of marsh occur to the north and south of the loch. Phalaris arundinacea, Equisetum palustre, Potentilla palustris, Ranunculus flammula, Agrostis stolonifera and other grasses, including Deschampsia caespitosa and Molinia caerulea, are frequent. Caltha palustris, Hydrocotyle vulgaris and Juncus articulatus are locally abundant with occasional Carex rostrata, and these species extend down to the loch edge. Juncus bufonius, Cardamine pratensis and Polygonum amphibium are rare occurrences in the southern marsh region. The silty substrate in this southern region is orange and this colour is dispersed into the water.

1a Marsh - improved land

Pastures, which frequently extend to the loch edge on the western and eastern margins of the loch are grazed by cattle and trampling is evident in the terrestrial/marsh zones. Patches of rough land with Deschampsia caespitosa, Carex nigra, Angelica sylvestris, Agrostis stolonifera, Equisetum palustre and occasional Ranunculus flammula, Caltha palustris, Juncus articulatus, Hydrocotyle vulgaris and Myosotis caespitosa occur in the predominantly terrestrial grassland. Juncus effusus is particularly abundant along the western margin.

2. Edge

The edge vegetation is dominated by Eleocharis palustris with Juncus articulatus, Hydrocotyle vulgaris and Agrostis stolonifera being locally abundant and with occasional Caltha palustris and Ranunculus flammula. Eleocharitetum palustris edge community. 519

3. Open water

Littorella uniflora occurs frequently along the stony eastern edge and Glyceria fluitans occasionally along the west. Other open water species were found washed up. Potamogeton filiformis and Callitriche hermaphroditica are probably abundant to locally dominant. Chara is frequent, particularly on the eastern edge and Myriophyllum alterniflorum, Potamogeton natans and Zannichellia palustris are also present.