

1993 LOCH SURVEY LOCHABER

Code. NNO142. Name. LOCH AWK Grid Ref. NNO09164.

Date 27/9....1/10/93 Surveyors. OLL/JJ/TH.... Estate.....

Area 273.2 ha Altitude 490 m Catchment.....ha Geology. 38/6/90.....

Water colour CLEAR - PALE
Brown Clarity. CLEAR Boat used. ✓ Secchi disc depth.....m

Loch type. 3..... Edge type(s). S4a. S8a. S9a. S9b. S10a. S11a. S12a. S22a. S28a
SCxa

Status..... Access. !..... Road/houses present (underline)

Land use % Open water..... Semi-natural..... Forestry..... Agriculture.....

Substrate types (underline main type, tick others present)

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

USES AND DAMAGE

Use	Area affected	Damage
Water abstraction	.....	.....
Sewage inflow	.....	.....
Agricultural pollution	.....	.....
Edge trampling	..... SOME SHORES.....	.....
Adjacent forestry	..... SEE MAPS.....	.....
Fishing (Edge/boat)	✓... FISHING... FROM .BANK ..& BOAT.....	.....
Shooting	.....	.....
	..... LITTER... SEEN... ON ALL SHORES. & IN LOCH .	

FAUNA

Birds	Mammals	Reptiles	Dragonflies & other inverts	Fish
MERGANSER				
DIPPERS				3-SPINED STICKLEBACK
HERONS				BROWN TROUT
CORMORANT				RAINBOW TROUT
MALLARD				

Species diversity

	Water Chemistry	
Edge.....23.....	NORTH	SOUTH
Open water....25.....	Alkalinity... 9.10 ..	0.316 ..
Total.....43.....	Conductivity. 1120 ..	2000 ..
	p.H..... 5.83 ..	7.13 ..

RARE SPECIES

Rare in RPB area

National

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1190.1 NNO2 NNO142.1

1190.2 NN12

12 OLL 6/93

1190.3 NM1

1190.4 NM91

1190.5 NM80

1190.6 NM90

.4

.5

.6

1993 LOCHABER LOCH SURVEY: AQUATIC PLANT SPECIES LIST

EMERGENT & EDGE SPECIES Site name LOCH AWE Grid ref..... Code.....

MC	S	Species	DAFOR	DOMIN
Ags		<i>Agrostis stolonifera</i>	Lf	....
Apn	#	<i>Apium nodiflorum</i>	....	....
Ber	#	<i>Berula erecta</i>	RIVER	(IN FORD RIVER)
Bm		<i>Bolboschoenus maritimus</i>	Lf	....
Cap		<i>Caltha palustris</i>	Lf	....
Crat	#	<i>Carex acuta</i>	....	....
Craf	#	<i>Carex acutiformis</i>	....	....
Cra	++	<i>Carex aquatilis</i>	LA	.... (1 LOCATION SEE MAP)
Crl		<i>Carex lasiocarpa</i>	....	....
Cxli		<i>Carex limosa</i>	....	....
Cxn		<i>Carex nigra</i>	LA	....
Cxpc	#	<i>Carex pseudocyperus</i>	....	....
Cxri	#	<i>Carex riparia</i>	LA	....
Cxro		<i>Carex rostrata</i>	LA	....
Cxv		<i>Carex vesicaria</i>	LA	....
Ca	#	<i>Catabrosa aquatica</i>	....	....
Cd	#	<i>Ceratophyllum demersum</i>	....	....
Civ	+	<i>Cicuta virosa</i>	....	....
Clm	#	<i>Cladium mariscus</i>	....	....
Des		<i>Deschampsia setacea</i>	....	....
Ela	++	<i>Eleocharis acicularis</i>	....	....
Eln		<i>Eleocharis multicaulis</i>	....	....
Elp		<i>Eleocharis palustris</i>	LA	....
Elq		<i>Eleocharis quinqueflora</i>	....	....
Elu		<i>Eleocharis uniglumis</i>	....	....
Eq	f	<i>Equisetum fluviatile</i>	LA	....
Ep		<i>Equisetum palustre</i>	....	....
Era		<i>Eriophorum angustifolium</i>	....	....
Gld		<i>Glyceria declinata</i>	....	....
Glf		<i>Glyceria fluitans</i>	LA	....
Glp	#	<i>Glyceria notata</i>	....	....
Hlp		<i>Hippuris vulgaris</i>	Lf	....
Hyd		<i>Hydrocotyle vulgaris</i>	Lf	....
He	#	<i>Hypericum elodes</i>	....	....
Ip		<i>Iris pseudacorus</i>	....	....
Jac		<i>Juncus acutiflorus</i>	....	....
Jaa	++	<i>Juncus alpinoarticulatus</i>	LF	....
Ja		<i>Juncus articulatus</i>	LF	....
Jb	+	<i>Juncus bulbosus</i>	Lf	....
Jc		<i>Juncus conglomeratus</i>	....	....
Je		<i>Juncus effusus</i>	O	....
Litt		<i>Littorella uniflora</i>	A	....
Lyc		<i>Lycopodiella inundata</i>	....	....
Lyt	+	<i>Lysimachia thyrsiflora</i>	....	....
Lyp	#	<i>Lythrum portula</i>	....	....
Lys		<i>Lythrum salicaria</i>	....	....
Ma		<i>Mentha aquatica</i>	LF	....
Mt		<i>Menyanthes trifoliata</i>	LO	....
Mn		<i>Mimulus moschatus</i>	....	....
Mg		<i>Mimulus guttatus</i>	....	....
Ml		<i>Mimulus luteus</i>	....	....
Mi		<i>Mimulus sp.</i>	....	....
Mon		<i>Montia fontana (4ssp)</i>	R	....
Myl		<i>Myosotis laxa</i>	....	....
Msec		<i>Myosotis secunda</i>	....	....
Msc		<i>Myosotis scorpioides</i>	....	....
Mst	+	<i>Myosotis stolonifera</i>	....	....

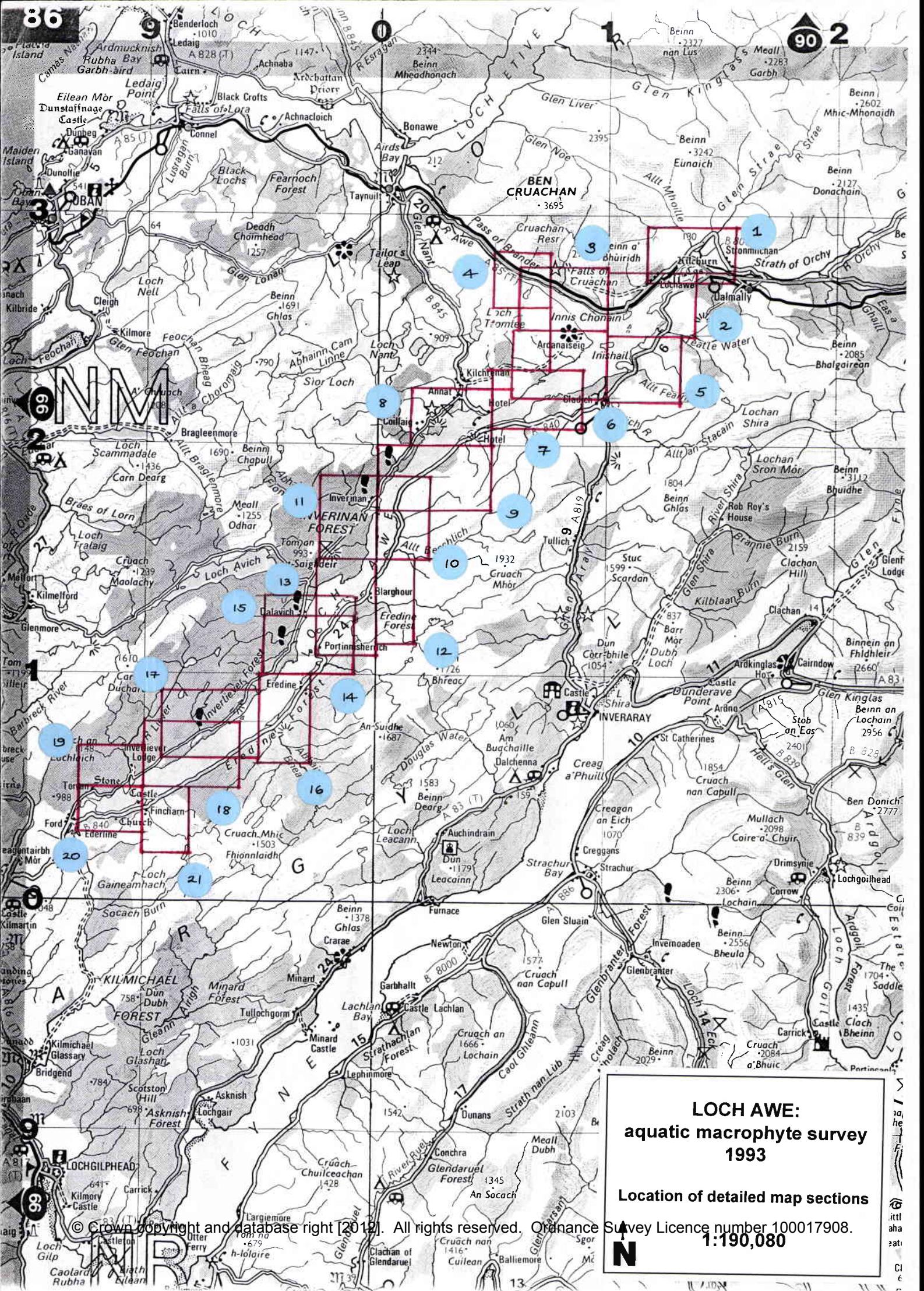
MC	S	Species	DAFOR	DOMIN
Oc		<i>Oenanthe crocata</i>	....	....
Of	#	<i>Oenanthe fistulosa</i>	....	....
Ol		<i>Oenanthe lachenalii</i>	....	....
Pan		<i>Persicaria amphibia</i>	....	....
Pha		<i>Phalaris arundinacea</i>	LA	....
Phr	#	<i>Phragmites australis</i>	LA	....
Pop		<i>Potentilla palustris</i>	R	....
Rfl		<i>Ranunculus flammula</i>	LF	....
		ssp. <i>flammula</i>		
		ssp. <i>minimus</i>		
		ssp. <i>scoticus</i>		
Rh		<i>Ranunculus hederaceus</i>	....	....
Rs	#	<i>Ranunculus sceleratus</i>	....	....
Rl	#	<i>Ranunculus lingua</i>	....	....
Rna		<i>Rorippa nasturtium-aquaticum</i>	....	....
Rraq	#	<i>Rumex aquaticus</i>	....	....
Rrh	#	<i>Rumex hydrolapathum</i>	....	....
Sv	#	<i>Samolus valerandi</i>	....	....
Sp	++	<i>Scheuchzeria palustris</i>	....	....
Sl		<i>Schoenoplectus lacustris</i>	LD	.... (SEE MAP FOR LOCATION)
St	#	<i>Schoenoplectus tabernaemontani</i>	....	....
Sd	#	<i>Solanum dulcamara</i>	LO	....
Sper		<i>Sparganium erectum (4ssp)</i>	LO	....
Spem		<i>Sparganium emersum</i>	....	....
Stp	#	<i>Stellaria palustris</i>	....	....
Ta	#	<i>Typha angustifolia</i>	....	....
Tl	#	<i>Typha latifolia</i>	....	....
Vaa	#	<i>Veronica anagallis-aquatica</i>	....	....
Va		<i>Veronica beccabunga</i>	....	....
Vc	#	<i>Veronica catenata</i>	....	....
Vs		<i>Veronica scutellata</i>	....	....
		FONTINALIS ANTIPYRETICA A		
		PILULARIA GLOBULIFERA O 4		
		ELATINE HEXANDRA R		
Cxd		<i>Carex viridula ssp oedocarpa (C. demissa)</i>		
Cxe		<i>Carex echinata</i>		
Cxp		<i>Carex panicea</i>		
Csp		<i>Carex paniculata</i>		
Gp		<i>Galium palustre</i>		
Gr		<i>Geum rivale</i>		
Sa		<i>Senecio aquaticus</i>		
Tp		<i>Triglochin palustre (T. palustris)</i>		
Vp		<i>Viola palustris</i>		

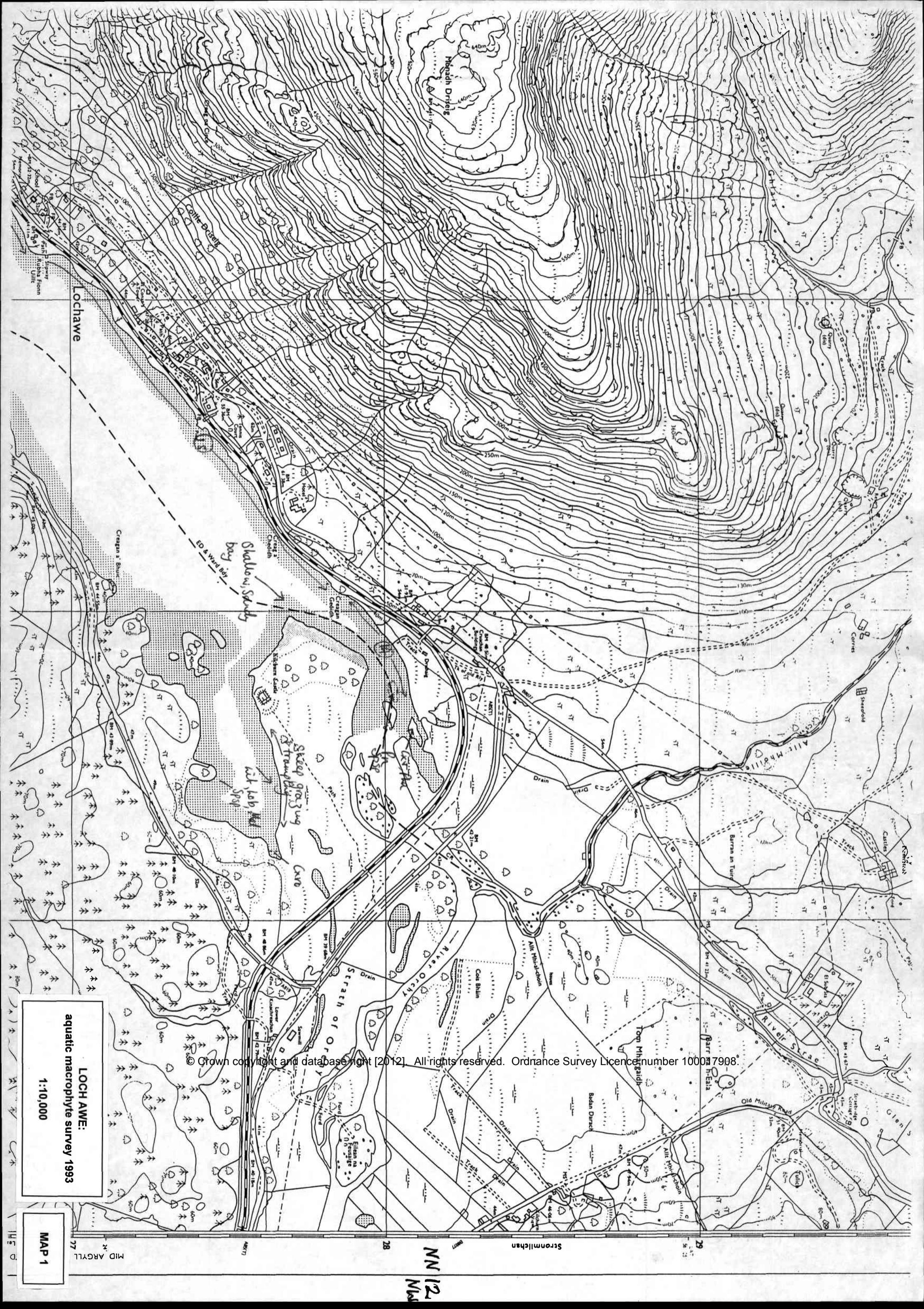
Pilularia globulifera recorded at: NN136273
NN028210

Alisma plantago-aquatica (in ford River)

1993 LOCHABER LOCH SURVEY: AQUATIC PLANT SPECIES LIST

SUBMERGED & FLOATING SPECIES Site name Grid ref. Code.

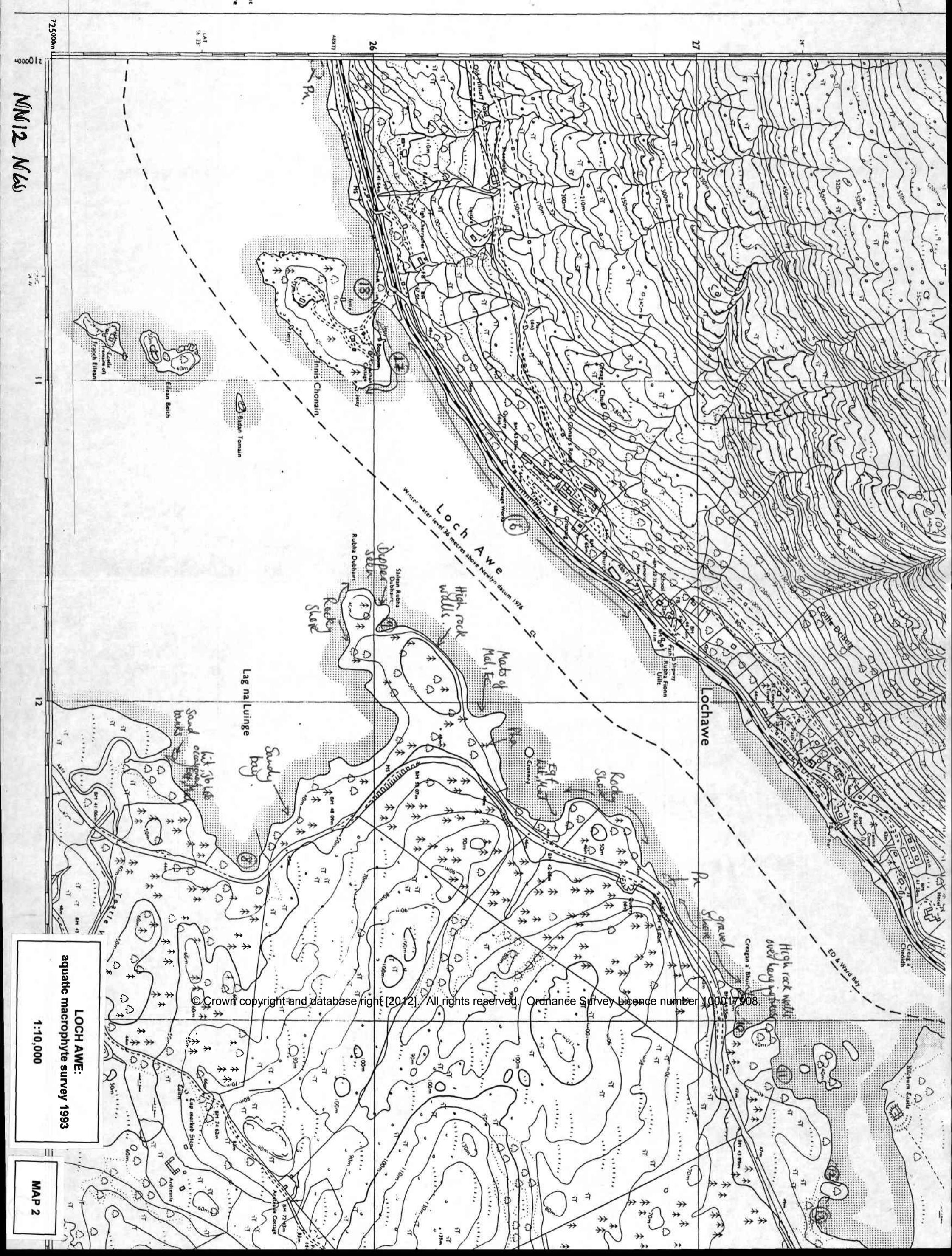






A right of way

$$1 \text{ foot} = 0.3048 \text{ metres}$$

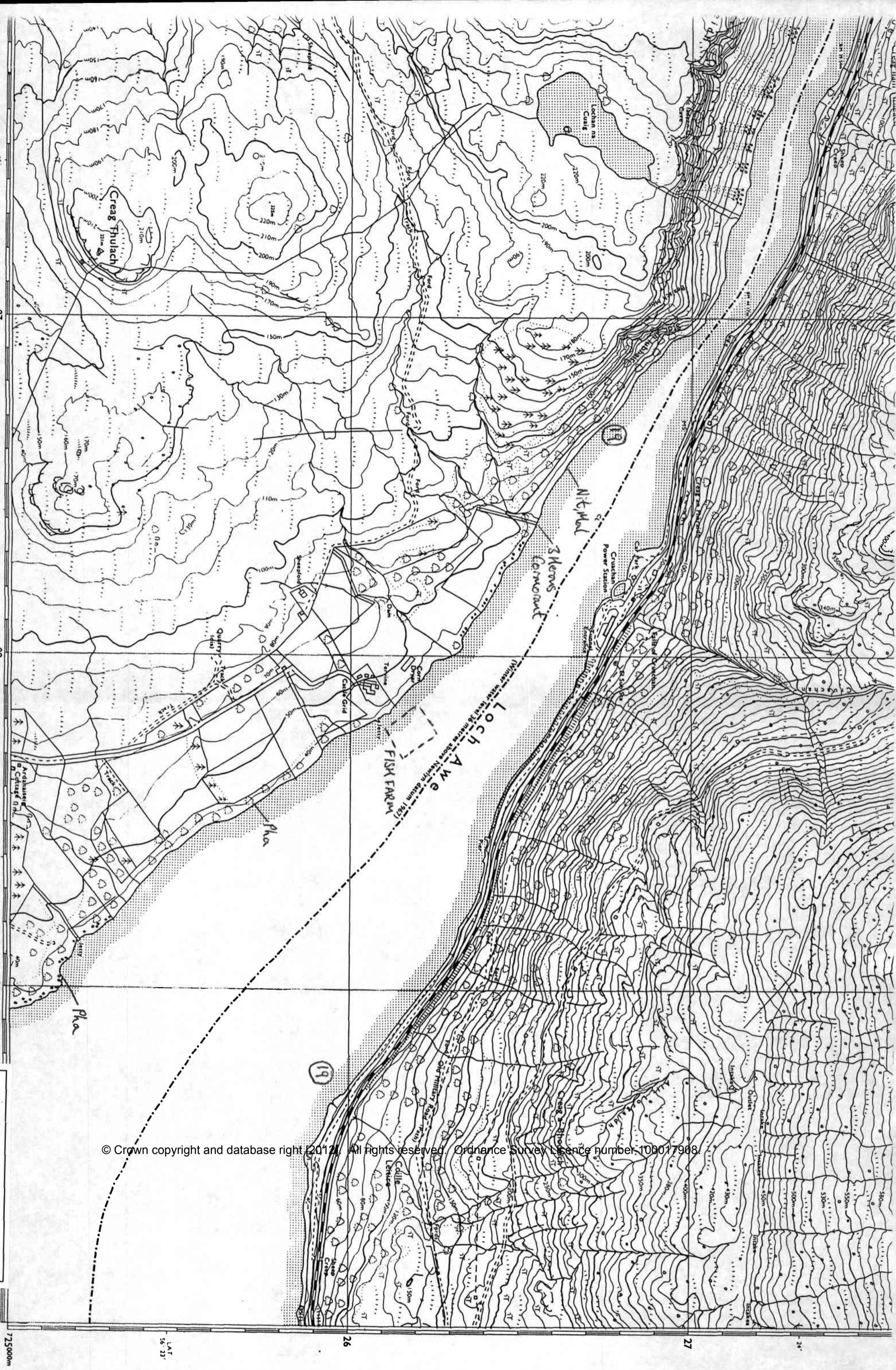


NN 02 NE

LOCH AWE:
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1:10,000

MAP 3



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GLENORCHY AND INISHAIL CP

56° 23'

NN 02 NE

NN 02 NE

- LY Coppice
- Orchard
- Coniferous trees
- Non-coniferous trees

- Lake, loch or pond
- Sloping masonry
- Chalk pit, clay pit or quarry
- Gravel pit
- Sand pit
- Disused pit or quarry
- Triangulation station

- Shingle
- Sand

The first appropriate symbol in this list is shown when coincidence of boundaries occurs.

Shown alternately with one of the symbols above when coincidence of boundaries occurs.
Shown only when not coincident with other boundaries.

by mereings.

FEATURES CONVERSION SCALE

Metres - Feet

2000 Metres 6500 Feet

1800 Metres 6000 Feet

1600 Metres 5500 Feet

1400 Metres 5000 Feet

1200 Metres 4500 Feet

1000 Metres 4000 Feet

800 Metres 3500 Feet

600 Metres 3000 Feet

400 Metres 2500 Feet

200 Metres 1500 Feet

Vertical face

- Police Station
- Post Office
- Public Convenience
- Public House
- Final Box
- Ring
- Telephone Call Box
- Telephone Call Post
- Cell

STEM

METRES

are NN

the ins. rds

05

2

052

the ins. rds

25

7

257

ence NN 052257

resulting reference
ned is sufficiently
n to one mile andJunction and at the
3° West of Grid

LOCH AWE:

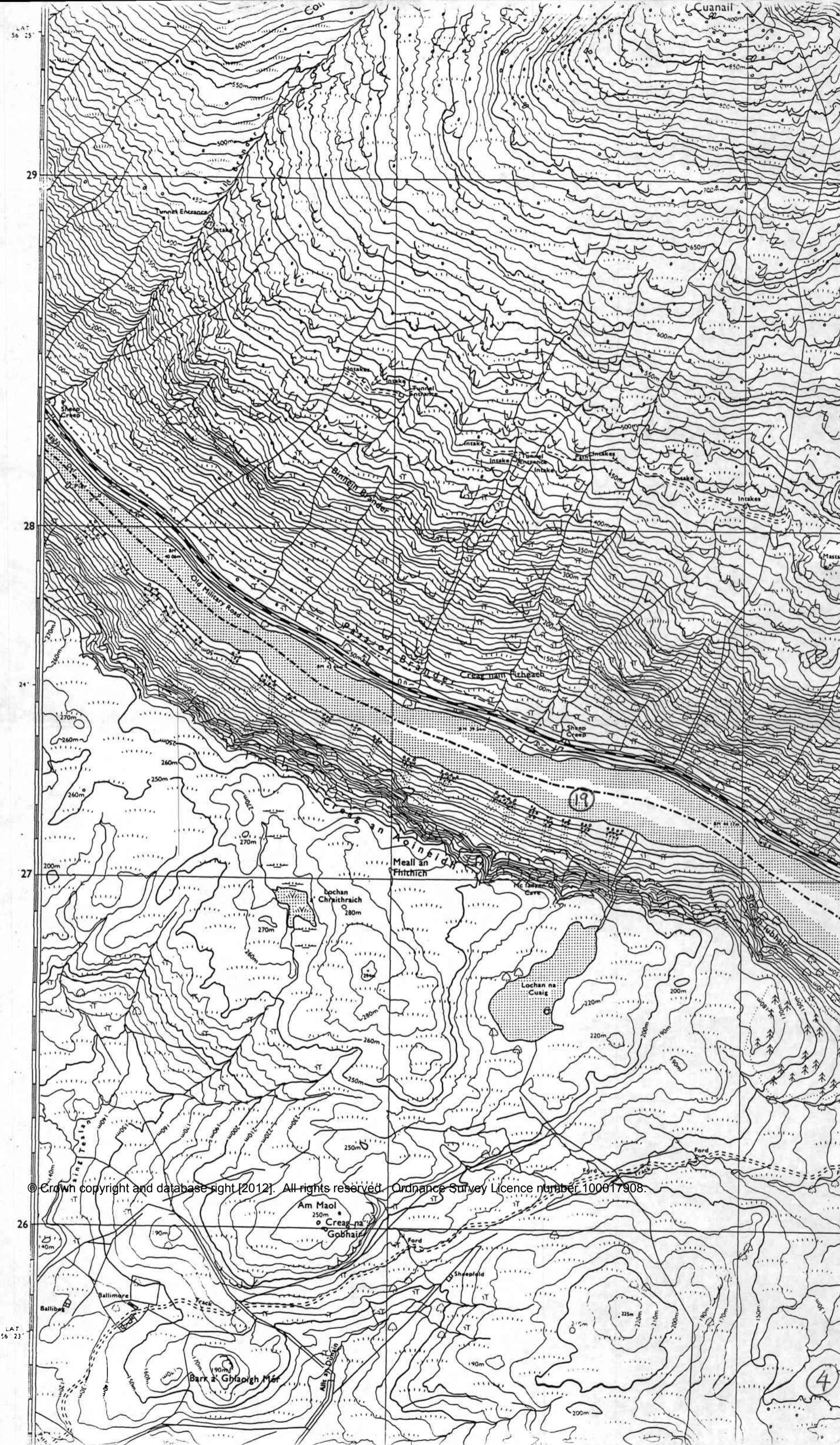
aquatic macrophyte survey 1993

1:10,000

1 metre = 3.2808 feet
1 foot = 0.3048 metre

MAP 4

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SCALE 1:10 000

MN12 SW

SYMBOLS

ROADS	
	Road
	Track
	Track
	Where unbanked known by pecked line
RAILWAYS	
	Cutting
	Embankment
	Road
	Road
	Over
	Under
	Level Crossing
	Footbridge
	Bridge
	Single track
	Multiple track
	Standard gauge
	Narrow gauge
VEGETATION	
	Bracken
	Boulders
	Rough grassland
	Reeds
	Heath
	Marsh
	Saltmarsh
	Reeds
	Scrub
	Coppice
	Orchard
	Coniferous trees
	Non-coniferous trees
	Lake, loch or pond
	Sloping masonry
	Chalk pit, clay pit or quarry
	Gravel pit
	Sand pit
	Disused pit or quarry
	Triangulation station
	Shingle
	Sand
MISCELLANEOUS	
	Antiquity (site of)
	Boulders
	Building
	Pylon
	Pole
	Electricity transmission line
	Glasshouse
	Refuse or slag heap
	Direction of flow of water

BOUNDRARIES As notified to 1:10 000

County (England and Wales), Region or Islands Area (Scotland)

District

London Borough

Civil Parish (England), Community (Wales)

Electoral Division or Ward

Example of change of mapping
Imperial equivalents for metric boundary
Basic survey area
0.91m = 3ft 1.22m = 4ft
only

Coincident boundaries are shown by the first appropriate symbol above, e.g. ... Boro. Const. & ED Bdy.

For Ordnance Survey purposes County Boundary is deemed to be the limit of the parish structure whether or not a parish area adjoins.

Contours are at 10 metres vertical interval.

HEIGHTS (METRES)

Values are given in metres above mean sea level at Newlyn.

Surface heights determined by air survey

Bench mark and value + 8m 15mm

Benchmarks containing taller and possibly later levelling information are obtainable from the Director General, Ordnance Survey.

Contours are at 10 metres vertical interval.

ROCK FEATURES

CONVERSION SCALE

Metres - Feet

2000 Metres

6500 Feet

4000 Metres

5000 Feet

6000 Metres

1500 Feet

1000 Metres

1500 Feet

500 Metres

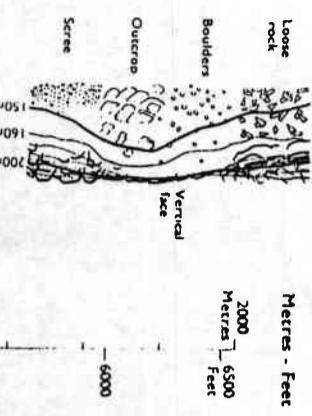
800 Feet

300 Metres

500 Feet

200 Metres

300 Feet



725000m

3000000m

1000000m

500000m

100000m

50000m

10000m

5000m

1000m

500m

100m

50m

10m

5m

1m

0.5m

0.1m

0.05m

0.01m

0.005m

0.001m

0.0005m

0.0001m

0.00005m

0.00001m

0.000005m

0.000001m

0.0000005m

0.0000001m

0.00000005m

0.00000001m

0.000000005m

0.000000001m

0.0000000005m

0.0000000001m

0.00000000005m

0.00000000001m

0.000000000005m

0.00000000001m

0.000000000001m

0.0000000000005m

0.000000000001m

0.0000000000001m

0.00000000000005m

0.0000000000001m

0.000000000000005m

0.00000000000001m

0.0000000000000005m

0.00000000000001m

0.0000000000000001m

0.00000000000000005m

0.0000000000000001m

0.000000000000000005m

0.00000000000000001m

0.0000000000000000005m

0.00000000000000001m

0.0000000000000000001m

0.00000000000000000005m

0.00000000000000001m

0.0000000000000000001m

0.000000000000000000005m

0.00000000000000001m

0.0000000000000000001m

0.00000000000000000005m

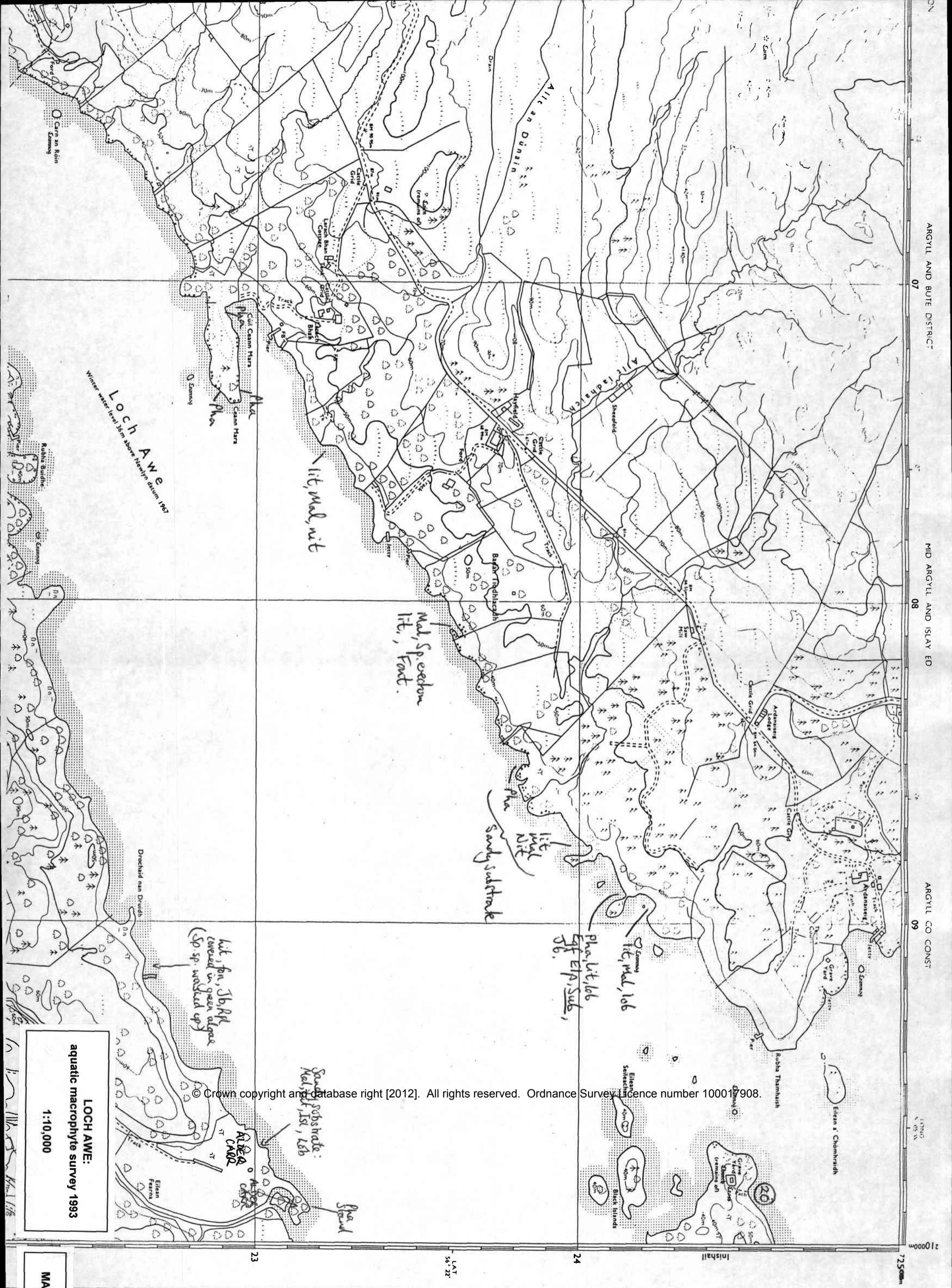
0.00000000000000001m

0.0000000000000000001m

0.000000000000000000005m

0.00000000000000001m

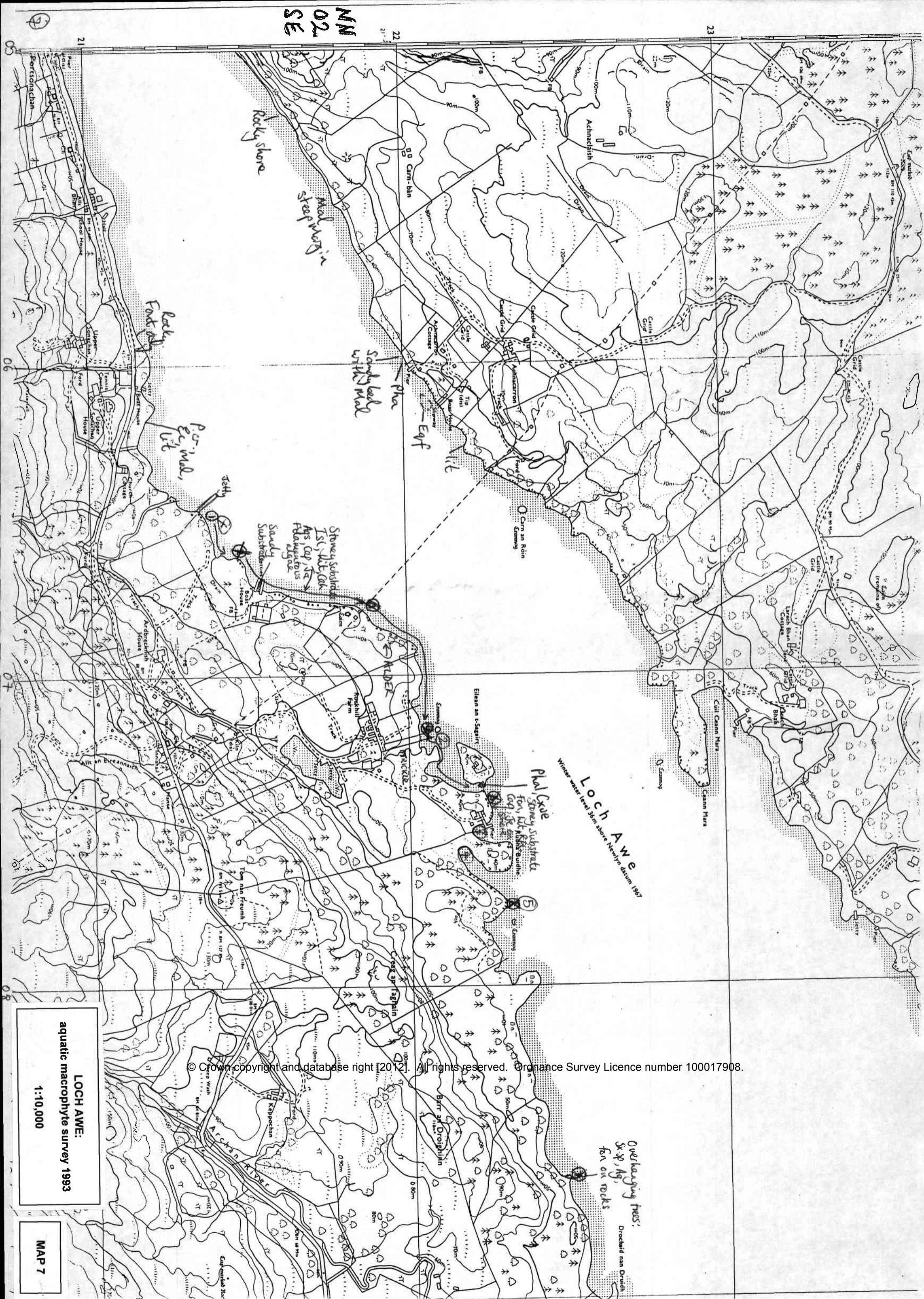
0.0000000000000000001m



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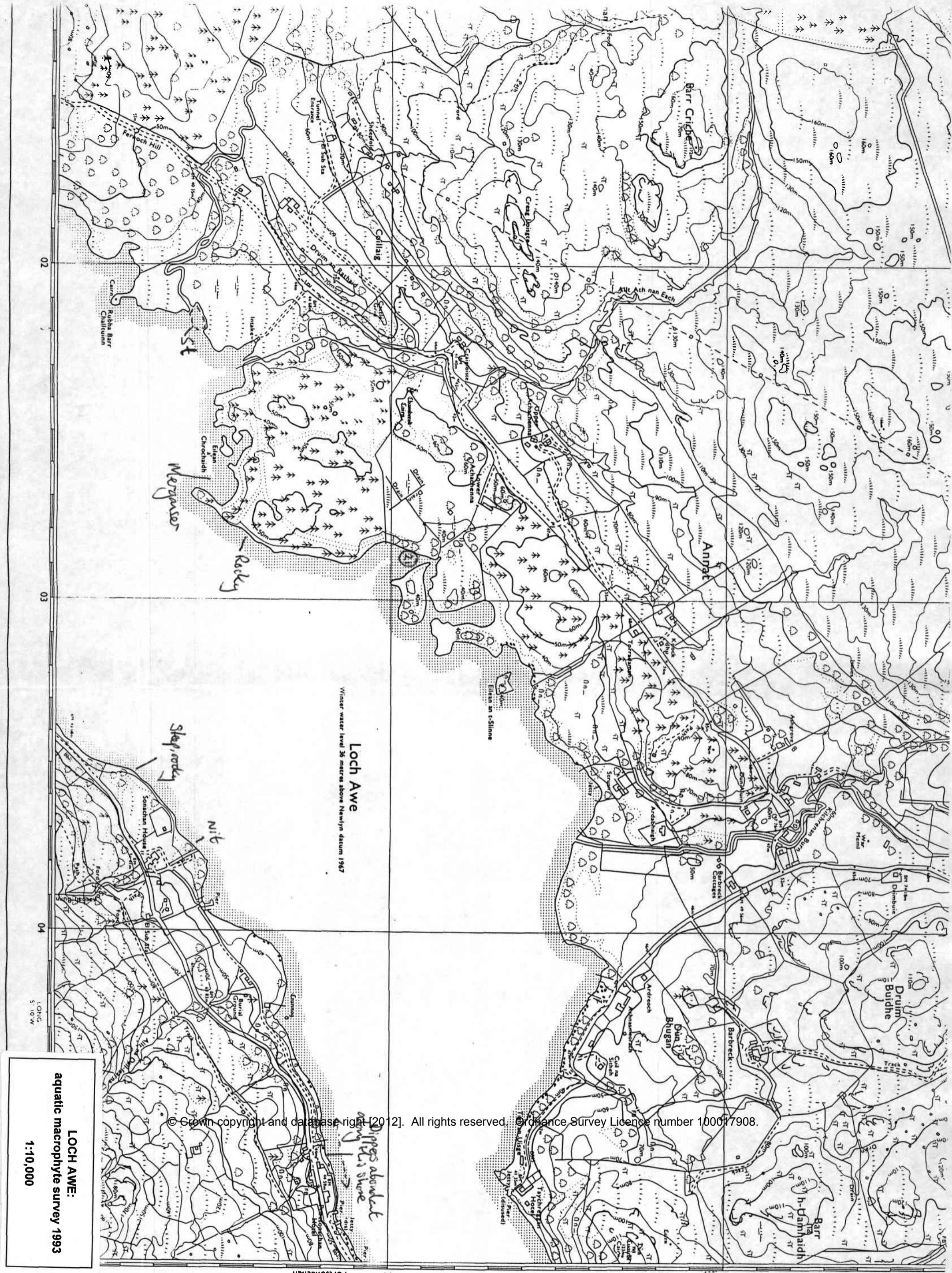
MAP 6



**LOCH AWE:
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1:10,000

MAP 7



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LUCI AVE.
aquatic macrophyte survey 1993

1:10,000

MAP 8

HEIGHTS IN METRES

ORDNANCE SURVEY

NN 01 NW

ARGYLLSHIRE

SOUTH LORN DISTRICT

KILCHRENNAN AND DAL AVICH CP

ARGYLL CO.

20000m

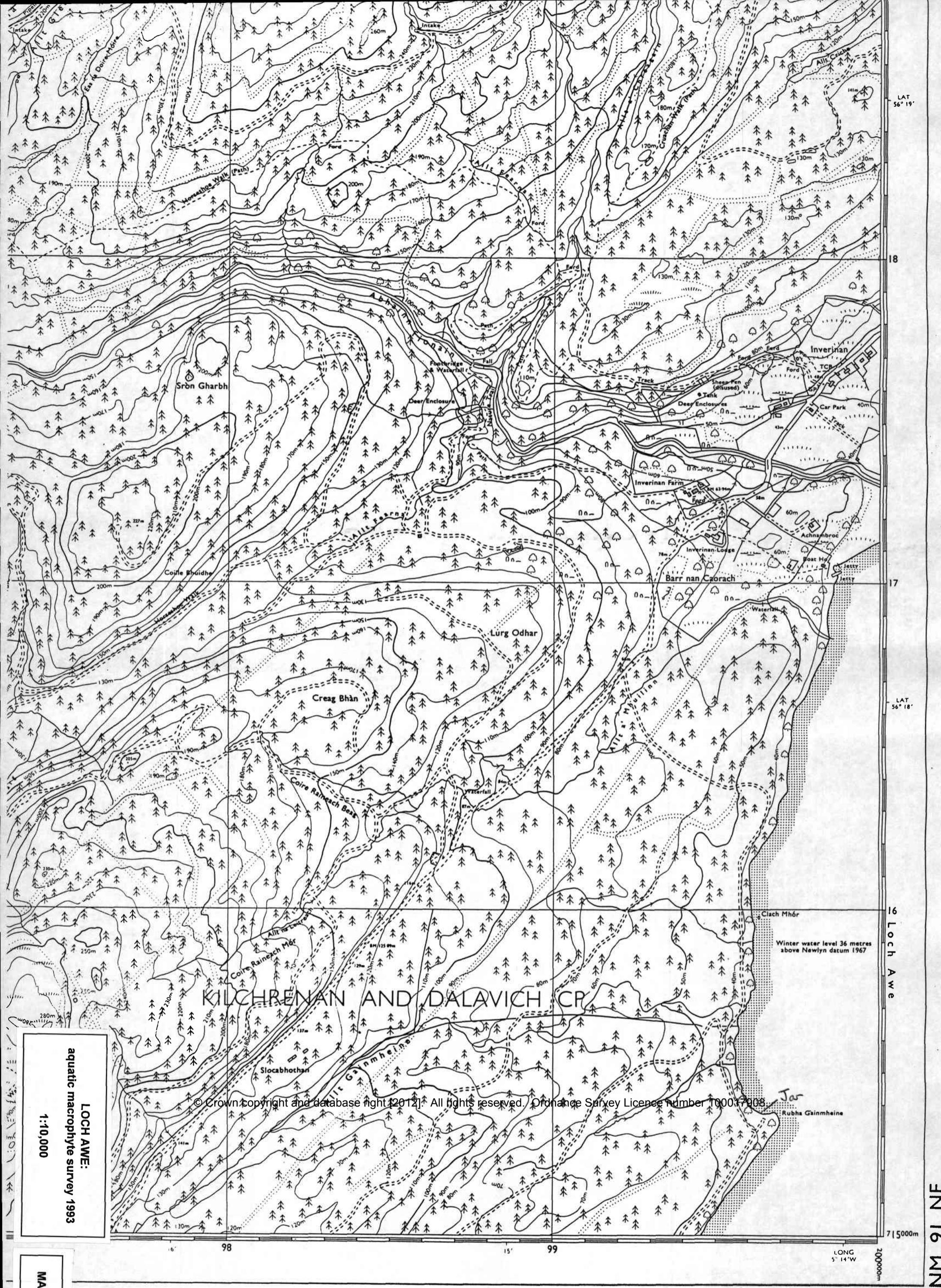
01

02

03

04

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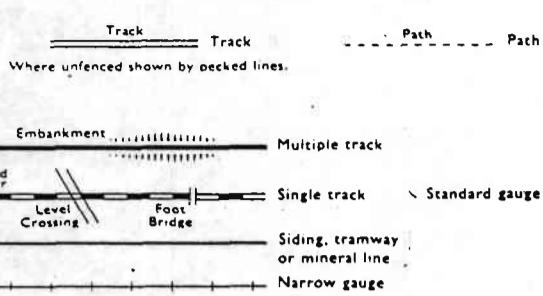
NN01 SW

SCALE 1:10 000

HEIGHTS IN METRES

MBOLS

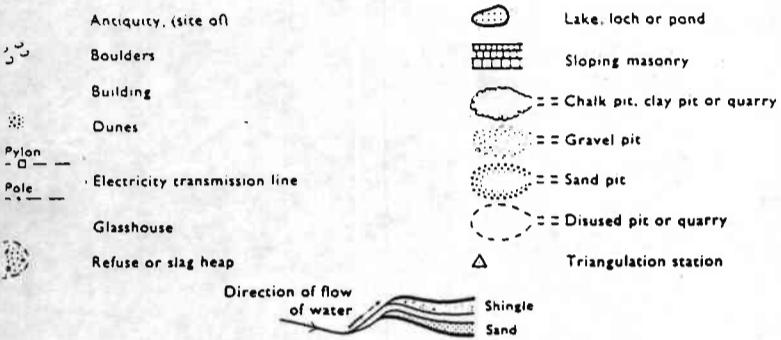
ADS



VEGETATION

Bracken	—	Marsh	Y	Coppice
Rough grassland	—	Salttings	○	Orchard
Heath	—	Reeds	▲	Coniferous trees
		Scrub	●	Non-coniferous trees

CELLANEOUS



UNDARIES

Geographical County	The first appropriate symbol in this list is shown when coincidence of boundaries occurs.
Administrative County, County Borough or County of City	
Municipal Borough, Urban or Rural District, Burgh or District Council	
Civil Parish showing change of merging	
Borough, Burgh or County Constituency	Shown alternately with one of the symbols above when coincidence of boundaries occurs. Shown only when not coincident with other boundaries.

Imperial equivalents for metric boundary merging.
0.91m = 3ft 1.22m = 4ft

IGHTS (METRES)

Heights are given in metres above mean sea level at Newlyn.

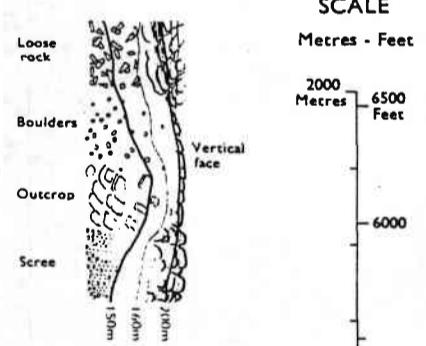
Sea heights ground survey determined by air survey

Each mark and value Δ am 100m

Each mark lists containing fuller and possibly levelling information are obtainable from the Director General, Ordnance Survey.

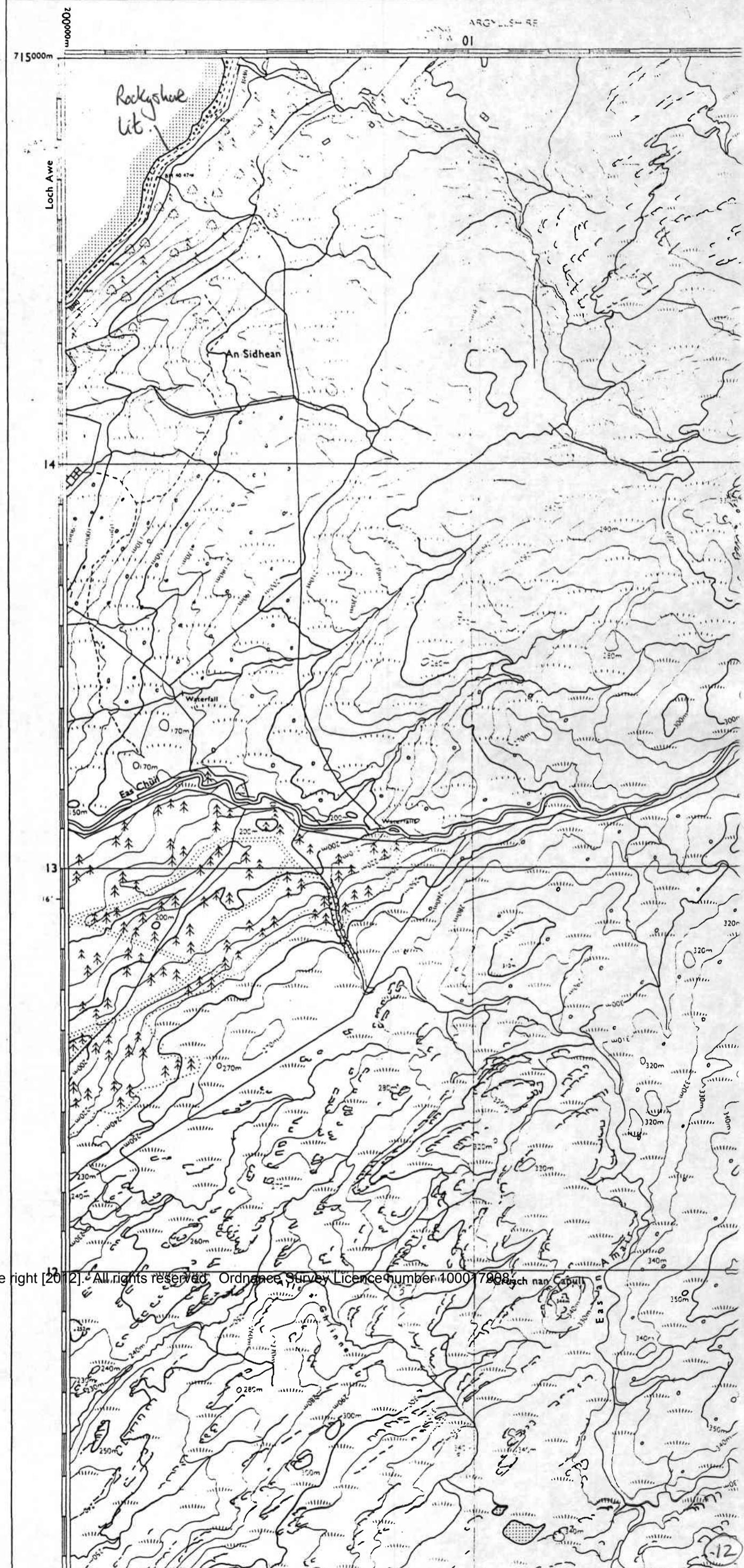
Contours are at 10 metres vertical interval.

ROCK FEATURES



CONVERSION SCALE

Metres	Feet
2000	6500
1500	5000
1000	3300
500	1600
0	0



GRID REFERENCE SYSTEM

REFERENCE CORRECT TO 100 METRES

The grid letters on this sheet are NN

Square in which point lies and read this line on north and south margins. Estimate tenths eastwards

02
9
029

Square in which point lies and read this line on east and west margins. Estimate tenths northwards

10
3
103

Full 100 metre reference NN 029103

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1:10,000

Above, is unique. If grid letters are omitted, the resulting reference is 100 kilometres. When the area concerned is sufficiently small it will be the case with maps on scales of one inch to one mile and less are normally omitted.

of this sheet True North is 2° 37' East of Grid North and at the East of Grid North, Magnetic North was about 8° West of Grid bearing about $\frac{1}{4}$ in five years.

MAP 12

KILCHRENAN AND DALAVICH CP

ARGYLL CO CONST

16° 98

15° 99

20000m
715000mLAT
56° 17'LONG
5° 14' W



NM91SE



NM90 NE

HEIGHTS IN METRES

0 000

ORDI

ARGYLLSHIRE

96

SOUTH LORN DISTRICT

97

The diagram illustrates four types of railway lines categorized under 'Standard gauge':

- Multiple track
- Single track
- Siding, tramway or mineral line
- Narrow gauge

A bracket on the right side groups 'Multiple track', 'Single track', and 'Siding, tramway or mineral line' under the label 'Standard gauge'. A separate bracket on the far left groups 'Multiple track', 'Single track', and 'Siding, tramway or mineral line' under the label 'Path'.

	Coppice
	Orchard
	Coniferous trees
	Non-coniferous trees

-  Lake, loch or pond
-  Sloping masonry
-  = Chalk pit, clay pit or quarry
-  = Gravel pit
-  = Sand pit
-  = Disused pit or quarry
-  Triangulation station
-  Shingle

The first appropriate symbol in this list is shown when coincidence of boundaries occurs.

eing Shown alternately with one of the symbols above when coincidence of boundaries occurs.
 Shown only when not coincident

≈ 4 ft

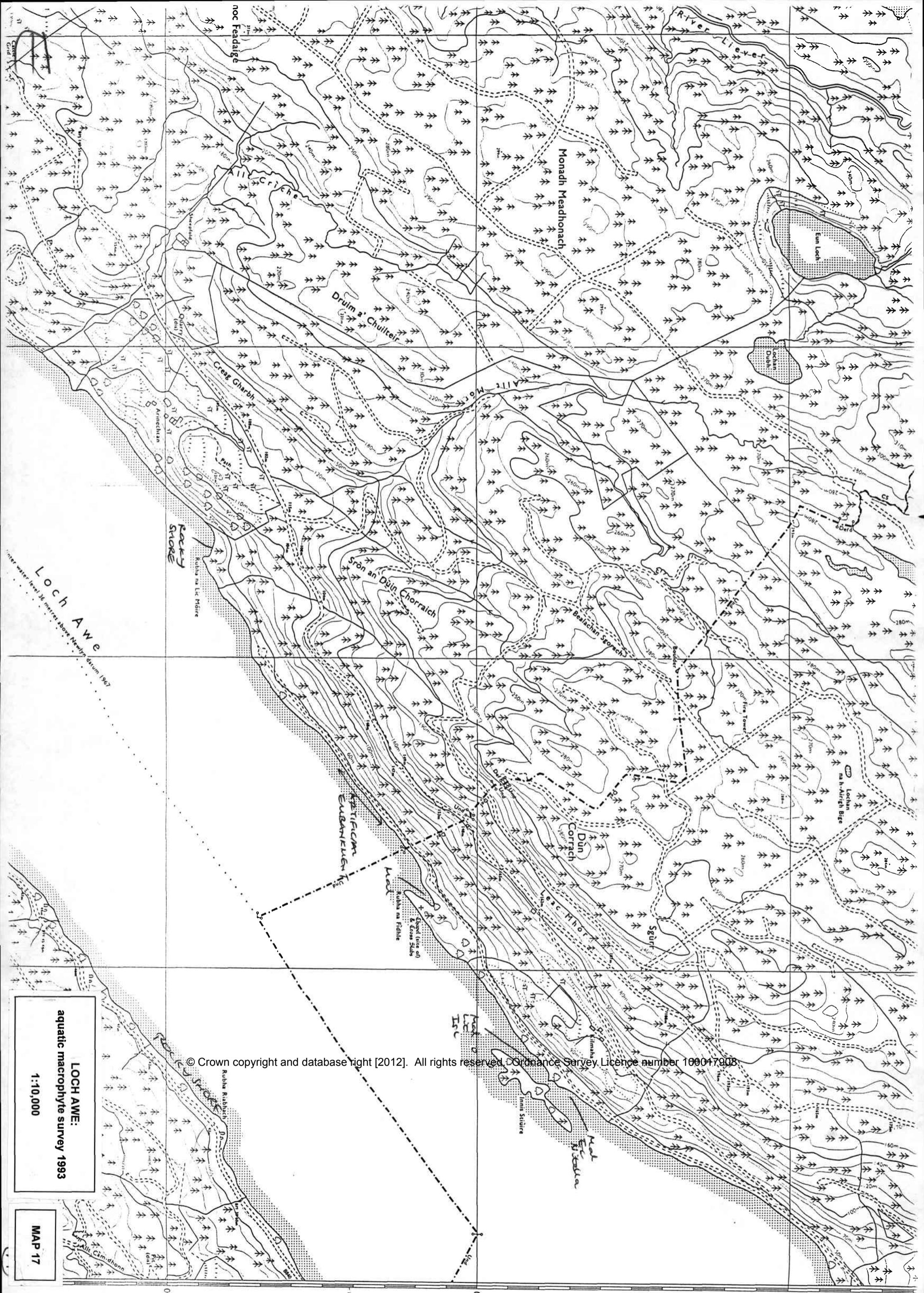
FEATURES **CONVERSION
SCALE**

Police Station	5000
Post Office	1500
Public Convenience	
Public House	
Signal Box	
Spring	
Telephone Call Box	
Telephone Call Post	
W.M.	

LOCH AWE:
aquatic macrophyte survey 19

MAP 16
at the
of Grid
TS
500
-1000

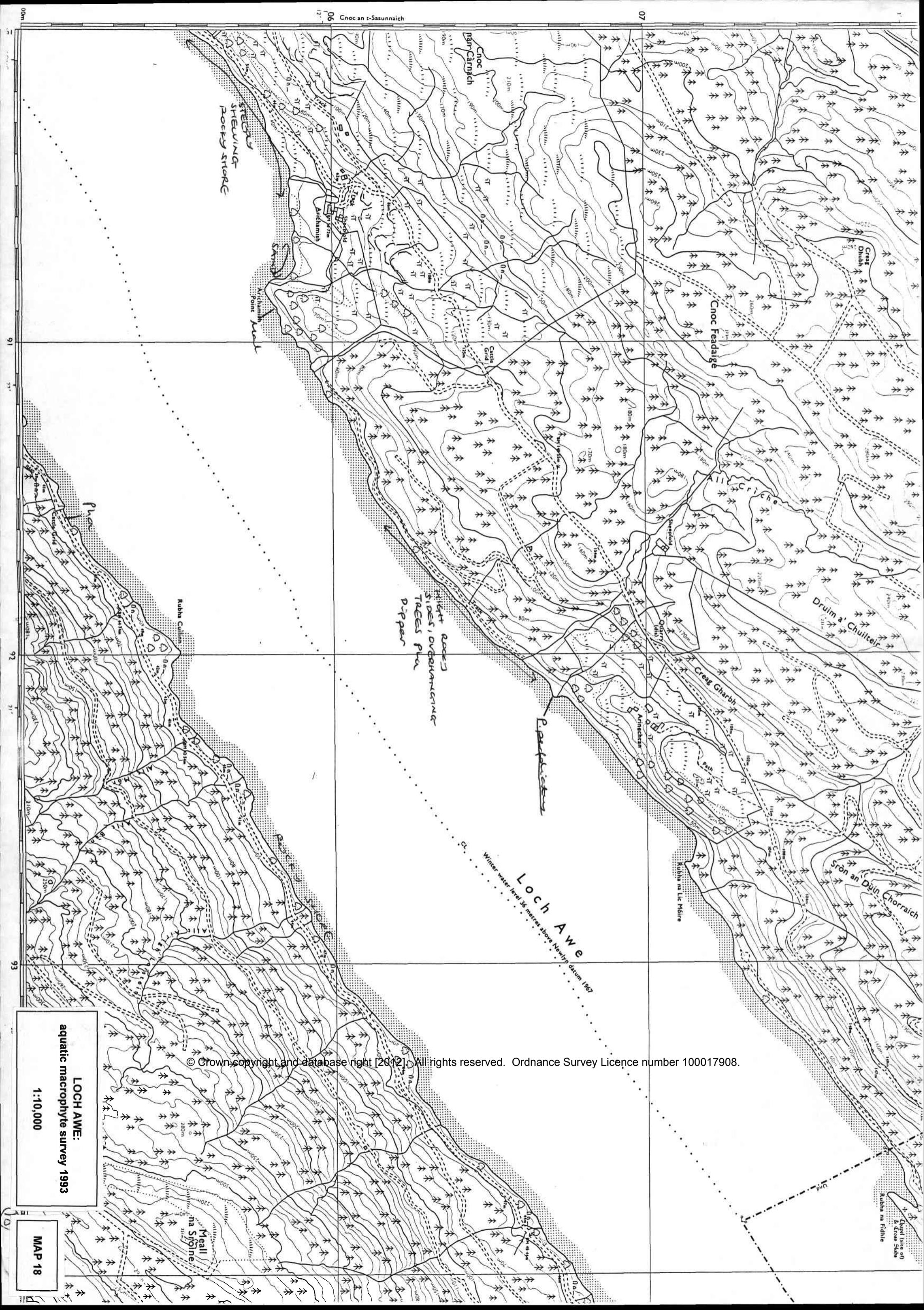




aquatic macrophyte survey 1993

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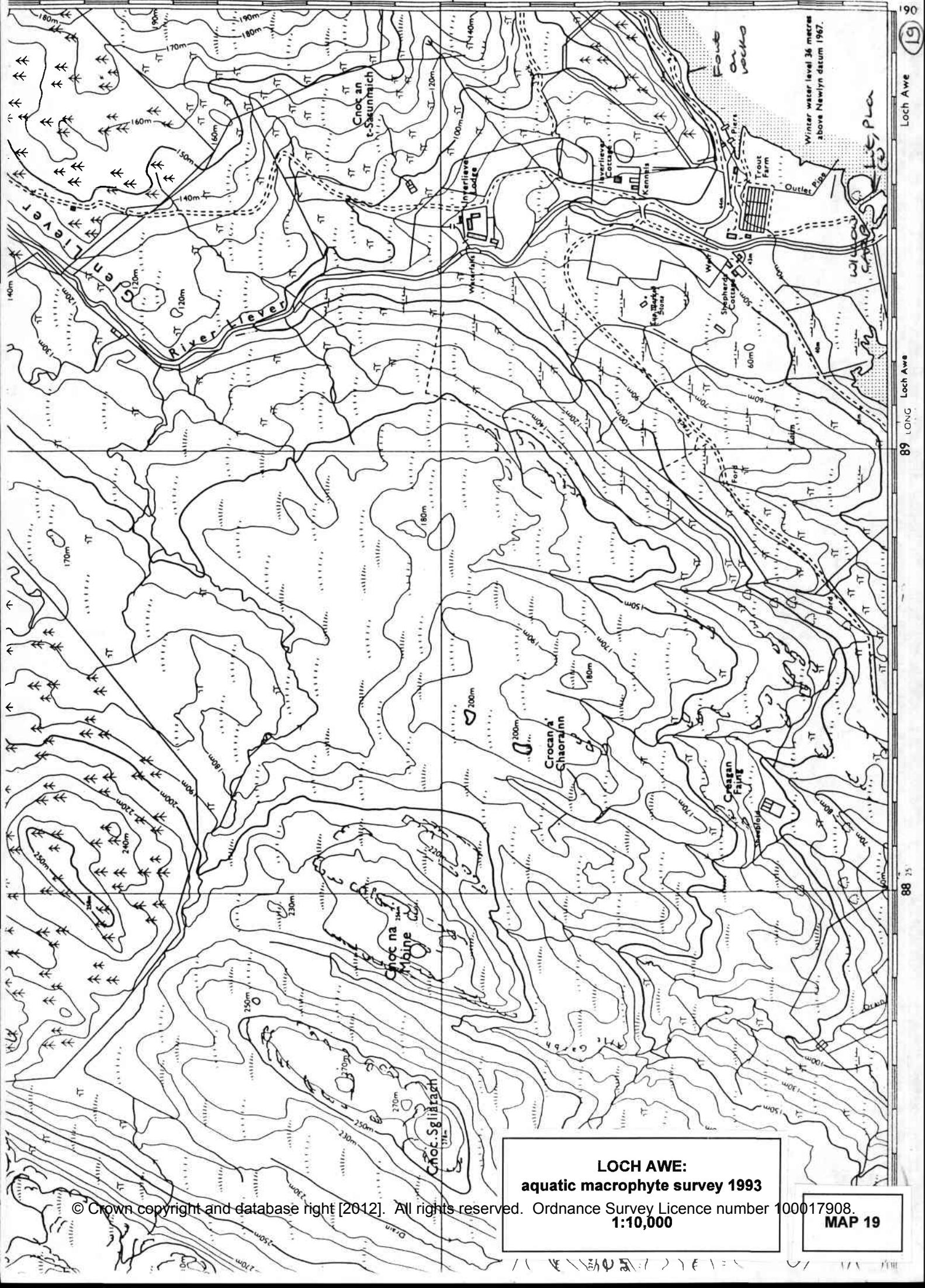
MAP 17

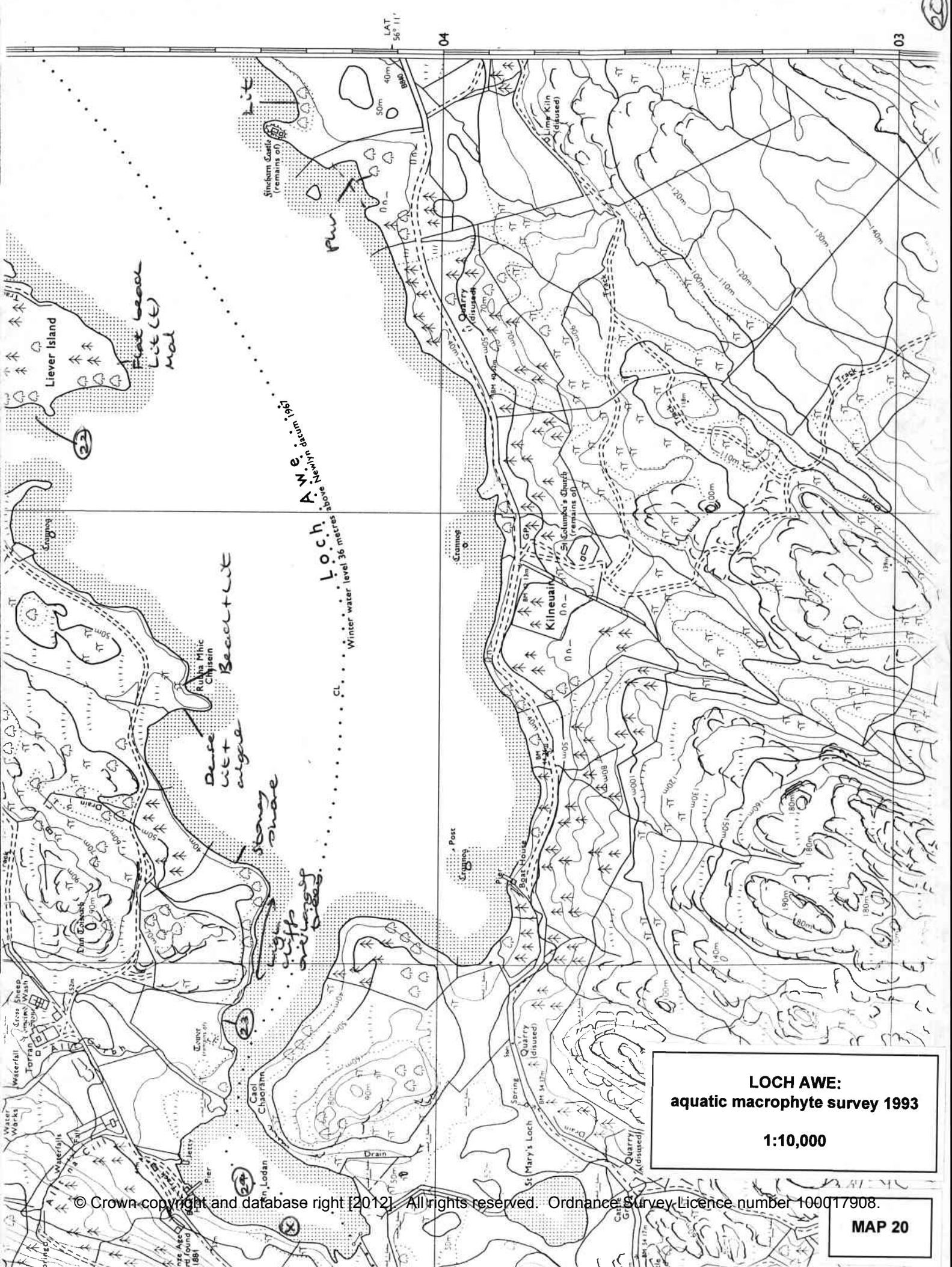


LOCH AWE:
aquatic macrophyte survey 1993

1:10,000

MAP 18





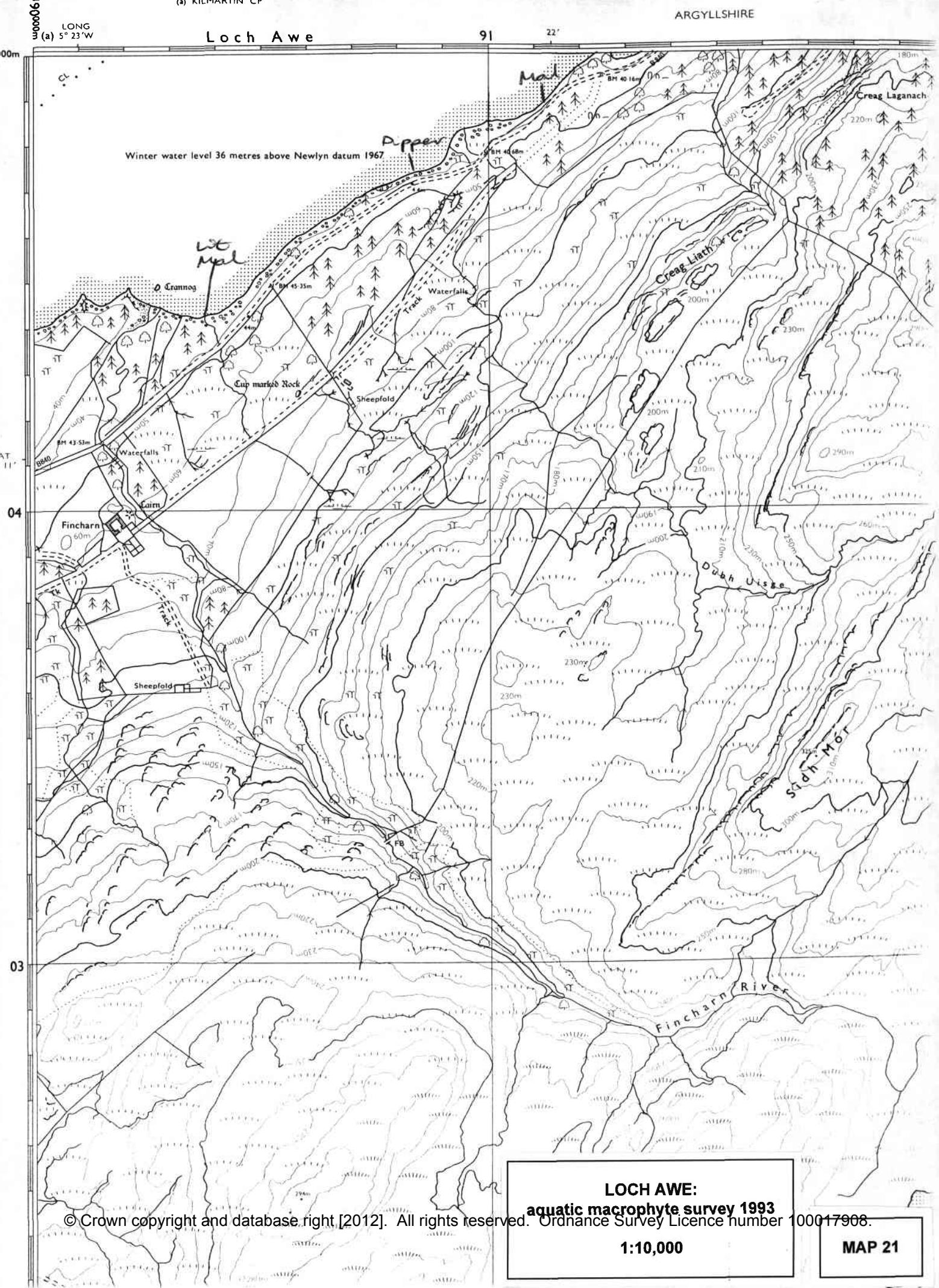
**LOCH AWE:
aquatic macrophyte survey 1993**

1:10,000

IGHTS IN METRES

(a) KILMARTIN CP

ARGYLLSHIRE



**LOCH AWE:
aquatic macrophyte survey 1993**

1:10,000

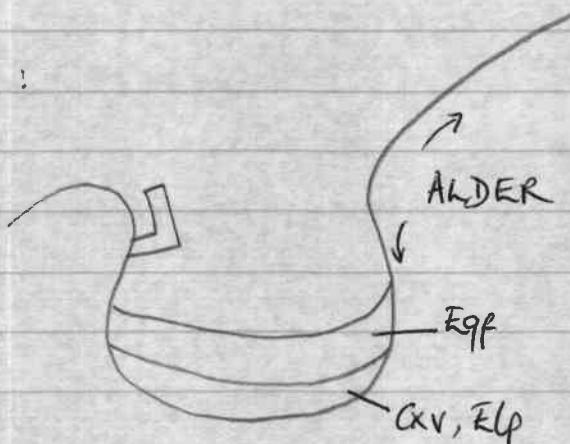
MAP 21

Loch Awe TARGET NOTES.

27. 9. 93. (ARDRECKNISH NO. PIER NN 065 213)

- ① Potamogeton crispus, Mal, Callitrichia hamulata, fowlit, Rpl, Ags., Isl, Je(Jb) on stoney shore
Elodea canadensis in clumps offshore
- ② Bay behind Eilean an t-Sagairt. Silty substrate supporting marsh vegetation - Cah, Rel, Jb, Cap, Qy, Ags, Pop, Hyd, (Mentha aquatica), Cxv, Pha, Elp, Je, Sper

- ③ Silty bay :



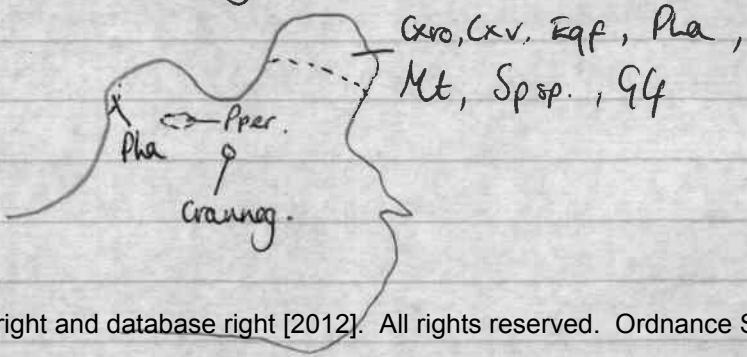
in addition : Je, Hyd, Ma, Qy
Cah, Jb(T), Cap,
Pn, Ags, Rpl,
Sper, Pop, Pha, Dc
hit, fow, Ja.

- ④ Rocky bay supporting occasional hit. On perimeter Pha, Rpl, fow, Pn, Jb, Cxv, Mal, Eqf, Elp, Je, Pop, Cap, Hyd, & Sper.

- ⑤ Rocky shore - Pal (washed up), hit, fow, Isl (ab) On shore: Pha, Rel, Cap. Submerged vegetation covered in filamentous algae

28. 9. 93

- ⑥ Large sand/stone bay : Mal, hit (lob), Jb



- ⑦ Sandy bay : Eqf, Cxv, Pha, ~~lit~~, Elp, GY, Mt, Rpl, Ja. Along edges - lit, Caw, Mal, Jb. Willow, alder, birch on edges.

⑧ Sandy bay supporting emergent stands : Eqf, Cxv, Pha, Cxro, Sper, Elp in addition Ma, Cap, Ja, Jb, lit, Mal, GY, Pper, Rpl, Ec, Lb.

⑨

⑩ Sandy bay supporting Eqf, Cxv, Pha, and occasional Elf.

⑪ Cxro, Cxv, Pha, GY, Eqf - emergent stands. In addition lit, Lb, ls, Spop., dense area of Sub, & water crowfoot (species ~~ed~~ unidentified)

⑫ Large stand of Sl (NN 134274).

⑬ Dense stand of Cxro on salty substrate. In addition : Eqf, Nup?, Cxni, Elp, Je, lit, Lb, Ptilularia globulifera, Ags, Elf, Sub, Cap, Ma, Hyd, Ppal, Cha, Nit (NN 136¹³⁷₂₇₃)

⑭ Mats of floating Sp sp. near shore, and Pn. Mal, Lb, Jb, Elg, Elp, Cah, GY

⑮ Vegetation sparse, occasional ^{floating} stands Sp sp. Rocky shore with Ag woodland and scattered Pha

⑯ Steep railway embankment of boulders. No vegetation.

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⑰ Callitricha sp., ls, Pper, lit. On outer shore of island water

Stoney substrate, no vegetation.

⑯ Sandy bay: Font, lit, Jb, Mal, Ec, lob, Pha

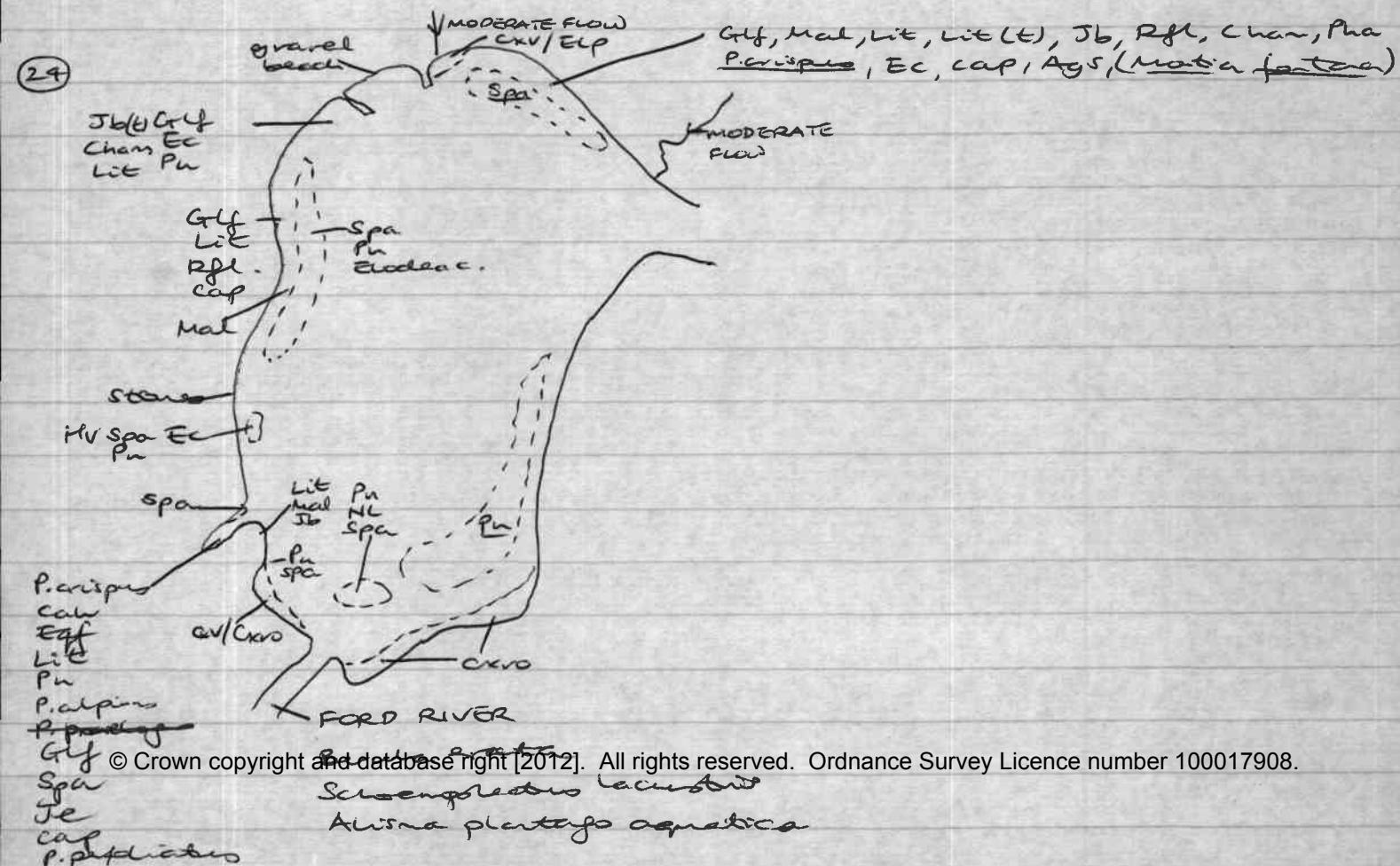
⑰ This arm of the loch has steeply sloping margins of boulders, with no vegetation growing.

⑱ Most of the margins of the islands are too steep and deep for vegetation, however in sheltered bays of Inishail: Pha, lit, Mal, P. perif were found.

⑲ Sandy, sheltered bay with rich vegetation. Stands of Phr, Pha, Cxro, Cxv, Je, Cen. Peltaria and Elatine hex., Rf, Jb, lit, Mal. Gif.

⑳ Cxro, callitrichae sp. mt, se, Carex aquatica, ma, Egf, Pha
Plr, Lit, Mal, Gif, Jb, Eup.

㉑ Ec, Mal, Lit + lit (terrestrial) Pha, Cxv, Cxro on shore



LOCH AWE 27/9/93 - 1/10/93

Two areas of shore omitted for survey:

- ① Innis Chonnel (NN 977119) south to Rubha Tregie (NN 966096) on the eastern shore & Barr Phart (NN 966105)^{north} to Dalavice (NN 970128) on the western shore
- ② Findan Coatre (NN 898043) south along the eastern shore to the mouth of Al Loden (NN 877044).

LOCH AWE 10KM sq. records NN0142 Survey no 1190

SPECIES	1190.1	1190.2	1190.3	1190.4	1190.5	1190.6	NN02	NN12	NN01	NM91	NM80	NM90
Ags	✓	/	✓ /							✓		
Ber		/		/						✓		/
cap	✓	/ ✓								✓		
cxa				/						✓	/	
cxw	✓	/ ✓									/	
cxo	✓		✓							✓		
Cxv	✓		✓							✓		
Elp	✓		✓	✓						✓		
Erf	✓		✓		✓					✓		
Gly	✓		✓							✓		
Hyd			✓							✓		
Ja	✓		✓		✓					✓		
Jbt			✓							✓		
je	✓		✓		✓					✓		
Litt										✓		
Ma			✓						✓		✓	
Mt										✓		
Mon										✓		
Pha	✓		✓					✓		✓		✓
Phe	✓		✓		✓							
SL			✓							✓		
Spa	✓											
Spa	✓		✓					✓		✓		
Sub	✓		✓		✓							
Apa										✓		
can	✓		✓							✓		
Ec	✓		✓							✓		
Ela	✓									✓		
Ef			✓									
Fou	✓			✓		✓				✓		
Isl	✓		✓									✓
Jba	✓		✓		✓					✓		
Lita	✓		✓		✓					✓		
Lob	✓		✓		✓							
Mal	✓		✓		✓			✓		✓		
Mul										✓		
Nup?			✓									
Pil	✓		✓									
Pal			✓							✓		
Par	✓									✓		
Pn			✓							✓		
Pxn												

not sure which