

A SURVEY OF THE VEGETATION

OF IRISH COASTAL LAGOONS

SUMMER, 1996

PAT HATCH

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SURVEY OF THE VEGETATION  
OF IRISH COASTAL LAGOONS, Summer 1996

INTRODUCTION

This report presents the results of a survey of the aquatic and marginal vegetation of twenty selected brackish coastal lagoons in the Irish Republic.

This survey was undertaken on behalf of the National Parks and Wildlife Service.

Aims

The aim of this survey is to describe the vegetation of each site in such a way as to facilitate its subsequent assessment and consideration for legal protection.

Methodology

Two survey methods were employed in the course of fieldwork:

1. Transects
2. Shore-based survey

1. Transects:

Each transect ran from the aquatic zone, through adjacent marginal areas, to the adjacent habitat. Aquatic and marginal areas were sampled using quadrats or relevés and the adjacent habitat described.

The position of aquatic samples, particularly their distance from the shore, was dependant on water depth and, in some cases, on the depth of soft substrates. A transect normally extended as far into the lagoon as depth would allow. Sample area was the area clearly visible from one point.

One sample was taken at each aquatic sampling point along the transect. All plant species present in the sample area were recorded. The average height and percentage cover of each species were estimated and recorded together with the total plant, higher plant and algal cover.

At the aquatic end of each transect a grapnel was used to attempt to locate additional species and these were recorded. Where no additional species were found the grapnel survey was not recorded. In some cases, the grapnel was the sole method of aquatic survey due to water depth or poor visibility. Here, of course, the results were a species list only with no cover data. The reach of the grapnel was 10 metres.

At each aquatic sample point measurements were taken of salinity (using a hand refractometer) and water depth. The nature of the substrate was also recorded.

The position of each aquatic sample was recorded as 'x metres out', meaning so many metres out from the shore. For the purposes of this survey, 'the shore' is defined as the marginal vegetation line. This can be both the loughward edge of a swamp and the loughward edge of saltmarsh vegetation with 50 metres of bare sand between it and the waters edge at time of survey. It was felt that this location method was more accurate and made sample areas more re-locatable than one related to, for instance, high water mark, as this is difficult to establish at many sites.

In the marginal areas through which each transect passed, homogeneous stands of vegetation were identified and sampled using quadrats or relevés. Sample area was generally 100m<sup>2</sup> for single species and particularly species-poor stands and 16m<sup>2</sup> for other stands. Sample shape varied according to the shape and size of the stand. For example, many marginal stands were narrow strips. All plant species in the sample area, their average height and percentage cover were recorded.

Salinity and water depth were measured and recorded where appropriate. Salinity readings for marginal swamps were taken at the midway point along that part of the transect.

Representative examples of every marginal community encountered during the course of the survey were sampled using British National Vegetation Classification (NVC) methods for the purpose of subsequent classification. This involved the taking of five quadrats in each community and the recording of percentage cover (using the Domin scale) and the calculation of frequency for each species. Representative examples were used as there was insufficient time to sample each community at every site where it occurred in this way. The resulting data is presented in an appendix to this report.

Each aquatic and marginal transect sample is presented here in table form, with a brief description covering dominant species, stand structure and physiognomy.

Adjacent habitat and land use was described in general terms and dominant species recorded.

The locations of transects within each site were selected to represent the degree of variation therein. Variation in marginal zone floristics, aquatic floristics and shore and aquatic substrate were taken into account. Transects were located at the outlet to the sea (where present) and the major freshwater inflow (where present) as a matter of course.

The location of transects is marked on the site maps herein.

## 2. Shore-based survey:

At all but the five largest sites (Lady's Island Lake, Tacumshin Lake, Lough Gill, Furnace Lough and Durnesh Lake) a shore-based survey was also carried out. The surveyor walked around the entire shore recording aquatic species, marginal communities and adjacent habitats and land use. The results are presented here as descriptive notes, divided into sections along the shore according to changes in floristics, substrate and/or adjacent habitat. These points of change are marked on the site maps.

Aquatic vegetation was surveyed by use of the grapnel and by means of wading where water and/or soft substrate depth allowed. The extent of aquatic survey was 10 metres out from the shore (i.e. the reach of the grapnel) except where otherwise stated in the descriptive notes.

A brief site description was written for each lagoon.

## Constraints

### 1. Time

Restrictions on the time available in which to carry out this survey had the following consequences:

- a). The five largest lagoons were surveyed using transects only as there was insufficient time to carry out a full shore-based survey;
- b). Marginal NVC survey was carried out on representative stands only (see 'Methodology').

## 2. Resources

No boats were available for survey purposes. This is one reason why this is primarily a shore-based survey.

## 3. Safety

Considerations of personal safety, in view of the fact that the surveyor was working alone, meant that, with one exception, no dives were undertaken. This is the second reason for the restriction of this survey, in the main, to the lagoon shores.

## Identifications

*Ruppia* species were identified by Pat Hatch and by Jim Ryan, National Parks & Wildlife Service

Charophytes were identified by Pat Hatch and by Jim Ryan, NPWS

Filamentous green algae: due to the difficulty in obtaining determinations, filamentous green algae is recorded in this report as 'filamentous algae'. Larger *Enteromorpha* is recorded simply as 'Enteromorpha'.

Other algal species were identified by Helen Fazakerley, Phycology Dept., University College Galway and Michael Guiry, Professor of Botany, University College Galway

## Nomenclature

Scientific names of vascular plants in this report are in accordance with Clapham, Tutin & Warburg, 'Excursion Flora of the British Isles' (Third Edition).

Scientific names of charophytes are according to

Scientific names of other algae are according to

## SURVEY SITES

The twenty surveyed coastal lagoons are listed below in clockwise order from Co. Wexford to Co. Donegal. Names and spellings are those shown on the recent 1:50,000 Ordnance Survey maps (Discovery Series) when available. Grid references are for the centre of the lagoon.

	Name	County	Nearest town or village	OS Grid Reference
1	Lady's Island Lake	Wexford	Rosslare	T099065
2	Tacumshin Lake	Wexford	Rosslare	T050065
3	Kilkeran Lake	Cork	Rosscarbery	W338344
4	Lissagriffin Lake	Cork	Crookhaven	V775265
5	Farranamanagh Lake	Cork	Kilcrohane	V830378
6	Drongawn Lough	Kerry	Sneem	V731640
7	Lough Gill	Kerry	Castlegregory	Q606142
8	Cloonconeen Pool	Clare	Carrigaholt	Q836497
9	Lough Donnell	Clare	Quilty	R002707
10	Lough Muree	Clare	Ballyvaughan	M255119
11	Aughinish Lagoon	Clare	Kinvarra	M286134
12	Bridge Lough	Galway	Kinvarra	M342128
13	Lettermullen Pool	Galway	Lettermullen	L827213
14	Loch Tanai	Galway	Costelloe	L950305
15	Lough Aconeera	Galway	Kilkieran	L875369
16	Mill Lough	Galway	Carna	L755331
17	Corragaun Lough	Mayo	Killadoon	L748698
18	Roonah Lough	Mayo	Killadoon	L755765
19	Furnace Lough	Mayo	Newport	L965975
20	Durnesh Lake	Donegal	Ballintra	G878695

LADY'S ISLAND LAKE  
Co. Wexford

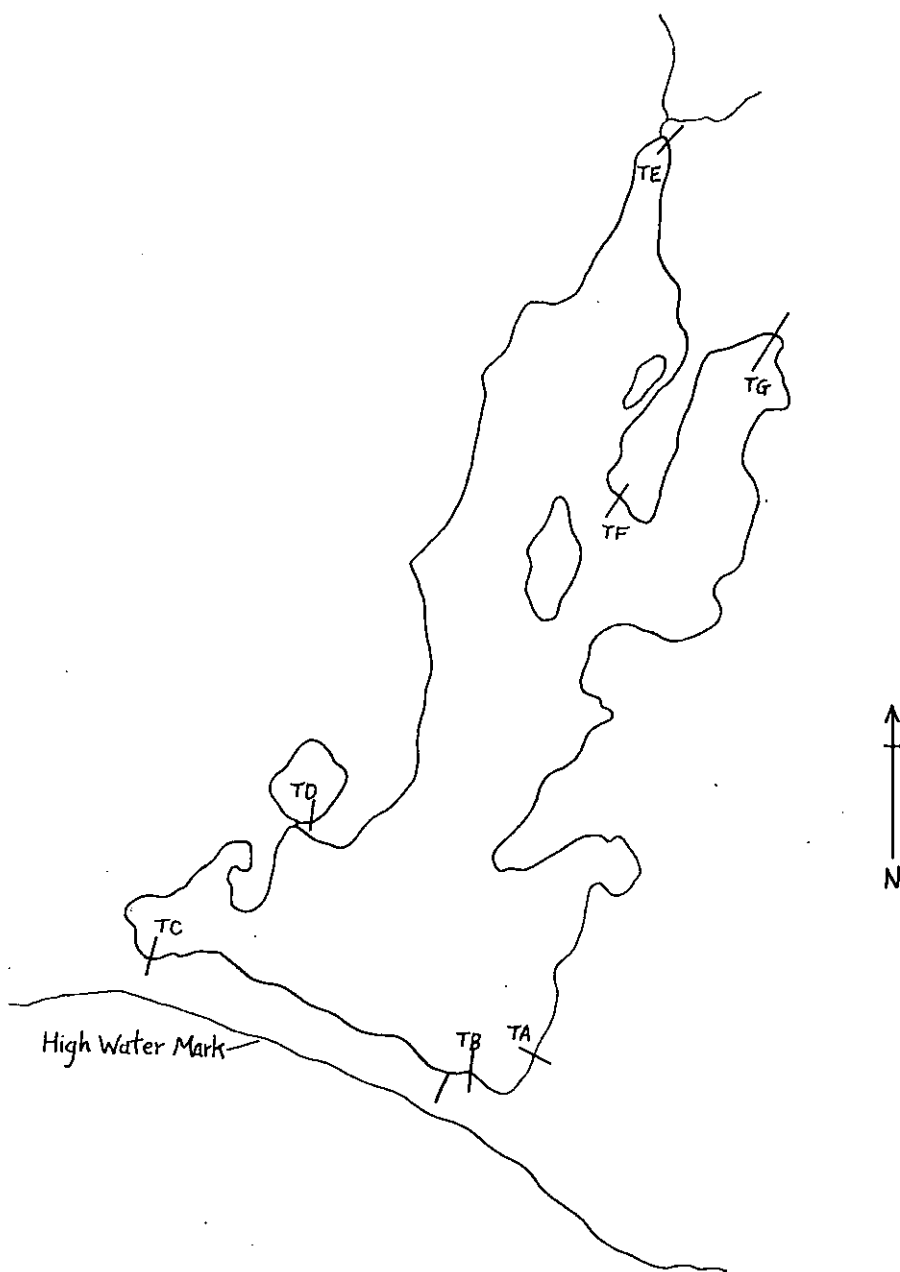
Site Description

This large lagoon is bordered by low-lying, predominantly pastoral farmland to the north, east and west. The barrier lies to the south.

The major freshater inflow joins the lake at its northern extent.

The slope of its shores is generally shallow. Marginal swamps occur in more or less sheltered areas with long stretches of open shore elsewhere. In these areas marginal vegetation forms a typically narrow strip. There is an area of open rocky shore in the south east. Extensive marshland occurs at Ring Marsh in the south eastern quarter.

There is a semi-isolated pool in the south west of the site fringed by emergent swamp species.



Lady's Island Lake, Co. Wexford: Location of Transects



Site: Lady's Island Lake	Transect code: A	
Location: Rocky shore near outlet	Sample point: 2 Aquatic - 3m out	
Sample area: 16m2 (4x4)	Substrate: Sand, gravel, boulders	
Depth: 50 cm	Salinity: 23 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		< 1
Ruppia sp.	15	< 1
Bare substrate		100
Sand and gravel		90
Boulders		10
Description: Very sparse low growing Ruppia only.		

Site: Lady's Island Lake	Transect code: A	
Location: Rocky shore near outlet	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Sand, gravel boulders	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		75
Juncus gerardii	30	25
Agrostis stolonifera	20	25
Festuca rubra	20	5
Potentilla anserina	10	5
Glaux maritima	10	5
Aster tripolium	40	10
Spergularia marina	8	< 1
Atriplex hastata	4	< 1
Tripleurospermum maritimum	5	< 1
Plantago coronopus	4	< 1
Juncus bufonius	4	< 1
Isolepes cernua	5	< 1
Bare substrate		25
Sand and gravel		5
Boulders		20
Description: Juncus gerardii - Agrostis stolonifera dominated shore community forming 15m wide strip amongst scattered boulders.		
Grading to Dactylis glomerata - Festuca rubra grassland.		

Site: Lady's Island Lake	Transect code: B	
Location: Outlet to sea	Sample point: 1 Aquatic - 5m out - grapnel	
Sample area: Grapnel only	Substrate: Sand, gravel	
Depth: 80 cm +	Salinity: 23 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia sp.	40 cm +	
Filamentous algae		
Description:		

Site: Lady's Island Lake	Transect code: B	
Location: Outlet to sea	Sample point: 2 Aquatic - 5m out	
Sample area: 16m2 (4x4)	Substrate: Sand, gravel	
Depth: 80 cm	Salinity: 23 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		< 1
Enteromorpha		< 1
Description: Very sparse Enteromorpha only.		

Site: Lady's Island Lake	Transect code: B	
Location: Outlet to sea	Sample point: 3 Marginal	
Sample area: 16m2 (8x2)	Substrate: Sand, gravel	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		15
Atriplex hastata	2	5
Spergularia marina	6	< 5
Tripleurospermum maritimum	3	< 5
Senecio jacobaea	6	< 5
Atriplex patula	2	< 1
Description: Sparse community of mostly prostrate pioneer shore species forming 2m strip.		
Backing unvegetated sand and gravel for 20m.		
Backing to Ammophila arenaria dune grassland.		

Site: Lady's Island Lake	Transect code: C	
Location: Western end of barrier	Sample point: 1 Aquatic - 10m out	
Sample area: 16m2 (4x4)	Substrate: Sand and gravel	
Depth: 60 cm	Salinity: 23 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Higher Plant		75
Ruppia sp.	15	75
Algae		5
Lamprothamnium papulosum	10	5
Description: Extensive low growing Ruppia dominant. Lamprothamnium blackened and dead looking. Same species at more or less same cover from c.20m out to shore.		

Site: Lady's Island Lake	Transect code: C	
Location: Western end of barrier	Sample point: 2 Marginal	
Sample area: 10m2 (10x1)	Substrate: Sand and gravel	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		10
Atriplex hastata	5	5
Tripleurospermum maritimum	3	5
Salicornia agg.	6	< 1
Plantago maritima	4	< 1
Description: 1m wide strip of sparse pioneer shore vegetation.		

Site: Lady's Island Lake	Transect code: C	
Location: Western end of barrier	Sample point: 3 Marginal	
Sample area: 10m2 (5x2)	Substrate: Sand, gravel	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		20
Suaeda maritima	10	5
Atriplex hastata	5	< 5
Tripleurospermum maritimum	3	< 5
Aster tripolium	10	< 1
Glaux maritima	5	< 1
Spergularia marina	6	< 1
Cochlearia anglica	4	< 1
Plantago coronopus	4	< 1
Description: Sparse cover of low growing salt-tolerant shore vegetation with Suaeda the dominant species. 3m strip.		
Grading through Tripleurospermum dominated community (10m) to		
Ammophila arenaria dunes (barrier).		

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Site: Lady's Island Lake	Transect code: D	
Location: Semi-isolated pool	Sample point: 2 Marginal	
Sample area: 80m2 (10x8)	Substrate: Silt	
Depth: 0 - 40 cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Scirpus maritimus	130	90
Potamogeton pectinatus	30	< 1
Description: Dense Scirpus maritimus swamp with sparse Potamogeton pectinatus the only associated submergent species. 8m.		
( Scirpus lacustris ssp tabernaemontani and Phragmites australis also forming single species and mixed species swamps in marginal areas of pool ).		

Site: Lady's Island Lake	Transect code: D	
Location: Semi-isolated pool	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate:	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus gerardii	25	20
Agrostis stolonifera	20	75
Festuca rubra	20	15
Potentilla anserina	10	15
Leontodon autumnalis	25	< 5
Glaux maritima	10	< 5
Oenanthe lachenalii	30	< 1
Description: Complete ground cover of Juncus gerardii - Agrostis stolonifera dominated community. 20m.		
Grading to A. stolonifera - Festuca rubra - Potentilla anserina grassland.		

Site: Lady's Island Lake	Transect code: E	
Location: Freshwater inflow	Sample point: 1 Aquatic - 10m out	
Sample area: 16m2 (4x4)	Substrate: Silt and sand	
Depth: 70 cm	Salinity: 14 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Higher Plant		60
Ruppia sp.	40	60
Algae		40
Filamentous algae		40
Description: Fairly dense Ruppia bed. More or less unchanging cover back to marginal zone.		
Approximately 80% of Ruppia plants in this sample were blackened and dead		
looking or partly so.		

Site: Lady's Island Lake	Transect code: E	
Location: Freshwater inflow	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt and sand	
Depth: 40 cm	Salinity: 10 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Higher Plant		40
Scirpus maritimus	70	40
Ruppia sp.	30	< 1
Algae		10
Enteromorpha		10
Description: Open Scirpus maritimus swamp with sparse Ruppia and Enteromorpha. 20m.		

Site: Lady's Island Lake	Transect code: E	
Location: Freshwater inflow	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt (de-oxygenated)	
Depth: 30 cm	Salinity: 6 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Higher Plant		60
Schoenoplectus lacustris ssp tabernaemontani	100	40
Scirpus maritimus	70	20
Algae		< 5
Enteromorpha		< 5
Description: Fairly open swamp vegetation with Schoenoplectus dominant over S. maritimus. Sparse free-floating Enteromorpha. 30m.		



Site: Lady's Island Lake	Transect code: E	
Location: Freshwater inflow	Sample point: 5 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 5 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	300	100
Lemna minor		< 1
Description: Tall, very dense Phragmites swamp. 100m.		
Grading to willow carr strip of c.50m width.		
Backing pasture.		

Site: Lady's Island Lake	Transect code: F	
Location: Exposed promontory head	Sample point: 1 Aquatic - 10m out	
Sample area: 16m2 (4x4)	Substrate: Gravel, cobbles	
Depth: 70 cm	Salinity: 22 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Ruppia sp.	40	5
Substrate		
Cobbles		80
Gravel		20
Description: Sparse Ruppia only.		

Site: Lady's Island Lake	Transect code: F	
Location: Exposed promontory head	Sample point: 2 Marginal	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus gerardii	30	80
Agrostis stolonifera	15	10
Festuca rubra	15	5
Potentilla anserina	10	5
Glaux maritima	10	5
Aster tripolium	30	< 1
Leontodon autumnalis	15	< 1
Tripleurospermum maritimum	15	< 1
Spergularia marina	10	< 1
Atriplex patula	8	< 1
Plantago major	6	< 1
Description: Extensive Juncus gerardii cover with Agrostis stolonifera and Festuca rubra locally co-dominant in small areas of more open Juncus cover. Associated species more or less sparse. 20m.		
Backing to Rubus fruticosus - Salix fragilis hedgerow.		
Backing arable farmland.		

Site: Lady's Island Lake	Transect code: G	
Location: Sheltered bay	Sample point: 1 Aquatic - 5m out	
Sample area: 16m2 (4x4)	Substrate: Silt, sand, gravel	
Depth: 50 cm	Salinity: 21 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		70
Higher Plant		60
Ruppia sp.	40	60
Algae		10
Filamentous algae		10
Lamprothamnium papulosum	8	< 1
Description: Patchy cover of dominant Ruppia with filamentous algae and sparse Lamprothamnium. Fruiting Ruppia plants present. Lamprothamnium blackened and dead-looking.		
Grapnel surveys from 5 - 50m out found no additional species.		

Site: Lady's Island Lake	Transect code: G	
Location: Sheltered bay	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 30 cm	Salinity: 18 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Scirpus maritimus	100	80
Description: Fairly dense single species Scirpus swamp. 45m.		

Site: Lady's Island Lake	Transect code: G	
Location: Sheltered bay	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 15 - 30 cm	Salinity: 10 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	300	100
Description: Tall dense single species Phragmites swamp. 30m.		

Site: Lady's Island Lake	Transect code: G	
Location: Sheltered bay	Sample point: 4 Marginal	
Sample area: 16m2 (4x4)	Substrate: Not known	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus gerardii	30	50
Agrostis stolonifera	25	40
Potentilla anserina	20	20
Aster tripolium	40	5
Leontodon autumnalis	20	< 1
Glaux maritima	20	< 1
Description: Juncus gerardii and Agrostis stolonifera co-dominant, each locally mono-dominant, among species-poor salt tolerant community. 20m.		
Grading to Agrostis stolonifera - Festuca rubra - Potentilla anserina grassland.		

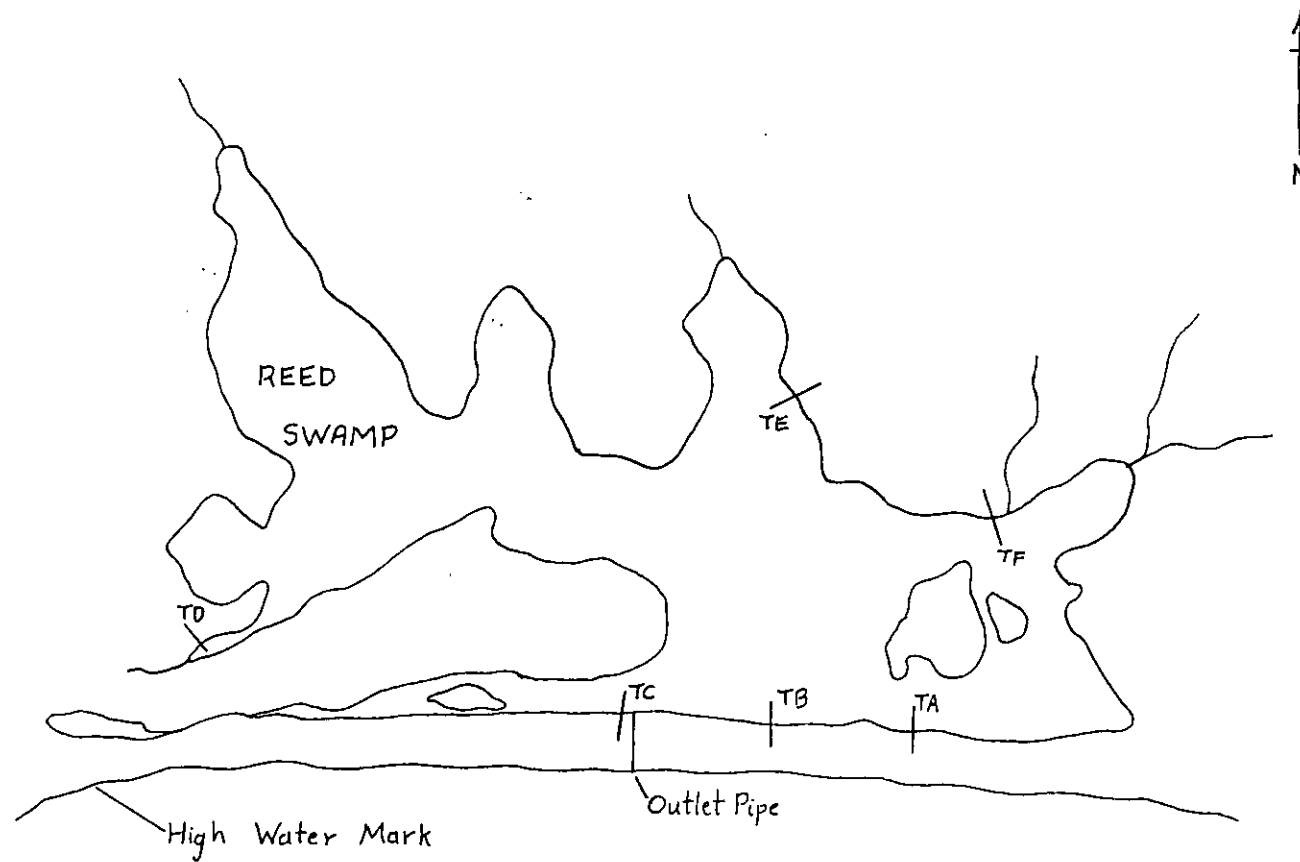
TACUMSHIN LAKE  
Co. Wexford

Site Description

The surrounding landscape is fairly low-lying with pastoral farmland to the north, east and west. The barrier lies to the south.

Several freshwater streams flow into the lagoon from the north.

Shores are generally shallow sloping and vegetated. Swamp vegetation occurs in extensive stands in sheltered bays. Two bays in the north west of the site are almost entirely filled with emergent swamps, predominantly of *Phragmites* and *Schoenoplectus lacustris*. More open shores occur on promontories in the north central area, the north east and east.



Tacumshin Lake, Co. Wexford: Location of Transects

Site: Tacumshin Lake	Transect code: A	
Location: Barrier - Eastern end	Sample point: 1 Aquatic - 20m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand	
Depth: 30 cm	Salinity: 26 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Ruppia c.f. maritima	15	5
Description: Sparse low growing Ruppia only.		

Site: Tacumshin Lake	Transect code: A	
Location: Barrier - Eastern end	Sample point: 2 Aquatic - 10m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand	
Depth: 20cm	Salinity: 26 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		40
Ruppia c.f. maritima	30	40
Description: Patchy cover of Ruppia only.		

Site: Tacumshin Lake	Transect code: A	
Location: Barrier - Eastern end	Sample point: 3 Aquatic - 5m out	
Sample area: 25m (5x5)	Substrate: Silt, sand	
Depth: 10cm	Salinity: 26 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		70
Ruppia c.f. maritima	30	70
Description: Increasing patchy Ruppia cover.		

Site: Tacumshin Lake	Transect code: A	
Location: Barrier - Eastern end	Sample point: 4 Marginal	
Sample area: 16m2 (8x2)	Substrate: Sand	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Juncus gerardii	50	90
Agrostis stolonifera	15	15
Glaux maritima	8	5
Aster tripolium	40	5
Triglochin maritima	20	< 1
Atriplex patula	4	< 1
Description: Tall dense cover of dominant Juncus gerardii with patchy Agrostis stolonifera among species-poor salt tolerant community. 6m.		
Backing open vegetation dominated by Tripleurospermum maritimum and Armeria maritima with sparse Plantago coronopus. 10m.		
Grading to Ammophila arenaria - Festuca rubra dune grassland (barrier).		

Site: Tacumshin Lake	Transect code: B	
Location: Barrier - Seawater seepage point	Sample point: 1 Aquatic - 30m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand	
Depth: 40 cm	Salinity: 35 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Ruppia c.f. maritima	40	100
Description: Dense single species Ruppia bed. Some plants in bud. This stand extends 20 - c.50m out.		

Site: Tacumshin Lake	Transect code: B	
Location: Barrier - Seawater seepage point	Sample point: 2 Aquatic - 10m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand	
Depth: 10 cm	Salinity: 35 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Ruppia c.f. maritima	10	5
Description: Ruppia now sparse and low growing. Same species at more or less same cover 0 - 20m out.		

Site: Tacumshin Lake	Transect code: B	
Location: Barrier - Seawater seepage point	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Sand, gravel	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Suaeda maritima	10	25
Glaux maritima	3	25
Salicornia agg.	2	< 1
Spergularia marina	3	< 1
Aster tripolium	6	< 1
Tripleurospermum maritimum	4	< 1
Description: Suaeda and Glaux co-dominant among open species-poor salt tolerant shore community. 18m.		
Backing Ammophila arenaria - Festuca rubra dune grassland (barrier).		

[illegible]

Site: Tacumshin Lake		Transect code: C	
Location: Barrier - Outlet pipe		Sample point: 2 Marginal	
Sample area: 20m2 (10x2)		Substrate: Silt	
Depth: 0 - 40cm		Salinity: 28 parts per thousand	
NVC community:			
	Height (cm)	Cover (%)	
Total Plant		100	
Scirpus maritimus	160	100	
Description: Tall dense single species Scirpus swamp forming 3m strip for 12m along shore.			

Site: Tacumshin Lake	Transect code: C	
Location: Barrier - Outlet pipe	Sample point: 3 Marginal	
Sample area: 20m2 (10x2)	Substrate: Sand, gravel	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Scirpus maritimus	90	20
Agrostis stolonifera	30	95
Glaux maritima	15	< 1
Description: Open Scirpus cover with dense Agrostis stolonifera dominant below and sparse Glaux the only associated species. 3m.		
Backing Ammophila arenaria dune grassland (barrier).		



[illegible]

Site: Tacumshin Lake	Transect code: D	
Location: Sheltered channel	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 20 - 60 cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Schoenoplectus lacustris ssp tabernaemontani	140	100
Description: Dense single species S. lacustris swamp. 35m.		

Site: Tacumshin Lake	Transect code: D	
Location: Sheltered channel	Sample point: 4 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 0 - 20 cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Schoenoplectus lacustris ssp tabernaemontani	140	80
Scirpus maritimus	120	10
Agrostis stolonifera	40	50
Triglochin maritima	70	10
Description: Fairly dense Schoenoplectus dominated swamp with frequent Scirpus maritimus.		
Agrostis stolonifera patchy below with frequent Triglochin. 40m.		

Site: Tacumshin Lake	Transect code: D	
Location: Sheltered channel	Sample point: 5 Marginal	
Sample area: 16m2 (4x4)	Substrate: Not known	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus gerardii	40	50
Agrostis stolonifera	30	40
Potentilla anserina	25	15
Glaux maritima	10	< 1
Aster tripolium	40	< 1
Triglochin maritima	50	< 1
Oenanthe lachenalii	40	< 1
Description: Juncus gerardii and Agrostis stolonifera co-dominant with frequent Potentilla and a few sparse salt tolerant associates. 25m.		
Backing flood embankment (height 3m, slope 45 degrees) with Festuca rubra and Rubus fruticosus dominant.		
Backing low lying Lolium perenne pasture.		



Site: Tacumshin Lake	Transect code: E	
Location: Marginal swamp	Sample point: 2 Aquatic - 15m out	
Sample area: 25m2 (5x5)	Substrate: Silt	
Depth: 50 cm	Salinity: 18 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		40
Higher Plant		35
Ruppia c.f. maritima	6	30
Potamogeton pectinatus	25	5
Algae		10
Filamentous algae		10
Chara canescens	8	< 1
Description: Open cover of low growing Ruppia dominant with sparse Potamogeton and filamentous algae. Chara canescens very sparse. Same species at more or less same cover 8 - 20m out.		

Site: Tacumshin Lake	Transect code: E	
Location: Marginal swamp	Sample point: 3 Aquatic - 5m out	
Sample area: 25m2 (5x5)	Substrate: Silt	
Depth: 30 cm	Salinity: 18 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Higher Plant		80
Potamogeton pectinatus	50	75
Ruppia c.f. maritima	20	5
Algae		5
Filamentous algae		5
Description: Potamogeton pectinatus dominant in fairly dense stand with sparse Ruppia and filamentous algae. Same species at more or less same cover 0 - 8m out.		



Site: Tacumshin Lake	Transect code: E	
Location: Marginal swamp	Sample point: 5 Marginal	
Sample area: 100m2 (20x5)	Substrate: Not known	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Schoenoplectus lacustris ssp tabernaemontani	100	30
Scirpus maritimus	80	20
Agrostis stolonifera	30	90
Glaux maritima	15	< 1
Description: Open cover of dominant Schoenoplectus lacustris with abundant Scirpus maritimus. Agrostis stolonifera forming dense ground cover. 8m.		

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Site: Tacumshin Lake	Transect code: F	
Location: Freshwater inflow	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 40 cm	Salinity: 10 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Scirpus maritimus	120	90
Description: Dense single species Scirpus swamp. 120m.		



Site: Tacumshin Lake	Transect code: F	
Location: Freshwater inflow	Sample point: 4 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 0 - 20 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	260	100
Description: Dense single species Phragmites swamp. 30m.		
Backing Agrostis stolonifera dominated community with frequent Ranunculus acris and Mentha aquatica. 5m.		
Grading to Lolium perenne - Dactylis glomerata pasture.		

KILKERAN LAKE  
Co. Cork

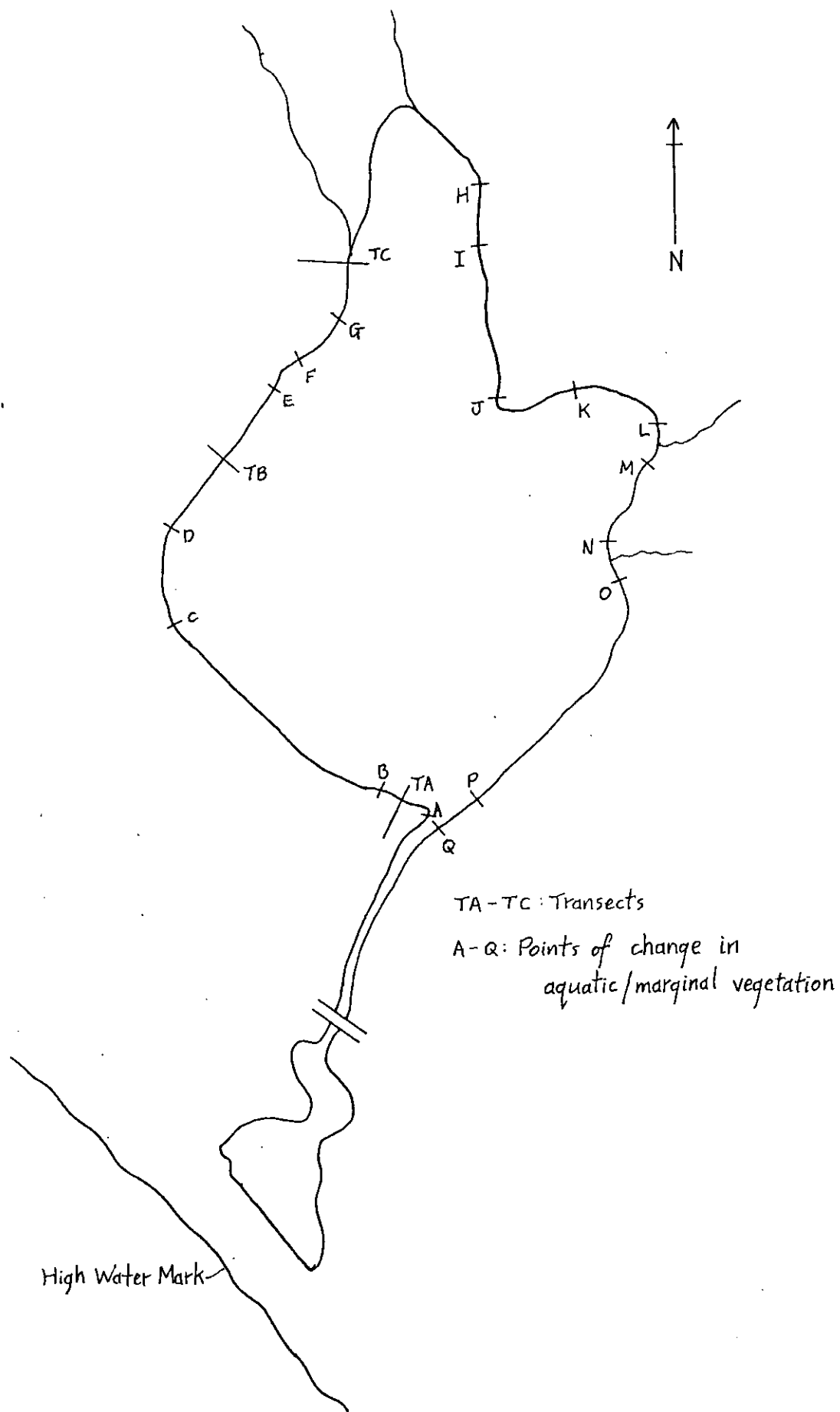
Site Description

Kilkeran Lake is set amongst low hills with predominantly pastoral farmland to the north, east, south east and west. A conifer plantation lies close to the mid-western shore and another, now partly derelict, to the south west. The dune barrier lies to the south west, through which the outlet to the sea runs from the southern point of the lake.

A public road passes between the lake and the dunes and a track runs along the western shore.

The major freshwater inflows (two) join the lake at its northern point, where an extensive Phragmites bed fringes the lake and extends back up the inflow valley.

A more or less narrow band of swamp vegetation fringes the lake along all but the north eastern shores, which are more open. Exposed bedrock forms the shore on a promontory in this area. Elsewhere the shore is gently sloping.



Kilkeran Lake, Co. Cork: Location of Transects and Shore-based Survey Sections

## KILKERAN LAKE

### Shore-based survey

#### Section A-B (Transect A)

Aquatic: *Ruppia maritima*  
*Potamogeton pectinatus*  
*Chara aspera* var. *aspera*

Sand and silt substrate

Marginal: Dense single species *Phragmites* swamp. 25-35m

Adjacent: Grading to dune grassland with *Elymus farsetus*, *Potentilla anserina*, *Trifolium repens*, *Lotus corniculatus*, *Plantago lanceolata*, *Galium verum*

#### Section B-C

Aquatic: *Potamogeton pectinatus*

Marginal: Unchanged

Adjacent: *Agrostis stolonifera* - *Potentilla anserina* dominated grassland. 10-20m  
*Arrhenatherum elatius* and *Pteridium aquilinum* dominant with sparse and partly  
derelict conifer plantation on dune grassland

#### Section C-D

Aquatic: *Potamogeton pectinatus* - dense bed to c.5m out  
*Enteromorpha*

Marginal: Single species *Scirpus maritimus* swamp. 2-3m

Adjacent: *Agrostis stolonifera* - *Potentilla anserina* dominated grassland. 5-20m  
Backing to public road and conifer plantation

#### Section D-E (Transect B)

Aquatic: Potamogeton pectinatus - dense bed to c.5-10m out  
Polygonum amphibium - occasional  
Enteromorpha - sparse

Marginal: Swamp vegetation. Single species Phragmites stands alternating with Scirpus maritimus dominated stands with sparse Schoenoplectus lacustris ssp tabernaemontani. 3-6m  
Grading to narrow strip of freshwater species. 1-3m. Iris psuedacorus, Filipendula ulmaria, Lythrum salicaria, Stachys palustris typically frequent with Agrostis stolonifera and Potentilla anserina locally dominant

Adjacent: Public road  
Conifer plantation

#### Section E-F

Aquatic: Potamogeton pectinatus - dense bed to c.15m out  
Enteromorpha

Marginal: Schoenoplectus dominated swamp with frequent Scirpus maritimus. 2-4m  
Grading as D-E

Adjacent: Public track  
Lolium perenne pasture

#### Section F-G

Aquatic: Potamogeton pectinatus - as E-F  
Polygonum amphibium - occasional  
Enteromorpha

Marginal: Phragmites and Schoenoplectus swamps as D-E. 4-10m  
Grading as D-E

Adjacent: Unchanged

#### Section G-H (Transect C)

- Aquatic: *Potamogeton pectinatus* - no longer in dense beds
- Marginal: Single species *Phragmites australis* swamp extending back along freshwater inflows
- Adjacent: Pasture and meadows

Section H-M - Access refused by landowner. Surveyed from western shore and from Section M-N. Accounts of the following five sections are therefore incomplete

#### Section H-I

- Aquatic: Unknown
- Marginal: Bedrock shore. No emergents
- Adjacent: Narrow strip of *Rubus fruticosus* and *Ulex* sp. on steep bank  
Backing to pasture

#### Section I-J

- Aquatic: Unknown
- Marginal: *Iris psuedacorus* locally dominant. Narrow shore backing to steep slope
- Adjacent: Pasture

#### Section J-K

- Aquatic: *Potamogeton pectinatus* - dense bed to c.10-20m out
- Marginal: As H-I
- Adjacent: As H-I

#### Section K-L

- Aquatic: Potamogeton pectinatus - dense bed to c.20-30m out  
Polygonum amphibium - occasional <1m out
- Marginal: Sparse Iris psuedacorus with Eleocharis sp., Agrostis stolonifera. 3-5m strip
- Adjacent: Unchanged

#### Section L-M

- Aquatic: Unchanged
- Marginal: Mixed Schoenoplectus - Scirpus maritimus swamp. c.3m  
Grading to Phragmites stand associated with small freshwater inflow
- Adjacent: Pasture

#### Section M-N

- Aquatic: Potamogeton pectinatus - dense bed to c.15-20m out
- Marginal: Schoenoplectus, Scirpus maritimus and Eleocharis palustris swamps, each species locally dominant. 1-3m  
Grading to Iris psuedacorus dominated strip with frequent Epilobium hirsutum, Filipendula ulmaria, Lythrum salicaria, Stachys palustris, Urtica dioica. 2-4m
- Adjacent: c.45 degree bank to c.5m height with Rubus fruticosus, Ulex europaeus and Pteridium aquilinum dominant  
Backing to Lolium perenne pasture

#### Section N-O

Aquatic: *Potamogeton pectinatus* - dense bed to c.10m out

Marginal: Swamp as M-N  
Grading to *Phragmites* dominated fen vegetation on small freshwater inflow stream. Frequent *Iris pseudacorus*, *Epilobium hirsutum*, *Filipendula ulmaria*, *Lythrum salicaria*, *Angelica sylvestris*, *Urtica dioica*. c. 60m

Adjacent: *Lolium* pasture and arable land

#### Section O-P

Aquatic: Unchanged

Marginal: As M-N

Adjacent: Steep bank as M-N with frequent *Alnus glutinosa* and *Sambucus nigra*  
Backing to pasture and arable land

#### Section P-Q

Aquatic: *Potamogeton pectinatus* - dense bed narrowing to c.3m out

Marginal: Dense single species *Phragmites* swamp. 20-25m  
Grading to *Phragmites* dominated stand with frequent *Urtica dioica*. 2-5m

Adjacent: As M-N

Site: Kilkeran Lake	Transect code: A	
Location: Outlet to sea	Sample point: 1 Aquatic - 1m out - grapnel	
Sample area: Grapnel only	Substrate: Sand, silt	
Depth: 80 cm +	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Potamogeton pectinatus		
Ruppia maritima		
Chara aspera var. aspera		
Description: Some Ruppia plants in fruit.		

Site: Kilkeran Lake	Transect code: A	
Location: Outlet to sea	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 0 - 60 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	230	100
Description: Dense single species Phragmites swamp. 25m.		
Grading to dune grassland with Elymus farctus, Potentilla anserina, Trifolium repens, Lotus corniculatus, Plantago lanceolata, Galium verum.		

Site: Kilkeran Lake	Transect code: B	
Location: Marginal swamp	Sample point: 1 Aquatic - 5m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand	
Depth: 70 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		100
Potamogeton pectinatus	70	100
Algae		5
Enteromorpha		5
Description: Dense Potamogeton pectinatus bed extending from 1 - 10m out.		

Site: Kilkeran Lake	Transect code: B	
Location: Marginal swamp	Sample point: 2 Marginal	
Sample area: 10m2 (10x2)	Substrate: Silt, sand	
Depth: 0 - 40 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Scirpus maritimus	100	80
Schoenoplectus lacustris ssp tabernaemontani	120	< 1
Description: Fairly dense Scirpus maritimus swamp with sparse Schoenoplectus. 4m.		

Site: Kilkeran Lake	Transect code: B	
Location: Marginal swamp	Sample point: 3 Marginal	
Sample area: 10m2 (10x1)	Substrate: Not known	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Iris psuedacorus	100	10
Agrostis stolonifera	20	80
Potentilla anserina	10	10
Filipendula ulmaria	70	5
Lythrum salicaria	40	5
Rumex crispus	40	< 1
Carex otrubae	40	< 1
Description: Open, fairly patchy Iris cover with species-poor freshwater vegetation. 2m.		
Backing public road.		
Backing coniferous plantation.		

Site: Kilkeran Lake	Transect code: C	
Location: Freshwater inflow	Sample point: 1 Aquatic - 1m out - grapnel	
Sample area: Grapnel only	Substrate: Silt	
Depth: 80 cm +	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Potamogeton pectinatus		
Description:		

Site: Kilkeran Lake	Transect code: C	
Location: Freshwater inflow	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 10 - 50 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	230	100
Description: Dense single species Phragmites swamp. 30m.		

Site: Kilkeran Lake	Transect code: C	
Location: Freshwater inflow	Sample point: 3 Marginal	
Sample area: 20m2 (20x1)	Substrate: Silt	
Depth: 0 - 10 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Alnus glutinosa	500	10
Phalaris arundinacea	200	75
Agrostis stolonifera	20	70
Potentilla anserina	15	10
Filipendula ulmaria	70	< 1
Lythrum salicaria	50	< 1
Galium palustre	20	< 1
Description: 1m strip of Phalaris dominated vegetation with Agrostis dominant amongst a species-poor understorey of freshwater plants. Occasional Alnus glutinosa.		
Backing footpath.		
Backing Lolium perenne pasture.		

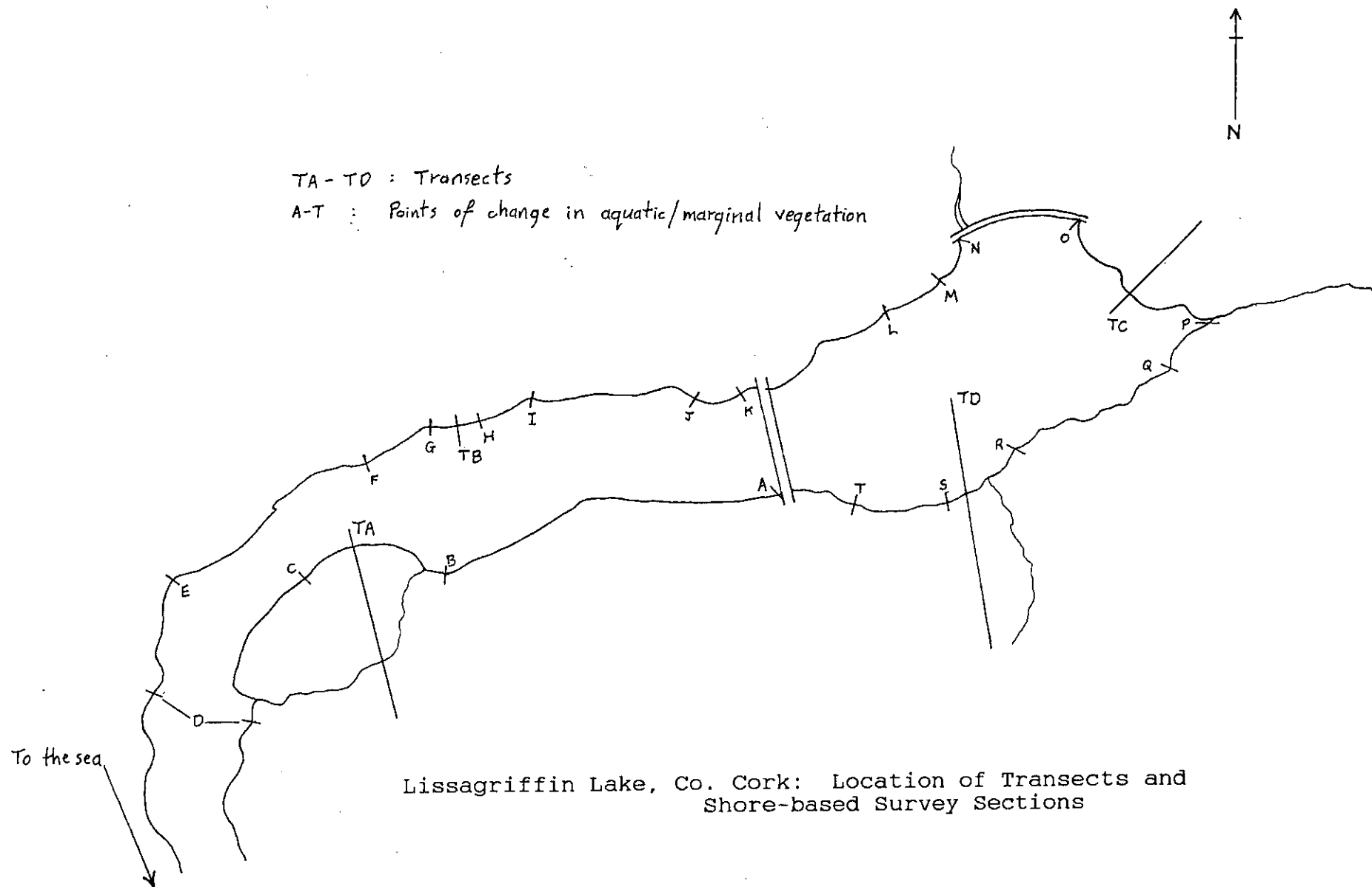
LISSAGRIFFIN LAKE  
Co. Cork

Site Description

This is a long narrow shallow lagoon bordered by fairly high ground to the north, east, south east and west. This is an area of rough pasture with occasional heath vegetation. The outlet to the sea lies at the western end of the site and runs through dune grassland.

The major freshwater inflows discharge into the lake at the eastern end from the north and east. The associated Phragmites beds are the only areas of extensive swamp vegetation. Elsewhere, shores are generally rocky and more or less steeply sloping with occasional narrow strips of emergents to the north and open and very shallow of slope to the south. Heath vegetation occurs above much of the northern shore and saltmarsh occurs along most of the lower lying, sandy southern shore.

A causeway carries a public road across the lake about mid-way along its length and another borders the north eastern corner, with the road continuing along above the north shore.



## LISSAGRIFFIN LAKE

### Shore-based survey

#### Section A-B

Aquatic: No aquatic vegetation to at least 20m out

Sand substrate

Marginal: Open *Scirpus maritimus* cover with salt tolerant vegetation dominated by *Puccinellia maritima* and *Glaux maritima*. c. 100m. Poached and grazed  
Grading to salt tolerant community dominated by *Festuca rubra*, *Juncus gerardii* and *Agrostis stolonifera* with sparse *Scirpus maritimus* and *Juncus maritimus*.  
c. 2-300m. Poached and grazed

Adjacent: Dune grassland dominated by *Festuca rubra*, *Trifolium repens*, *Plantago lanceolata*, *Galium verum*

#### Section B-C (Transect A)

Aquatic: Unchanged

Marginal: *Salicornia* dominant with patchy *Puccinellia maritima* in species-poor salt tolerant community on sandy substrate. 40-50m  
*Festuca rubra* dominant with *Glaux maritima* locally co-dominant in species-poor salt tolerant community on sandy substrate. 30-40m

Adjacent: Dune grassland dominated by *Ammophila arenaria* and *Festuca rubra*

#### Section C-D

Aquatic: *Ulva lactuca* - sparse

Marginal: 1-2m strip of open *Honkenya peploides* cover on sand  
Backing to *Festuca rubra* - *Glaux maritima* dominated community as B-C.  
5-70m

Adjacent: Unchanged

#### Section D-E

Aquatic: Unchanged

Marginal: As B-C

Adjacent: 2.5m earth cliff  
Backing to pasture

#### Section E-F

Aquatic: *Enteromorpha*  
*Ulva lactuca*

Marginal: Single species *Phragmites australis* swamp. 3-20m

Adjacent: Heath vegetation dominated by *Ulex europaeus*, *Pteridium aquilinum* and *Erica cinerea* on 45 degree slope to public road

#### Section F-G

Aquatic: *Enteromorpha* - patchy  
*Ulva lactuca* - patchy  
*Fucus* c.f. *spiralis* - patchy

Sand substrate with occasional cobbles

Marginal: Single species *Scirpus maritimus* swamp. 3m

Adjacent: 3m stone wall backing to public road

Section G-H (Transect B)

Aquatic:    Unchanged

Marginal:   Bedrock shore with sparse salt tolerant vegetation dominated by *Festuca rubra*

Adjacent:    As E-F

Section H-I

Aquatic:    Enteromorpha - patchy  
              Ulva lactuca - patchy

Marginal:   5m concrete wall

Adjacent:    Public road

Section I-J

Aquatic:    Unchanged

Marginal:   Scirpus maritimus and Phragmites swamp vegetation with each species locally dominant in small single species stands. c.5m

Adjacent:    As E-F

Section J-K

As G-H

Section K-L

Aquatic:    No aquatic vegetation to at least 15m out

Marginal:   Single species Phragmites swamp. 15-20m

Adjacent:    As E-F

#### Section L-M

Aquatic:     Unchanged

Marginal:    1m stone wall

Adjacent:    Amenity grassland (private garden)

#### Section M-N

Aquatic:     Unchanged

Marginal:    Single species Phragmites swamp. 15-20m

Adjacent:    Unchanged

#### Section N-O

Aquatic:     Unchanged

Marginal:    2m stone causeway wall

Adjacent:    Public road on causeway backing to extensive Phragmites bed associated with freshwater inflow

#### Section O-P (Transect C)

Aquatic:     Filamentous algae - patchy  
                Enteromorpha - very sparse

Silt and sand substrate

Marginal:    Dense single species Phragmites swamp. c.50-60m  
                Grading to dense Phragmites dominated fen community with sparse species-poor understorey of freshwater species associated with freshwater inflow. c.2-300m

Adjacent:    Public road to north, heath as E-F and pasture to south and east

### Section P-Q

- Aquatic: *Ruppia* sp. - sparse and low growing to at least 20m out  
Filamentous algae - sparse  
Enteromorpha - sparse
- Marginal: Dense single species *Phragmites* swamp. 25-30m  
Backing to 45 degree bedrock shore
- Adjacent: Heath as E-F

### Section Q-R

- Aquatic: Unchanged
- Marginal: *Scirpus maritimus* and *Schoenoplectus lacustris* ssp *tabernaemontani* swamp with each species locally dominant. c.10m  
Grading to 1-2m *Agrostis stolonifera* dominated strip with frequent *Eleocharis palustris*, *Glaux maritima*, *Atriplex hastata*
- Adjacent: 1.5m stone wall backing to rough pasture

### Section R-S (Transect D)

- Aquatic: *Ruppia* sp. - sparse and low growing from c.50m to at least 100m out  
Enteromorpha - very sparse  
  
Sand substrate
- Marginal: Open *Scirpus maritimus* cover with frequent *Phragmites* shoots over salt tolerant community with occasional *Juncus maritimus* tussocks. *Agrostis stolonifera* and *Eleocharis palustris* patchy and locally dominant among otherwise sparse understorey species. Poached and grazed. 20-40m  
Grading to fairly dense *Schoenoplectus* cover with frequent *Phragmites* and *Scirpus maritimus* over species-poor salt tolerant community. *Agrostis* and *Eleocharis* as above. Poached and grazed. 10-20m  
Grading to open *Schoenoplectus* cover over sparse freshwater species on heavily poached substrate. Grazed. 40-50m
- Adjacent: *Phragmites* fen associated with freshwater stream. c.20m  
Backing to rough pasture

#### Section S-T

Aquatic:    Unchanged

Marginal:   Fairly open Schoenoplectus cover with sparse Phragmites shoots over species-poor salt tolerant community. Abundant Glaux maritima dominant below with patchy Agrostis stolonifera and Eleocharis palustris locally co-dominant among sparse understorey. 30-50m  
Grading to Iris pseudacorus dominated community of sparse freshwater species on heavily poached substrate. Grazed. c.70m

Adjacent:   Rough pasture

#### Section T-A

Aquatic:    Unchanged

Marginal:   As A-B

Adjacent:   Unchanged

Site: Lissagriffin Lake	Transect code: A	
Location: Saltmarsh bordering outlet channel	Sample point: 1 Aquatic - 10m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 70 cm	Salinity: 19 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Description: No aquatic vegetation.		



Site: Lissagriffin Lake	Transect code: A	
Location: Saltmarsh bordering outlet channel	Sample point: 3 Marginal	
Sample area: 100m2 (4x4)	Substrate: Sand	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		75
Festuca rubra	10	50
Glaux maritima	8	20
Agrostis stolonifera	8	5
Carex extensa	15	5
Plantago maritima	6	< 1
Plantago coronopus	2	< 1
Description: Species-poor salt tolerant community with Festuca rubra dominant and Glaux widespread and locally co-dominant. 40m. A small outflow channel (average width 4m) passes through this community and connects with the main outflow.		
Grading to Ammophila arenaria - Festuca rubra dune grassland (barrier).		

Site: Lissagriffin Lake	Transect code: B	
Location: Open rocky shore	Sample point: 1 Aquatic - 5m out	
Sample area: 25m2 (5x5)	Substrate: Sand, cobbles	
Depth: 80 cm	Salinity: 19 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		70
Fucus c.f. spiralis	25	30
Enteromorpha	20	20
Ulva lactuca	30	20
Description: Patchy algal cover growing on submerged rocks.		
Backing rocky shore with sparse vegetation. Festuca rubra dominant with sparse		
Armeria maritima, Plantago maritima, Glaux maritima on exposed bedrock (slope c.45		
degrees).		
Grading to heath vegetation dominated by Ulex europaeus and Pteridium		
aquilinum.		

[illegible]

Site: Lissagriffin Lake	Transect code: C	
Location: Freshwater inflow	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		100
Phragmites australis	230	100
Algae		10
Enteromorpha		10
Description: Dense single species Phragmites swamp with open ground cover of washed up Enteromorpha. 60m.		

Site: Lissagriffin Lake	Transect code: C	
Location: Freshwater inflow	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	230	100
Mentha aquatica	30	< 1
Lythrum salicaria	40	< 1
Galium palustre	20	< 1
Nasturtium officinale	15	< 1
Description: Dense Phragmites fen with sparse understorey of freshwater species. c.100m		
Backing to heath vegetation with Ulex europaeus and Pteridium aquilinum		

Site: Lissagriffin Lake	Transect code: D	
Location: Marginal swamp	Sample point: 1 Aquatic - 100m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 20 cm	Salinity: 6 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Higher Plant		5
Ruppia sp.	8	5
Algae		< 1
Filamentous algae		< 1
Description: Sparse low growing Ruppia with very sparse filamentous algae. Same species at more or less same cover 60 - 100m out.		

Site: Lissagriffin Lake	Transect code: D	
Location: Marginal swamp	Sample point: 2 Aquatic - 50m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 15 cm	Salinity: 6 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Filamentous algae		5
Description: Sparse filamentous algae only.		

Site: Lissagriffin Lake	Transect code: D	
Location: Marginal swamp	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		75
Scirpus maritimus	100	60
Phragmites australis	80	5
Eleocharis palustris	15	5
Glaux maritima	8	5
Agrostis stolonifera	15	5
Juncus maritimus	70	< 1
Juncus gerardii	20	< 1
Triglochin maritima	15	< 1
Aster tripolium	25	< 1
Samolus valerandi	10	< 1
Salicornia agg.	8	< 1
Carex serotina	15	< 1
Description: Open Scirpus cover with frequent Phragmites shoots over salt tolerant community with occasional Juncus maritimus tussocks. Eleocharis and Agrostis patchy and locally dominant among otherwise sparse understorey species on poached substrate. 30m.		

Site: Lissagriffin Lake	Transect code: D	
Location: Marginal swamp	Sample point: 4 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Schoenoplectus lacustris ssp tabernaemontani	100	75
Phragmites australis	80	5
Scirpus maritimus	80	5
Eleocharis palustris	20	5
Agrostis stolonifera	15	5
Glaux maritima	10	< 1
Samolus valerandi	10	< 1
Oenanthe lachenalii	20	< 1
Description: Fairly dense Schoenoplectus with sparse Scirpus maritimus and Phragmites shoots. Patchy Eleocharis and Agrostis dominant among species-poor understorey of sparse salt tolerant species. 20m.		

Site: Lissagriffin Lake	Transect code: D	
Location: Marginal swamp	Sample point: 5 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Schoenoplectus lacustris ssp tabernaemontani	100	30
Agrostis stolonifera	15	5
Pedicularis palustris	30	5
Hydrocotyle vulgaris	4	5
Apium nodiflorum	10	< 5
Mentha aquatica	15	< 5
Ranunculus flammula	15	< 1
Samolus valerandi	8	< 1
Triglochin palustris	10	< 1
Baldellia ranunculoides	15	< 1
Anagallis tenella	2	< 1
Juncus articulatus	25	< 1
Carex nigra	15	< 1
Description: Open cover of Schoenoplectus with Agrostis stolonifera locally dominant amongst open ground cover of freshwater species on heavily poached substrate. 50m.		
Backing freshwater Phragmites fen. c.20m.		
Backing pasture on rising ground.		

## FARRANAMANAGH LAKE

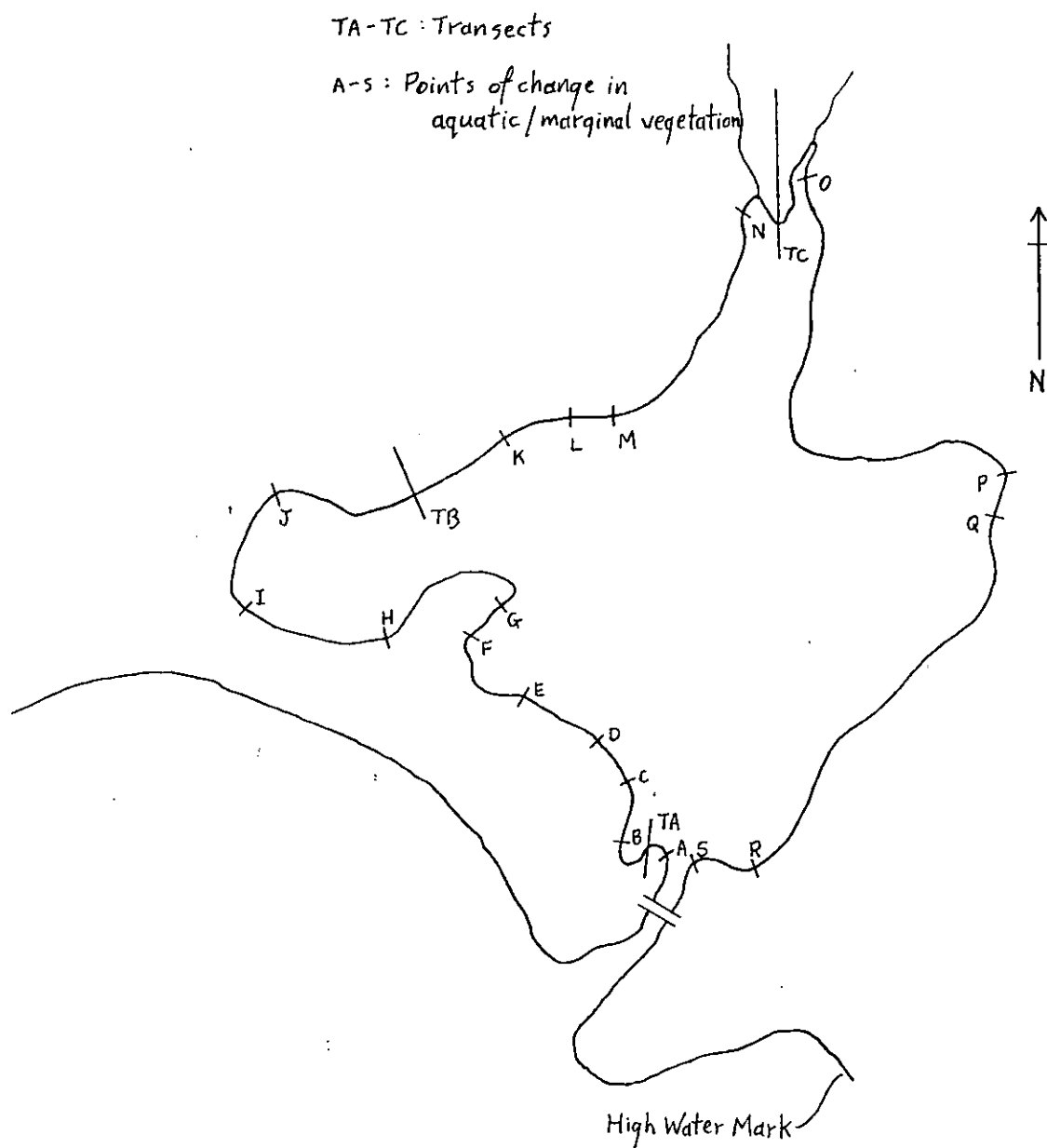
Co. Cork

### Site Description

This small lagoon is bordered by fairly low-lying pasture to the west and north west and heath and bog vegetation on higher ground to the east and north east. The shingle barrier lies to the south, through which the outlet to the sea runs from the southern tip of the lake.

The only freshwater stream flows in at the head of the northern bay. Fen vegetation occurs here with open willow carr. Marginal swamp is found here and as a fringing strip along the west and north western shores. It also occurs in small isolated patches along the rockier eastern shore where the low peat cliffs of the north eastern quarter give way to outcropping bedrock to the south.

A coastal footpath runs along the barrier, crossing the outlet channel via a stone bridge.



Farranamanagh Lake, Co. Cork: Location of Transects and Shore-based Survey Sections

## FARRANAMANAGH LAKE

### Shore-based survey

#### Section A-B (Transect A)

Aquatic: Ruppia sp. - sparse  
Filamentous algae - patchy

Coarse sand and gravel substrate with frequent cobbles

Marginal: Single species Scirpus maritimus and Schoenoplectus lacustris ssp  
tabernaemontani swamps. 2-3m

Adjacent: Festuca rubra - Potentilla anserina dominated grassland

#### Section B-C

Aquatic: Unchanged

Marginal: 30-40cm earth cliff

Adjacent: Unchanged

#### Section C-D

Aquatic: Unchanged

Marginal: Swamp vegetation as A-B

Adjacent: Unchanged

#### Section D-E

Aquatic: Filamentous algae - extensive  
Enteromorpha - sparse

Marginal: As B-C

Adjacent: Unchanged

#### Section E-F

Aquatic: Ruppia sp. - fairly extensive to at least 4m out  
Filamentous algae - extensive  
Enteromorpha - sparse

Marginal: Unchanged

Adjacent: Unchanged

#### Section F-G

Aquatic: Unchanged

Marginal: Emergent Juncus maritimus forming 1m strip along shore

Adjacent: Heath vegetation dominated by Ulex europaeus and Pteridium aquilinum

#### Section G-H

Aquatic: Ruppia sp. - sparse to at least 1m out  
Filamentous algae - sparse

Gravel substrate with frequent cobbles

Marginal: Scirpus maritimus and Schoenoplectus lacustris ssp tabernaemontani swamp with  
each species locally dominant. 2-3m  
Grading to 1m strip of dense Juncus gerardii and Agrostis stolonifera

Adjacent: Unchanged

#### Section H-I

Aquatic: Filamentous alge - sparse

Marginal: 30-50cm earth cliff

Adjacent: Festuca rubra - Potentilla anserina dominated grassland

#### Section I-J

Aquatic: Ruppia sp. - fairly extensive open cover to at least 2m out  
Filamentous algae - patchy cover

Marginal: Schoenoplectus swamp with occasional Scirpus shoots and sparse Ruppia.  
2-10m

Adjacent: 1.5m dry stone wall  
Backing to Lolium perenne grassland

#### Section J-K (Transect B)

Aquatic: Ruppia sp. - fairly extensive open cover to at least 2m out  
Filamentous algae - extensive

Silt and gravel substrate with frequent cobbles

Marginal: Open single species Schoenoplectus swamp with sparse Ruppia and patchy  
filamentous algae. 5-8m  
Backing to 50cm earth cliff

Adjacent: Heath vegetation dominated by Pteridium aquilinum

#### Section K-L

Aquatic: Unchanged

Marginal: Unchanged

Adjacent: 1.5m dry stone wall  
Lolium perenne - Holcus lanatus - Cynosaurus cristatus pasture

### Section L-M

Aquatic: Ruppia sp.- sparse to at least 2m out  
Filamentous algae - patchy cover

Cobble and boulder substrate

Marginal: Single species Scirpus maritimus swamp with sparse Ruppia. 3m

Adjacent: Unchanged

### Section M-N

Aquatic: Ruppia sp. - sparse to at least 2m out  
Filamentous algae - patchy

Silt and gravel substrate with frequent cobbles

Marginal: Schoenoplectus swamp as J-L

Adjacent: Unchanged

### Section N-O (Transect C)

Aquatic: Unchanged

Silt substrate

Marginal: Single species Schoenoplectus swamp with sparse Ruppia. 25-40m  
Backing to 30-50cm earth cliff

Adjacent: Molinia caerulea dominant amongst fen vegetation bordering freshwater inflow.  
Frequent Lythrum salicaria, Mentha aquatica, Menyanthes trifoliata, Filipendula  
ulmaria. Occasional Salix cinerea

### Section O-P

Aquatic: *Ruppia* sp. - very sparse to at least 2m out  
Filamentous algae - extensive

Gravel substrate with frequent cobbles and boulders

Marginal: 50cm earth cliff

Adjacent: Heath vegetation dominated by *Ulex gallii* and *Pteridium aquilinum*

### Section P-Q

Aquatic: Unchanged

Marginal: Small single species swamps of *Scirpus maritimus* (2x1m), *Eleocharis palustris* (12x1m) and *Schoenoplectus lacustris* ssp *tabernaemontani* (5x3m)

Adjacent: Heath as O-P and bog vegetation dominated by *Molinia caerulea*, *Trichophorum cespitosum* and *Sphagnum* spp.

### Section Q-R

Aquatic: Unchanged

Marginal: Bedrock shore with occasional small *Schoenoplectus* swamps - average area c.15m<sup>2</sup> - backing to short stretches 50cm earth cliff

Adjacent: Unchanged

Section R-S

Aquatic:    Unchanged

Marginal:   Scirpus maritimus - Schoenoplectus swamp with each species locally dominant.  
              1-6m  
              Grading to Juncus gerardii - Festuca rubra - Agrostis stolonifera community  
              with sparse Cochlearia anglica and occasional Juncus maritimus tussocks. 15m

Adjacent:   Festuca rubra - Potentilla anserina grassland

Site: Farranamanagh Lake	Transect code: A	
Location: Outlet to sea	Sample point: 1 Aquatic - 2m out	
Sample area: 16m2 (4x4)	Substrate: Sand, gravel, cobbles	
Depth: 20 - 50 cm	Salinity: 25 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		25
Higher Plant		15
Ruppia sp.	15	15
Algae		10
Filamentous algae		10
Description: Open cover of Ruppia with occasional patches of filamentous algae.		





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Site: Farranamanagh Lake	Transect code: B	
Location: Marginal swamp	Sample point: 2 Marginal	
Sample area: 40m2 (10x4)	Substrate: Silt, cobbles	
Depth: 30 - 50 cm	Salinity: 15 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Higher Plant		60
Schoenoplectus lacustris ssp tabernaemontani	100	60
Ruppia sp.	15	< 1
Algae		25
Filamentous algae		25
Description: Open Schoenoplectus swamp with sparse low growing Ruppia and patchy cover of free-floating filamentous algae. 4m.		

Site: Farranamanagh Lake	Transect code: B	
Location: Marginal swamp	Sample point: 3 Marginal - pool	
Sample area: 20m2 (10x2 - whole stand)	Substrate: Silt	
Depth: 30 cm	Salinity: 16 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		30
Higher Plant		30
Ruppia sp.	20	30
Algae		< 1
Filamentous algae		< 1
Description: Open cover of low growing Ruppia with sparse free-floating algae.		

Site: Farranamanagh Lake	Transect code: B	
Location: Marginal swamp	Sample point: 4 Marginal	
Sample area: 20m2 (10x2)	Substrate: Silt	
Depth: 20 - 30 cm	Salinity: 16 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		75
Higher Plant		70
Schoenoplectus lacustris ssp tabernaemontani	100	70
Ruppia sp.	15	< 1
Algae		5
Filamentous algae		5
Description: Fairly open Schoenoplectus swamp with sparse low growing Ruppia and free-floating filamentous algae. 2m		
Backing 50cm earth cliff		
Backing Pteridium aquilinum dominated heath.		

Site: Farranamanagh Lake	Transect code: C	
Location: Freshwater inflow	Sample point: 1 Aquatic - 2m out	
Sample area: 16m2 (4x4)	Substrate: Silt	
Depth: 50 cm	Salinity: 16 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		10
Higher Plant		5
Ruppia sp.	20	5
Algae		5
Filamentous algae		5
Description: Sparse Ruppia and filamentous algae. Ruppia low growing.		



Site: Farranamanagh Lough	Transect code: C	
Location: Freshwater inflow	Sample point: 3 Marginal - pool	
Sample area: 60m2 (15x4 - whole stand)	Substrate: Silt	
Depth: 30cm	Salinity: 9 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		20
Ruppia sp.	15	20
Description: Extensive but open cover of low growing Ruppia in single species stand.		
Backing 40cm earth cliff.		
Backing fen vegetation bordering freshwater inflow. Molinia caerulea dominant		
with Lythrum salicaria, Mentha aquatica, Menyanthes trifoliata, Filipendula ulmaria, Angelica		
sylvestris, Ranunculus acris, Myrica gale frequent. Occasional Salix cinerea, increasing		
cover to landward.		

DRONGAWN LOUGH  
Co. Kerry

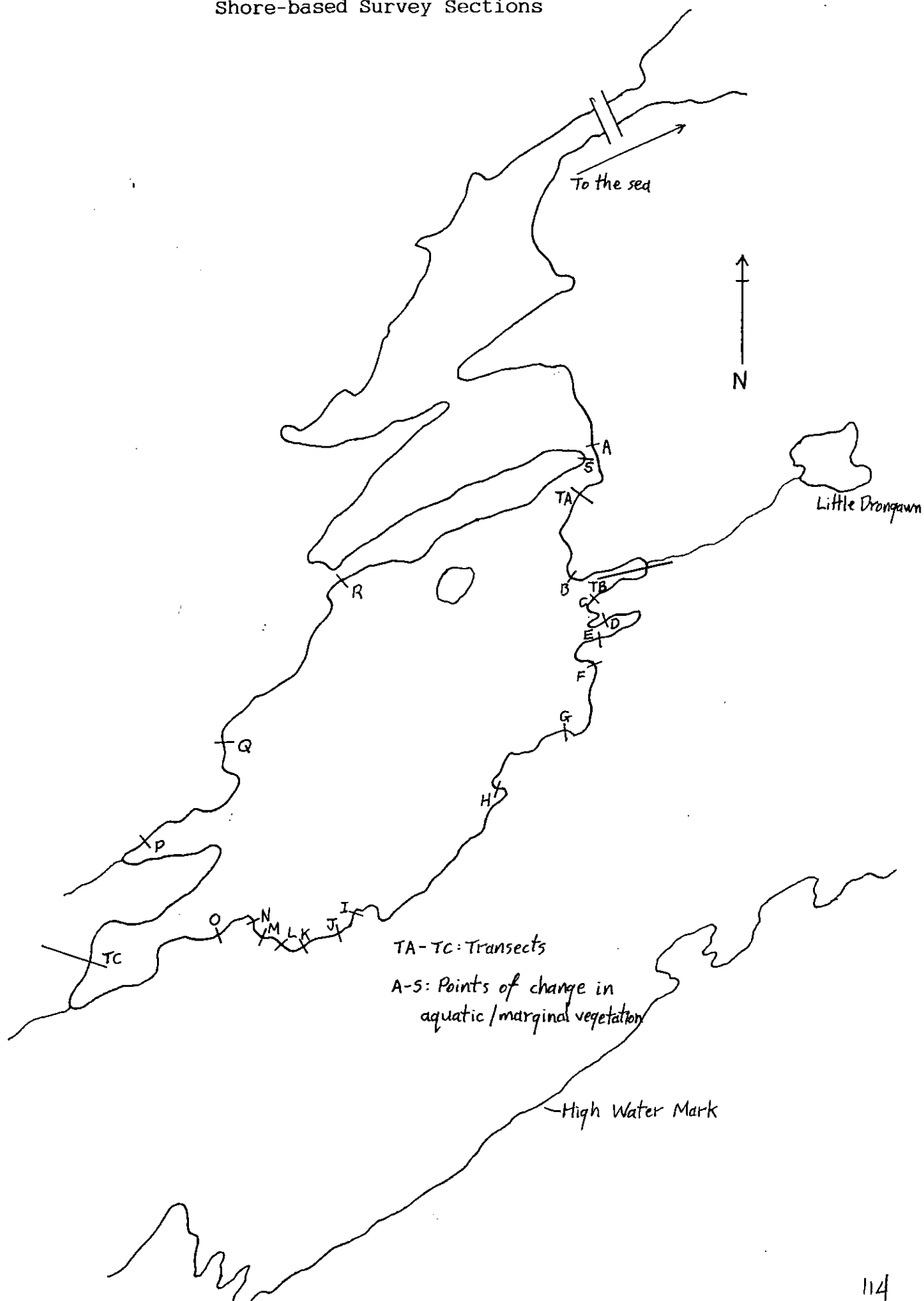
Site Description

This is a fairly rocky site set in a landscape dominated by bog vegetation and frequent heathy outcrops. The whole area is criss-crossed by dry stone walls and subject to grazing.

The bedrock barrier lies across the northern end of the lagoon with the outlet to the sea at its eastern end. There is no inflowing freshwater stream of any size, only occasional small drainage ditches and flushes.

The shores of the lough are mainly peat of irregular slope with occasional areas of low peat cliff. Bedrock outcrops occur occasionally along the south eastern shore, forming small steep sided promontories in places. There is no swamp vegetation.

# Drongawn Lough, Co. Kerry: Location of Transects and Shore-based Survey Sections



## DRONGAWN LOUGH

### Shore-based survey

#### Section A-B (Transect A)

Aquatic: Filamentous algae - patchy  
Enteromorpha - patchy  
Fucus serratus - patchy  
Fucus sp. - patchy  
Codium tomentosum - sparse

Bedrock and silt substrate

Marginal: Juncus maritimus tussocks with species-poor salt tolerant understorey dominated by Agrostis stolonifera. 1m strip

Adjacent: Heath vegetation with Ulex europaeus, Calluna vulgaris, Erica cinerea, Potentilla erecta dominant

#### Section B-C (Transect B)

Aquatic: Ruppia c.f. cirrhosa - dense patches  
Filamentous algae - patchy  
Enteromorpha - patchy

Marginal: Juncus maritimus community as A-B. Extending back to c.50m at bayhead, forming 1-2m strip along shore elsewhere

Adjacent: Unchanged

#### Section C-D

Aquatic: Ruppia c.f. cirrhosa - sparse  
Filamentous algae - extensive  
Enteromorpha - patchy  
Fucus serratus - patchy

Marginal: Exposed bedrock shore with lichens. Occasional small patches of Juncus maritimus dominated community as before

Adjacent: Unchanged

#### Section D-E

Aquatic: Ruppia c.f. cirrhosa - dense beds  
Filamentous algae - extensive  
Enteromorpha - sparse

Marginal: Juncus maritimus community as before forming 1-2m strip along shore

Adjacent: Unchanged

#### Section E-F

Aquatic: Filamentous algae - patchy  
Enteromorpha - sparse  
Fucus serratus - patchy  
Fucus sp. - patchy  
Codium tomentosum - sparse

Marginal: Lichenous bedrock shore

Adjacent: Unchanged

#### Section F-G

- Aquatic: *Ruppia* c.f. *cirrrosa* - dense beds c.10m out, sparse to landward  
Filamentous algae - patchy  
Enteromorpha - sparse
- Marginal: *Juncus maritimus* community as D-E
- Adjacent: Unchanged

#### Section G-H

- Aquatic: *Ruppia* c.f. *cirrrosa* - dense beds c. 10m out, sparse to landward  
Enteromorpha - sparse  
*Fucus serratus* - patchy  
*Fucus* sp. - patchy  
*Codium tomentosum* - sparse
- Marginal: Bedrock shore as E-F
- Adjacent: Unchanged

#### Section H-I

As F-G

#### Section I-J

- Aquatic: Unchanged
- Marginal: *Juncus maritimus* community now to c.70m
- Adjacent: Unchanged

Section J-K

As F-G

Section K-L

As I-J

Section L-M

As F-G

Section M-N

As I-J

Section N-O

As G-H

Section O-P (Transect C)

Aquatic: *Ruppia* c.f. *cirrhusa* - cover and zonation unchanged  
Filamentous algae - patchy cover

Marginal: *Juncus maritimus* tussocks with *Agrostis stolonifera*, *Festuca rubra* and *Juncus gerardii* locally dominant below with more or less sparse salt tolerant associates.  
1-20m

Adjacent: Bog vegetation dominated by *Molinia caerulea*, *Schoenus nigricans*, *Eriophorum angustifolium* and *Sphagnum* spp. with frequent *Myrica gale*, *Erica tetralix*, *Trichophorum cespitosum* and *Drosera rotundifolia*

#### Section P-Q

Aquatic:    Unchanged

Marginal:   *Juncus maritimus* community as Transect C forming 1-3m strip along shore

Adjacent:   Heath as A-B

#### Section Q-R

Aquatic:    Unchanged

Marginal:   Unchanged

Adjacent:   Bog vegetation as O-P with occasional heath as A-B

#### Section R-S

Aquatic:    Unchanged

Marginal:   Unchanged

Adjacent:   Heath as A-B

Site: Drongawn Lough	Transect code: A	
Location: Outlet to sea	Sample point: 1 Aquatic - 2m out	
Sample area: 16m2 (4x4)	Substrate: Bedrock, silt	
Depth: 0 - 50 cm	Salinity: 34 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Fucus serratus	25	25
Fucus sp.	30	20
Enteromorpha	15	20
Filamentous algae		20
Codium tomentosum	6	< 1
Description: Fairly dense cover of algal community dominated by fucoids and filamentous species.		

Site: Drongawn Lough	Transect code: A	
Location: Outlet to sea	Sample point: 2 Marginal	
Sample area: 10m2 (10x1)	Substrate: Peat, exposed bedrock	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Juncus maritimus	80	80
Agrostis stolonifera	15	25
Glaux maritima	6	5
Triglochin maritima	10	5
Plantago maritima	8	< 1
Samolus valerandi	10	< 1
Carex extensa	15	< 1
Description: Fairly dense cover of Juncus maritimus tussocks with Agrostis dominant below amongst species-poor salt tolerant community forming 1m strip along the shore.		
Backing to heath vegetation on rising rocky ground. Dominant species - Ulex europaeus, Calluna vulgaris, Erica cinerea, Potentilla erecta.		

Site: Lough Gill	Transect code: A	
Location: Outlet to sea	Sample point: 4 Marginal	
Sample area: 100m <sup>2</sup> (10x10)	Substrate: Silt	
Depth: 15 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		60
Scirpus maritimus	70	50
Schoenoplectus lacustris ssp tabernaemontani	80	10
Phragmites australis	70	< 1
Potamogeton pectinatus	6	5
Algae		80
Filamentous algae		80
Description: Increasingly open cover of dominant Scirpus maritimus with Schoenoplectus increasingly frequent. Potamogeton pectinatus low growing and fairly sparse beneath floating algal mat. Extending 15m landward of stock fence. Grazed.		
Backing to Iris psuedacorus - Juncus effusus - Agrostis stolonifera community, 100m.		
Grading to Ammophila arenaria - Festuca rubra dune grassland.		

Site: Drongawn Lough	Transect code: B	
Location: Sheltered bay	Sample point: 1 Aquatic - 30m out	
Sample area: 16m2 (4x4)	Substrate: Bedrock, silt	
Depth: 60 cm	Salinity: 26 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Filamentous algae		100
Description: Dense cover of filamentous algae only.		

Site: Drongawn Lough	Transect code: B	
Location: Sheltered bay	Sample point: 2 Aquatic - 15m out	
Sample area: 16m2 (4x4)	Substrate: Bedrock, silt	
Depth: 50 cm	Salinity: 23 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		50
Ruppia c.f. cirrhosa	50	50
Algae		
Filamentous algae		25
Enteromorpha	20	25
Description: Patchy cover of Ruppia growing through patchy cover of Enteromorpha and filamentous algae.		

Site: Drongawn Lough	Transect code: B	
Location: Sheltered bay	Sample point: 3 Aquatic - 2m out	
Sample area: 16m2 (4x4)	Substrate: Bedrock, peat	
Depth: 50 cm	Salinity: 19 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Higher Plant		10
Ruppia c.f. cirrhosa	40	10
Algae		
Filamentous algae		80
Description: Filamentous algae dominant with open cover of Ruppia.		
Backing stone and earth barrier (height 70cm, width 50cm).		



Site: Drongawn Lough	Transect code: B	
Location: Sheltered bay	Sample point: 5 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	80	75
Agrostis stolonifera	15	30
Plantago maritima	10	< 5
Glaux maritima	6	< 5
Triglochin maritima	15	< 5
Samolus valerandi	10	< 1
Carex extensa	20	< 1
Description: Fairly dense cover of Juncus maritimus tussocks over species-poor salt tolerant vegetation. Agrostis stolonifera dominant amongst an otherwise sparse understorey. 50m. Backing Ulex europaeus - Calluna vulgaris - Erica cinerea heath.		

Site: Drongawn Lough	Transect code: C	
Location: Peat cliff shore	Sample point: 1 Aquatic - 10m out	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 60 cm	Salinity: 34 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		75
Ruppia c.f. cirrhosa	50	75
Algae		30
Filamentous algae		30
Description: Ruppia dominant in extensive bed with filamentous algae restricted to areas of lower cover.		

Site: Drongawn Lough	Transect code: C	
Location: Peat cliff shore	Sample point: 2 Aquatic - 2m out	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 50 cm	Salinity: 34 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Higher Plant		5
Ruppia c.f. cirrhosa	40	5
Algae		75
Filamentous algae		75
Description: Filamentous algae dominant with sparse Ruppia cover.		
Backing 70cm peat cliff		

Site: Drongawn Lough	Transect code: C	
Location: Sheltered bay	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	70	60
Agrostis stolonifera	20	20
Juncus gerardii	25	15
Festuca rubra	20	15
Glaux maritima	8	5
Aster tripolium	20	5
Triglochin maritima	10	< 1
Plantago maritima	8	< 1
Cochlearia anglica	5	< 1
Samolus valerandi	8	< 1
Carex extensa	20	< 1
Description: Open cover of Juncus maritimus tussocks. Agrostis, Festuca and Juncus gerardii co-dominant below with more or less sparse salt tolerant associates. 20m.		
Grading to bog vegetation dominated by Sphagnum spp., Molinia caerulea, Schoenus nigricans and Eriophylum angustifolium with Myrica gale, Erica tetralix, Trichophorum cespitosum, Drosera rotundifolia.		

LOUGH GILL  
Co. Kerry

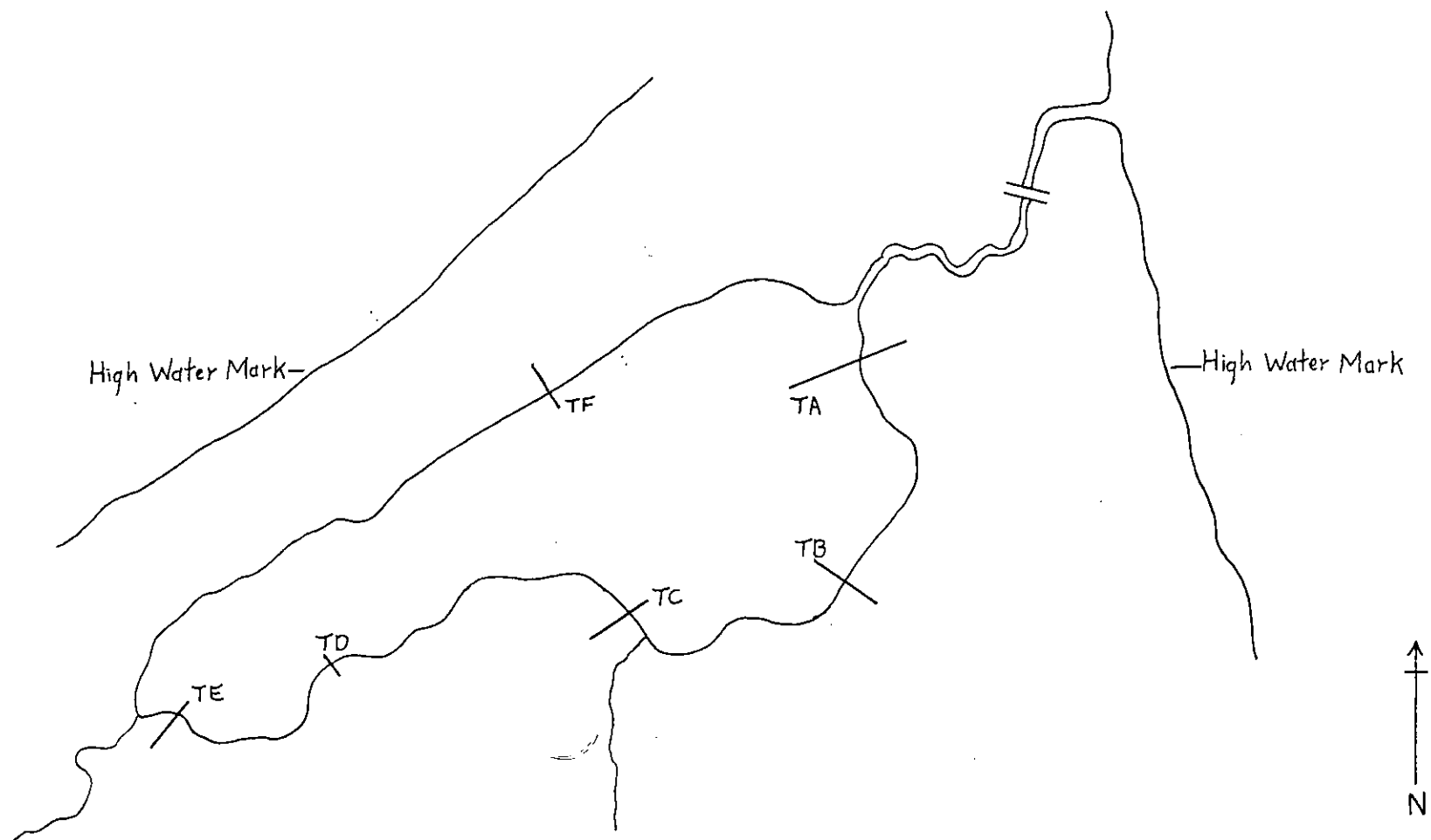
Site Description

Low-lying pastoral farmland lies to the south of this lough with mountainous country beyond. The sea lies beyond sand dunes to the north, north east and west.

The major freshwater inflow discharges into the lough at its western end and the outlet to the sea runs from the opposite, eastern end. Fairly extensive Phragmites dominated swamps occur at the freshwater inflow and bordering the southern shore. A narrow strip of swamp vegetation fringes most of the northern shore and Scirpus and Schoenoplectus swamps are found at the eastern end.

The only open shores are in the south west where, according to local knowledge, an area of pasture has been extended into the lough by a local landowner. A golf course adjoins the lough to the north west.

Shores are shallowly sloping around the whole site.



Lough Gill, Co. Kerry: Location of Transects

Site: Lough Gill	Transect code: A	
Location: Outlet to sea	Sample point: 1 Aquatic - 100m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 50 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Higher Plant		70
Ruppia maritima	5	70
Algae		50
Filamentous algae		50
Description: Fairly dense low growing Ruppia (some in flower) beneath patchy cover of free-floating filamentous algae. Same species at more or less the same cover at 75m, 50m, 25m and 10m out from the shore. Water depth gradually decreasing to 30cm at 50m out, remaining constant to 3m out.		

Site: Lough Gill	Transect code: A	
Location: Outlet to sea	Sample point: 2 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 20 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Higher Plant		60
Ruppia maritima	5	60
Algae		70
Filamentous algae		70
Enteromorpha	40	< 1
Description: Patchy cover of low growing Ruppia beneath extensive free-floating algal mat.		

Site: Lough Gill	Transect code: A	
Location: Outlet to sea	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 15 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		70
Scirpus maritimus	80	70
Schoenoplectus lacustris ssp tabernaemontani	90	< 1
Phragmites australis	90	< 1
Algae		95
Enteromorpha	20	95
Description: Fairly dense Scirpus maritimus swamp with occasional Schoenoplectus and Phragmites shoots over a dense algal mat. Extending 25m to stock fence.		

[illegible]

Site: Lough Gill	Transect code: B	
Location: Swamp bordering shallow shelf	Sample point: 2 Aquatic - 20m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 30 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Higher Plant		10
Zannichellia palustris	5	10
Ruppia maritima	6	< 5
Algae		40
Filamentous algae		20
Chara aspera var. aspera	6	20
Description: Chara aspera dominant with higher plant associates beneath patchy mat of filamentous algae.		

Site: Lough Gill	Transect code: B	
Location: Swamp bordering shallow shelf	Sample point: 3 Aquatic - 10m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 30 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Higher Plant		5
Zannichellia palustris	5	< 5
Ruppia maritima	8	< 5
Potamogeton pectinatus	8	< 5
Algae		60
Filamentous algae		60
Chara aspera var. aspera	5	10
Description: Chara aspera dominant with higher plant associates beneath increasing cover of surface algal mat.		



Site: Lough Gill	Transect code: B	
Location: Swamp bordering shallow shelf	Sample point: 5 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 30 cm	Salinity: 1 part per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Higher Plant		75
Schoenoplectus lacustris ssp tabernaemontani	120	70
Phragmites australis	100	5
Potamogeton pectinatus	40	< 1
Algae		25
Filamentous algae		25
Description: Tall, fairly dense Schoenoplectus lacustris swamp with sparse Phragmites.		
Patchy algal mat with sparse Potamogeton pectinatus. 40m.		

Site: Lough Gill	Transect code: B	
Location: Swamp bordering shallow shelf	Sample point: 6 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 0 - 20 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Higher Plant		80
Schoenoplectus lacustris ssp tabernaemontani	120	70
Phragmites australis	100	< 1
Potamogeton natans	30	< 1
Lemna minor		< 1
Algae		25
Filamentous algae		25
Description: Tall, fairly dense Schoenoplectus lacustris swamp with sparse Phragmites.		
Patchy algal mat with sparse Potamogeton natans and Lemna minor. 20m. Grazed.		
Grading to Iris psuedacorus - Juncus effusus - Agrostis stolonifera community.		

[illegible]

Site: Lough Gill	Transect code: C	
Location: Swamp bordering deeper water	Sample point: 2 Aquatic - 2m out - grapnel	
Sample area: Grapnel only	Substrate: Silt (depth - 60cm +)	
Depth: 70 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Enteromorpha		
Filamentous algae		
Description:		

[illegible]

Site: Lough Gill	Transect code: C	
Location: Swamp bordering deeper water	Sample point: 4 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 5 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	240	100
Angelica sylvestris	50	< 1
Apium nodiflorum	40	< 1
Potentilla palustris	40	< 1
Menyanthes trifoliata	30	< 1
Lemna minor		< 1
Description: Tall dense Phragmites bed with sparse understorey of freshwater associates.		
Extending for c.200m.		
Backing to Lolium perenne - Cynosaurus cristatus pasture.		

Site: Lough Gill	Transect code: D	
Location: Open shore	Sample point: 1 Aquatic - 20m out - grapnel	
Sample area: Grapnel only	Substrate: Sand	
Depth: 80 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Myriophyllum spicatum		
Filamentous algae		
Chara aspera var. aspera		
Description:		

Site: Lough Gill	Transect code: D	
Location: Open shore	Sample point: 2 Aquatic - 10m out - grapnel	
Sample area: Grapnel only	Substrate: Sand	
Depth: 70 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Myriophyllum spicatum		
Filamentous algae		
Description:		

[illegible]

Site: Lough Gill	Transect code: D	
Location: Open shore	Sample point: 4 Marginal	
Sample area: 16m2 (4x4)	Substrate: Sandy soil	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Iris psuedacorus	100	40
Agrostis stolonifera	15	25
Juncus articulatus	30	5
Potentilla anserina	8	5
Eleocharis palustris	25	5
Mentha aquatica	20	< 1
Nasturtium officinale	6	< 1
Filipendula ulmaria	50	< 1
Hydrocotyle vulgaris	2	< 1
Ranunculus acris	3	< 1
Polygonum hydropiper	30	< 1
Rumex acetosa	8	< 1
Galium palustre	10	< 1
Juncus bufonius	10	< 1
Samolus valerandi	10	< 1
Apium nodiflorum	8	< 1
Stellaria alsine	15	< 1
Rumex conglomeratus	12	< 1
Caltha palustris	10	< 1
Leontodon autumnalis	20	< 1
Senecio palustris	15	< 1
Potentilla palustris	5	< 1
Juncus effusus	45	< 1
Description: Patchy cover of Iris dominated community forming 4m wide strip along poached wet earth and sand bank, average slope c.30 degrees. Grazed. Many species fairly low growing.		
Grading to Lolium perenne - Cynosaurus cristatus pasture.		

Site: Lough Gill	Transect code: E	
Location: Freshwater inflow	Sample point: 1 Aquatic - 20m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 50 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		25
Higher Plant		20
Zannichellia palustris	6	15
Myriophyllum spicatum	30	5
Algae		20
Filamentous algae		20
Enteromorpha	10	< 1
Description: Zannichellia dominant among sparse submergent species. Patchy surface layer of filamentous algae.		

Site: Lough Gill	Transect code: E	
Location: Freshwater inflow	Sample point: 2 Aquatic - 10m out	
Sample area: 25m2 (5x5)	Substrate: Sand and silt	
Depth: 50 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Higher Plant		40
Zannichellia palustris	6	20
Ruppia maritima	40	20
Algae		40
Filamentous algae		40
Enteromorpha	10	< 1
Description: Ruppia and Zannichellia in mixed and single species patches, some Ruppia plants in flower. Surface algal mat becoming more extensive but still patchy.		

Site: Lough Gill	Transect code: E	
Location: Freshwater inflow	Sample point: 3 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Sand and silt	
Depth: 50 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		30
Ruppia maritima	40	25
Potamogeton pectinatus	40	5
Myriophyllum spicatum	40	< 5
Description: Ruppia dominant with sparse associates. Some Ruppia in fruit. No algal mat to c.5m out.		

[illegible]

Site: Lough Gill	Transect code: E	
Location: Freshwater inflow	Sample point: 5 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	200	100
Equisetum fluviatile	100	5
Mentha aquatica	70	5
Apium nodiflorum	20	5
Galium palustre	15	< 1
Description: Dense species-poor Phragmites fen with sparse freshwater associates. c.100m.		
Grading to Lolium perenne - Cynosaurus cristatus pasture.		

Site: Lough Gill	Transect code: F	
Location: Barrier	Sample point: 1 Aquatic - 10m out - grapnel	
Sample area: Grapnel only	Substrate: Sand	
Depth: 50 cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Filamentous algae		30
Chara aspera var. aspera		
Description: Patchy surface cover of free-floating algal mat. Same species and algal mat cover from 10m out to marginal zone.		

Site: Lough Gill	Transect code: F	
Location: Barrier	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Sand and silt	
Depth: 50 cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Higher Plant		40
Scirpus maritimus	100	25
Schoenoplectus lacustris ssp tabernaemontani	120	10
Phragmites australis	130	5
Algae		10
Filamentous algae		10
Description: Open Scirpus maritimus dominated swamp for 20m. Sparse cover of associated emergents and surface algal layer.		

Site: Lough Gill	Transect code: F	
Location: Barrier	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Sand and silt	
Depth: 40 cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Higher Plant		90
Phragmites australis	170	75
Schoenoplectus lacustris ssp tabernaemontani	120	5
Typha latifolia	170	5
Scirpus maritimus	100	< 1
Nymphaea alba		5
Baldellia ranunculoides	80	< 1
Algae		10
Filamentous algae		10
Description: Fairly dense Phragmites dominated swamp with sparse cover of associated species and sparse surface mat of filamentous algae. 17m.		

Site: Lough Gill	Transect code: F	
Location: Barrier	Sample point: 4 Marginal	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	150	20
Agrostis stolonifera	30	75
Potentilla anserina	30	5
Juncus articulatus	70	5
Mentha aquatica	30	< 5
Filipendula ulmaria	130	< 5
Ranunculus acris	20	< 1
Caltha palustris	30	< 1
Angelica sylvestris	90	< 1
Heracleum sphondylium	100	< 1
Vicia cracca	80	< 1
Equisetum fluviatile	40	< 1
Description: Open Phragmites cover with dense Agrostis dominant amongst fen vegetation, 5m		
Grading to improved meadow with Trifolium repens, T. pratense, Bromus		
hordeaceus, c.100m.		
Grading to Ammophila arenaria - Festuca rubra dune grassland.		

## CLOONCONEEN POOL

Co. Clare

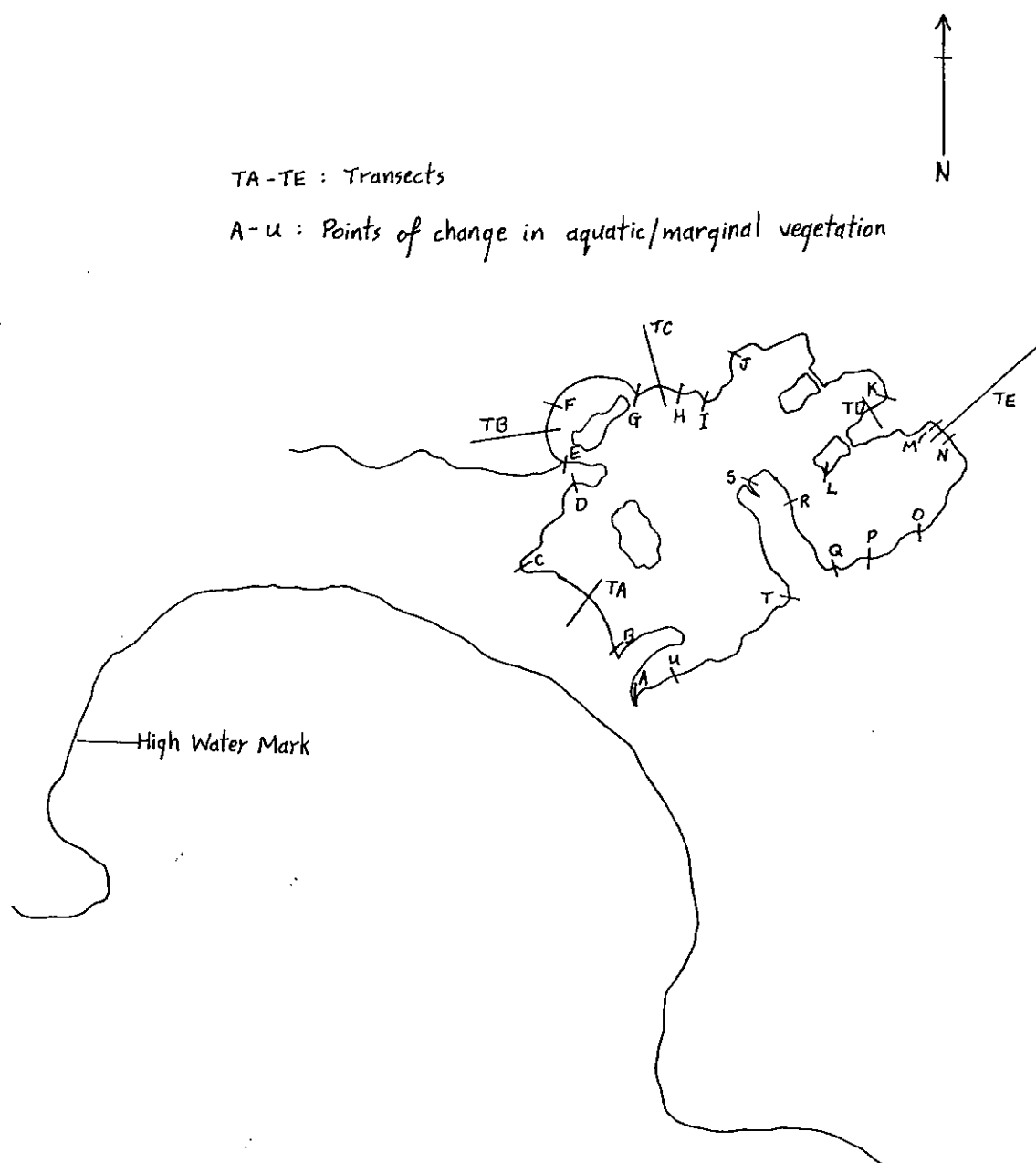
### Site Description

A low-lying area with flat grazed wet grassland to the north, south and east. A wetland area extends away to the west with fairly extensive *Phragmites* and *Spartina* stands lying between the coast and drier pastoral farmland to the north. This wetland is associated with the lagoon's main freshwater inflow, which flows in at its western end. The sea lies beyond the shingle barrier to the south west with the remnants of a 'drowned forest' on the shore below high water mark.

There are drainage channels to the north and east and some evidence of small-scale peat cutting to south and east where *Ruppia* and *Scirpus maritimus* occur in the resulting pools.

There are no extensive emergent stands. *Scirpus* forms a narrow fringe around much of the south and east shores and *Phragmites* occurs in one small area in the east and with saltmarsh species on the edge of the barrier.

Away from the stony barrier shore and the silty shore associated with the freshwater inflow the remaining shores are of peat. Low cliffs occur in places with shores of more shallow slope elsewhere.



Cloonconeen Pool, Co. Clare: Location of Transects and Shore-based Survey Sections

## CLOONCONEEN POOL

### Shore-based survey

#### Section A-B

Aquatic: *Ruppia maritima* - sparse and low growing  
Filamentous algae - sparse

Sand and gravel substrate

Marginal: Sparsely vegetated shingle barrier. *Triplurospermum maritimum* and *Atriplex hastata* dominant

Adjacent: Shingle barrier

#### Section B-C (Transect A)

Aquatic: *Ruppia maritima* - cover unchanged  
Filamentous algae - extensive surface layer to c. 15m out

Peat substrate

Marginal: Open *Phragmites* cover with *Puccinellia maritima* dominant below over salt tolerant vegetation on peaty substrate. *Juncus gerardii* frequent. 5-12m

Adjacent: Unchanged

### Section C-D

- Aquatic: *Ruppia maritima* - very sparse  
Filamentous algae - sparse
- Marginal: *Scirpus maritimus* strip. 1m  
Backing to *Puccinellia maritima* dominated saltmarsh community. As B-C but now with sparse *Scirpus* cover replacing *Phragmites*. 12-15m  
Occasional small single species patches of *Spartina* along shore. Average area 4m<sup>2</sup>  
Grading to *Juncus gerardii* - *Festuca rubra* saltmarsh community. c.150m
- Adjacent: *Spartina anglica* dominated vegetation. c. 100m  
*Phragmites australis* bed. c.100m

### Section D-E

- Aquatic: Unchanged
- Marginal: *Spartina anglica* single species stand forming 2-4m strip along shore  
Backing to *Juncus gerardii* - *Festuca rubra* saltmarsh community with frequent *Juncus maritimus* tussocks as Transect B. c.150m
- Adjacent: Unchanged

### Section E-F (Transect B)

- Aquatic: Filamentous algae - sparse  
  
Silt substrate
- Marginal: *Salicornia* on open mud shore with occasional *Spartina* stands of average area c.20m<sup>2</sup>. *Salicornia* sparse on lower shore, cover increasing to landward. 10-15m  
Backing to *Puccinellia maritima* dominated saltmarsh with patchy *Agrostis stolonifera* and occasional *Scirpus maritimus* shoots. 10-15m  
Grading to *Juncus gerardii* - *Festuca rubra* saltmarsh community with frequent *Juncus maritimus* tussocks. c.100m
- Adjacent: Embankment with *Rubus fruticosus* and *Salix cinerea*  
Backing to public road  
Backing to *Lolium perenne* pasture

### Section F-G

Aquatic: Unchanged

Marginal: Open muddy shore with sparse *Scirpus maritimus* and occasional *Juncus maritimus* tussocks and *Spartina* patches of c.6m<sup>2</sup> maximum. *Scirpus* and *Spartina* heavily grazed. 15-20m  
Grading to *Puccinellia* saltmarsh as E-F. Heavily poached and grazed. 5-8m  
Grading to *Juncus gerardii* - *Festuca rubra* community as E-F

Adjacent: Unchanged

### Section G-H (Transect C)

Aquatic: *Ruppia maritima* - sparse and low growing  
Filamentous algae - dense and extensive

Marginal: Open cover of *Juncus maritimus* tussocks with patchy *Juncus gerardii* and *Agrostis stolonifera* co-dominant below with salt tolerant associates. 3-4m  
Grading to *Juncus gerardii* - *Festuca rubra* - *Agrostis stolonifera* dominated community. c.100m. Poached and grazed

Adjacent: Unchanged

### Section H-I

Aquatic: Unchanged

Marginal: 1m peat cliff  
Backing to *Juncus gerardii* - *Festuca rubra* - *Agrostis stolonifera* community as G-H.

Adjacent: Unchanged

#### Section I-J

- Aquatic: Filamentous algae - dense and extensive
- Marginal: Occasional short stretches of peat cliff of c. 10m maximum extent  
Otherwise as G-H
- Adjacent: Unchanged

#### Section J-K

- Aquatic: *Ruppia maritima* - sparse, low growing  
Filamentous algae - cover unchanged
- Marginal: As G-H but with frequent *Juncus maritimus* tussocks over *Juncus gerardii* -  
*Festuca rubra* - *Agrostis stolonifera* community as Transect E
- Adjacent: Unchanged

#### Section K-L (Transect D)

- Aquatic: Unchanged
- Marginal: *Scirpus maritimus* single species strip. 2m  
Grading to open *Scirpus* cover with *Juncus gerardii* dominant below in species-poor salt tolerant vegetation. 12m  
  
Grading to Section L-M

#### Section L-M

- Aquatic: *Ruppia maritima* - dense extensive beds  
Filamentous algae - sparse
- Marginal: *Juncus maritimus* dominant with occasional patches of *Scirpus maritimus*,  
co-dominant in places. 4-5m  
  
Grading to Section K-L

### Section M-N (Transect E)

Aquatic:    Unchanged

              Peat substrate

Marginal:   Open Phragmites swamp with sparse *Ruppia maritima*. 3-5m  
              Backing to dense cover of *Juncus maritimus* with frequent *Phragmites* shoots over  
              species-poor salt tolerant vegetation. 4-5m  
              Grading to *Juncus gerardii* - *Festuca rubra* - *Agrostis stolonifera* saltmarsh  
              community with open cover of *Juncus maritimus*. c.60m

Adjacent:   Public road

### Section N-O

Aquatic:    Unchanged

Marginal:   As L-M  
              Grading to *Juncus gerardii* - *Festuca rubra* - *Agrostis stolonifera* community as  
              Transect C. c.100m

Adjacent:   *Lolium perenne* pasture

### Section O-P

Aquatic:    Unchanged

Marginal:   1-1.5m peat cliff  
              Backing to *Juncus gerardii* - *Festuca rubra* - *Agrostis stolonifera* community as  
              Transect C. c.100m

Adjacent:   Unchanged

#### Section P-Q

Aquatic: Unchanged

Marginal: Dense *Juncus maritimus* forming 1m strip  
Grading as O-P

Adjacent: Unchanged

#### Section Q-R

Aquatic: *Ruppia maritima* - Unchanged

Marginal: *Scirpus maritimus* single species stand forming 1-2m strip  
Grading as O-P

Adjacent: Unchanged

#### Section R-S

Aquatic: *Ruppia maritima* - sparse  
Filamentous algae - extensive

Marginal: As P-Q

Adjacent: Unchanged

#### Section S-T

Aquatic: Unchanged

Marginal: As O-P

Adjacent: Unchanged

#### Section T-U

Aquatic:    Unchanged

Marginal:   Juncus maritimus and Scirpus maritimus each locally dominant in 1-2m strip  
              along shore. Occasional short stretches of 1-1.5m peat cliff  
              Grading as O-P

Adjacent:   Unchanged

#### Section U-A

Aquatic:    Unchanged

Marginal:   Scirpus maritimus dominant with species-poor salt tolerant understorey. 1-6m  
              Grading as O-P

Adjacent:   Unchanged

Site: Cloonconeen Pool	Transect code: A	
Location: Barrier	Sample point: 1 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Peat	
Depth: 15 cm	Salinity: 36 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		< 1
Ruppia maritima	20	< 1
Algae		100
Filamentous algae		100
Description: Very sparse Ruppia amongst dense free-floating algal mat.		

Site: Cloonconeen Pool	Transect code: A	
Location: Barrier	Sample point: 2 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	80	30
Puccinellia maritima	20	90
Juncus gerardii	25	20
Salicornia agg.	20	5
Atriplex hastata	30	< 5
Aster tripolium	30	< 1
Spergularia marina	15	< 1
Triglochin maritima	10	< 1
Cochlearia anglica	15	< 1
Glaux maritima	10	< 1
Plantago maritima	15	< 1
Atriplex patula	20	< 1
Description: Open low growing Phragmites cover with saltmarsh community below.		
Dense cover of dominant Puccinellia with patchy Juncus gerardii and tall, sparse salt tolerant associates. 12m.		
Backing shingle barrier (gravel, cobbles, boulders) with very sparse vegetation.		
Tripleurospermum maritimum and Atriplex hastata most frequent with rare Glaucium flavum.		

Site: Cloonconeen Pool	Transect code: B	
Location: Spartina and Salicornia stands	Sample point: 1 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Silt	
Depth: 10 cm	Salinity: 35 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		20
Filamentous algae		20
Description: Patchy cover of free-floating filamentous algae only.		

Site: Cloonconeen Pool	Transect code: B	
Location: Spartina and Salicornia stands	Sample point: 2 Marginal	
Sample area: 30m2 (10x3)	Substrate: Silt	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Spartina anglica		100
Description: Dense single species stand of Spartina. 3m		

Site: Cloonconeen Pool		Transect code: B	
Location: Spartina and Salicornia stands		Sample point: 3 Marginal	
Sample area: 100m2 (10x10)		Substrate: Mud	
Depth: 0 cm		Salinity: -----	
NVC community:			
	Height (cm)	Cover (%)	
Total Plant		25	
Salicornia agg.	10	25	
Spartina anglica	15	< 1	
Description: Open cover of dominant Salicornia with rare low growing Spartina shoots. 12m.			
Salicornia cover varying from < 1% on lower shore to c.70% on upper shore.			

Site: Cloonconeen Pool	Transect code: B	
Location: Spartina and Salicornia stands	Sample point: 4 Marginal	
Sample area: 16m2 (4x4)	Substrate: Mud	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Puccinellia maritima	10	80
Agrostis stolonifera	10	25
Aster tripolium	35	10
Atriplex hastata	20	5
Cochlearia anglica	10	< 5
Scirpus maritimus	40	< 1
Salicornia agg.	15	< 1
Juncus gerardii	30	< 1
Triglochin maritima	15	< 1
Spergularia marina	20	< 1
Description: Dense cover of dominant Puccinellia with sparse, fairly tall growing salt tolerant species. Agrostis stolonifera patchy and very locally co-dominant. 10m.		

Site: Cloonconeen Pool	Transect code: B	
Location: Spartina and Salicornia stands	Sample point: 5 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	80	25
Festuca rubra	20	75
Juncus gerardii	25	25
Agrostis stolonifera	15	10
Potentilla anserina	8	10
Aster tripolium	30	< 5
Leontodon autumnalis	20	< 1
Triglochin maritima	15	< 1
Plantago maritima	10	< 1
Cochlearia anglica	6	< 1
Atriplex hastata	10	< 1
Description: Open cover of Juncus maritimus tussocks. Festuca rubra dominant below with Juncus gerardii very locally co-dominant, Agrostis stolonifera and Potentilla anserina patchy. Other species sparse. c.200m.		

Site: Cloonconeen Pool	Transect code: C	
Location: Marginal Juncus maritimus	Sample point: 1 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Silt	
Depth: 30 cm	Salinity: 35 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		< 1
Ruppia maritima	20	< 1
Algae		100
Filamentous algae		100
Description: Very sparse Ruppia amongst dense free-floating filamentous algae. Older parts of Ruppia plants coated by algae. Some plants in flower.		

Site: Cloonconeen Pool	Transect code: C	
Location: Marginal Juncus maritimus	Sample point: 2 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Juncus maritimus	80	30
Juncus gerardii	15	40
Agrostis stolonifera	8	20
Aster tripolium	15	5
Triglochin maritima	15	< 5
Glaux maritima	6	< 5
Spergularia marina	5	< 5
Atriplex hastata	20	< 1
Cochlearia anglica	5	< 1
Puccinellia maritima	10	< 1
Scirpus maritimus	30	< 1
Plantago maritima	15	< 1
Salicornia agg.	6	< 1
Description: Open cover of Juncus maritimus tussocks with salt tolerant vegetation dominated by patchy cover of Juncus gerardii with Agrostis stolonifera locally co-dominant. All other species sparse. Lightly poached, grazed. 4m strip along shore.		
Backing low peat bank (slope c.80 degrees, average height 50cm).		

Site: Cloonconeen Pool	Transect code: C	
Location: Marginal Juncus maritimus	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Festuca rubra	15	75
Agrostis stolonifera	10	60
Juncus gerardii	15	20
Trifolium repens	4	5
Potentilla anserina	3	5
Glaux maritima	4	< 5
Triglochin maritima	10	< 1
Plantago maritima	10	< 1
Aster tripolium	10	< 1
Leontodon autumnalis	6	< 1
Cochlearia anglica	5	< 1
Atriplex hastata	10	< 1
Description: Festuca rubra and Agrostis stolonifera co-dominant with patchy Juncus gerardii very locally so. Associated salt tolerant species more or less sparse and low growing.		
Grazed. 100m.		
Backing 45 degree bank to c.2m height with Rubus fruticosus and Salix cinerea.		
Backing public road.		

Site: Coonconeen	Transect code: D	
Location: Scirpus swamp - sheltered bay	Sample point: 1 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Silt	
Depth: 40 cm	Salinity: 33 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		< 1
Ruppia maritima	30	< 1
Algae		100
Filamentous algae		100
Description: Sparse Ruppia amongst dense cover of free-floating filamentous algae.		

Site: Cloonconeen Pool	Transect code: D	
Location: Scirpus swamp - sheltered bay	Sample point: 2 Marginal	
Sample area: 20m2 (10x2)	Substrate: Silt	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		75
Scirpus maritimus	80	75
Description: Fairly dense Scirpus maritimus single species swamp. 2m.		

Site: Cloonconeen Pool	Transect code: D	
Location: Scirpus swamp - sheltered bay	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		85
Scirpus maritimus	60	30
Juncus maritimus	80	5
Juncus gerardii	40	40
Aster tripolium	40	20
Atriplex hastata	30	< 1
Cochlearia anglica	10	< 1
Description: Patchy cover of Juncus gerardii and low growing Scirpus, each locally dominant over a few tall salt tolerant associates. Occasional Juncus maritimus tussocks forming very open cover. Small bare patches of water-logged substrate. 12m.		

Site: Clooncaneen Pool	Transect code: E	
Location: Phragmites swamp & isolated pool	Sample point: 1 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Peat	
Depth: 20 cm	Salinity: 34 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		70
Ruppia maritima	40	70
Algae		100
Filamentous algae		100
Description: Substrate covere by filamentous algae with abundant Ruppia growing through to the surface. Many Ruppia plants in flower and fruit.		

Site: Cloonconeen Pool	Transect code: E	
Location: Phragmites swamp & isolated pool	Sample point: 2 Marginal	
Sample area: 30m2 (10x3 - whole stand)	Substrate: Peat	
Depth: 20 cm	Salinity: 30 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		5
Phragmites australis	70	5
Ruppia maritima	40	< 1
Algae		100
Filamentous algae		100
Description: Sparse low growing Phragmites with dense cover of submergent filamentous algae and sparse Ruppia growing through. Only the few tallest Phragmites shoots in flower. 3m.		

Site: Cloonconeen Pool	Transect code: E	
Location: Phragmites swamp & isolated pool	Sample point: 3 Marginal	
Sample area: 40m2 (10x4 - whole stand)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	90	90
Phragmites australis	90	5
Aster tripolium	60	5
Glaux maritima	30	< 5
Atriplex hastata	40	< 5
Agrostis stolonifera	30	< 1
Plantago maritima	25	< 1
Cochlearia anglica	10	< 1
Description: Dense cover of Juncus maritimus tussocks with sparse salt tolerant species including low growing Phragmites shoots. 4m.		

Site: Cloonconeen Pool	Transect code: E	
Location: Phragmites swamp & isolated pool	Sample point: 4 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	100	40
Festuca rubra	60	80
Agrostis stolonifera	40	5
Juncus gerardii	20	5
Potentilla anserina	30	5
Atriplex hastata	40	< 1
Glaux maritima	30	< 1
Aster tripolium	50	< 1
Cochlearia anglica	15	< 1
Plantago maritima	30	< 1
Description: Open cover of frequent Juncus maritimus tussocks with Festuca rubra dominant amongst tall growing salt tolerant species. Agrostis, Potentilla and Juncus gerardii all patchy in cover and very locally co-dominant. 12m.		

Site: Clooncaneen Pool	Transect code: E	
Location: Phragmites swamp & isolated pool	Sample point: 5 Marginal - Pool	
Sample area: 20m2 (10x2)	Substrate: Peat	
Depth: 0 - 30cm	Salinity: 15 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Scirpus maritimus	130	90
Atriplex hastata	20	5
Description: Tall dense Scirpus maritimus swamp with sparse Atriplex the only associated species. 2m.		

Site: Cloonconeen Pool	Transect code: E	
Location: Phragmites swamp & isolated pool	Sample point: 6 Marginal - Pool	
Sample area: 125m2 (25x5 - whole stand)	Substrate: Peat	
Depth: 30 cm	Salinity: 15 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		70
Ruppia maritima	40	70
Algae		100
Filamentous algae		100
Description: Dense extensive patches of Ruppia growing through filamentous algae in isolated pool 25x5m. Both flowering and fruiting Ruppia plants present.		
Backing 50cm peat cliff.		

Site: Cloonconeen Pool	Transect code: E	
Location: Phragmites swamp & isolated pool	Sample point: 7 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		
Juncus maritimus	90	5
Festuca rubra	20	50
Agrostis stolonifera	20	40
Juncus gerardii	20	20
Potentilla anserina	15	5
Atriplex hastata	20	< 1
Glaux maritima	15	< 1
Aster tripolium	25	< 1
Leontodon autumnalis	20	< 1
Cochlearia anglica	6	< 1
Description: Sparse cover of Juncus maritimus tussocks. Festuca and Agrostis co-dominant below with patchy Juncus gerardii locally so. Associated salt tolerant species all more or less sparse. 50m.		
Backing to public road.		

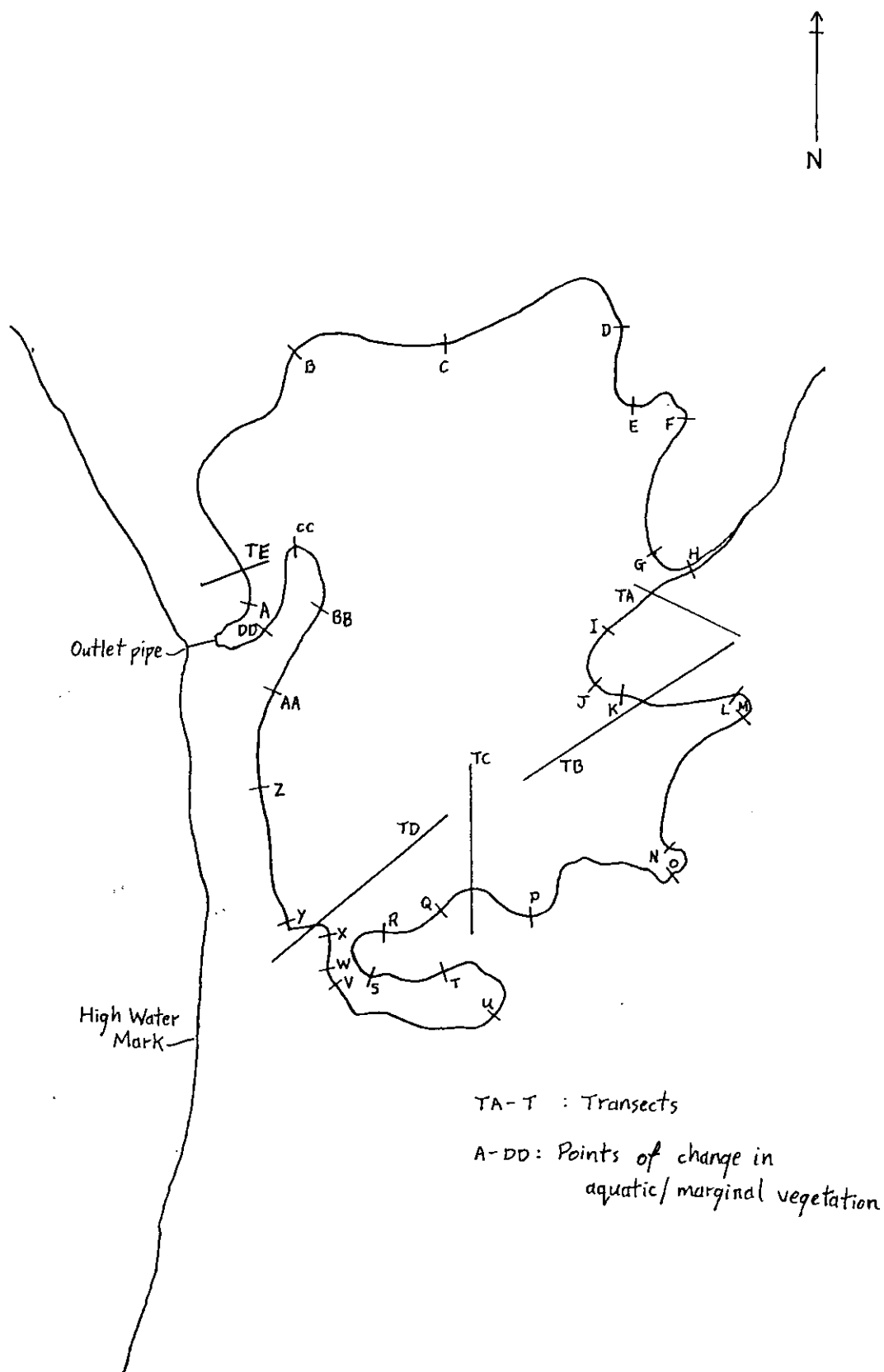
LOUGH DONNELL  
Co. Clare

Site Description

This is a shallow sandy lagoon set in a fairly low-lying landscape. Land to the north, south and south east is used for pasture. The shingle barrier lies to the west, through which a pipe connects the lagoon with the sea.

The valley of the River Annageeragh, at the end of which the lagoon lies, comes in from the east and discharges its waters into the lough. There is no other freshwater inflow stream.

Swamp vegetation occurs all around the eastern and southern shores, being fairly extensive in the east where it grades to fen and rush pasture, which extends some way back up the river valley. The north shore and the western, stony barrier shore are open in contrast. Shore slope is generally gradual except for short stretches of very low sandy cliff in the north east.



Lough Donnell, Co. Clare: Location of Transects and Shore-based Survey Sections

## LOUGH DONNELL

### Shore-based survey

#### Section A-B (Transect E)

Aquatic: Enteromorpha - patchy

Sand substrate with occasional cobbles

Marginal: Sparse cover of *Glaux maritima*, *Spergularia marina* and *Triglochin maritima*.  
1-2m strip

Adjacent: *Festuca rubra* - *Trifolium repens* grassland

#### Section B-C

Aquatic: Unchanged

Marginal: Unchanged

Adjacent: *Lolium perenne* - *Cynosaurus cristatus* - *Agrostis stolonifera* pasture

#### Section C-D

Aquatic: *Ruppia maritima* - occasional small low growing patches - maximum 2m<sup>2</sup>  
*Enteromorpha* - sparse

Marginal: Unchanged

Adjacent: Unchanged

#### Section D-E

Aquatic:    Unchanged

Marginal:   Schoenoplectus lacustris ssp tabernaemontani single species swamp. 4-8m  
              Backing to Schoenoplectus - Scirpus maritimus co-dominant stand. 2-8m.  
              Grazed  
              Backing to 50cm sandy cliff

Adjacent:   Unchanged

#### Section E-F

Aquatic:    Unchanged

Marginal:   Scirpus maritimus single species swamp. 6-12m. Sparse Ruppia to 2m in  
              Grading to Scirpus - Schoenoplectus co-dominant stand. 2-7m  
              Backing to Agrostis stolonifera - Eleocharis uniglumis dominated community as  
              Transect C. 1m  
              Backing to 30-60cm sandy cliff

Adjacent:   Unchanged

#### Section F-G

Aquatic:    Ruppia maritima - very sparse - no longer in patches  
              Enteromorpha - sparse

Marginal:   Schoenoplectus lacustris ssp tabernaemontani single species swamp. 3-10m  
              Backing to 30-50cm sandy cliff

Adjacent:   Unchanged

#### Section G-H

Aquatic: No aquatic vegetation

Silt substrate

Marginal: Schoenoplectus single species swamp. 15m  
Backing to Agrostis stolonifera - Eleocharis uniglumis community as Transect C.  
8-15m

Adjacent: Unchanged

#### Section H-I (Transect A)

Aquatic: Unchanged

Marginal: Phragmites australis dominated swamp with abundant Schoenoplectus. 8-10m  
Grading to dense Phragmites with sparse understorey of salt tolerant species. 2m  
Grading to dense Phragmites fen with sparse understorey of freshwater species.  
c.100m

Adjacent: Juncus effusus - Agrostis stolonifera dominated wet grassland

#### Section I-J

Aquatic: Ruppia maritima - frequent low growing patches - maximum 2m<sup>2</sup>

Silt and sand substrate with occasional cobbles

Marginal: Schoenoplectus single species swamp. c.8m  
Grading to Phragmites single species swamp. c.10m  
Grading to Phragmites fen community as H-I

Adjacent: Unchanged

### Section J-K

Aquatic:    Unchanged

Marginal:   As H-I

Adjacent:   Unchanged

### Section K-L (Transect B)

Aquatic:    *Ruppia maritima* - fairly extensive, low growing  
              *Enteromorpha* - >50m out only

Marginal:   *Schoenoplectus* single species swamp. c.20m. Occasional pools with sparse  
              *Ruppia maritima*  
              Grading to open *Schoenoplectus* cover with abundant *Phragmites* shoots and salt  
              tolerant understorey. 8-10m  
              Grading to dense *Phragmites* with freshwater fen vegetation. c.100m

Adjacent:   Unchanged

### Section L-M

Aquatic:    Unchanged

Marginal:   *Schoenoplectus* single species swamp. c.20m

Adjacent:   Unchanged

### Section M-N

Aquatic:    *Ruppia maritima* - almost continuous cover  
              *Enteromorpha* - sparse

Marginal:   *Schoenoplectus* single species swamp. 10-60m, average c.50m  
              Grading to *Phragmites* swamp and fen communities as I-J. c.100m

Adjacent:   Unchanged

### Section N-O

- Aquatic: *Ruppia maritima* - open cover - c.30%  
Enteromorpha - sparse
- Marginal: *Scirpus maritimus* single species swamp. 10m  
Backing to *Schoenoplectus* single species swamp. 20m  
Grading to *Phragmites* swamp and fen communities as I-J.
- Adjacent: Unchanged

### Section O-P

- Aquatic: Unchanged
- Marginal: *Schoenoplectus* single species swamp. 20-80m  
Grading to *Schoenoplectus* with salt tolerant species as K-L. 5-10m
- Adjacent: 1m dry stone wall  
*Agrostis stolonifera* - *Potentilla anserina* pasture

### Section P-Q (Transect C)

- Aquatic: *Ruppia maritima* - extensive 50-100m out, less so 0-50m out, low growing  
Enteromorpha - sparse
- Marginal: Mosaic of *Scirpus maritimus* single species swamps and *Scirpus* -  
*Schoenoplectus* co-dominant swamps. 40-50m  
Grading to *Scirpus maritimus* with species-poor salt tolerant vegetation. 4m  
Backing 30cm-1m sandy cliff
- Adjacent: *Agrostis stolonifera* - *Potentilla anserina* - *Eleocharis uniglumis* dominant with  
salt tolerant species

#### Section Q-R

Aquatic: *Ruppia maritima* - occasional patches - <1m<sup>2</sup>  
*Enteromorpha* - sparse

Marginal: Mosaic of *Schoenoplectus* single species swamps and *Scirpus* - *Schoenoplectus*  
co-dominant swamps. 12m  
Grading as P-Q

Adjacent: Unchanged

#### Section R-S

Aquatic: No aquatic vegetation  
Silt substrate

Marginal: Open cover of *Glaux maritima*, *Spergularia marina*, *Triglochin maritima*. 4-6m

Adjacent: Unchanged

#### Section S-T

Aquatic: Unchanged

Marginal: As Q-R

Adjacent: Unchanged

#### Section T-U

Aquatic: Unchanged

Marginal: As P-Q

Adjacent: Unchanged

#### Section U-V

Aquatic:    Unchanged

Marginal:   Open cover of *Glaux maritima*, *Spergularia marina* and *Triglochin maritima*.  
              2-8m  
              Grading to *Agrostis stolonifera* - *Potentilla anserina* - *Eleocharis uniglumis*  
              community as Transect C

Adjacent:   *Lolium Perenne* - *Holcus lanatus* - *Cynosaurus cristatus* pasture

#### Section V-W

Aquatic:    Unchanged

Marginal:   *Scirpus maritimus* dominated swamp with occasional *Schoenoplectus* shoots.  
              4-8m  
              Backing to open *Glaux maritima* community as U-V. 1-2m strip

Adjacent:   *Festuca rubra* - *Trifolium repens* sandy grassland. 40m  
              Backing to unvegetated shingle barrier

#### Section W-X

Aquatic:    *Ruppia maritima* - sparse  
              *Enteromorpha* - sparse

              Silt and sand substrate with occasional cobbles

Marginal:   Open *Glaux maritima* community as above with occasional *Scirpus maritimus*  
              shoots. 1m strip

Adjacent:   Unchanged

#### Section X-Y (Transect D)

- Aquatic: *Ruppia maritima* - fairly dense and extensive, increasingly so to landward  
*Enteromorpha* - patchy
- Marginal: *Puccinellia maritima* dominant with patchy *Agrostis stolonifera*, frequent *Glaux maritima* and more or less sparse salt tolerant associates. 20m
- Adjacent: Unvegetated shingle barrier

#### Section Y-Z

- Aquatic: Unchanged
- Marginal: Patches of *Puccinellia* dominated community as X-Y - maximum area c.20m<sup>2</sup> - with occasional single species patches of *Puccinellia* and *Glaux maritima* on sand substrate. 10m
- Adjacent: Unchanged

#### Section Z-AA

- Aquatic: Unchanged
- Marginal: Unvegetated sand
- Adjacent: Unchanged

#### Section AA-BB

- Aquatic: Unchanged
- Marginal: *Glaux maritima* - *Spergularia marina* - *Triglochin maritima* community. 1-4m
- Adjacent: *Festuca rubra* - *Trifolium repens* sandy grassland  
Backing to unvegetated shingle barrier

Section BB-CC

Aquatic: *Ruppia maritima* - absent to 50m out, then occurring in occasional low growing patches - maximum 2m<sup>2</sup>

*Enteromorpha* - sparse

Marginal: Unchanged

Adjacent: Unchanged

Section CC-DD

Aquatic: *Enteromorpha* - extensive cover

Marginal: Unchanged

Adjacent: Unchanged

Site: Lough Donnell	Transect code: A	
Location: Freshwater inflow	Sample point: 1 Aquatic - 5m out	
Sample area: 16m2 (4x4) + grapnel	Substrate: Silt	
Depth: 60 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		0
Description: No aquatic vegetation present.		

[illegible]

Site: Lough Donnell	Transect code: A	
Location: Freshwater inflow	Sample point: 3 Marginal	
Sample area: 20m2 (10x2)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	230	100
Samolus valerandi	20	< 1
Triglochin maritima	30	< 1
Aster tripolium	40	< 1
Mentha aquatica	30	< 1
Description: Phragmites dominant in species-poor stand with sparse, mostly salt tolerant, associates. 2m.		

Site: Lough Donnell	Transect code: A	
Location: Freshwater inflow	Sample point: 4 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	230	100
Lythrum salicaria	80	15
Agrostis stolonifera	20	< 1
Mentha aquatica	40	< 1
Potentilla anserina	15	< 1
Galium palustre	40	< 1
Description: Dense species-poor Phragmites dominated fen community. c.100m.		
Grading to Juncus effusus - Agrostis stolonifera dominated community.		

Site: Lough Donnell	Transect code: B	
Location: Marginal swamp	Sample point: 1 Aquatic - 70m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand, cobbles, boulders	
Depth: 40 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		10
Enteromorpha	20	10
Substrate		
Silt and sand		90
Cobbles and boulders		10
Description: Open cover of Enteromorpha. Restricted to submerged rocks.		

Site: Lough Donell	Transect code: B	
Location: Marginal swamp	Sample point: 2 Aquatic - 50m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand	
Depth: 30 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Ruppia maritima	15	60
Description: Fairly open cover of low growing Ruppia. Same species at more or less same cover from 20 - 60m out.		



Site: Lough Donnell	Transect code: B	
Location: Marginal swamp	Sample point: 4 Marginal	
Sample area: 50m2 (10x5)	Substrate: Silt	
Depth: 5 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Schoenoplectus lacustris ssp tabernaemontani	130	90
Description: Tall dense single species Schoenoplectus swamp. 6m.		



Site: Lough Donnell	Transect code: B	
Location: Marginal swamp	Sample point: 6 Marginal	
Sample area: 50m2 (10x5)	Substrate: Silt	
Depth: 0 - 5 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Schoenoplectus lacustris ssp tabernaemontani	80	90
Description: Dense single species Schoenoplectus swamp. 5m.		

Site: Lough Donnell		Transect code: B	
Location: Marginal swamp		Sample point: 7 Marginal	
Sample area: 80m2 (10x8)		Substrate: Silt	
Depth: 0 cm		Salinity: -----	
NVC community:			
	Height (cm)	Cover (%)	
Total Plant		95	
Schoenoplectus lacustris ssp tabernaemontani	50	25	
Phragmites australis	100	25	
Agrostis stolonifera	15	25	
Eleocharis uniglumis	10	25	
Glaux maritima	15	5	
Triglochin maritima	15	5	
Atriplex hastata	15	< 1	
Description: Open cover of co-dominant Schoenoplectus and Phragmites with Agrostis stolonifera and Eleocharis uniglumis co-dominant among species-poor understorey of salt tolerant species. 8m.			

Site: Lough Donnell	Transect code: B	
Location: Marginal swamp	Sample point: 8 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	200	100
Agrostis stolonifera	15	70
Lythrum salicaria	40	< 5
Triglochin maritima	20	< 1
Atriplex hastata	15	< 1
Galium palustre	10	< 1
Bare substrate		20
Description: Dense Phragmites fen with Agrostis stolonifera dominant amongst species-poor understorey. c.100m.		
Grading to Juncus effusus - Agrostis stolonifera dominated community.		

Site: Lough Donnell	Transect code: C	
Location: Marginal swamp	Sample point: 1 Aquatic - 100m out	
Sample area: 25m <sup>2</sup> (5x5)	Substrate: Silt, sand, cobbles	
Depth: 30 cm	Salinity: 0 parts per thousand	
NVC community:	Height (cm)	Cover (%)
		75
Total Plant		70
Higher Plant		
	8	70
Ruppia maritima		
Algae		
	20	5
Enteromorpha		
Substrate		
		95
Silt and sand		5
Cobbles		
Description: Fairly dense low growing Ruppia dominant with Enteromorpha restricted to scattered submerged rocks. Same species at more or less same cover 60 - 100m out.		

Site: Lough Donnell		Transect code: C
Location: Marginal swamp		Sample point: 2 Aquatic - 50m out
Sample area: 25m <sup>2</sup> (5x5)		Substrate: Silt, sand, cobbles
Depth: 15 cm		Salinity: 0 parts per thousand
NVC community:		
	Height (cm)	Cover (%)
Total Plant		35
Higher Plant		30
Ruppia maritima	8	30
Algae		
Enteromorpha	20	5
Substrate		
Silt and sand		95
Cobbles		5
Description: Open cover of low growing Ruppia dominant with Enteromorpha restricted to submerged rocks. Same species at more or less same cover 15 - 60m out.		



Site: Lough Donnell	Transect code: C	
Location: Marginal swamp	Sample point: 4 Aquatic - 3m out	
Sample area: 25m <sup>2</sup> (5x5)	Substrate: Silt, sand, cobbles	
Depth: 5 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
<i>Ruppia maritima</i>	6	60
Substrate		
Silt and sand		95
Cobbles		5
Description: Fairly open cover of low growing <i>Ruppia</i> only.		

Site: Lough Donnell	Transect code: C	
Location: Marginal swamp	Sample point: 5 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt, sand, cobbles	
Depth: 5 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		100
Scirpus maritimus	70	50
Ruppia maritima	5	70
Algae		10
Enteromorpha		10
Substrate		
Silt and sand		95
Cobbles		5
Description: Open Scirpus swamp with fairly dense cover of low growing Ruppia. Sparse free-floating Enteromorpha. Some Ruppia plants in fruit. 10m.		



Site: Lough Donnell	Transect code: C	
Location: Marginal swamp	Sample point: 7 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 0 - 5 cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Scirpus maritimus	70	80
Description: Fairly dense single species Scirpus maritimus swamp. 18m.		

Site: Lough Donnell	Transect code: C	
Location: Marginal swamp	Sample point: 8 Marginal	
Sample area: 16m2 (4x4)	Substrate: Silt	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		55
Scirpus maritimus	60	50
Triglochin maritima	30	10
Spergularia marina	8	< 5
Glaux maritima	6	< 1
Description: Open Scirpus cover over very open ground cover of salt tolerant associates. 4m. Backing sandy cliff - average height 60 cm.		

Site: Lough Donnell	Transect code: C	
Location: Marginal swamp	Sample point: 9 Marginal	
Sample area: 16m2 (4x4)	Substrate: Not known	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Agrostis stolonifera	10	90
Potentilla anserina	5	10
Eleocharis uniglumis	10	< 5
Glaux maritima	5	< 5
Triglochin maritima	10	< 5
Leontodon autumnalis	10	< 1
Spergularia marina	5	< 1
Hydrocotyle vulgaris	4	< 1
Description: Dense cover of Agrostis stolonifera dominant with frequent Potentilla anserina among sparse associates. 32m. Grazed.		
Grading to Scirpus maritimus dominated stands 25m.		
Backing unvegetated flooded area 40m. Salinity 5.		
Grading to Agrostis stolonifera - Potentilla anserina community (as above). 30m.		
Grading to Lolium perenne - Holcus lanatus - Cynosaurus cristatus pasture.		

Site: Lough Donnell	Transect code: D	
Location: Open shore - barrier	Sample point: 1 Aquatic - 125m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand, cobbles	
Depth: 25 cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		40
Higher Plant		20
Ruppia maritima	8	20
Algae		20
Enteromorpha	10	20
Substrate		
		85
Silt and sand		15
Cobbles		
Description: Patchy cover of co-dominant Ruppia and Enteromorpha, the latter restricted to scattered submerged rocks.		

Site: Lough Donnell	Transect code: D	
Location: Open shore - barrier	Sample point: 2 Aquatic - 100m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand, cobbles	
Depth: 25 cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Higher Plant		30
Ruppia maritima	8	30
Algae		30
Enteromorpha	10	30
Substrate		
Silt and sand		70
Cobbles		30
Description: Patchy cover of co-dominant low growing Ruppia and rupicolous Enteromorpha.		

Site: Lough Donnell	Transect code: D	
Location: Open shore - barrier	Sample point: 3 Aquatic - 75m out	
Sample area: 25m2 (5x5)	Substrate: Silt, sand, cobbles	
Depth: 15 cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Higher Plant		70
Ruppia maritima	15	70
Algae		20
Enteromorpha	20	20
Substrate		
Silt and sand		80
Cobbles		20
Description: Fairly dense cover of low growing Ruppia dominant with Enteromorpha restricted to submerged rocks. Same species at more or less same cover to shore.		
Shoreline - 50m out from the vegetation line at time of survey.		
Backing 50m unvegetated sand.		

Site: Lough Donnell	Transect code: D	
Location: Open shore - barrier	Sample point: 4 Marginal	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Puccinellia maritima	8	90
Agrostis stolonifera	10	15
Glaux maritima	5	15
Triglochin maritima	10	5
Aster tripolium	6	< 5
Atriplex hastata	10	< 1
Spergularia marina	5	< 1
Cochlearia anglica	4	< 1
Leontodon autumnalis	10	< 1
Suaeda maritima	8	< 1
Description: Dense cover of dominant Puccinellia in fairly low growing salt tolerant community with Glaux and patchy Agrostis stolonifera the only frequently occurring associates. 20m.		
Backing shingle barrier of unvegetated boulders and cobbles.		

Site: Lough Donnell	Transect code: E	
Location: Outlet channel	Sample point: 1 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Sand and cobbles	
Depth: c.1 m	Salinity: 8 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		10
Enteromorpha	30	10
Description: Patchy cover of Enteromorpha in narrow channel leading from outlet pipe.		

Site: Lough Donnell	Transect code: E	
Location: Outlet channel	Sample point: 2 Marginal	
Sample area: 40m2 (10x4)	Substrate: Sand	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		10
Glaux maritima	10	5
Spergularia marina	6	< 5
Triglochin maritima	15	< 5
Description: Sparse cover of species-poor community on open sandy shore. 4m		
Grading to Festuca rubra - Trifolium repens grassland		

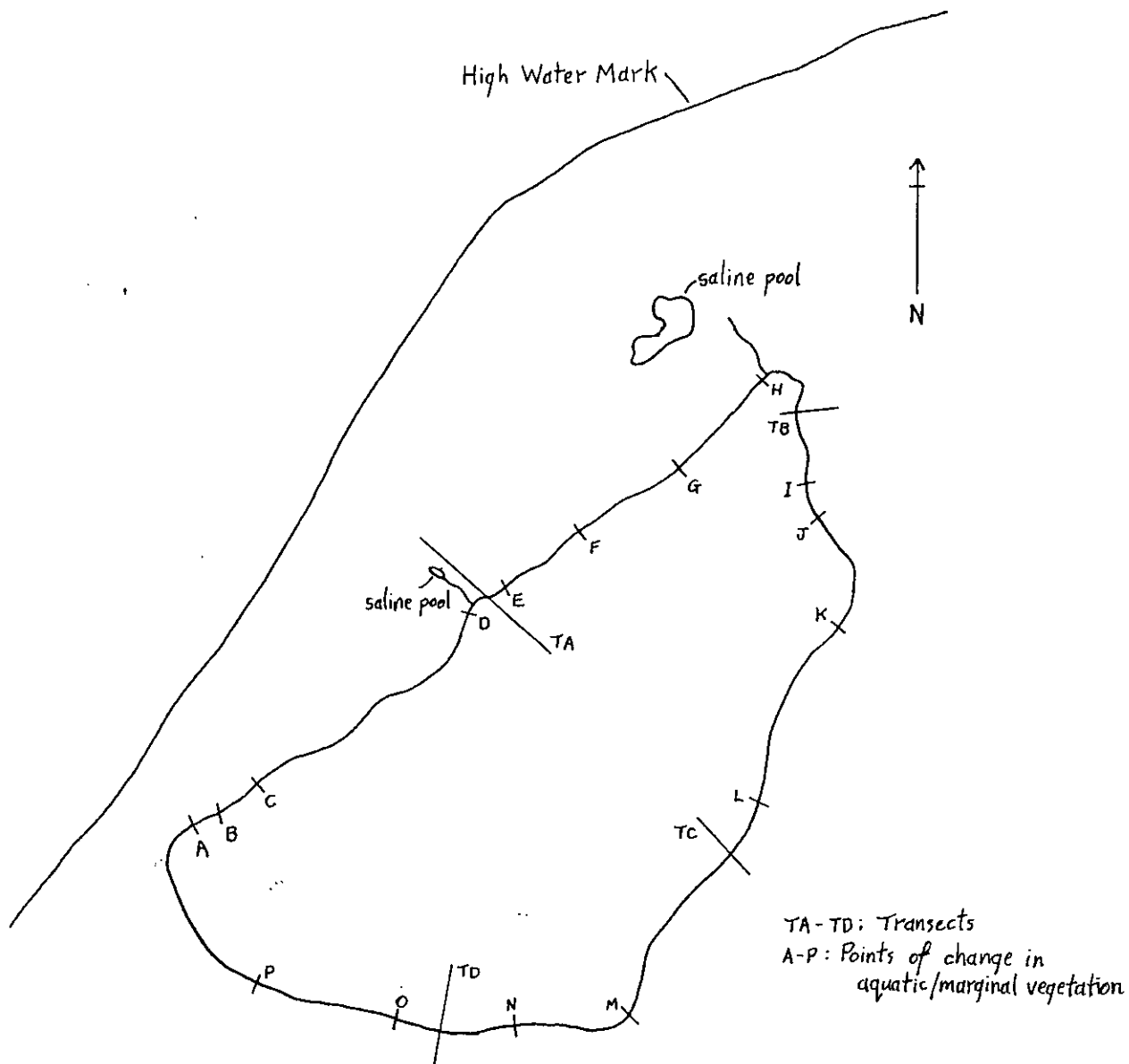
LOUGH MUREE  
Co. Clare

Site Description

Lough Muree lies between Knockvorneen to the east and the sea to the west. Pastoral farmland borders the site to the north, south, south east and immediate west. A public road runs close to the southern shore.

Marginal areas are typically narrow, with fringing emergent and sparse shore vegetation backing to more or less steeply sloping ground to the south, east and west. A narrow band of Scirpus swamp is more or less continuous along the southern and eastern shores and occurs in patches along the western shore. Limestone pavement forms the north east shore.

There is no freshwater inflow stream. Two small saline streams join the lough at the north end and half way along the western shore (no flow in either at time of survey). These are associated with small unvegetated saline pools which lie between the lough and the sea.



Lough Muree, Co. Clare: Location of Transects and Shore-based Survey Sections

## LOUGH MUREE

### Shore-based survey

#### Section A-B

- Aquatic:    *Ruppia* sp. - patchy cover to at least 20m out  
              *Potamogeton pectinatus* - sparse  
              Filamentous algae - extensive surface cover to 20m out  
              *Enteromorpha* - sparse  
              *Chara canescens* - sparse
- Sand and gravel substrate with occasional cobbles
- Marginal:    Open *Scirpus maritimus* cover on gravel substrate with frequent cobbles and  
                  boulders. As Transect C. 4m  
                  Backing to 1m strip *Juncus gerardii*, *Glaux maritima*, *Potentilla anserina* as  
                  Transect C
- Adjacent:    1.5m dry stone embankment  
                  Arable farmland

#### Section B-C

- Aquatic:    Unchanged
- Marginal:    Unvegetated stony shore. 2-4m  
                  Backing to open cover of *Juncus gerardii* and *Glaux maritima* on stony shore. As  
                  Transect A. 1m strip
- Adjacent:    Unchanged

### Section C-D

- Aquatic: *Ruppia* sp. - sparse  
*Potamogeton pectinatus* - sparse  
Filamentous algae - dense and extensive to c.20m out  
*Enteromorpha* - sparse
- Marginal: *Scirpus maritimus* stands grading to *Juncus gerardii* - Glaux - *Potentilla* (as A-B) alternating along shore with *J. gerardii* - Glaux community (as B-C). Average extent of each community c.10-15m along shore
- Adjacent: Unchanged

### Section D-E (Transect A)

- Aquatic: *Ruppia* sp. - sparse to c.25m out  
*Potamogeton pectinatus* - patchy to at least 50m out  
Filamentous algae - sparse  
*Enteromorpha* - patchy to c.50m out  
*Lamprothamnium papulosum* - sparse
- Silt and sand substrate
- Marginal: Open *Juncus gerardii* - Glaux *maritima* community with sparse *Atriplex hastata* and *Suaeda maritima*. 1m  
Grading to *J. gerardii* - *Agrostis stolonifera* dominated species-poor community. 35m. Grazed and poached  
Grading to *J. gerardii* - *Festuca rubra* - *Puccinellia maritima* dominated community. 40m. Grazed and poached
- Adjacent: *Lolium perenne* pasture

#### Section E-F

Aquatic: Potamogeton pectinatus - dense and extensive to at least 20m out  
Filamentous algae - dense and extensive surface layer to c.20m out  
Enteromorpha - sparse

Sand and gravel substrate with occasional cobbles

Marginal: As C-D

Adjacent: Earth bank (height 4m) with Rubus fruticosus  
Backing to Lolium perenne - Dactylis glomerata - Trifolium repens pasture

#### Section F-G

Aquatic: Potamogeton pectinatus - as E-F  
Filamentous algae - as E-F  
Enteromorpha - as E-F  
Lamprothamnium papulosum - sparse  
Chara canescens - sparse

Marginal: Unchanged

Adjacent: Unchanged

#### Section G-H

Aquatic: Ruppia sp. - sparse  
Potamogeton pectinatus - sparse  
Filamentous algae - as E-F  
Enteromorpha - as E-F

Marginal: Juncus gerardii - Glaux maritima community as B-C

Adjacent: Unchanged

#### Section H-I (Transect B)

Aquatic:    *Ruppia* sp. - sparse  
              *Potamogeton pectinatus* - sparse  
              *Enteromorpha* - dense and extensive to 5m out  
  
              Bedrock substrate

Marginal:   Exposed bedrock substrate with occasional boulders  
              *Scirpus maritimus* growing in fissures of limestone pavement. 10m

Adjacent:   Limestone pavement with *Festuca rubra*, *Pteridium aquilinum*, *Rubus fruticosus*,  
              *Hedera helix*, *Prunus spinosa*

#### Section I-J

Aquatic:    *Potamogeton pectinatus* - sparse  
              *Enteromorpha* - sparse  
              Filamentous algae - patchy surface cover to c.30m out

Marginal:   Unchanged

Adjacent:   Unchanged

#### Section J-K

Aquatic:    Unchanged

Marginal:   Unchanged

Adjacent:   *Agrostis stolonifera* - *Potentilla anserina* grassland on limestone pavement

### Section K-L

Aquatic: Potamogeton pectinatus - dense and extensive to at least 20m out  
Filamentous algae - dense and extensive surface layer to c.20m out  
Enteromorpha - restricted to shoreline rocks

Silt and sand substrate with occasional boulders

Marginal: As A-B. 1-5m strip

Adjacent: Earth and rock bank (height c.5m)  
Backing to heath and grassland

### Section L-M (Transect C)

Aquatic: Ruppia sp. - sparse to at least 20m out  
Potamogeton pectinatus - patchy to at least 20m out  
Enteromorpha - dense and extensive to c.20m out  
Lamprothamnium papulosum - patchy to c.5m out  
Chara canescens - sparse to c.5m out

Sand and gravel substrate with cobbles and boulders

Marginal: Unchanged

Adjacent: 1.5m dry stone wall  
Arable farmland

### Section M-N

Aquatic: Ruppia sp. - sparse  
Potamogeton pectinatus - cover unchanged  
Enteromorpha - cover unchanged

Silt and sand substrate with cobbles

Marginal: Unchanged

Adjacent: Agrostis stolonifera - Potentilla anserina grassland  
Backing to public road

#### Section N-O (Transect D)

Aquatic: *Ruppia* sp. - dense patches from c.5m to at least 20m out  
*Potamogeton pectinatus* - dense patches from c.5m to at least 20m out  
Filamentous algae - dense and extensive surface layer to c.15m out  
*Lamprothamnium papulosum* - sparse  
*Chara canescens* - sparse

Marginal: Unchanged

Adjacent: Unchanged

#### Section O-P

Aquatic: *Ruppia* sp. - cover unchanged  
*Potamogeton pectinatus* - sparse  
Filamentous algae - dense and extensive to c.5m out  
*Chara canescens* - occasional dense patches to at least 12m out

Marginal: Unchanged

Adjacent: Unchanged

#### Section P-A

Aquatic: *Ruppia* sp. - dense and extensive to at least 30m out  
Filamentous algae - sparse  
*Enteromorpha* - sparse

Silt substrate

Marginal: Dense *Scirpus maritimus* single species swamp. 5-12m  
Grading to *Juncus gerardii* - *Agrostis stolonifera* - *Potentilla anserina* community  
as Transect A. 5-15m. Grazed and poached

Adjacent: Unchanged

Site: Lough Muree	Transect code: A	
Location: Saline stream inflow	Sample point: 1 Aquatic - 55m out - grapnel	
Sample area: Grapnel only	Substrate: Sand and silt	
Depth: 50 cm +	Salinity: 20 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Potamogeton pectinatus		
Enteromorpha		
Filamentous algae		
Description:		

Site: Lough Muree	Transect code: A	
Location: Saline stream inflow	Sample point: 2 Aquatic - 50m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 40 cm	Salinity: 20 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		40
Potamogeton pectinatus	40	40
Algae		100
Enteromorpha		100
Lamprothamnium papulosum	6	< 1
Description: Open cover of Potamogeton pectinatus beneath a free-floating algal mat.		

Site: Lough Muree	Transect code: A	
Location: Saline stream inflow	Sample point: 3 Aquatic - 25m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 30 cm	Salinity: 20 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Higher Plant		< 5
Ruppia sp.	10	< 5
Algae		60
Enteromorpha		60
Lamprothamnium papulosum	10	5
Description: Sparse Lamprothamnium and low growing Ruppia with a patchy cover of free-floating Enteromorpha. Both flowering and fruiting Ruppia present.		

Site: Lough Muree	Transect code: A	
Location: Saline stream inflow	Sample point: 4 Aquatic - 10m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 30 cm	Salinity: 22 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		20
Higher Plant		5
Ruppia sp.	8	5
Algae		15
Enteromorpha		15
Description: Sparse low growing Ruppia beneath an open cover of free-floating Enteromorpha.		



[illegible]

Site: Lough Muree	Transect code: A	
Location: Saline stream inflow	Sample point: 7 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Juncus gerardii	15	25
Agrostis stolonifera	10	70
Potentilla anserina	8	5
Leontodon autumnalis	15	< 5
Glaux maritima	6	< 5
Plantago coronopus	10	< 5
Spergularia marina	8	< 1
Plantago major	10	< 1
Lolium perenne	20	< 1
Description: Juncus gerardii and Agrostis stolonifera dominant in grazed vegetation on poached ground, extending back to 35m from the lough in a low lying area ( c. 75m x 25m ) bordered by higher ground to north east and south west. Saline stream passing through this community to the lough. No flow at time of survey.		

Site: Lough Muree	Transect code: A	
Location: Saline stream inflow	Sample point: 8 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		70
Juncus gerardii	20	10
Festuca rubra	15	15
Puccinellia maritima	10	15
Spergularia marina	8	15
Agrostis stolonifera	15	5
Plantago coronopus	5	5
Glaux maritima	6	5
Juncus bufonius	5	< 5
Leontodon autumnalis	15	< 1
Triglochin maritima	10	< 1
Description: Juncus gerardii, Festuca rubra, Puccinellia maritima and Spergularia marina all frequent with each species locally dominant. Vegetation grazed, substrate heavily poached with up to 50% bare ground in places. This community extends back 40m (x 20m) and borders an unvegetated saline pool of 20cm depth at time of survey.		
Grading to Lolium perenne pasture.		

Site: Lough Muree	Transect code: B	
Location: Limestone pavement shore	Sample point: 1 Aquatic - 10m out - grapnel	
Sample area: Grapnel only	Substrate: Coarse sand	
Depth: 50 cm +	Salinity: 20 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia sp.		
Potamogeton pectinatus		
Enteromorpha		
Description:		

Site: Lough Muree	Transect code: B	
Location: Limestone pavement shore	Sample point: 2 Aquatic - 5m out	
Sample area: 25m2 (5x5)	Substrate: Bedrock	
Depth: 20 - 50 cm	Salinity: 20 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		5
Potamogeton pectinatus	70	5
Algae		95
Enteromorpha	15	95
Description: Enteromorpha dominant. P. pectinatus growing sparsely in fissures (grykes) of submerged limestone pavement.		

Site: Lough Muree	Transect code: B	
Location: Limestone pavement shore	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Bedrock and silt	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Scirpus maritimus	80	5
Description: Open limestone pavement with Scirpus maritimus densely growing in silted fissures (grykes). 10m.		

Site: Lough Muree	Transect code: B	
Location: Limestone pavement shore	Sample point: 4 Marginal	
Sample area: 100m2 (10x10)	Substrate: Bedrock	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		40
Agrostis stolonifera	30	35
Potentilla anserina	15	5
Juncus gerardii	25	< 1
Leontodon autumnalis	20	< 1
Description: Agrostis stolonifera dominant in species-poor community growing in fissures (grykes) of limestone pavement. 12m.		
Grading to more densely vegetated limestone pavement with Festuca rubra, Pteridium aquilinum, Prunus spinosa, Rubus fruticosus, Hedera helix frequent.		

Site: Lough Muree	Transect code: C	
Location: Marginal swamp	Sample point: 1 Aquatic - 20m out	
Sample area: 16m2 (4x4)	Substrate: Coarse sand, cobbles	
Depth: 70 cm	Salinity: 20 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		40
Potamogeton pectinatus	60	40
Ruppia sp.	60	< 1
Algae		70
Enteromorpha		70
Description: Patches of dense Potamogeton pectinatus locally dominant with Enteromorpha forming a free-floating algal mat. Ruppia in flower. Same species at more or less same cover from 10m to at least 25m out.		

Site: Lough Muree	Transect code: C	
Location: Marginal swamp	Sample point: 2 Aquatic - 5m out	
Sample area: 16m2 (4x4)	Substrate: Sand, gravel, cobbles, boulders	
Depth: 30 cm	Salinity: 20 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Higher Plant		< 1
Potamogeton pectinatus	30	< 1
Algae		95
Enteromorpha		75
Lamprothamnium papulosum	5	20
Chara canescens	6	< 1
Substrate		
Sand and gravel		50
Cobbles and boulders		50
Description: Patchy cover of Enteromorpha with open cover of low growing		
Lamprothamnium dominant below.		





[illegible]

Site: Lough Muree	Transect code: D	
Location: Marginal swamp	Sample point: 1 Aquatic - 20m out	
Sample area: 16m2 (4x4)	Substrate: Silt, cobbles	
Depth: 80 cm +	Salinity: 15 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		100
Ruppia sp.	85	60
Potamogeton pectinatus	90	40
Algae		10
Filamentous algae		5
Lamprothamnium papulosum	70	5
Chara canescens	60	< 1
Substrate		
Silt		90
Cobbles		10
Description: Ruppia and Potamogeton pectinatus co-dominant in dense bed with occasional patches of tall Lamprothamnium and very sparse Chara canescens. Filamentous algae free-floating, sparse. Some Ruppia plants in flower, some in fruit. Silty substrate of 10 - 20cm depth.		

[illegible]

Site: Lough Muree	Transect code: D	
Location: Marginal swamp	Sample point: 3 Aquatic - 2m out	
Sample area: 16m2 (4x4)	Substrate: Silt, coarse sand, boulders	
Depth: 0 - 15 cm	Salinity: 15 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		< 1
Potamogeton pectinatus	30	< 1
Algae		100
Filamentous algae		80
Enteromorpha		20
Substrate		
Silt and sand		80
Boulders		20
Description: Filamentous algae forming complete surface layer with Enteromorpha occurring on frequent submerged rocks. Potamogeton pectinatus very sparse.		

Site: Lough Muree	Transect code: D	
Location: Marginal swamp	Sample point: 4 Marginal	
Sample area: 10m2 (10x1)	Substrate: Peat, cobbles, boulders	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		70
Scirpus maritimus	60	70
Bare substrate		50
Silt		30
Cobbles and boulders		20
Description: Fairly open Scirpus maritimus single species swamp forming 1m strip.		

Site: Lough Muree	Transect code: D	
Location: Marginal swamp	Sample point: 5 Marginal	
Sample area: 16m2 (8x2)	Substrate: Peat, cobbles, boulders	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Scirpus maritimus	40	30
Glaux maritima	15	20
Agrostis stolonifera	10	< 1
Bare substrate		60
Peat		40
Cobbles and boulders		20
Description: Low growing open Scirpus maritimus cover with Glaux dominant below. 3m.		

Site: Lough Muree	Transect code: D	
Location: Marginal swamp	Sample point: 6 Marginal	
Sample area: 10m2 (10x1)	Substrate: Peat, cobbles	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Juncus gerardii	25	60
Glaux maritima	10	25
Agrostis stolonifera	10	5
Potentilla anserina	8	< 5
Bare substrate		
Peat		5
Cobbles		5
Description: Dominant Juncus gerardii in dense patches with abundant Glaux. 1m strip.		
Grading to Agrostis stolonifera - Potentilla anserina grassland on c. 45 degree		
slope to c. 1m height backing to public road.		

## AUGHINISH LAGOON

Co. Clare

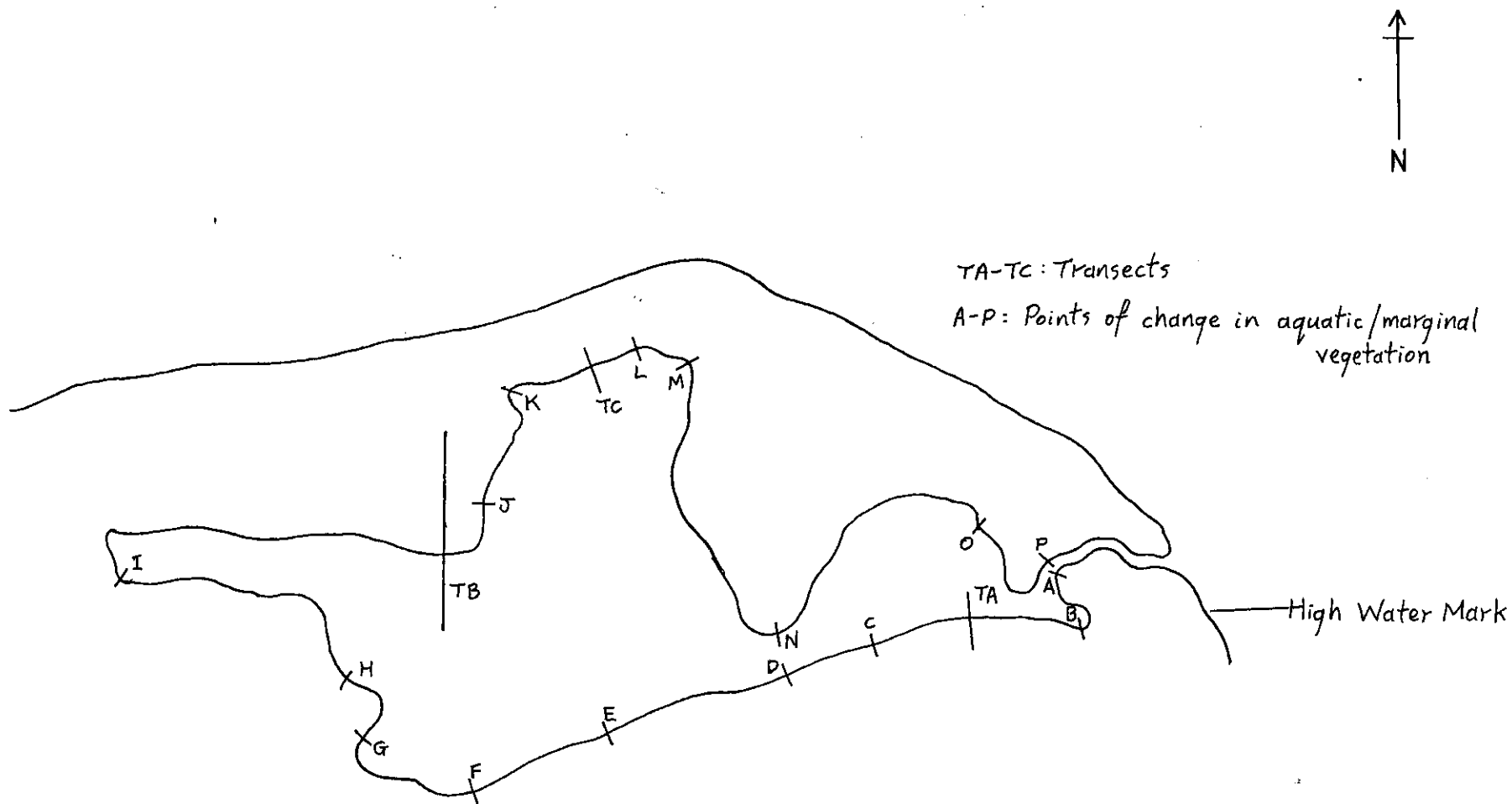
### Site Description

This small lagoon is situated on a low-lying peninsula and bordered by pasture to the south and west and a shingle barrier with the sea beyond to the north and east. Dry stone walls criss-cross the adjacent farmland and run along the lagoon's southern and western shores in places.

There is no major freshwater inflow stream. The outlet channel runs out to the sea through the barrier from the eastern end.

Shore slope is generally gradual to the north and associated with saltmarsh, except along the steeper, sparsely vegetated shingle barrier. To the south and south west narrow shores quickly give way to rising ground and adjacent pasture.

An area of saltmarsh subject to periodic flooding lies just to the west of the lagoon.



Aughinish Lagoon, Co. Clare: Location of Transects and  
 Shore-based Survey Sections

## AUGHINISH LAGOON

### Shore-based survey

#### Section A-B

- Aquatic: Enteromorpha - sparse  
Filamentous algae - sparse  
Silt substrate with scattered cobbles
- Marginal: Puccinellia maritima - Suaeda maritima - Salicornia agg. saltmarsh as Transect B
- Adjacent: Outlet channel  
Shingle barrier

#### Section B-C (Transect A)

- Aquatic: Filamentous algae - patchy  
Codium tomentosum - patchy  
Fucus serratus - patchy  
Cystoseira foeniculata - patchy  
Ulva lactuca - sparse  
Polysiphonia elongata - sparse  
Enteromorpha - sparse
- Sand and gravel substrate with cobbles and boulders
- Marginal: 1-1.5m dry stone wall  
2-3m strip of unvegetated silt and gravel shore  
Backing Puccinellia maritima - Suaeda maritima - Salicornia agg. saltmarsh. 3-5m
- Adjacent: Lolium perenne - Dactylis glomerata - Trifolium repens pasture

#### Section C-D

Aquatic: Cystoseira foeniculata  
Enteromorpha  
Filamentous algae - covers unchanged

Silt substrate with cobbles

Marginal: Unchanged

Adjacent: Unchanged

#### Section D-E

Aquatic: Cystoseira foeniculata  
Fucus serratus  
Filamentous algae  
Enteromorpha  
Ulva lactuca - covers unchanged

Sand substrate with gravel and cobbles

Marginal: Cobble shore with sparse Puccinellia, Suaeda and Salicornia. 2-3m. Cover <1%

Adjacent: 2m dry stone wall  
Backing Lolium pasture as before

#### Section E-F

Aquatic: Cystoseira foeniculata  
Filamentous algae  
Enteromorpha  
Ulva lactuca - covers unchanged

Silt substrate with gravel and cobbles

Marginal: Unchanged

Adjacent: Unchanged

#### Section F-G

Aquatic: Filamentous algae - sparse

Marginal: Puccinellia - Suaeda - Salicornia saltmarsh as Transect A. c.10m. Poached

Adjacent: Lolium pasture as before with occasional Prunus spinosa and Crataegus monogyna

#### Section G-H

Aquatic: Cystoseira foeniculata  
Enteromorpha  
Filamentous algae - all sparse

Silt, sand and gravel substrate

Marginal: Puccinellia - Suaeda - Salicornia saltmarsh strip as Transect A. 0.5-1m

Adjacent: 1.5m dry stone wall  
Lolium perenne - Holcus lanatus - Dactylis glomerata pasture

#### Section H-I

As G-H but with stone wall running along shoreline

#### Section I-J (Transect B)

Aquatic: Species unchanged

Silt substrate

Marginal: Puccinellia - Suaeda - Salicornia saltmarsh. c.80m

Adjacent: Shingle barrier with open vegetation dominated by Festuca rubra and Armeria maritima

Section J-K

Aquatic: Cystoseira foeniculata - sparse  
Plocamium cartilagineum - sparse

Sand and gravel substrate with cobbles and boulders

Marginal: Unchanged

Adjacent: Unchanged

Section K-L (Transect C)

Aquatic: Cystoseira foeniculata  
Plocamium cartilagineum  
Osmundia hybrida  
Filamentous algae - all sparse

Marginal: Unvegetated sand, gravel, cobbles and boulders of the shingle barrier. 2-12m

Adjacent: Unchanged

Section L-M

Aquatic: Unchanged

Marginal: Puccinellia - Suaeda - Salicornia saltmarsh strip as Transect A. 1-4m

Adjacent: Unchanged

#### Section M-N

- Aquatic: Cystoseira foeniculata  
Enteromorpha  
Filamentous algae - all sparse
- Marginal: Extensive Puccinellia - Suaeda - Salicornia saltmarsh as Transect B. c.80m
- Adjacent: Agrostis stolonifera - Festuca rubra - Armeria maritima grassland  
Backing shingle barrier

#### Section N-O

- Aquatic: Cystoseira foeniculata  
Osmundia hybrida  
Enteromorpha  
Filamentous algae - all sparse
- Silt and gravel substrate with cobbles
- Marginal: Unchanged. 4m
- Adjacent: Unchanged

#### Section O-P

- Aquatic: Cystoseira foeniculata  
Osmundia hybrida  
Fucus serratus  
Enteromorpha  
Filamentous algae - all sparse
- Sand and gravel substrate with cobbles
- Marginal: Unvegetated cobbles
- Adjacent: Causeway  
Shingle barrier

Site: Aughinish Lagoon	Transect code: A	
Location: Outlet to sea	Sample point: 1 Aquatic - 2m out	
Sample area: 24m2 (6x4)	Substrate: Sand, gravel, cobbles, boulders	
Depth: 40 cm	Salinity: 33 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		70
Codium tomentosum	30	30
Fucus serratus	30	20
Filamentous algae		20
Cystoseira foeniculata	20	15
Enteromorpha	20	< 1
Ulva lactuca	15	< 1
Polysiphonia elongata	4	< 1
Bare substrate		30
Sand and gravel		30
Description: Patches of unvegetated sand and gravel amongst algae-covered cobbles and boulders. Codium, Fucus and Cystoseira patches covered in filamentous algae. Ulva and Enteromorpha restricted to landward edge of sample.		
Backing dry stone wall - 1.2m high.		
Backing 2.5m strip of unvegetated silt and gravel shore.		

Site: Aughinish Lagoon		Transect code: A	
Location: Outlet to sea		Sample point: 2 Marginal	
Sample area: 16m2 (4x4)		Substrate: Silt and gravel	
Depth: 0 cm		Salinity: -----	
NVC community:			
	Height (cm)	Cover (%)	
Total Plant		100	
Puccinellia maritima	5	90	
Suaeda maritima	15	15	
Salicornia agg.	15	< 5	
Glaux maritima	5	< 1	
Description: Puccinellia dominant in species-poor saltmarsh community forming 4m wide strip along the shore.			
Backing c.30 degree bank to 3m height with Festuca rubra - Briza media - Trifolium pratense grassland.			
Backing Dactylis glomerata meadow.			

[illegible]



Site: Aughinish Lagoon	Transect code: B	
Location: Saltmarsh backing to barrier	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Puccinellia maritima	5	90
Suaeda maritima	10	30
Salicornia agg.	15	25
Spergularia marina	8	< 5
Aster tripolium	15	< 1
Armeria maritima	10	< 1
Description: Puccinellia dominant, forming dense low growing ground cover with Suaeda and Salicornia abundant. 80m.		
Backing shingle barrier. Festuca rubra dominant with Tripleurospermum maritimum, Armeria maritima, Silene maritima frequent. Average vegetation cover c.60%.		

Site: Aughinish Lagoon	Transect code: C	
Location: Open shingle shore - barrier	Sample point: 1 Aquatic - 5m out	
Sample area: 25m2 (5x5)	Substrate: Sand, gravel, cobbles	
Depth: 0 - 70 cm	Salinity: 32 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Cystoseira foeniculata	20	5
Osmundia hybrida	5	< 1
Filamentous algae		< 1
Substrate		
Sand and gravel		90
Cobbles		10
Description: Sparse, species-poor algal community confined to scattered submerged cobbles.		
Cystoseira dominant but restricted to larger rocks only.		
Backing shingle barrier.		
Unvegetated cobble and boulder shore 7m.		
Backing open Festuca rubra dominated vegetation on finer substrate with		
frequent Armeria maritima, Silene maritima, Tripleurospermum maritimum, Raphanus		
raphanistrum. Average vegetation cover c.50%.		

BRIDGE LOUGH  
Co. Galway

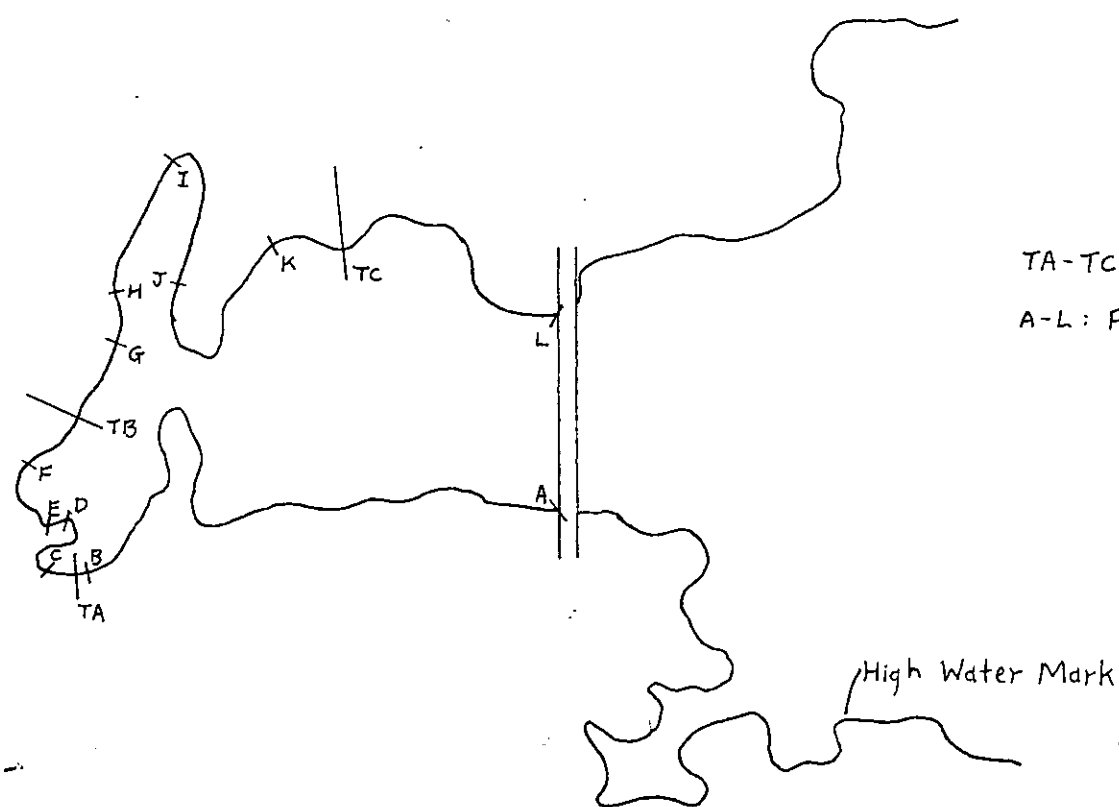
Site Description

This is a small silty lagoon on a low-lying promontory with pasture to the north and south and wetland to the west. A causeway forms the eastern shore and separates the site from the sea.

A stand of blackthorn woodland occurs close to the western shore, where a dry stone wall runs along the edge of the lagoon.

Shores are generally shallow of slope. Emergent vegetation is restricted to a small stand of *Schoenoplectus* in a sheltered bay in the south west corner of the lagoon. Small areas of saltmarsh adjoin the lagoon along the north shore.

The pool which lies to the west is also a brackish water site. There is no major freshwater inflow stream.



TA-TC: Transects

A-L: Points of change in  
aquatic / marginal vegetation

Bridge Lough, Co. Galway: Location of Transects and  
Shore-based Survey Sections

## BRIDGE LOUGH

### Shore-based survey

#### Section A-B

- Aquatic: Enteromorpha  
Filamentous algae  
Silt substrate with cobbles
- Marginal: Unvegetated cobble and boulder substrate. c.2m  
Puccinellia maritima dominated saltmarsh vegetation with frequent Agrostis stolonifera and Juncus gerardii as Transect C. 1-2m strip on heavily poached substrate
- Adjacent: Lolium perenne improved pasture

#### Section B-C (Transect A)

- Aquatic: Filamentous algae  
Silt substrate
- Marginal: Schoenoplectus lacustris ssp tabernaemontani dominant with Epilobium hirsutum locally co-dominant, Agrostis stolonifera and Ranunculus sceleratus frequent. 20x8m
- Adjacent: Agrostis stolonifera grassland with frequent Rorippa nasturtium-aquaticum. 10m  
Backing public road

#### Section C-D

Aquatic:    Unchanged

Marginal:   *Festuca rubra* - *Juncus gerardii* dominated salt tolerant vegetation as Transect B.  
              0.5-3m strip

Adjacent:   *Crataegus monogyna* scrub on promontory

#### Section D-E

Aquatic:    *Ruppia maritima* - sparse  
              Filamentous algae

Marginal:   Vegetation unchanged  
              Scattered boulders along shore

Adjacent:   Unchanged

#### Section E-F

Aquatic:    Unchanged

Marginal:   Unchanged

Adjacent:   Low stone wall and public road

Section F-G (Transect B)

Aquatic: *Ruppia maritima*  
*Enteromorpha*  
Filamentous algae

1m dry stone wall runs more or less parallel to shore c.5m out  
100% cover of filamentous algae and *Enteromorpha* loughward of wall  
Patchy cover of *Ruppia* and filamentous algae landward of wall

Marginal: Species-poor *Puccinellia* dominated salt tolerant vegetation. 2-3m  
*Juncus gerardii* - *Festuca rubra* dominated salt tolerant community. 4-6m  
Both communities with scattered cobbles and boulders

Adjacent: *Prunus spinosa* scrub with occasional *Crataegus monogyna*

Section G-H

Aquatic: Filamentous algae - extensive

Marginal: *Juncus gerardii* - *Festuca rubra* dominated community as Transect B. 0.3-1m

Adjacent: 1.5m dry stone wall with occasional *Crataegus monogyna*  
*Lolium perenne* pasture

Section H-I

Aquatic: Filamentous algae - sparse

Marginal: Unchanged

Adjacent: Unchanged

#### Section I-J

Aquatic: Unchanged

Marginal: Puccinellia dominant with Spergularia marina and Glaux maritima. 0.5-5m.  
Poached

Adjacent: Agrostis stolonifera - Trifolium pratense pasture

#### Section J-K

Aquatic: Filamentous algae - extensive

Marginal: Unchanged

Adjacent: Unchanged

#### Section K-L (Transect C)

Aquatic: Unchanged

Marginal: Puccinellia dominated salt tolerant vegetation with frequent Agrostis stolonifera  
and Juncus gerardii. 4-20m

Adjacent: Dactylis glomerata - Agrostis stolonifera - Trifolium repens - T. pratense  
grassland

Site: Bridge Lough	Transect code: A	
Location: Marginal swamp	Sample point: 1 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Silt	
Depth: 5 cm	Salinity: 32 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Filamentous algae		5
Description: Occasional small patches of free-floating filamentous algae only. Deep silt substrate.		

Site: Bridge Lough	Transect code: A	
Location: Marginal swamp	Sample point: 2 Marginal	
Sample area: 80m2 (10x8)	Substrate: Silt	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		70
Scirpus lacustris ssp tabernaemontani	90	30
Epilobium hirsutum	80	20
Agrostis stolonifera	20	10
Ranunculus sceleratus	40	5
Triglochin palustris	15	< 5
Rorippa nasturtium-aquaticum	15	< 5
Rumex obtusifolius	50	< 1
Chenopodium rubrum	8	< 1
Juncus bufonius	8	< 1
Carex otrubae	40	< 1
Description: Scirpus lacustris dominant with Epilobium hirsutum locally co-dominant amongst freshwater associates. 8m.		
Backing Agrostis stolonifera damp grassland with frequent Rorippa nasturtium-aquaticum.		

Site: Bridge Lough	Transect code: B	
Location: Open shore	Sample point: 1 Aquatic - 10m out	
Sample area: 16m2 (4x4)	Substrate: Silt	
Depth: 30 cm	Salinity: 32 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Filamentous algae		100
Description: Complete cover of filamentous algae only, extending back to dry stone wall at 3m out from shore.		

Site: Bridge Lough	Transect code: B	
Location: Open shore	Sample point: 2 Aquatic - 3m out	
Sample area: 15m2 (5x3)	Substrate: Silt, cobbles	
Depth: 10 cm	Salinity: 28 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		25
Higher Plant		20
Ruppia maritima	20	20
Algae		5
Filamentous algae		5
Enteromorpha		< 1
Description: Open cover of dominant Ruppia. Older parts of Ruppia plants coated with algae, newer shoots more sparsely so. About 30 - 40% of plants showing signs of recent growth, with some in bud, some flowering and some coming into fruit. The remaining 60 - 70% shorter and completely coated by algae.		
Backing low peat cliff - 50 cm.		

Site: Bridge Lough	Transect code: B	
Location: Open shore	Sample point: 3 Marginal	
Sample area: 20m2 (10x2)	Substrate: Peat, cobbles, boulders	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Puccinellia maritima	15	90
Glaux maritima	15	< 5
Chenopodium rubrum	20	< 5
Juncus gerardii	25	< 1
Bare substrate		5
Cobbles and boulders		5
Description: Dense cover of dominant Puccinellia with tall associates in species-poor saltmarsh strip. 3m.		

Site: Bridge Lough	Transect code: B	
Location: Open shore	Sample point: 4 Marginal	
Sample area: 20m2 (10x2)	Substrate: Peat, bedrock, boulders	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Juncus gerardii	40	50
Festuca rubra	20	50
Agrostis stolonifera	20	30
Chenopodium rubrum	15	< 5
Glaux maritima	15	< 5
Leontodon autumnalis	25	< 1
Spergularia marina	10	< 1
Triglochin maritima	20	< 1
Carex otrubae	40	< 1
Bare substrate		5
Bedrock and boulders		5
Description: Juncus gerardii and Festuca rubra co-dominant with Agrostis stolonifera frequent and all other species sparse. Exposed bedrock and scattered boulders with epiphytic lichens and bryophytes. 5m.		
Backing Prunus spinosa woodland with occasional Crataegus monogyna.		

Site: Bridge Lough	Transect code: C	
Location: Open shore	Sample point: 1 Aquatic - 10m out	
Sample area: 16m2 (4x4)	Substrate: Silt, cobbles	
Depth: 20 cm	Salinity: 32 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Filamentous algae		100
Enteromorpha		< 1
Description: Complete surface layer of filamentous algal mat with sparse Enteromorpha restricted to submerged rocks. Same species at more or less same cover to shore.		

Site: Bridge Lough	Transect code: C	
Location: Open shore	Sample point: 2 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Puccinellia maritima	6	80
Spergularia marina	8	10
Agrostis stolonifera	6	10
Juncus gerardii	20	5
Juncus bufonius	6	5
Salicornia agg	10	< 1
Triglochin maritima	15	< 1
Glaux maritima	8	< 1
Chenopodium rubrum	15	< 1
Leontodon autumnalis	15	< 1
Cochlearia anglica	6	< 1
Samolus valerandi	6	< 1
Description: Salt tolerant community dominated by extensive Puccinellia with frequent Spergularia and Agrostis. Associated species sparse. 25m.		
Backing dry stone wall.		
Backing Agrostis stolonifera - Trifolium repens pasture.		

LETTERMULLEN POOL  
Co. Galway

Site Description

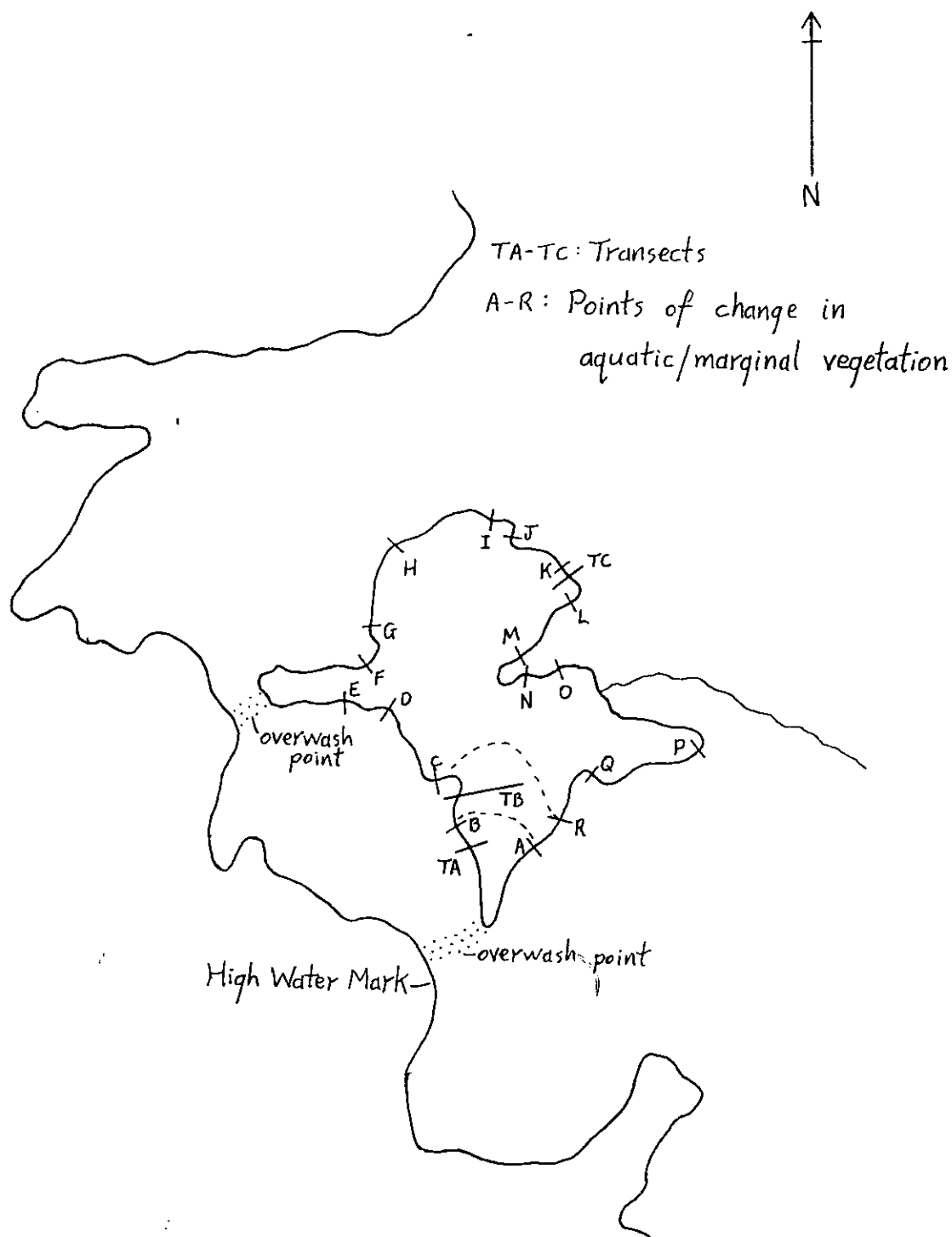
Lettermullen Pool is a small isolated lagoon situated on a rocky headland and immediately bordered by high ground on all sides but the north east.

This high ground is predominantly covered with maritime grassland and cliff communities and drops more or less steeply to the lagoon's shores. These are low peat cliffs with occasional stretches of exposed bedrock.

The rocky substrate drops away fairly steeply from all shores but the northern, except where where a narrow bedrock shelf straddles the mouth of the southern bay.

A small area of wet grassland lies beyond the low cliff and outcrops of the north eastern shore and is associated with the pool's only inflow channel, which enters here. According to local knowledge this narrow channel is a third access point for seawater during winter storms, in addition to the two overwash points. *Scirpus maritimus* occurs in this channel up to approximately 250 metres back from the lagoon.

There is no emergent vegetation.



Lettermullen Pool, Co. Galway: Location of Transects and Shore-based Survey Sections

## LETTERMULLEN POOL

### Shore-based survey

#### Section A-B (Transect A)

Aquatic: Filamentous algae - extensive  
Corallina officinalis - patchy  
Chondrus crispus - sparse

Bedrock substrate

Marginal: Exposed bedrock shore - slope c.35-90 degrees

Adjacent: Maritime cliff community dominated by Festuca rubra with frequent Armeria maritima, Crithmum maritimum, Plantago maritima, Plantago coronopus, Spergularia rupicola, Silene maritima and crustose and fruticose lichens

#### Section B-C (Transect B)

Aquatic: Ruppia cirrhosa - patchy  
Zostera marina - patchy  
Filamentous algae - patchy  
Enteromorpha - sparse  
Polysiphonia elongata - sparse  
Codium tomentosum - sparse  
Lomentaria clavellosa - sparse

Bedrock substrate forming shallow shelf with sand, gravel, cobbles and boulders

Marginal: Low rock and earth cliff to 20cm

Adjacent: As A-B plus occasional Limonium humile and Raphanus maritimus

### Section C-D

Aquatic: *Ruppia cirrhosa* - dense bed beyond algae  
*Zostera marina* - patchy cover amongst *Ruppia*  
Filamentous algae - dense cover up to 1m out  
Enteromorpha - sparse amongst filamentous algae  
*Chondrus crispus* - sparse amongst filamentous algae  
*Lamprothamnium papulosum*

Bedrock substrate

Marginal: Unchanged

Adjacent: Unchanged

### Section D-E

Aquatic: *Ruppia cirrhosa* - patchy  
*Zostera marina* - sparse  
Filamentous algae - as above  
Enteromorpha - as above  
*Chondrus crispus* - as above

Marginal: Unchanged

Adjacent: Unchanged

### Section E-F

Aquatic: *Ruppia cirrhosa* - patchy  
*Zostera marina* - very sparse  
Filamentous algae - as above  
Enteromorpha - as above  
*Chondrus crispus* - as above

Bedrock substrate with cobbles and boulders in shallow sheltered bay

Marginal: Unchanged

Adjacent: Unchanged

#### Section F-G

- Aquatic: *Ruppia cirrhosa* - dense bed beyond algae  
*Zostera marina* - patchy cover amongst *Ruppia*  
Filamentous algae - patchy cover up to 1m out  
*Corallina officinalis* - patchy cover up to 1m out  
*Chondrus crispus* - sparse up to 1m out
- Marginal: Bedrock shore with lichens
- Adjacent: *Festuca rubra* - *Potentilla anserina* grassland. Grazed

#### Section G-H

- Aquatic: Unchanged
- Marginal: *Juncus maritimus* dominated salt tolerant community as Transect C forming 1-2m strip along shore. *Juncus gerardii* and *Glaux maritima* frequent with few sparse associates.
- Adjacent: Unchanged

#### Section H-I

- Aquatic: Species and cover as before plus *Lamprothamnium papulosum*
- Marginal: Bedrock shore - average slope c.45 degrees - with occasional emergent *Juncus maritimus* tussocks
- Adjacent: Unchanged

#### Section I-J

- Aquatic: Unchanged
- Marginal: As G-H
- Adjacent: Unchanged

### Section J-K

Aquatic: As F-G

Marginal: Bedrock shore with lichens

Adjacent: Public road  
Backing to *Ulex gallii* - *Erica cinerea* heath

### Section K-L (Transect C)

Aquatic: *Ruppia cirrhosa* - dense bed c. 10m out, increasingly sparse to landward  
*Zostera marina* - patchy cover amongst *Ruppia*, increasingly sparse to landward  
Filamentous algae - increasing cover to landward  
*Lamprothamnium papulosum* - patchy cover up to 5m out

Silt substrate

Marginal: Dense *Juncus maritimus* cover with patchy *Juncus gerardii* and sparse salt tolerant associates. 1m

Adjacent: *Festuca rubra* - *Potentilla anserina* grassland

### Section L-M

Aquatic: *Ruppia cirrhosa* - dense bed beyond algal belt  
*Zostera marina* - patchy cover amongst *Ruppia*  
Filamentous algae - dense cover up to 1m out  
*Lamprothamnium papulosum* - beyond *Ruppia* belt

Bedrock substrate with silt and cobbles

Marginal: Bedrock shore with lichens

Adjacent: Bedrock outcrop with lichens

### Section M-N

Aquatic: *Ruppia cirrhosa* - dense bed beyond algal belt  
*Zostera marina* - patchy cover amongst *Ruppia*  
Algae as A-B in narrow strip to 2m out

Bedrock substrate

Marginal: Unchanged

Adjacent: Unchanged

### Section N-O

Aquatic: *Ruppia cirrhosa* - open bed beyond algal belt  
*Zostera marina* - patchy cover amongst *Ruppia*  
*Lamprothamnium papulosum* - patchy cover amongst *Ruppia*  
Filamentous algae - dense cover up to 1m out  
*Chondrus crispus* - sparse amongst filamentous algae

Marginal: Unchanged

Adjacent: Unchanged

### Section O-P

Aquatic: Species unchanged  
*Lamprothamnium* restricted to shallow bays  
*Chondrus* restricted to steeply sloping bedrock shores

Bedrock substrate with silty patches

Marginal: Bedrock shore with occasional stretches of c. 50cm peat cliff  
Peat cliff areas backing to *Juncus maritimus* dominated community as Transect C.  
1-2m

Adjacent: *Festuca rubra* - *Potentilla erecta* grassland

#### Section P-Q

Aquatic: *Ruppia cirrhosa* - dense bed beyond algal belt  
*Zostera marina* - patchy cover amongst *Ruppia*  
Filamentous algae - dense cover to 2-5m out

Marginal: 30-50cm peat cliff

Adjacent: Unchanged

#### Section Q-R

As A-B plus sparse *Codium*

#### Section R-A

Aquatic: As B-C

Marginal: Steep bedrock shore with crustose, foliose and fruticose lichens - slope c.80 degrees

Adjacent: Maritime cliff community as A-B

Site: Lettermullen Pool	Transect code: A	
Location: Seawater access point	Sample point: 1 Aquatic - 2m out	
Sample area: 20m2 (10x2)	Substrate: Bedrock	
Depth: 10 - 40 cm	Salinity: 34 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Corallina officinalis	4	65
Filamentous algae	6	30
Chondrus crispus	5	> 1
Description: Open cover of Corallina with patchy filamentous algae on steeply sloping substrate.		

Site: Lettermullen Pool	Transect code: A	
Location: Seawater access point	Sample point: 2 Aquatic - 50cm out	
Sample area: 10m2 (10x1)	Substrate: Bedrock	
Depth: 0 - 10 cm	Salinity: 34 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Filamentous algae		100
Description: Dense cover of filamentous algae only.		
Backing rocky shore (slope c.75 degrees) dominated by Festuca rubra with		
Armeria maritima, Crithmum maritimum, Plantago maritima, Plantago coronopus, Spergularia		
rupicola, Silene maritima and rupicolous crustose and fruticose lichens.		

Site: Lettermullen Pool	Transect code: B	
Location: Shallow rock shelf	Sample point: 1 Aquatic - 25m out	
Sample area: c.300m2 (whole stand)	Substrate: Bedrock, sand	
Depth: 30 cm (average)	Salinity: 34 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Higher Plant		20
Ruppia cirrhosa	40	15
Zostera marina	40	5
Algae		40
Filamentous algae	10	40
Codium tomentosum	3	< 1
Polysiphonia elongata	4	< 1
Lomentaria clavellosa	4	< 1
Enteromorpha	10	< 1
Description: Open filamentous algae cover with Ruppia and Zostera occurring in occasional small dense beds (average area c.5m2) and in more open cover. Other algal species sparse. Within Ruppia - Zostera beds average cover c.80% Ruppia - 20% Zostera.		
This is a raised area of bedrock running across the northern end of the bay at the southern seawater overwash point. The substrate drops away sharply to north and south.		
Backing to 50cm peat cliff.		
Backing to Festuca rubra dominated grassland with frequent rock outcrops.		
Plantago coronopus, Plantago maritima, Armeria maritima, Silene maritima frequent.		

Site: Lettermullen Pool	Transect code: C	
Location: Sheltered bay	Sample point: 1 Aquatic - 10m out	
Sample area: 25m2 (5x5)	Substrate: Silt	
Depth: 30 cm	Salinity: 35 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		100
Ruppia cirrhosa	50	90
Zostera marina	60	10
Algae		10
Filamentous algae		10
Description: Dense Ruppia bed with occasional patches of Zostera and filamentous algae.		

Site: Lettermullen Pool	Transect code: C	
Location: Sheltered bay	Sample point: 2 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Silt, cobbles	
Depth: 20 cm	Salinity: 35 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		5
Ruppia cirrhosa	30	< 5
Zostera marina	30	< 5
Algae		90
Filamentous algae		70
Lamprothamnium papulosum	10	20
Description: Filamentous algae dominant with sparse Ruppia and Zostera. Lamprothamnium in fairly dense patches, locally dominant within 2m of shore.		

Site: Lettermullen Pool	Transect code: C	
Location: Sheltered bay	Sample point: 3 Marginal	
Sample area: 10m2 (10x1)	Substrate: Peat	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Juncus maritimus	50	80
Juncus gerardii	25	10
Glaux maritima	10	5
Cochlearia anglica	4	5
Aster tripolium	25	< 1
Plantago maritima	10	< 1
Limonium humile	25	< 1
Description: Dense Juncus maritimus cover with patchy Juncus gerardii and sparse salt tolerant associates. 2m.		
Grading to Festuca rubra - Potentilla anserina grassland. 10m.		
Backing public road.		

LOCH TANAI  
Co. Galway

Site Description

This is a low-lying area of heath and bog with frequent rock outcrops.

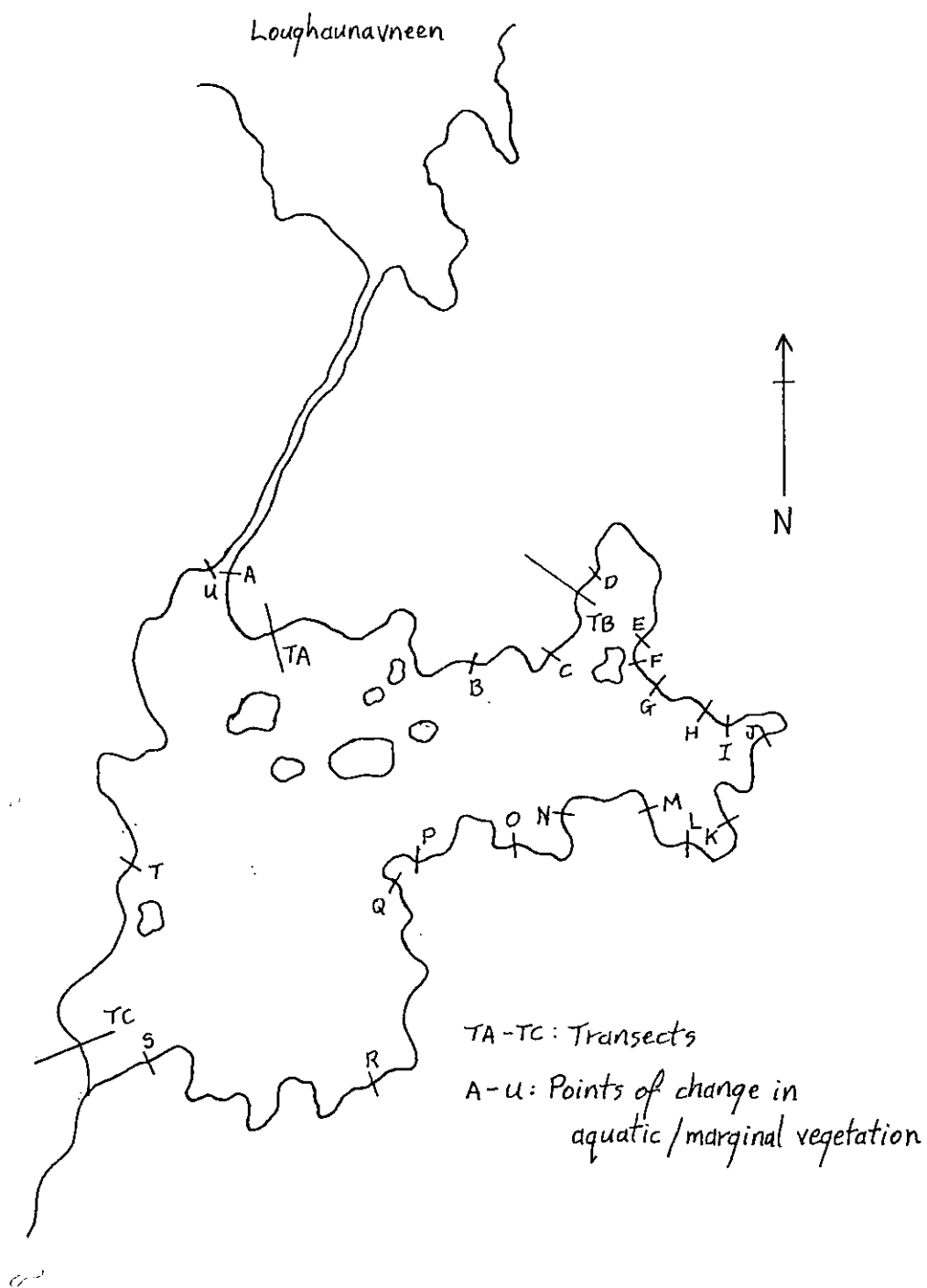
Exposed bedrock forms much of the shoreline, particularly on small promontories, with long stretches of peat shore between forming low cliffs in places. Marginal areas are typically narrow with more extensive *Juncus maritimus* wetland around bayheads and associated inflows.

The only stands of tall emergents are narrow *Phragmites* beds fringing the two largest islands.

The main freshwater inflow joins the lagoon from the south west. There are several smaller streams and flushes, mostly to the south.

The outlet channel runs from the north west corner of the lagoon.

A public road runs along part of the north eastern shore.



Loch Tanai, Co. Galway: Location of Transects and Shore-based Survey Sections

## LOUGH TANAI

### Shore-based survey

#### Section A-B (Transect A)

- Aquatic: *Ruppia* sp. - dense beds  
*Zostera marina* - patchy cover amongst *Ruppia*  
Filamentous algae - extensive  
*Enteromorpha* - patchy  
*Fucus* c.f. *vesiculosus* - patchy, to 1-2m out only  
*Fucus* sp. - patchy, to 1-2m out only  
*Phyllophora psuedo ceranoides* - sparse  
*Lamprothamnium papulosum* - patchy cover amongst *Ruppia*
- Peat and silt substrate with frequent cobbles
- Marginal: *Juncus maritimus* tussocks with species-poor understorey of patchy *Agrostis stolonifera* and sparse salt tolerant associates. 1-10m  
Vegetated strip interrupted by occasional bedrock outcrops
- Adjacent: *Ulex gallii* - *Molinia caerulea* - *Erica cinerea* heath with frequent *Daboecia cantabrica*

#### Section B-C

- Aquatic: Unchanged
- Marginal: Bedrock and boulder shore with lichens
- Adjacent: *Ulex gallii* - *Molinia caerulea* - *Calluna vulgaris* heath

#### Section C-D (Transect B)

Aquatic: *Ruppia* sp. - patchy  
*Zostera marina* - patchy  
Filamentous algae - extensive  
*Lamprothamnium papulosum* - sparse

Silt substrate

Marginal: *Juncus maritimus* tussocks with patchy *Agrostis stolonifera* and sparse salt tolerant associates. 25-30m

Adjacent: Bog vegetation dominated by *Molinia caerulea*, *Calluna vulgaris*, *Sphagnum* spp.

#### Section D-E

Aquatic: *Ruppia* sp. - sparse, low growing  
Filamentous algae - extensive

Marginal: As C-D. 8-10m

Adjacent: Heath as B-C and bog vegetation as C-D

#### Section E-F

Aquatic: *Ruppia* sp. - sparse, low growing  
Filamentous algae - extensive  
*Lamprothamnium papulosum* - sparse

Peat and silt substrate with cobbles

Marginal: Bedrock shore with lichens

Adjacent: Heath as B-C

### Section F-G

Aquatic:    *Ruppia* sp. - sparse  
              Filamentous algae - extensive  
              *Fucus* c.f. *vesiculosus* - patchy  
              *Fucus* sp. - patchy

Marginal:   *Juncus maritimus* salt tolerant community. 1m

Adjacent:    Unchanged

### Section G-H

Aquatic:    *Ruppia* sp. - very sparse  
              *Zostera marina* - sparse  
              Filamentous algae - extensive  
              *Fucus* c.f. *vesiculosus* - dense cover to 1-2m out  
              *Fucus* sp. - dense cover to 1-2m out

Marginal:    Bedrock shore with lichens

Adjacent:    Unchanged

### Section H-I

Aquatic:    *Ruppia* sp. - fairly dense patches beyond furoid belt  
              *Zostera marina* - sparse  
              Filamentous algae - extensive  
              *Fucus* c.f. *vesiculosus* - sparse  
              *Fucus* sp. - sparse  
              *Lamprothamnium papulosum* - sparse

Marginal:    Unchanged

Adjacent:    Unchanged

#### Section I-J

Aquatic:    *Ruppia* sp. - dense patches  
              *Zostera marina* - sparse  
              Filamentous algae - extensive  
              *Fucus* c.f. *vesiculosus* - dense cover to 1-2m out  
              *Fucus* sp. - dense cover to 1-2m out  
              *Lamprothamnium papulosum* - sparse

Marginal:   *Juncus maritimus* salt tolerant community. 1-2m

Adjacent:    Unchanged

#### Section J-K

Aquatic:    Unchanged

Marginal:   Lichenous bedrock shore with occasional patches of *Juncus maritimus* salt  
              tolerant community

Adjacent:    Unchanged

#### Section K-L

Aquatic:    *Ruppia* sp. - dense patches  
              *Zostera marina* - very sparse  
              Filamentous algae - extensive  
              *Lamprothamnium papulosum* - dense patches

Marginal:    Unchanged

Adjacent:    Unchanged

### Section L-M

Aquatic: *Ruppia* sp. - sparse, low growing  
Filamentous algae - extensive

Silt substrate

Marginal: *Juncus maritimus* salt tolerant community. Up to c.50m at bayhead, 1-2m strip elsewhere

Adjacent: Unchanged

### Section M-N

Aquatic: *Ruppia* sp. - dense beds beyond furoid belt  
*Zostera marina* - sparse amongst *Ruppia*  
Filamentous algae - extensive  
*Fucus* c.f. *vesiculosus* - dense cover to 1-2m out  
*Fucus* sp. - dense cover to 1-2m out  
*Lamprothamnium papulosum*

Bedrock substrate with gravel and cobbles

Marginal: Lichenous bedrock shore with occasional patches of *Juncus maritimus* salt tolerant community

Adjacent: Unchanged

### Section N-O

Aquatic: *Ruppia* sp. - dense beds  
Filamentous algae - extensive  
*Lamprothamnium papulosum*

Coarse gravel substrate with cobbles

Marginal: *Juncus maritimus* salt tolerant community forming 1-2m strip along shore  
Backing to 1.5m peat cliff

Adjacent: Unchanged

#### Section O-P

Aquatic: Ruppia sp. - fairly dense cover beyond fucoid belt  
Zostera marina - sparse amongst Ruppia  
Filamentous algae - extensive  
Fucus c.f. vesiculosus - dense cover to 1-2m out  
Fucus sp. - dense cover to 1-2m out  
Lamprothamnium papulosum - patchy cover amongst Ruppia

Marginal: Rocky shore as M-N

Adjacent: Unchanged

#### Section P-Q

Aquatic: Zostera marina - patchy cover  
Filamentous algae - extensive  
Fucus c.f. vesiculosus - cover unchanged  
Fucus sp. - cover unchanged

Marginal: Unchanged

Adjacent: Unchanged

#### Section Q-R

Aquatic: As O-P  
Zostera now fairly dense

Marginal: Unchanged

Adjacent: Unchanged

### Section R-S

Aquatic: *Ruppia* sp. - fairly dense  
Filamentous algae - extensive  
*Lamprothamnium papulosum*

Peat, silt and gravel substrate with cobbles and boulders

Marginal: *Juncus maritimus* salt tolerant community forming 2-8m strip along shore  
Backing to 1.5m peat cliff

Adjacent: Heath as B-C and bog vegetation as C-D

### Section S-T (Transect C)

Aquatic: *Ruppia* sp. - patchy, low growing  
Filamentous algae - extensive

Silt substrate

Marginal: *Juncus maritimus* community with patchy *Agrostis stolonifera* and sparse associates to c.20m with occasional small patches of *Puccinellia maritima* dominated vegetation

Adjacent: *Ulex gallii* - *Calluna vulgaris* - *Erica cinerea* dominated heath

### Section T-U

Aquatic: *Ruppia* sp. - dense beds  
*Zostera marina* - patchy cover amongst *Ruppia*  
Filamentous algae - extensive  
*Enteromorpha* - sparse  
*Lamprothamnium papulosum* - sparse

Peat, silt and gravel substrate

Marginal: Unchanged

Adjacent: Unchanged

Site: Lough Tanai	Transect code: A	
Location: Outlet to sea	Sample point: 1 Aquatic - 10m out	
Sample area: 16m2 (4x4)	Substrate: Silt	
Depth: 50 cm	Salinity: 32 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		50
Ruppia sp.	50	45
Zostera marina	60	5
Algae		80
Filamentous algae		80
Lamprothamnium papulosum	20	5
Description: Ruppia, small patches of Zostera and sparse Lamprothamnium growing through fairly dense cover of filamentous algae.		

Site: Lough Tanai	Transect code: A	
Location: Outlet to sea	Sample point: 2 Aquatic - 2m out	
Sample area: 16m2 (4x4)	Substrate: Peat, silt, cobbles	
Depth: 30 cm	Salinity: 32 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		80
Ruppia sp.	40	70
Zostera marina	60	10
Algae		60
Filamentous algae		50
Fucus c.f. vesiculosus	40	5
Fucus sp.	25	< 5
Phyllophora psuedo ceranoides	8	< 1
Lamprothamnium papulosum	15	10
Description: Dense Ruppia bed and frequent Zostera growing through and between patchy cover of filamentous algae with Lamprothamnium occurring where Ruppia density lower. Fucoids restricted to submerged rocks close to shore. Some Ruppia plants in bud, some in flower.		

Site: Lough Tanai	Transect code: A	
Location: Outlet to sea	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	70	80
Agrostis stolonifera	10	25
Glaux maritima	6	< 5
Aster tripolium	20	< 1
Triglochin maritima	10	< 1
Plantago maritima	8	< 1
Carex extensa	15	< 1
Description: Dense cover of Juncus maritimus tussocks over patchy cover of Agrostis stolonifera with sparse salt tolerant species. 8m.		
Grading to heath with Ulex gallii, Molinia caerulea, Erica cinerea and Daboecia cantabrica.		

Site: Lough Tanai		Transect code: B
Location: Sheltered bay and isolated pool		Sample point: 1 Aquatic - 3m out
Sample area: 25m2 (5x5)		Substrate: Silt (depth c.40cm)
Depth: 25 cm		Salinity: 30 parts per thousand
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		30
Ruppia sp.	30	30
Zostera marina	35	< 5
Algae		85
Filamentous algae		80
Lamprothamnium papulosum	10	5
Description: Patchy cover of Ruppia amongst extensive filamentous algae with patchy Zostera and sparse Lamprothamnium. Some Ruppia plants in flower.		

Site: Lough Tanai	Transect code: B	
Location: Sheltered bay and isolated pool	Sample point: 2 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	70	75
Agrostis stolonifera	15	30
Aster tripolium	25	5
Glaux maritima	10	< 1
Triglochin maritima	15	< 1
Plantago maritima	10	< 1
Cochlearia anglica	6	< 1
Carex extensa	15	< 1
Description: Fairly dense cover of Juncus maritimus tussocks over salt tolerant vegetation dominated by patchy Agrostis stolonifera with associated species sparse. 18m.		

Site: Lough Tanai	Transect code: B	
Location: Sheltered bay and isolated pool	Sample point: 3 Marginal - Pool	
Sample area: 40m2 (10x4 - whole stand)	Substrate: Silt (depth c.50cm)	
Depth: 15 cm	Salinity: 21 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		20
Higher Plant		10
Ruppia sp.	15	10
Algae		10
Filamentous algae		10
Lamprothamnium papulosum	10	< 1
Description: Patchy cover of low growing Ruppia with open filamentous algae cover and very sparse Lamprothamnium. Both flowering and fruiting Ruppia present. Shallow isolated pool. 80% of substrate is unvegetated silt.		
Backing Juncus maritimus dominated community as sample point 2. 10m.		
Grading to Sphagnum spp. - Molinia caerulea - Calluna vulgaris bog vegetation.		

Site: Lough Tanai	Transect code: C	
Location: Freshwater inflow	Sample point: 1 Aquatic - 3m out	
Sample area: 16m2 (4x4)	Substrate: Silt (depth c.30cm)	
Depth: 10 cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		10
Ruppia sp.	6	10
Algae		100
Filamentous algae		100
Description: Patches of Ruppia growing through filamentous algae in shallow water. Ruppia low growing, both flowering and fruiting plants present.		

Site: Lough Tanai	Transect code: C	
Location: Freshwater inflow	Sample point: 2 Marginal	
Sample area: 8m2	Substrate: Peat	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Puccinellia maritima	8	90
Triglochin maritima	10	5
Glaux maritima	6	< 1
Spergularia marina	5	< 1
Aster tripolium	15	< 1
Plantago maritima	8	< 1
Limonium humile	20	< 1
Description: Dense cover of Puccinellia dominant over sparse species-poor salt tolerant associates. This community occurs here as patches (average area c.8m2) interlaced with unvegetated silt.		

Site: Lough Tanai	Transect code: C	
Location: Freshwater inflow	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	80	90
Agrostis stolonifera	15	20
Triglochin maritima	10	5
Glaux maritima	6	< 1
Aster tripolium	20	< 1
Cochlearia anglica	6	< 1
Plantago maritima	8	< 1
Limonium humile	20	< 1
Description: Dense cover of Juncus maritimus tussocks with sparse species-poor understorey dominated by patchy Agrostis stolonifera. 20m.		
Backing Ulex gallii - Calluna vulgaris - Erica cinerea dominated heath.		

LOUGH ACONEERA  
Co. Galway

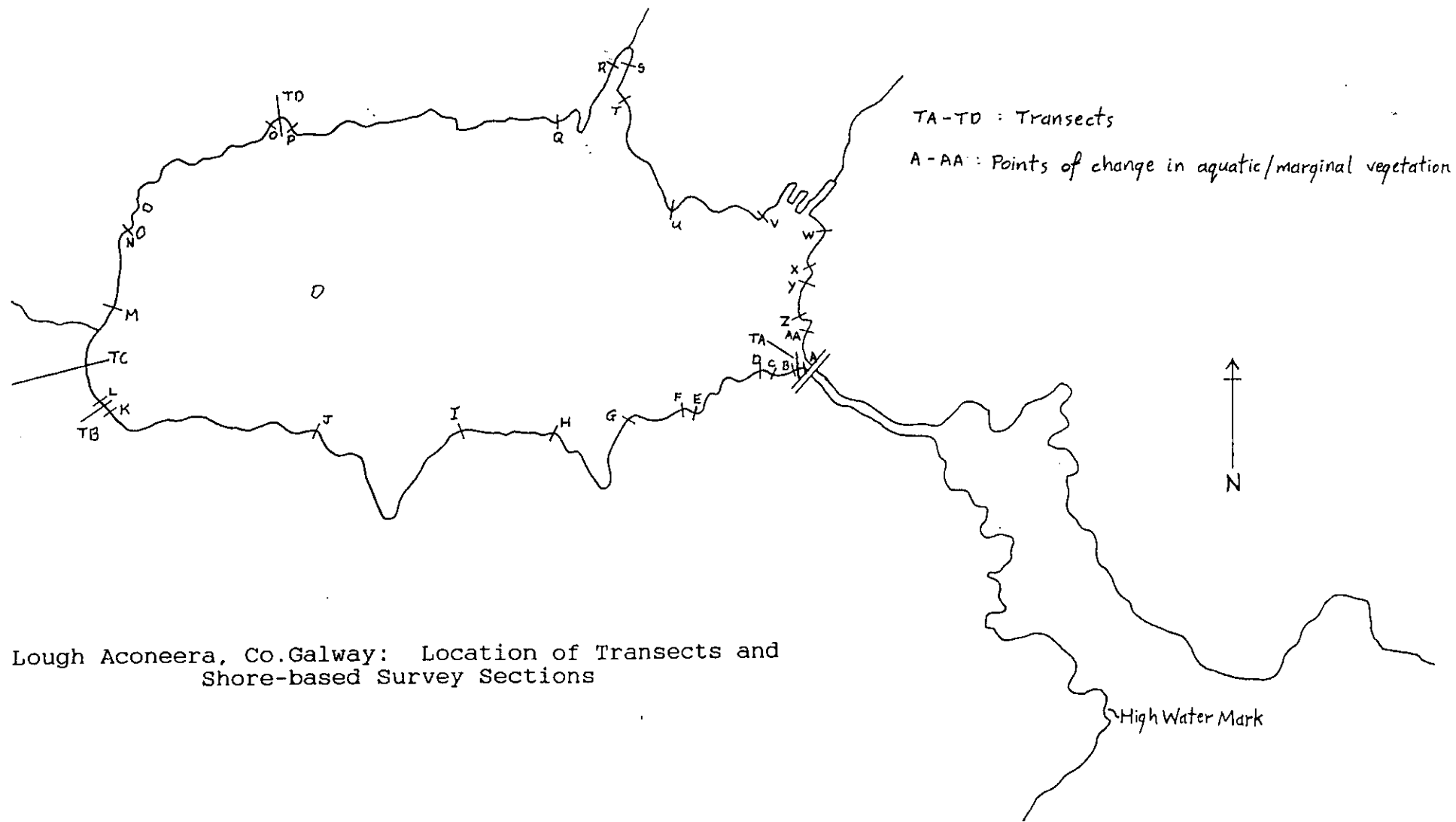
Site Description

Lough Aconeera lies between Cnoc Mordain and the sea. The site is bordered by heath, bog and associated grassland. Rock outcrops and dry stone walls are frequent across the surrounding landscape. The area is subject to grazing.

There is an area of small hand-cut hayfields between the south eastern shore and the public road.

Shores are predominantly rocky, of both steeply sloping exposed bedrock and boulders, with low peat cliffs in places. The only exceptions are the small swampy areas of sheltered bayheads and the south eastern shore, where Phragmites and Schoenoplectus swamp is more extensive. This is the point of entry for the major freshwater inflow. Several other small inflow streams join the lough along its northern shore.

The outlet channel exits at the south eastern corner.



Lough Aconeera, Co. Galway: Location of Transects and Shore-based Survey Sections

## LOUGH ACONEERA

### Shore-based survey

#### Section A-B (Transect A)

Aquatic: *Ruppia cirrhosa* - patchy cover <8m out only  
*Potamogeton pectinatus* - sparse <8m out only  
*Enteromorpha* - extensive  
*Fucus* sp.- patchy cover >8m out only

Silt and cobble substrate

Marginal: Open *Schoenoplectus lacustris* ssp *tabernaemontani* single species swamp. 15m  
Dense *Juncus maritimus* with sparse understorey of salt tolerant species. 1-2m

Adjacent: *Ulex gallii* - *Calluna vulgaris* - *Erica cinerea* heath on rocky outcrop with  
frequent *Dabeoica cantabrica*

#### Section B-C

Aquatic: *Ruppia cirrhosa* - cover unchanged  
*Enteromorpha* - cover unchanged

Marginal: *Phragmites australis* swamp with *Cladium mariscus* frequent on landward edge.  
20-25m

Adjacent: 45 degree bank to public road

### Section C-D

Aquatic:    Unchanged

Marginal:   *Juncus maritimus* with species-poor salt tolerant vegetation as A-B. 3-5m  
              Backing 50cm peat cliff

Adjacent:   Heath as A-B

### Section D-E

Aquatic:    *Ruppia cirrhosa* - sparse  
              *Potamogeton pectinatus* - fairly dense, extensive  
              *Enteromorpha* - fairly sparse  
              *Fucus* sp. - sparse, <2m out only  
              *Chara baltica* - sparse

Gravel substrate with frequent cobbles and boulders

Marginal:   Exposed bedrock shore - average slope c.40 degrees - with crustose, foliose and  
              fruticose lichens

Adjacent:   Unchanged

### Section E-F

Aquatic:    *Potamogeton pectinatus*  
              *Enteromorpha*  
              *Chara baltica*

Marginal:   Single species *Phragmites* swamp. 5m  
              Backing to lichenous bedrock shore - slope c.70 degrees

Adjacent:   Unchanged

### Section F-G

Aquatic: Potamogeton pectinatus  
Enteromorpha  
Fucus sp.  
Chara baltica

Marginal: Juncus maritimus and Schoenoplectus lacustris ssp tabernaemontani in a mosaic of mono-dominant stands among scattered boulders. Both as A-B. 4 -8m  
Backing to bedrock shore as E-F

Adjacent: Unchanged

### Section G-H

Aquatic: Unchanged

Marginal: Juncus maritimus, Schoenoplectus and Eleocharis palustris in small scattered patches - average area c.3m<sup>2</sup>. 5-10m  
Backing to lichenous bedrock shore - slope varying c.15-c.90 degrees

Adjacent: Bog vegetation with dominant Molinia caerulea and frequent Sphagnum spp.,  
Myrica gale, Trichophorum cespitosum, Erica tetralix, Potentilla erecta  
Heath as A-B occuring on rocky outcrops

### Section H-I

Aquatic: Potamogeton pectinatus  
Enteromorpha  
Fucus sp.

Marginal: Unchanged

Adjacent: Heath as A-B

#### Section I-J

Aquatic: Potamogeton pectinatus  
Ruppia cirrhosa  
Enteromorpha

Marginal: Unchanged

Adjacent: Unchanged

#### Section J-K

Aquatic: Ruppia cirrhosa  
Potamogeton pectinatus - extensive in small sheltered bays only  
Enteromorpha  
Filamentous algae  
Chara baltica - >5m out only

Marginal: Unchanged

Adjacent: Holcus lanatus - Potentilla anserina pasture

#### Section K-L (Transect B)

Aquatic: Ruppia cirrhosa  
Potamogeton pectinatus  
Enteromorpha  
Filamentous algae

Silt and gravel substrate with cobbles

Marginal: Sparse Phragmites swamp with sparse aquatics. 3-4m  
- Phragmites dominated swamp with frequent Schoenoplectus. 2-3m

### Section L-M (Transect C)

- Aquatic: *Ruppia cirrhosa* - dense beds  
*Potamogeton pectinatus* - dense beds  
*Chara baltica* - abundant around freshwater inflow
- Marginal: *Phragmites* dominant with frequent *Schoenoplectus* on silt substrate. 10-20m  
*Schoenoplectus* dominant with frequent low growing *Phragmites* on silt substrate.  
25-40m. Grazed and poached
- Adjacent: Heath as A-B and bog vegetation as G-H

### Section M-N

- Aquatic: *Ruppia cirrhosa*  
*Potamogeton pectinatus*  
*Enteromorpha*  
  
Gravel substrate with cobbles and boulders
- Marginal: 1m peat cliff with occasional crustose lichen covered boulders and exposed  
bedrock. Sparse *Phragmites* and *Schoenoplectus* shoots in sheltered areas
- Adjacent: Bog vegetation as G-H

### Section N-O

- Aquatic: *Ruppia cirrhosa*  
*Potamogeton pectinatus*  
*Enteromorpha*  
*Chara baltica*
- Marginal: Exposed lichen covered bedrock and boulders with occasional 30-40cm peat cliff  
Occasional *Juncus maritimus* tussocks amongst boulders
- Adjacent: Bog vegetation as G-H and heath as A-B

#### Section O-P (Transect D)

Aquatic: Filamentous algae  
Chara baltica

Silt substrate

Marginal: Fairly dense single species Schoenoplectus swamp. 10-15m  
Open Schoenoplectus cover over sparse freshwater species. 3-8m

Adjacent: Unchanged

#### Section P-Q

Aquatic: Ruppia cirrhosa  
Potamogeton pectinatus - particularly dense in sheltered bays  
Filamentous algae  
Enteromorpha

Gravel substrate with cobbles and boulders

Marginal: Exposed lichen covered bedrock and boulders with occasional Juncus maritimus  
and Schoenoplectus in small stands of <c.2m<sup>2</sup> among boulders

Adjacent: Unchanged

#### Section Q-R

Aquatic: Ruppia cirrhosa  
Potamogeton pectinatus  
Filamentous algae  
Enteromorpha  
Chara baltica

Marginal: Exposed lichen covered bedrock and boulders with occasional Juncus maritimus  
tussocks

Adjacent: Heath as A-B

#### Section R-S

Aquatic:    Unchanged

              Silt substrate with cobbles and boulders

Marginal:   Phragmites dominated swamp with frequent Schoenoplectus as Transect C.  
              10-15m

Adjacent:    Bog vegetation as G-H

#### Section S-T

Aquatic:    Species unchanged

              Gravel substrate with cobbles and boulders

Marginal:   As N-O

Adjacent:    Bog vegetation as G-H with heath as A-B

#### Section T-U

Aquatic:    Filamentous algae  
              Enteromorpha

Marginal:   Unvegetated boulder shore

Adjacent:    Unchanged

#### Section U-V

Aquatic:    Potamogeton pectinatus  
              Filamentous algae  
              Enteromorpha

Marginal:   Unchanged

Adjacent:    Unchanged

#### Section V-W

Aquatic: Potamogeton pectinatus  
Filamentous algae  
Enteromorpha  
Chara baltica

Marginal: Single species Schoenoplectus swamps - average area c.150m<sup>2</sup> - in sheltered bays between small promontories of exposed lichen covered bedrock

Adjacent: Unchanged

#### Section W-X

Aquatic: Ruppia cirrhosa  
Potamogeton pectinatus  
Enteromorpha

Marginal: As P-Q

Adjacent: Heath as A-B

#### Section X-Y

Aquatic: Unchanged

Marginal: Open cover of emergent Schoenoplectus, Phragmites and Juncus maritimus with occasional Schoenus nigricans tussocks. 5-8m

Adjacent: Bog vegetation as G-H

#### Section Y-Z

All as W-X

Section Z-AA

Aquatic:    Unchanged

Marginal:   Mixed Phragmites - Schoenoplectus swamp as Transect C. 6-8m

Adjacent:   Bog vegetation as G-H

Section AA-BB

Aquatic:    Ruppia cirrhosa  
              Potamogeton pectinatus  
              Enteromorpha  
              Fucus sp.

Marginal:   As P-Q

Adjacent:   Heath as A-B



Site: Lough Aconeera	Transect code: A	
Location: Outlet to sea	Sample point: 2 Aquatic - 5m out	
Sample area: 16m2 (4x4)	Substrate: Silt, cobbles	
Depth: 50 cm	Salinity: 14 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		20
Ruppia cirrhosa	40	20
Potamogeton pectinatus	25	< 1
Algae		80
Enteromorpha	20	80
Substrate		
Cobbles		80
Silt		20
Description: Ruppia (including plants in flower and fruit) growing up through extensive cover of Enteromorpha. Potamogeton pectinatus very sparse.		

Site: Lough Aconeera	Transect code: A	
Location: Outlet to sea	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt (de-oxygenated)	
Depth: 15 cm	Salinity: 14 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Schoenoplectus lacustris ssp tabernaemontani	60	50
Description: Open low growing single species Schoenoplectus swamp. 20m. Cover increasing to landward.		

Site: Lough Aconeera	Transect code: A	
Location: Outlet to sea	Sample point: 4 Marginal	
Sample area: 10m2 (10x1)	Substrate: Silt	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Juncus maritimus	70	85
Schoenoplectus lacustris ssp tabernaemontani	70	5
Glaux maritima	6	< 1
Triglochin maritima	10	< 1
Plantago maritima	8	< 1
Samolus valerandi	8	< 1
Chenopodium rubrum	6	< 1
Carex extensa	15	< 1
Description: Juncus maritimus dominant at dense cover with sparse salt tolerant associates in 1m strip.		
Backing Ulex gallii - Calluna vulgaris dominated heath with Erica cinerea, Daboecia cantabrica, Molinia caerulea.		



Site: Lough Aconeera	Transect code: B	
Location: Swamp associated with spring	Sample point: 2 Marginal	
Sample area: 20m2 (10x2)	Substrate: Silt, gravel, cobbles	
Depth: 80 cm	Salinity: 14 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Higher Plant		10
Phragmites australis	130	5
Potamogeton pectinatus	50	5
Ruppia cirrhosa	15	< 1
Algae		50
Filamentous algae		45
Enteromorpha	10	5
Substrate		
Silt and gravel		90
Cobbles		10
Description: Open Phragmites swamp. Substrate largely covered by mat of filamentous algae and decaying Phragmites material. Sparse low growing Ruppia and slightly more extensive, more developed Potamogeton pectinatus with Enteromorpha confined to cobbles. 3m.		



Site: Lough Aconeera	Transect code: B	
Location: Swamp associated with spring	Sample point: 4 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	300	90
Equisetum fluviatile	40	5
Lycopus europaeus	30	5
Mentha aquatica	30	< 1
Galium palustre	15	< 1
Description: Dense Phragmites bed on water-logged sloping ground (c.15 degrees) with sparse species-poor fen vegetation. 30m.		
Grading to spring flush vegetation dominated by Juncus effusus and Agrostis stolonifera with Iris psuedacorus, Mentha aquatica, Myosotis scorpioides, Lotus corniculatus, Galium palustre abundant.		

[illegible]





Site: Lough Aconeera	Transect code: D	
Location: Marginal swamp	Sample point: 1 Aquatic - 1m out - grapnel	
Sample area: Grapnel only	Substrate: Silt	
Depth: 1 m	Salinity: 14 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Chara baltica		
Filamentous algae		
Description:		

Site: Lough Aconeera	Transect code: D	
Location: Marginal swamp	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 5 - 40 cm	Salinity: 10 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Schoenoplectus lacustris ssp tabernaemontani	80	60
Description: Open, fairly low growing single species Schoenoplectus swamp. 15m.		

Site: Lough Aconeera	Transect code: D	
Location: Marginal swamp	Sample point: 3 Marginal	
Sample area: 50m2 (10x5 - whole stand)	Substrate: Silt and peat	
Depth: 0 - 5 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		45
Schoenoplectus lacustris ssp tabernaemontani	80	30
Hydrocotyle vulgaris	5	10
Anagallis tenella	1	< 5
Ranunculus flammula	30	< 1
Triglochin palustris	10	< 1
Potamogeton natans	5	< 1
Juncus articulatus	20	< 1
Eriophorum angustifolium	30	< 1
Eleocharis palustris	20	< 1
Eleogiton fluitans	5	< 1
Description: Open cover of Schoenoplectus dominant over sparse freshwater flush vegetation. 5m.		
Grading to Sphagnum spp - Molinia caerulea - Potentilla erecta wet heath vegetation.		

MILL LOUGH  
Co. Galway

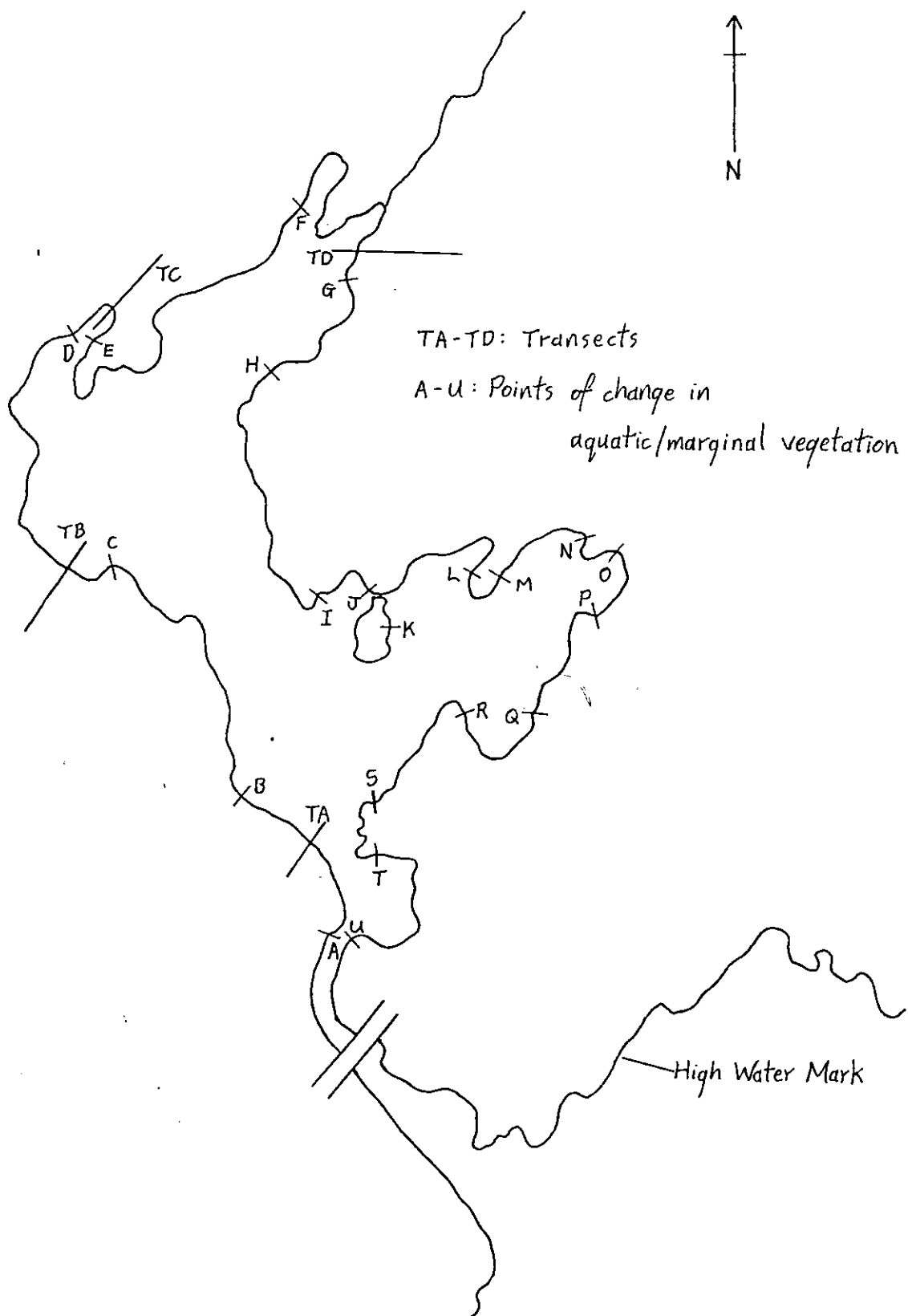
Site Description

This is a rocky site set in a 'rolling' landscape of low hills. The area surrounding the lagoon is largely dominated by heath vegetation with frequent rock outcrops and is subject to grazing. A fairly extensive area of *Juncus maritimus* dominated vegetation lies to the north east of the lough.

The shores are largely exposed bedrock and boulders with occasional peat shores of shallow slope.

The major freshwater inflow enters the lagoon to the north east. Open *Phragmites* swamps occur here and in bays and other more or less sheltered areas in the north west and east. These are nowhere extensive.

The outlet to the sea joins the lough at its southern tip, passing beneath a road bridge which runs close to the south eastern shore.



Mill Lough, Co. Galway: Location of Transects and Shore-based Survey Sections

## MILL LOUGH

### Shore-based survey

#### Section A-B (Transect A)

Aquatic: Enteromorpha - extensive  
Filamentous algae - sparse  
Fucus sp. - patchy

Gravel substrate with cobbles and boulders

Marginal: Open cover of low Juncus maritimus tussocks over salt tolerant species  
dominated by Juncus gerardii and Agrostis stolonifera on peat substrate. 3-15m  
Grazed and poached

Adjacent: Ulex gallii - Molinia caerulea - Potentilla erecta heath with frequent Daboecia  
cantabrica

#### Section B-C

Aquatic: Ruppia cirrhosa  
Enteromorpha  
Filamentous algae  
Fucus sp.

Marginal: Unchanged

Adjacent: Unchanged

#### Section C-D (Transect B)

Aquatic: *Ruppia cirrhosa* - sparse, low growing  
*Enteromorpha* - extensive mat, free floating  
Filamentous algae - patchy

Silt substrate

Marginal: Dense *Phragmites* swamp with sparse *Ruppia* and free floating filamentous algae.  
5-10m  
Grading to species-poor salt tolerant community with fairly dense cover of *Juncus maritimus* tussocks and patchy *Agrostis stolonifera* dominant below. 5-100m.  
Grazed and poached

Adjacent: Unchanged

#### Section D-E (Transect C)

Aquatic: *Ruppia cirrhosa* - sparse, low growing  
*Enteromorpha* - extensive, free floating

Marginal: Open *Phragmites* dominated swamp with frequent *Schoenoplectus lacustris* ssp *tabernaemontani*. 4 -5m  
Grading to open cover of *Schoenoplectus* and *Juncus maritimus* with *Eleocharis palustris* and *Agrostis stolonifera* co-dominant below among salt tolerant species. c.20m

Adjacent: *Iris pseudacorus* dominated flush community with frequent *Juncus effusus*, *Mentha aquatica*, *Filipendula ulmaria* and *Lotus corniculatus*.

#### Section E-F

Aquatic: *Ruppia cirrhosa*  
Filamentous algae

Gravel substrate with cobbles and boulders

Marginal: Exposed bedrock and boulder shore with crustose, foliose and fruticose lichens.  
Occasional small patches of *Juncus maritimus* salt tolerant community as  
Transect A

Adjacent: Heath as A-B

#### Section F-G (Transect D)

Aquatic: *Ruppia cirrhosa* - sparse  
Filamentous algae - extensive

Silt substrate with cobbles

Marginal: Sparse *Phragmites* swamp growing through dense filamentous algae cover with sparse *Ruppia* in sheltered bays.  
Backing to *Juncus maritimus* salt tolerant community. c.10m at bayheads, c.200m east of freshwater inflow, 1-2m strip elsewhere

Adjacent: Bog vegetation at bayheads. Dominant species *Molinia caerulea*, *Schoenus nigricans*, *Myrica gale*, *Sphagnum* spp.  
Heath as A-B elsewhere

#### Section G-H

As E-F

#### Section H-I

Aquatic: *Ruppia cirrhosa*  
Filamentous algae  
*Fucus* sp.

Marginal: Unchanged

Adjacent: Unchanged

#### Section I-J

Aquatic: *Ruppia cirrhosa*  
Filamentous algae

Marginal: *Juncus maritimus* dominated salt tolerant community as Transect A. 1-5m

Adjacent: Unchanged

#### Section J-K

Aquatic: Ruppia cirrhosa  
Filamentous algae  
Fucus sp.

Marginal: As E-F

Adjacent: Unchanged

#### Section K-L

Aquatic: Ruppia cirrhosa  
Filamentous algae

Marginal: As I-J with occasional boulders and exposed bedrock

Adjacent: Unchanged

#### Section L-M

Aquatic: Ruppia cirrhosa  
Filamentous algae  
Fucus sp.

Marginal: Exposed bedrock shore with crustose, foliose and fruticose lichens

Adjacent: Unchanged

#### Section M-N

Aquatic: Ruppia cirrhosa  
Filamentous algae

Marginal: Juncus maritimus dominated salt tolerant community as Transect D. c.150-200m

Adjacent: Unchanged

#### Section N-O

As E-F

#### Section O-P

Aquatic: Unchanged

Marginal: Open Phragmites swamp with sparse low growing Ruppia. 15-20m  
Backing to Juncus maritimus dominated community as Transect D. 5-15m

Adjacent: Dry stone wall  
Public road

#### Section P-Q

Aquatic: Ruppia cirrhosa  
Filamentous algae  
Fucus sp. - sparse

Marginal: Juncus maritimus strip - 1-4m - almost continuous with scattered lichen covered  
boulders and bedrock outcrops forming shore in places.

Adjacent: Heath as A-B

#### Section Q-R

Aquatic: Unchanged

Marginal: Open single species Phragmites swamp. 10-15m  
Backing to Juncus maritimus dominated community as Transect D. 3-c.50m

Adjacent: Unchanged

### Section R-S

Aquatic: Species unchanged  
Fucus now more extensive

Marginal: As P-Q

Adjacent: Unchanged

### Section S-T

Aquatic: Filamentous algae  
Enteromorpha  
Fucus sp.

Marginal: Unchanged

Adjacent: Unchanged

### Section T-U

Aquatic: Ruppia cirrhosa  
Filamentous algae  
Enteromorpha  
Fucus sp.

Marginal: Unchanged

Adjacent: Unchanged

[illegible]

Site: Mill Lough	Transect code: A	
Location: Outlet to sea	Sample point: 2 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		75
Juncus maritimus	50	50
Juncus gerardii	25	10
Agrostis stolonifera	10	10
Glaux maritima	6	5
Aster tripolium	15	< 5
Triglochin maritima	15	< 1
Plantago maritima	10	< 1
Leontodon autumnalis	15	< 1
Description: Open cover of low Juncus maritimus tussocks over salt-tolerant community dominated by Juncus gerardii and Agrostis stolonifera. 10m. Poached and grazed.		
Grading to Ulex gallii - Molinia caerulea - Potentilla erecta heath with Daboecia cantabrica.		

Site: Mill Lough	Transect code: B	
Location: Marginal swamp	Sample point: 1 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Silt	
Depth: 50 cm	Salinity: 21 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		< 1
Ruppia cirrhosa	20	< 1
Algae		100
Enteromorpha		80
Filamentous algae		20
Description: A mat of free floating algae with very sparse, mostly low growing Ruppia.		
Several Ruppia plants in flower and fruit.		

Site: Mill Lough	Transect code: B	
Location: Marginal swamp	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 0 - 15 cm	Salinity: 20 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		90
Phragmites australis	160	90
Ruppia cirrhosa	10	< 5
Algae		30
Filamentous algae		30
Description: Dense Phragmites swamp with sparse low growing Ruppia and free floating algae 10m.		

Site: Mill Lough	Transect code: B	
Location: Marginal swamp	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Juncus maritimus	60	70
Phragmites australis	40	5
Agrostis stolonifera	20	10
Puccinellia maritima	10	< 5
Aster tripolium	20	< 5
Glaux maritima	8	< 5
Triglochin maritima	10	< 1
Plantago maritima	8	< 1
Description: Juncus maritimus dominant over species-poor salt tolerant vegetation. 100m.		
Grazed. Substrate poached and water-logged.		
Grading to Ulex gallii - Molinia caerulea - Potentilla erecta heath.		

Site: Mill Lough	Transect code: C	
Location: Swamp associated with spring	Sample point: 1 Aquatic - 3m out	
Sample area: 16m2 (4x4)	Substrate: Silt	
Depth: 45 cm	Salinity: 16 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Higher Plant		< 5
Ruppia cirrhosa	20	< 5
Algae		100
Enteromorpha		100
Description: Sparse low growing Ruppia with extensive cover of free floating Emteromorpha		



Site: Mill Lough	Transect code: C	
Location: Swamp associated with spring	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Schoenoplectus lacustris ssp tabernaemontani	60	25
Juncus maritimus	50	25
Eleocharis palustris	30	20
Agrostis stolonifera	15	20
Juncus gerardii	20	5
Glaux maritima	8	5
Cochlearia anglica	6	< 1
Triglochin maritima	15	< 1
Plantago maritima	10	< 1
Samolus valerandi	10	< 1
Carex otrubae	40	< 1
Description: Open cover of Schoenoplectus and Juncus maritimus with Eleocharis and Agrostis co-dominant below among salt tolerant species. 20m.		
Grading to Iris pseudacorus dominated community with frequent Juncus effusus, Mentha aquatica, Filipendula ulmaria, Lotus corniculatus.		

[illegible]

Site: Mill Lough	Transect code: D	
Location: Freshwater inflow	Sample point: 2 Marginal	
Sample area: 20m2 (10x2)	Substrate: Silt	
Depth: 20 - 50 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Phragmites australis	150	60
Description: Open single species Phragmites swamp. 3m.		
Backing 50cm peat cliff.		

Site: Mill Lough	Transect code: D	
Location: Freshwater inflow	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Juncus maritimus	60	50
Schoenus nigricans	40	20
Agrostis stolonifera	15	15
Juncus gerardii	15	10
Festuca rubra	15	5
Glaux maritima	8	< 5
Plantago maritima	10	< 1
Leontodon autumnalis	20	< 1
Samolus valerandi	8	< 1
Carex extensa	15	< 1
Description: Open cover of Juncus maritimus tussocks with Schoenus nigricans locally co-dominant. Patchy cover of Agrostis stolonifera and Juncus gerardii among ground layer of otherwise sparse salt tolerant species. c.200m.		
Backing to Ulex gallii - Molinia caerulea - Potentilla erecta heath		

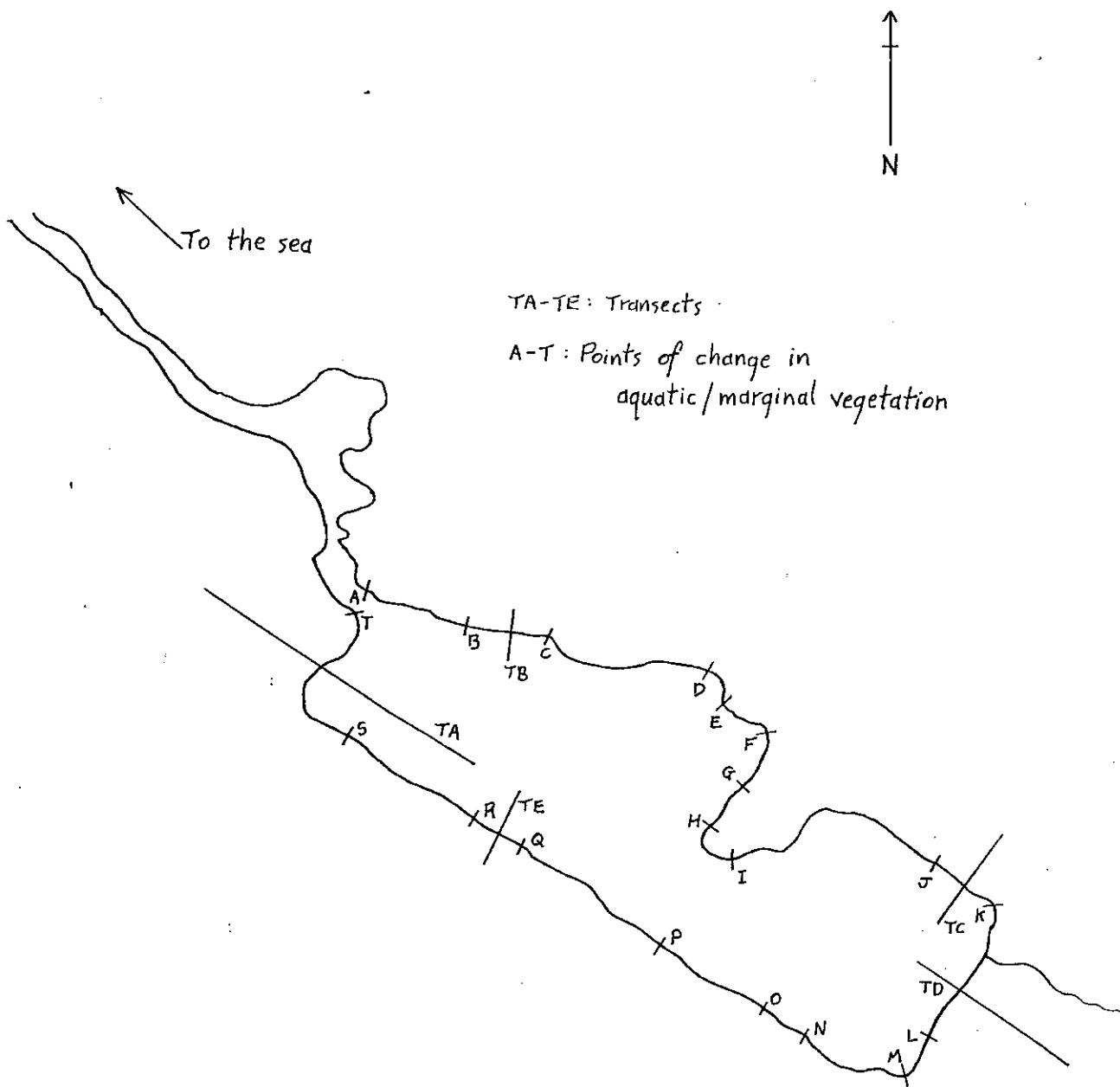
CORRAGAUN LOUGH  
Co. Mayo

Site Description

This fairly small, sandy lagoon lies in a narrow valley of heath, grassland and frequent rock outcrops. Grazed *Nardus stricta* grassland borders the site to the north and east, wet *Molinia caerulea* grassland, flushes and heathy outcrops to the south and saltmarsh on low-lying sandy ground to the west. A narrow band of hazel scrub runs across part of the southern slopes.

Most of the shore is either low peat cliff or exposed bedrock with marginal areas typically narrow. Swamp vegetation occurs at the eastern end of the lough, where it is associated with the main freshwater inflow and at one part of the north central shore where a smaller inflow emerges.

The saltmarsh at the western end also borders the outlet to the sea, which joins the lough here.



Corragaun Lough, Co. Mayo: Location of Transects and Shore-based Survey Sections

## CORRAGAUN LOUGH

### Shore-based survey

#### Section A-B

- Aquatic: Enteromorpha only - sparse  
Sand substrate
- Marginal: Exposed bedrock with crustose lichens  
Occasional peat cliff - average height 40cm - with Juncus maritimus patches
- Adjacent: Nardus stricta grassland - grazed

#### Section B-C (Transect B)

- Aquatic: Ruppia c.f. maritima - low growing - patchy cover  
Enteromorpha - free floating - sparse  
Filamentous algae - free floating - sparse
- Marginal: Peat cliff - average height 1m
- Adjacent: Juncus maritimus - Festuca rubra - Agrostis stolonifera community with  
salt tolerant species. 30-40m  
Backing Nardus stricta grassland as A-B

#### Section C-D

- Aquatic: Unchanged
- Marginal: Peat cliff - average height 50cm
- Adjacent: Nardus stricta grassland as A-B

#### Section D-E

Aquatic: Unchanged

Marginal: *Schoenoplectus lacustris* ssp *tabernaemontani* swamp with occasional  
*Scirpus maritimus* and *Phragmites* shoots. 15m  
Backing *Puccinellia maritima* dominated saltmarsh to c.30m

Adjacent: Unchanged

#### Section E-F

Aquatic: Unchanged

Marginal: Exposed bedrock with crustose lichens

Adjacent: Unchanged

#### Section F-G

Aquatic: Unchanged

Marginal: *Scirpus maritimus* swamp with occasional *Schoenoplectus lacustris* ssp  
*tabernaemontani* and *Phragmites* shoots. c.20m  
Backing peat cliff - average height 50cm

Adjacent: Backing *Juncus maritimus* - *Festuca rubra* - *Agrostis stolonifera* community on  
promontory  
Grading to *Nardus stricta* grassland as before

#### Section G-H

Aquatic: Unchanged

Marginal: Peat cliff - average height 1m

Adjacent: Backing *Juncus maritimus* community as before  
Grading to *Nardus stricta* grassland as before

Section H-I

Aquatic: Unchanged

Marginal: Exposed bedrock with crustose lichens

Adjacent: *Calluna vulgaris* - *Erica cinerea* dominated heath on rocky outcrop  
Backing *Juncus maritimus* community as before  
Grading to *Nardus stricta* grassland as before

Section I-J

Aquatic: Unchanged

Marginal: Peat cliff - average height 50cm

Adjacent: *Juncus maritimus* community as before  
Grading to *Nardus stricta* grassland as before

Section J-K (Transect C)

Aquatic: Unchanged

Marginal: Swamp vegetation with *Scirpus maritimus* and *Schoenoplectus lacustris* ssp  
*tabernaemontani* each locally dominant with occasional *Phragmites* shoots. c.30m  
Backing peat cliff - average height 40cm

Adjacent: Unchanged

#### Section K-L (Transect D)

Aquatic: Unchanged

Marginal: *Phragmites australis* single species swamp. c.50m  
Grading to *Scirpus maritimus* dominated swamp with frequent *Phragmites*.  
c.100m  
Grading to *Schoenoplectus lacustris* ssp *tabernaemontani* swamp with frequent  
*Scirpus maritimus* and *Phragmites*. c.20m

Adjacent: *Molinia caerulea* dominated flush vegetation with frequent *Myrica gale*, *Potentilla erecta*, *Ranunculus acris*.  
Grading to *Nardus stricta* grassland as before

#### Section L-M

Aquatic: Unchanged

Marginal: *Phragmites australis* single species swamp. c.30m

Adjacent: *Agrostis stolonifera* - *Festuca rubra* - *Plantago coronopus* grassland  
Grading to *Nardus stricta* grassland as before

#### Section M-N

Aquatic: *Enteromorpha*  
Filamentous algae

Marginal: *Juncus maritimus* community as before. c.20m

Adjacent: *Nardus stricta* grassland as before

#### Section N-O

Aquatic: Unchanged

Marginal: Swamp with *Scirpus maritimus* and *Schoenoplectus lacustris* ssp *tabernaemontani*  
each locally dominant. 5-20m

Adjacent: Unchanged

#### Section O-P

Aquatic: Unchanged

Marginal: Peat cliff c. 70cm

Adjacent: *Juncus maritimus* community. 1-2m  
Grading to flush vegetation dominated by *Molinia caerulea* with frequent *Myrica*  
*gale*, *Schoenus nigricans*, *Potentilla erecta*, *Succissa pratensis*, *Narthecium*  
*ossifragum*

#### Section P-Q

Aquatic: *Ruppia* c.f. *maritima*  
*Enteromorpha*  
Filamentous algae

Marginal: Exposed bedrock with crustose lichens

Adjacent: Flush vegetation as O-P with occasional patches of *Calluna vulgaris* dominated  
heath on drier ground. 30-50m  
Backing *Corylus avellana* scrub. c. 50m

#### Section Q-R (Transect E)

Aquatic: Unchanged

Marginal: Open *Eleocharis palustris* dominated community with salt tolerant species on  
stony shore. 4m

Adjacent: Unchanged

#### Section R-S

As P-Q

Section S-T (Transect A)

Aquatic:    Unchanged

Marginal:   Saltmarsh dominated by *Puccinellia maritima* and *Glaux maritima*. c. 500m

Adjacent:   *Ammophila arenaria* dune grassland (barrier)

Site: Corragaun Lough	Transect code: A	
Location: Saltmarsh bordering outlet to sea	Sample point: 1 Aquatic - 150m out	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 40 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Higher Plant		40
Ruppia c.f. maritima	6	40
Algae		10
Enteromorpha		10
Description: Low growing Ruppia dominant with frequent free-floating Enteromorpha. Same species at more or less constant cover from 60m - 150m out.		



[illegible]

Site: Corragaun Lough		Transect code: A	
Location: Saltmarsh bordering outlet to sea		Sample point: 4 Marginal	
Sample area: 100m2 (10x10)		Substrate: Sand	
Depth: 0 cm		Salinity: -----	
NVC community:			
	Height (cm)	Cover (%)	
Total Plant		20	
Puccinellia maritima	3	10	
Glaux maritima	3	10	
Description: Open patchy cover of Puccinellia and Glaux on sandflat. c.100m			

Site: Corragaun Lough	Transect code: A	
Location: Saltmarsh bordering outlet to sea	Sample point: 5 Marginal	
Sample area: 100m2 (10x10)	Substrate: Sand	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Puccinellia maritima	3	20
Glaux maritima	4	20
Agrostis stolonifera	6	5
Plantago coronopus	4	5
Plantago maritima	5	< 1
Description: Puccinellia - Glaux dominated species-poor saltmarsh vegetation. c.400m.		
Cover increasing to landward. Grading to Ammophila arenaria dune grassland ( barrier ).		

Site: Corragoun Lough		Transect code: B	
Location: Peat cliff shore		Sample point: 1 Aquatic - 20m out	
Sample area: 16m <sup>2</sup> (4x4)		Substrate: Sandy and silt	
Depth: 20 cm		Salinity: 4 parts per thousand	
NVC community:			
	Height (cm)	Cover (%)	
Total Plant		50	
Higher Plant		40	
Ruppia c.f. maritima	6	40	
Algae		10	
Enteromorpha		10	
Description: Low growing Ruppia dominant. Some plants in flower and fruit. Enteromorpha free-floating only.			

Site: Corragoun Lough	Transect code: B	
Location: Peat cliff shore	Sample point: 2 Aquatic - 5m out	
Sample area: 16m2 (4x4)	Substrate: Sand, cobbles	
Depth: 20 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Filamentous algae		70
Enteromorpha	15	30
Substrate		
Sand		90
Cobbles		10
Description: Filamentous algae dominant with Enteromorpha confined to scattered cobbles.		
No higher plant species.		
Backing 60cm peat cliff.		

Site: Corragaun Lough	Transect code: B	
Location: Peat cliff shore	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	70	90
Festuca rubra	30	50
Agrostis stolonifera	30	40
Leontodon autumnalis	15	5
Glaux maritima	10	< 1
Cochlearia anglica	4	< 1
Description: Dense cover of Juncus maritimus tussocks with Agrostis stolonifera and Festuca rubra co-dominant in species-poor salt-tolerant community. 40m.		
Grading to Nardus stricta grassland with frequent rock outcrops. Grazed.		

Site: Corragaun Lough	Transect code: C	
Location: Marginal swamp	Sample point: 1 Aquatic - 1m out - grapnel	
Sample area: Grapnel only	Substrate: Peaty silt	
Depth: 40 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia c.f. maritima		
Enteromorpha		
Filamentous algae		
Description:		

Site: Corragaun Lough	Transect code: C	
Location: Marginak swamp	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peaty silt	
Depth: 30 - 40 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		65
Schoenoplectus lacustris ssp tabernaemontani	100	60
Phragmites australis	80	5
Description: Open Schoenoplectus lacustris swamp with sparse Phragmites shoots. 10m.		

Site: Corragaun Lough	Transect code: C	
Location: Marginal swamp	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peaty silt	
Depth: 10 - 30 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Scirpus maritimus	70	100
Phragmites australis	80	< 1
Description: Dense Scirpus maritimus swamp with sparse Phragmites shoots. 16m. Backing 40cm peat cliff.		

Site: Corragaun Lough	Transect code: C	
Location: Marginal swamps	Sample point: 4 Marginal	
Sample area: 16m2 (4x4)	Substrate: Peat	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus maritimus	120	75
Festuca rubra	30	50
Agrostis stolonifera	30	30
Leontodon autumnalis	20	< 5
Glaux maritima	15	< 5
Cochlearia anglica	6	< 1
Triglochin maritima	15	< 1
Samolus valerandi	15	< 1
Plantago lanceolata	15	< 1
Hydrocotyle vulgaris	3	< 1
Description: Tall, fairly dense cover of Juncus maritimus with Festuca rubra and Agrostis stolonifera co-dominant. 70m.		
Grading to Nardus stricta grassland with frequent rock outcrops. Grazed.		

Site: Corragaun Lough	Transect code: D	
Location: Freshwater inflow	Sample point: 1 Aquatic - 1m out - grapnel	
Sample area: Grapnel only	Substrate: Peaty silt	
Depth: 60 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia c.f. maritima		
Enteromorpha		
Filamentous algae		
Description:		

Site: Corragaun Lough	Transect code: D	
Location: Freshwater inflow	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 50 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		70
Phragmites australis	180	70
Description: Fairly dense single species Phragmites swamp. 60m.		

Site: Corragaun Lough	Transect code: D	
Location: Freshwater inflow	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Scirpus maritimus	70	75
Phragmites australis	100	20
Agrostis stolonifera	30	40
Festuca rubra	30	25
Cochlearia anglica	10	< 5
Leontodon autumnalis	20	< 1
Glaux maritima	15	< 1
Samolus valerandi	15	< 1
Bare peat		10
Description: Scirpus maritimus dominant amongst open, low growing Phragmites cover with open ground cover of salt tolerant species dominated by Agrostis stolonifera and Festuca rubra. 30m.		

Site: Corragaun Lough	Transect code: D	
Location: Freshwater inflow	Sample point: 4 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 15 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Scirpus maritimus	80	90
Phragmites australis	100	5
Agrostis stolonifera	30	< 1
Description: Fairly dense Scirpus maritimus swamp with low growing, sparse Phragmites cover. 80m.		

Site: Corragaun Lough	Transect code: D	
Location: Freshwater inflow	Sample point: 5 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 10 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Schoenoplectus lacustris ssp tabernaemontani	100	50
Scirpus maritimus	50	10
Phragmites australis	80	5
Agrostis stolonifera	30	60
Glaux maritima	15	< 1
Description: Open low growing swamp vegetation with Schoenoplectus dominant amongst the tall emergents and Agrostis stolonifera forming a fairly open mat below. 20m.		

Site: Corragaun Lough	Transect code: D	
Location: Freshwater inflow	Sample point: 6 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Molinia caerulea	100	90
Myrica gale	40	5
Potentilla erecta	15	< 5
Ranunculus acris	15	< 5
Iris psuedacorus	130	< 1
Angelica sylvestris	100	< 1
Filipendula ulmaria	40	< 1
Mentha aquatica	30	< 1
Galium palustre	15	< 1
Description: Dense cover of Molinia tussocks with sparse freshwater flush vegetation. c.100m		
Grading to Nardus stricta grassland with frequent rock outcrops. Grazed.		

Site: Corragaun Lough	Transect code: E	
Location: Open shore	Sample point: 1 Aquatic - 70m out - grapnel	
Sample area: Grapnel only	Substrate: Silt and sand	
Depth: 40 cm +	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia c.f. maritima		
Enteromorpha		
Description:		

Site: Corragaun Lough	Transect code: E	
Location: Open shore	Sample point: 2 Aquatic - 50m out	
Sample area: 16m2 (4x4)	Substrate: Silt and sand	
Depth: 30 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Enteromorpha		95
Description: Dense cover of Enteromorpha only. Same species at more or less same cover 20 - 70m out.		

Site: Corragoun Lough	Transect code: E	
Location: Open shore	Sample point: 3 Aquatic - 15m out	
Sample area: 16m2 (4x4)	Substrate: Silt and sand	
Depth: 30 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		40
Higher Plant		20
Ruppia c.f. maritima	6	20
Algae		20
Enteromorpha	20	20
Description: Low -growing Ruppia co-dominant with Enteromorpha. Same species at more or less same cover 8 - 20m out.		

Site: Corragaun Lough	Transect code: E	
Location: Open shore	Sample point: 4 Aquatic - 5m out	
Sample area: 16m2 (4x4)	Substrate: Silt and sand	
Depth: 0 - 15 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Enteromorpha	15	100
Description: Dense Enteromorpha only. 0 - 8m out.		

Site: Corragaun Lough	Transect code: E	
Location: Open shore	Sample point: 5 Marginal	
Sample area: 16m2 (4x4)	Substrate: Gravel, cobbles, boulders	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		20
Eleocharis palustris	20	5
Puccinellia maritima	10	5
Agrostis stolonifera	10	5
Glaux maritima	8	5
Spergularia marina	5	< 1
Triglochin palustris	8	< 1
Plantago coronopus	5	< 1
Plantago maritimus	8	< 1
Cochlearia anglica	6	< 1
Isolepes cernua	6	< 1
Bare substrate		80
Gravel		70
Cobbles		10
Boulders		< 1
Description: Sparse shore community dominated by Eleocharis, Puccinellia and Agrostis stolonifera. 4m.		
Backing 45 degree slope with wet heath vegetation dominated by Schoenus nigricans, Molinia caerulea, Calluna vulgaris, Potentilla erecta with Erica tetralix, Succisa pratensis, Narthecium ossifragum, Myrica gale.		

## ROONAH LOUGH

Co. Mayo

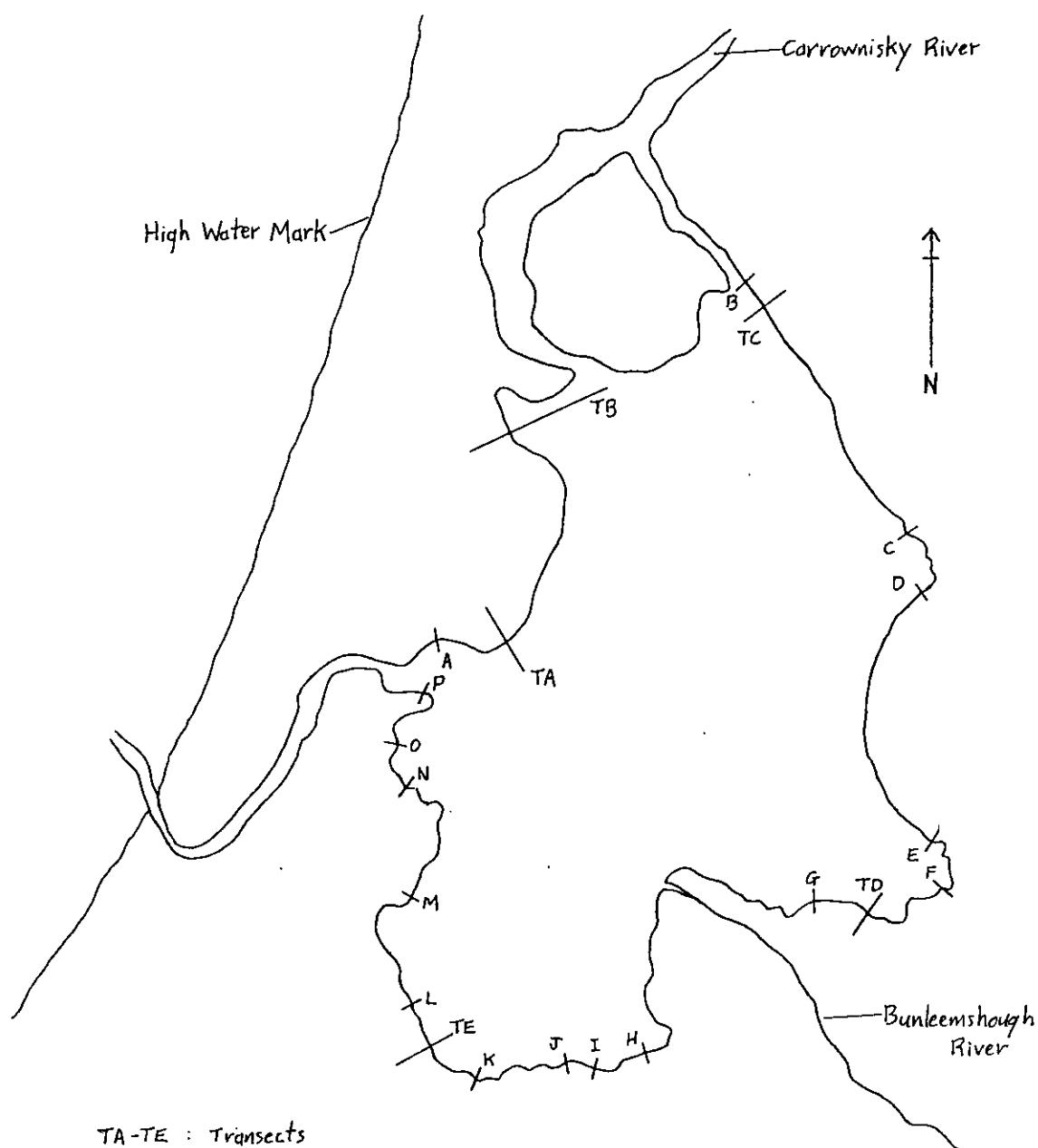
### Site Description

Roonah Lough is a shallow sandy lagoon set in a fairly low-lying landscape. Pastoral farmland borders the lough to the north, south and east. The sea lies beyond low dune grassland to the west.

The Carrownisky River is the main freshwater inflow, approaching from the east and discharging into the lagoon at two points at its northern end. A smaller stream, the Bunleemshough River, flows in from the south east. Several ditches drain into the lough from surrounding farmland.

Much of the shoreline is low earth cliff, backing along the eastern shores to a narrow strip of wet rush and Iris grassland. Scirpus and Schoenoplectus swamp vegetation is confined to fairly sheltered areas of the south and south east shores.

The outlet channel runs from about mid-way along the western shore.



TA-TE : Transects

A-P : Points of change in aquatic/marginal vegetation

Roonah Lough, Co. Mayo: Location of Transects and  
Shore-based Survey Sections

## ROONAH LOUGH

### Shore-based survey

#### Section A-B (Transects A and B)

Aquatic: Filamentous algae only - sparse

Sandy substrate

Marginal: *Eleocharis palustris* - *Agrostis stolonifera* dominated community. 10-c.80m

Adjacent: Dune grassland dominated by *Festuca rubra*, *Trifolium repens*, *Plantago lanceolata*, *Lotus corniculatus*

#### Section B-C (Transect C)

Aquatic: *Ruppia maritima* - sparse  
*Chara globularis* var. *virgata* - sparse  
Filamentous algae - sparse

Marginal: 50cm earth cliff

Adjacent: *Agrostis stolonifera* - *Potentilla anserina* grassland. 10m  
Grading to *Lolium perenne* - *Holcus lanatus* - *Cynosaurus cristatus* pasture

#### Section C-D

Aquatic: Unchanged

Marginal: *Eleocharis palustris* - *Agrostis stolonifera* dominated community. 5-10m

Adjacent: *Iris psuedacorus* - *Juncus effusus* dominant with frequent *Filipendula ulmaria*,  
*Rorippa nasturtium-aquaticum*, *Hydrocotyle vulgaris*  
Grading to pasture as B-C

#### Section D-E

- Aquatic: *Ruppia maritima*  
*Chara globularis* var. *virgata*  
*Chara globularis* var. *annulata*  
Filamentous algae - all sparse
- Marginal: 50cm earth cliff
- Adjacent: *Agrostis stolonifera* - *Potentilla anserina* grassland. 3-5m  
Grading to *Iris* community and pasture as C-D

#### Section E-F

- Aquatic: *Ruppia maritima* - sparse  
Filamentous algae - sparse
- Gravel and cobble substrate
- Marginal: *Scirpus maritimus* single species swamp. 20x15m  
Backing *Eleocharis palustris* swamp. 20x5m.
- Adjacent: *Agrostis stolonifera* - *Potentilla anserina* grassland with *Juncus effusus*  
Grading as D-E

#### Section F-G

- Aquatic: Species unchanged
- Silt substrate
- Marginal: *Schoenoplectus lacustris* ssp *tabernaemontani* and *Eleocharis palustris* swamps.  
Maximum area c.200m<sup>2</sup>  
50cm earth cliff
- Adjacent: *Agrostis stolonifera* - *Potentilla anserina* grassland  
Grading to pasture as B-C

#### Section G-H

- Aquatic: Species unchanged  
Sand substrate
- Marginal: 50cm earth cliff  
Occasional *Schoenoplectus* and *Eleocharis palustris* swamps  
(maximum area c.25m<sup>2</sup>)
- Adjacent: *Agrostis stolonifera* - *Potentilla anserina* grassland  
Grading to *Iris pseudacorus* - *Juncus effusus* grassland  
Grading to pasture as B-C

#### Section H-I

- Aquatic: Unchanged
- Marginal: *Eleocharis* swamp. 25x10m
- Adjacent: Unchanged

#### Section I-J

- Aquatic: Unchanged
- Marginal: *Schoenoplectus* single species swamp. 25x15m
- Adjacent: Unchanged

#### Section J-K

- Aquatic: Unchanged
- Marginal: 50cm earth cliff
- Adjacent: Unchanged

### Section K-L

- Aquatic: *Ruppia maritima*  
*Enteromorpha*  
Filamentous algae
- Marginal: *Scirpus maritimus* and *Schoenoplectus lacustris* ssp *tabernaemontani* single  
species swamps. Average 30m  
Backing low peat cliff (average c.30cm)
- Adjacent: *Holcus lanatus* - *Cynosaurus cristatus* - *Potentilla anserina* - *Juncus effusus*  
grassland. Average 8m  
Grading to *Molinia caerulea* - *Nardus stricta* grassland

### Section L-M

- Aquatic: Unchanged
- Marginal: 70cm earth cliff
- Adjacent: *Agrostis stolonifera* - *Potentilla anserina* grassland

### Section M-N

- Aquatic: Filamentous algae only
- Marginal: *Eleocharis palustris* - *Agrostis stolonifera* community almost continuous. 1-5m  
Backing 50cm earth cliff
- Adjacent: Unchanged

Section N-O

Aquatic: Unchanged

Marginal: As M-N with occasional *Scirpus maritimus* shoots. 5-30m

Adjacent: Dune grassland dominated by *Festuca rubra*, *Trifolium repens*, *Plantago lanceolata*, *Lotus corniculatus*

Section O-P

Aquatic: Unchanged

Marginal: Open *Agrostis stolonifera* - *Glaux maritima* community. 2-5m

Adjacent: Unchanged

Site: Roonah Lough	Transect code: A	
Location: Outlet to sea	Sample point: 1 Aquatic - grapnel from shore	
Sample area: Grapnel only	Substrate: Sand	
Depth: 50 cm +	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Filamentous algae		
Description: Filamentous algae only.		



Site: Roonah Lough	Transect code: B	
Location: Freshwater inflow	Sample point: 1 Aquatic 0-30m out - grapnel	
Sample area: Grapnel only	Substrate: Silt	
Depth: 50 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Filamentous algae		
Description: Sparse filamentous algae the only aquatic species from 0 - 30m out.		

Site: Roonah Lough	Transect code: B	
Location: Freshwater inflow	Sample point: 2 Marginal	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: 20 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Eleocharis palustris	40	50
Agrostis stolonifera	30	50
Glaux maritima	15	5
Juncus articulatus	30	< 1
Description: Dense cover of Eleocharis and Agrostis co-dominant in species-poor community.		
20m. Flooded at time of survey.		

Site: Roonah Lough	Transect code: B	
Location: Freshwater inflow	Sample point: 3 Marginal	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Eleocharis palustris	40	50
Agrostis stolonifera	30	25
Potentilla anserina	10	5
Trifolium repens	6	5
Scirpus maritimus	30	< 5
Glaux maritima	10	< 5
Ranunculus acris	10	< 5
Rorippa nasturtium-aquaticum	20	< 5
Hydrocotyle vulgaris	6	< 5
Galium palustre	15	< 5
Leontodon autumnalis	30	< 5
Juncus articulatus	30	< 5
Description: Eleocharis - Agrostis dominated community with occasional low growing Scirpus maritimus shoots. Complete ground cover. 50m.		
Grading to dune grassland with Festuca rubra, Trifolium repens, Plantago lanceolata, Lotus corniculatus dominant.		

Site: Roonah Lough	Transect code: C	
Location: Freshwater inflow - cliff shore	Sample point: 1 Aquatic - 10m out	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: 50 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		< 1
Higher Plant		< 1
Ruppia maritima	8	< 1
Algae		< 1
Chara globularis var. virgata	7	< 1
Description: Very sparse cover of Ruppia and Chara globularis.		
Backing earth cliff - height 50 cm.		
Backing Agrostis stolonifera - Potentilla anserina - Juncus articulatus		
grassland. 10m.		
Grading to Lolium perenne - Holcus lanatus - Cynosaurus cristatus pasture.		

Site: Roonah Lough	Transect code: D	
Location: Marginal swamps	Sample point: 1 Aquatic - 5m out - grapnel	
Sample area: Grapnel only	Substrate: Silt	
Depth: 80 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia maritima		
Filamentous algae		
Description:		

Site: Roonah Lough	Transect code: D	
Location: Marginal swamps	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 70 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		25
Schoenoplectus lacustris ssp tabernaemontani	130	25
Description: Open single species Schoenoplectus lacustris swamp. 10m.		

Site: Roonah Lough	Transect code: D	
Location: Marginal swamps	Sample point: 3 Marginal	
Sample area: 60m2 (20x3 - whole stand)	Substrate: Silt	
Depth: 50 cm	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		30
Eleocharis palustris	70	30
Agrostis stolonifera	40	< 1
Juncus articulatus	60	< 1
Description: Open cover of tall Eleocharis dominated species-poor vegetation. 3m.		
Backing earth cliff - height 50 cm.		
Backing Agrostis stolonifera - Potentilla anserina - Juncus articulatus		
community. 3m.		
Grading to Lolium perenne - Holcus lanatus - Cynosuarus cristatus pasture.		

Site: Roonah Lough	Transect code: E	
Location: Marginal swamp	Sample point: 1 Aquatic - 1m out - grapnel	
Sample area: Grapnel only	Substrate: Not known	
Depth: 80 cm +	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia maritima		
Enteromorpha		
Filamentous algae		
Description:		

Site: Roonah Lough	Transect code: E	
Location: Marginal swamp	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peaty silt	
Depth: 50 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Scirpus maritimus	130	100
Description: Dense single species Scirpus maritimus swamp. 30m.		

Site: Roonah Lough	Transect code: E	
Location: Marginal swamp	Sample point: 3 Marginal	
Sample area: 40m2 (40x1 - whole stand)	Substrate: Peaty silt	
Depth: 30 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Scirpus maritimus	100	60
Agrostis stolonifera	30	20
Description: 1m strip Scirpus maritimus swamp with more open cover and Agrostis stolonifera now present.		
Backing 30cm peat cliff.		
Backing Holcus lanatus - Cynosaurus cristatus - Potentilla anserina - Juncus effusus grassland. 7m.		
Grading to Nardus stricta grassland with Molinia caerulea, Eriophorum angustifolium, Succisa pratensis, Mentha aquatica, Hydrocotyle vulgaris, Narthecium ossifragum.		

## FURNACE LOUGH

Co. Mayo

### Site Description

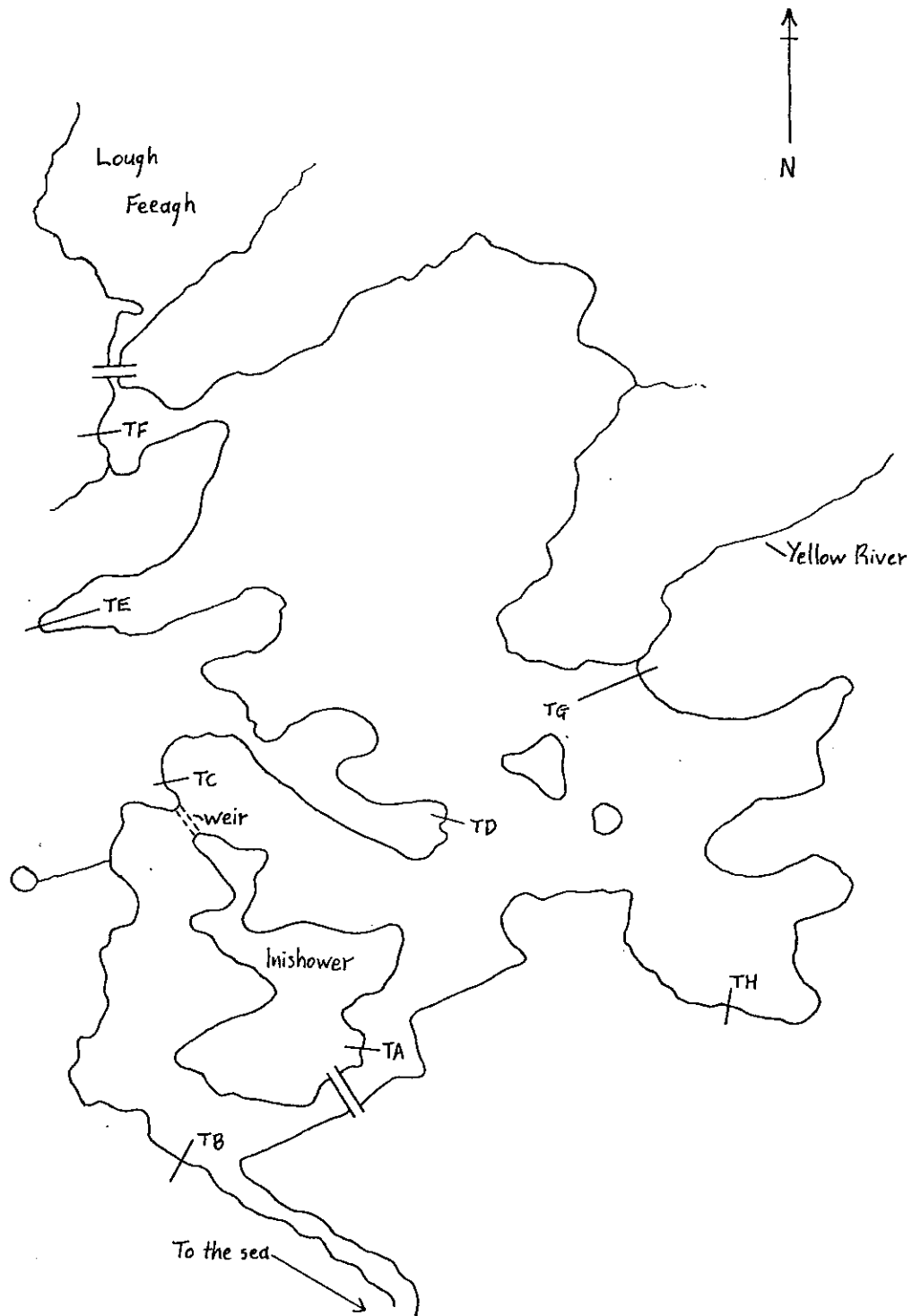
This is a large lagoon situated at the lower end of a valley which runs down through the Nephin Beg mountain range. The surrounding landscape is rocky with numerous smaller valleys and ridges coming down to the lough shores.

Heath and bog is the dominant vegetation of the area and borders the lough shores to the east and west. Lower-lying pasture occurs on Inishower and borders the lough to the south. Small patches of broad-leaved woodland occur along the northern and southern shores and at the end of a long promontory to the north of Inishower.

An inflow channel at the north western corner brings water into the lough from the larger Lough Feeagh which lies to the north. Several small loughs to the west also supply freshwater to the lagoon. The main inflowing river is the Yellow River, which discharges into the lagoon about half way along its eastern shore.

Shores are generally open and rocky and marginal areas narrow. Phragmites swamp occurs in sheltered areas and as a fringe around two small islands in the south.

The outlet to the sea joins the lough at its southern extremity.



Furnace Lough, Co. Mayo: Location of Transects

Site: Furnace Lough	Transect code: A	
Location: Narrow channel near outlet to sea	Sample point: 1 Aquatic - grapnel from shore	
Sample area: Grapnel only	Substrate: Not known	
Depth: 70 cm +	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia sp.		
Potamogeton pectinatus		
Enteromorpha		
Filamentous algae		
Description: Narrow channel (c. 50m wide). No emergent or other marginal vegetation.		
Shore = earth cliff, 80 cm.		
Backing Molinia caerulea - Juncus acutiflorus - Juncus effusus community.		

Site: Furnace Lough	Transect code: B	
Location: Outlet to sea	Sample point: 1 Aquatic - 10m out - grapnel	
Sample area: Grapnel only	Substrate: Boulders, cobbles, gravel	
Depth: 80 cm +	Salinity: 20 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Fucus sp.		
Enteromorpha		
Filamentous algae		
Description:		

[illegible]

Site: Furnace Lough	Transect code: B	
Location: Outlet to sea	Sample point: 3 Marginal	
Sample area: 10m2 (10x1)	Substrate; Boulders, cobbles, gravel	
Depth: 0 - 20 cm	Salinity: 17 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Eleocharis palustris	15	60
Glaux maritima	10	10
Juncus maritimus	50	5
Cochlearia anglica	4	< 1
Litorella uniflora	5	< 1
Description: 1m wide strip species-poor salt tolerant community dominated by Eleocharis palustris with occasional Juncus maritimus tussocks.		

Site: Furnace Lough	Transect code: B	
Location: Outlet to sea	Sample point: 4 Marginal	
Sample area: 16m2 (8x2)	Substrate: Cobbles, clay	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		95
Juncus maritimus	60	30
Juncus gerardii	15	20
Festuca rubra	20	20
Triglochin maritima	10	20
Glaux maritima	10	10
Agrostis stolonifera	15	10
Cochlearia anglica	5	< 1
Description: 2m strip of species-poor salt tolerant vegetation dominated by Juncus gerardii and Festuca rubra with frequent Juncus maritimus tussocks.		
Backing c.75 degree slope up to 1m bank height and grading to Lolium perenne - Holcus lanatus pasture.		



Site: Furnace Lough	Transect code: C	
Location: Weir	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Boulders, cobbles	
Depth: 50 cm	Salinity: 17 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		90
Phragmites australis	220	90
Description: Dense single species Phragmites swamp forming 10m wide strip on rocky substrate, standing c.2m out from the shoreline. Substrate falls away sharply on loughward side of stand.		

Site: Furnace Lough	Transect code: C	
Location: Weir	Sample point: 3 Marginal	
Sample area: 16m2 (8x2)	Substrate: Boulders, cobbles	
Depth: 0 - 10 cm	Salinity: 17 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		10
Eleocharis palustris	50	5
Glaux maritima	10	< 5
Triglochin maritima	30	< 1
Juncus articulatus	30	< 1
Samolus valerandi	20	< 1
Description: Sparse Eleocharis dominated community forming 2m wide strip along rocky shore.		
Backing to wet heath vegetation with Sphagnum spp., Molinia caerulea, Calluna vulgaris, Erica tetralix, Trichophorum cespitosum.		

Site: Furnace Lough	Transect code: D	
Location: Exposed promontory head	Sample point: 1 Aquatic - 2m out - grapnel	
Sample area: Grapnel only	Substrate: Cobbles, gravel	
Depth: 70 cm +	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia sp.		
Chara aspera var. aspera		
Enteromorpha		
Filamentous algae		
Description:		

Site: Furnace Lough	Transect code: D	
Location: Exposed promontory head	Sample point: 2 Marginal	
Sample area: 10m2 (10x1)	Substrate: Boulders, cobbles, gravel	
Depth: 0 - 25 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		30
Littorella uniflora	5	25
Isolepis cernua	6	< 5
Agrostis stolonifera	20	< 5
Bare substrate		
Cobbles		60
Boulders		5
Gravel		5
Description: Sparse Littorella dominated shore community forming 1m wide strip, flooded at time of survey.		
Backing steep earth bank (c. 80 degrees to 2.5m height) and Alnus glutinosa - Fraxinus excelsior woodland.		

Site: Furnace Lough	Transect code: E	
Location: Sheltered bay	Sample point: 1 Aquatic - 40m out - grapnel	
Sample area: Grapnel only	Substrate: Not known	
Depth: 1m +	Salinity: Not known	
NVC community:		
	Height (cm)	Cover (%)
Ruppia sp.		
Potamogeton pectinatus		
Filamentous algae		
Description:		

Site: Furnace Lough	Transect code: E	
Location: Sheltered bay	Sample point: 2 Aquatic - 20m out - grapnel	
Sample area: Grapnel only	Substrate: Not known	
Depth: c. 1m	Salinity: Not known	
NVC community:		
	Height (cm)	Cover (%)
Ruppia sp.		
Enteromorpha		
Filamentous algae		
Description: Same species found by grapnel survey from 10m out and from shore		

Site: Furnace Lough	Transect code: E	
Location: Sheltered bay	Sample point: 3 Marginal	
Sample area: 10m2 (10x1)	Substrate: Sand, boulders	
Depth: 20 cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		50
Eleocharis palustris	25	40
Agrostis stolonifera	15	10
Samolus valerandi	15	< 1
Litorella uniflora	5	< 1
Isolepes cernua	6	< 1
Juncus articulatus	30	< 1
Bare substrate		50
Sand		40
Boulders		10
Description: Eleocharis dominated shore community forming 1m strip around bayhead.		
Backing 45 degree bank of peat and boulders, backing to wet heath vegetation -		
dominant species - Calluna vulgaris, Molinia caerulea, Potentilla erecta, Erica tetralix,		
Sphagnum spp..		

[illegible]

Site: Furnace Lough	Transect code: F	
Location: Inflow from Lough Feagh	Sample point: 2 Marginal	
Sample area: 50m2 (10 x 5)	Substrate: Peat	
Depth: 30 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	230	100
Agrostis stolonifera	40	< 1
Lythrum salicaria	60	< 1
Mentha aquatica	40	< 1
Hydrocotyle vulgaris	30	< 1
Description: Dense species-poor Phragmites swamp with sparse freshwater associates. 7m.		
Substrate dropping away steeply at loughward edge of swamp.		

Site: Furnace Lough	Transect code: F	
Location: Inflow from Lough Feagh	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Peat	
Depth: 0 cm	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	200	80
Molinia caerulea	80	95
Erica erigena	140	5
Myrica gale	100	5
Angelica sylvestris	120	5
Lythrum salicaria	50	< 1
Mentha aquatica	40	< 1
Hydrocotyle vulgaris	30	< 1
Filipendula ulmaria	120	< 1
Potentilla palustris	30	< 1
Osmunda regalis	100	< 1
Description: Dense Phragmites and Molinia co-dominant with sparse fen vegetation including shrubby understorey which increases its cover to landward. Extending about 100m back from the lough.		
Grading to wet heath vegetation with Molinia, Trichophorum cespitosum, Calluna vulgaris, Erica tetralix, Eriophorum angustifolium, Sphagnum spp..		

Site: Furnace Lough	Transect code: G	
Location: Freshwater inflow	Sample point: 1 Aquatic - 100m out - grapnel	
Sample area: Grapnel only	Substrate: Not known	
Depth: 1m +	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Ruppia sp.		
Chara aspera var. aspera		
Description:		



Site: Furnace Lough	Transect code: G	
Location: Freshwater inflow	Sample point: 4 Aquatic - 5m out	
Sample area: 16m2 (4x4)	Substrate: Gravel	
Depth: 40 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Chara aspera var. aspera	6	< 1
Description: Sparse Chara only from 5m out to shore.		

[illegible]



Site: Furnace Lough	Transect code: H	
Location: Sheltered bay	Sample point: 2 Marginal	
Sample area: 10m2 (5x2)	Substrate: Boulders, cobbles, gravel	
Depth: 0 - 20 cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		25
Agrostis stolonifera	20	15
Eleocharis palustris	40	10
Glaux maritima	10	5
Triglochin maritima	20	< 1
Juncus articulatus	30	< 1
Description: Fairly sparse, open cover of species-poor Eleocharis - Agrostis dominated shoreline community forming strip of 2m width.		
Backing to wet heath vegetation with Molinia caerulea, Calluna vulgaris, Erica tetralix, Myrica gale and Sphagnum spp..		

DURNESH LAKE  
Co. Donegal

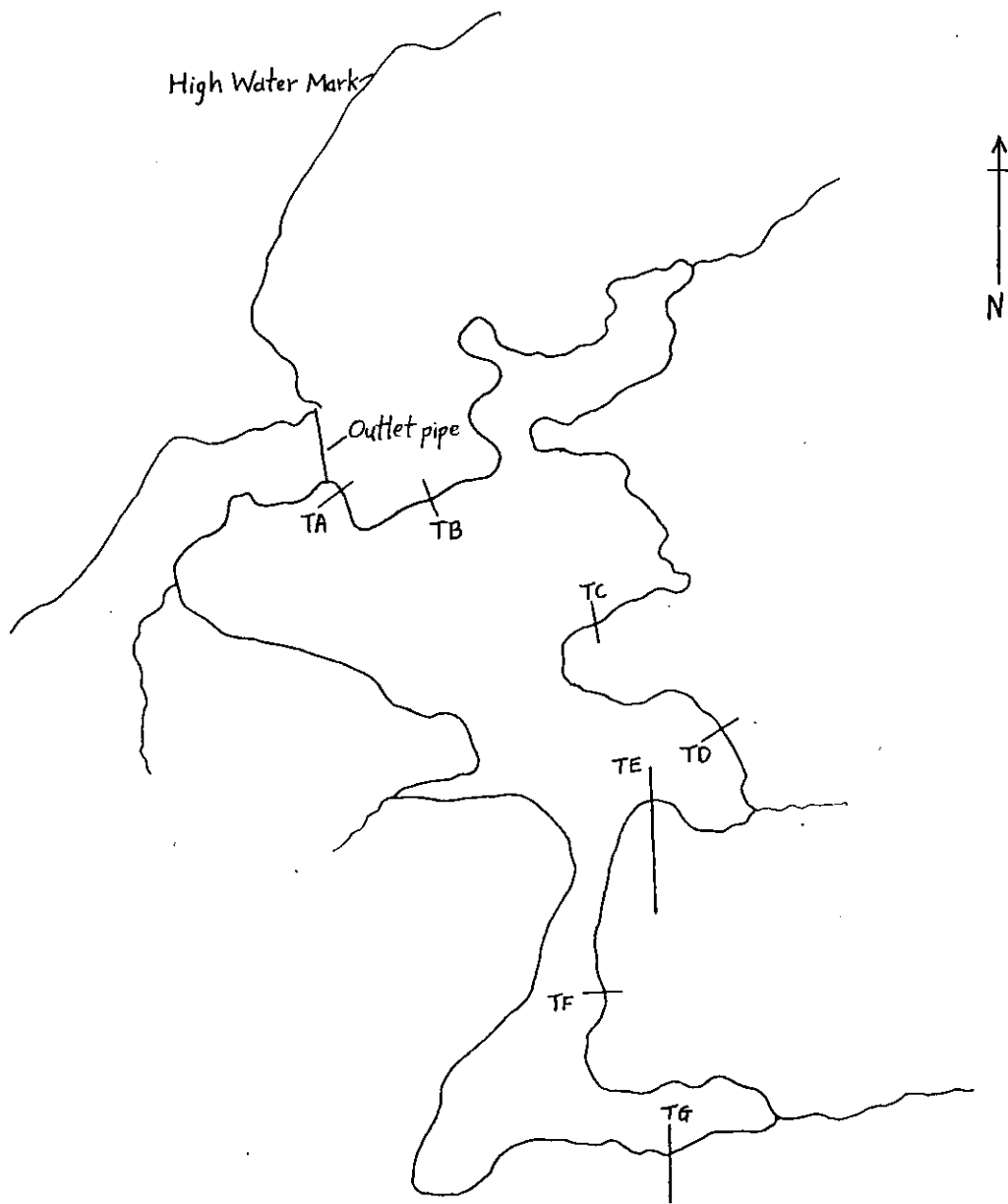
Site Description

This is a large lagoon set amongst pastoral farmland on low hills.

Swamp vegetation, often fairly extensive, is dominant in marginal areas in the southern half of the site and around freshwater inflows in the north east and north west corners. Elsewhere, shores are more open with short rock-strewn stretches and areas of low earth cliff along the eastern shore.

Shores are more or less shallowly sloping, but narrow, with adjacent land generally rising quickly to the surrounding hills.

Freshwater inflows join the lagoon from the north east, north west and south east. A pipe runs beneath the dunes to the north east and joins the lagoons waters with those of the sea beyond.



Durnesh Lake, Co. Donegal: Location of Transects

Site: Durnesh Lake	Transect code: A	
Location: Outlet to sea	Sample Point: 1 Aquatic - 50m out	
Sample area: 16m2 (4 x 4)	Substrate: Sand	
Depth: 60cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		80
Higher Plant		80
Ruppia sp.	6	80
Description: Fairly dense, low growing Ruppia. None in bud, flower or fruit.		

Site: Durnesh Lake	Transect code: A	
Location: Outlet to sea	Sample point: 2 Marginal	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 50cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		70
Higher Plant		70
Schoenoplectus lacustris ssp tabernaemontani	140	10
Ruppia sp.	10	60
Algae		1
Enteromorpha		1
Description: Sparse S. lacustris swamp extending from about 8 - 28m out from shoreline.		
Extensive low growing Ruppia, some in flower and in fruit. Enteromorpha restricted to free-floating Furoid algae.		



Site: Durnesh Lake	Transect code: A	
Location: Outlet to sea	Sample point: 4 Marginal	
Sample area: 10m2 (10x1)	Substrate: Cobbles	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Glaux maritima	10	5
Description: 0.5 - 1m wide strip of cobble shore with sparse Glaux.		

Site: Durnesh Lake	Transect code: A	
Location: Outlet to sea	Sample point: 5 Marginal	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Iris psuedocorus	170	80
Filipendula ulmaria	130	10
Agrostis stolonifera	30	10
Mentha aquatica	30	1
Potentilla anserina	10	1
Vicia cracca	40	1
Description: Tall, densely growing Iris dominant with species-poor understorey of freshwater associates on sandy bank, slope c. 30 degrees, height c. 3m..		
Grading to Marram dune grassland ( barrier ).		

Site: Durnesh Lake	Transect code: B	
Location: Open shore	Sample point: 1 Aquatic - 5m out - grapnel	
Sample area: Grapnel only	Substrate: Not known	
Depth: 80cm +	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Potamogeton pectinatus		
Ruppia sp.		
Chara aspera var. aspera		
Description:		



Site: Durnesh Lake	Transect code: B	
Location: Open shore	Sample point: 3 Marginal	
Sample area: 10m2 (10x1)	Substrate: Cobbles, gravel	
Depth: 0-15cm	Salinity: 5 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Higher Plant		5
Schoenoplectus lacustris ssp tabernaemontani	60	< 5
Potamogeton pectinatus	30	< 1
Litorella uniflora	6	< 1
Algae		< 1
Chara aspera var. aspera		<1
Description: Very sparse, low growing Schoenoplectus in 1m strip along shore. Aquatic associates all sparse.		

[illegible]

Site: Durnesh Lake	Transect code: C	
Location: Open shore	Sample point: 1 Aquatic - 12m out	
Sample area: 16m2 (4x4)	Substrate: Cobbles, coarse gravel	
Depth: 90cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Potamogeton pectinatus	80	100
Description: Dense bed of tall Potamogeton pectinatus.		

Site: Dumesh Lake	Transect code: C	
Location: Open shore	Sample point: 2 Aquatic - 3m out	
Sample area: 25m2 (5x5)	Substrate: Cobbles, coarse gravel	
Depth: 0 - 45cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		5
Higher Plant		< 1
Potamogeton pectinatus	40	< 1
Algae		5
Chara aspera var. aspera	8	5
Description: Sparse charophyte cover on stony substrate with scattered P. pectinatus.		

Site: Durnesh Lake	Transect code: C	
Location: Open shore	Sample point: 3 Marginal	
Sample area: 10m2 (10x1)	Substrate: Boulders, cobbles, gravel	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		10
Juncus gerardii	12	5
Agrostis stolonifera	10	5
Potentilla anserina	3	1
Glaux maritima	10	< 1
Substrate		90
Boulders		5
Cobbles		75
Gravel		10
Description: Sparse cover of J. gerardii - A. stolonifera dominated community on stony substrate. 3m.		
Grading to Schoenus nigricans flush vegetation on c. 45 degree slope to c. 6m height, with Festuca rubra, Briza media, Succisa pratensis, Juncus articulatus.		
Backing to Lolium perenne - Holcus lanatus - Cynosaurus cristatus pasture.		

Site: Durnesh Lake	Transect code: D	
Location: Sparse emergent stand	Sample point: 1 Aquatic - 50m out	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: 50 cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		15
Higher Plant		10
Potamogeton pectinatus	30	10
Ruppia sp.	15	< 1
Algae		5
Chara aspera var. aspera	5	5
Description: Sparse cover of fairly low growing aquatics.		

Site: Durnesh Lake	Transect code: D	
Location: Sparse emergent stand	Sample point: 2 Aquatic - 25m out	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: 40 cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Higher Plant		50
Potamogeton pectinatus	15	50
Ruppia sp.	10	< 1
Algae		10
Chara aspera var. aspera	5	10
Description: Fairly high cover of low growing Potamogeton pectinatus with frequent charophyte and very sparse low growing Ruppia.		

Site: Durnesh Lake		Transect code: D	
Location: Sparse emergent stand		Sample point: 3 Aquatic - 5m out	
Sample area: 16m2 (4x4)		Substrate: Sand	
Depth: 30 cm		Salinity: 3 parts per thousand	
NVC community:			
	Height (cm)	Cover (%)	
Total Plant		60	
Higher Plant		50	
Potamogeton pectinatus	20	50	
Myriophyllum spicatum	10	< 1	
Algae		10	
Chara aspera var. aspera	6	10	
Description: Fairly high cover of low growing Potamogeton pectinatus with frequent charophyte and very sparse low growing Myriophyllum.			

Site: Durnesh Lake	Transect code: D	
Location: Sparse emergent stand	Sample point: 4 Marginal	
Sample area: 25m2 (5x5)	Substrate: Sand	
Depth: 0 - 20cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		20
Higher Plant		20
Schoenoplectus lacustris ssp tabernaemontani	80	15
Potamogeton pectinatus	30	5
Myriophyllum spicatum	10	< 1
Algae		< 1
Chara aspera var. aspera	6	< 1
Description: Open Schoenoplectus swamp with sparse aquatic associates. Grazed. 8m		

Site: Durnesh Lake	Transect code: D	
Location: Sparse emergent stand	Sample point: 5 Marginal	
Sample area: 16m2 (4x4)	Substrate: Not known	
Depth: -----	Salinity: -----	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Juncus gerardii	15	60
Agrostis stolonifera	15	50
Scirpus maritimus	25	10
Potentilla anserina	6	5
Leontodon autumnalis	15	< 1
Description: Species-poor J. gerardii - A. stolonifera community with occasional young S. maritimus shoots.		
Grading to Iris psuedacorus - Juncus effusus freshwater flush community, 30m.		
Backing c.45 degree slope to c.6m height with Schoenus nigricans flush vegetation (as Transect C).		
Backing Lolium perenne - Holcus lanatus - Cynosaurus cristatus pasture.		

[illegible]

Site: Durnesh Lake	Transect code: E	
Location: Schoenoplectus swamp	Sample point: 2 Aquatic - 25m out	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: 50 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		60
Higher Plant		50
Potamogeton pectinatus	30	50
Ruppia sp.	10	< 1
Algae		10
Chara aspera var. aspera	6	10
Description: Potamogeton pectinatus dominant, its cover increasing as Ruppia cover decreases.		

Site: Durnesh Lake	Transect code: E	
Location: Schoenoplectus swamp	Sample point: 3 Aquatic - 5m out	
Sample area: 16m2 (4x4)	Substrate: Sand	
Depth: 50 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		75
Higher Plant		70
Potamogeton pectinatus	30	70
Algae		5
Chara aspera var. aspera	6	5
Description: Potamogeton cover increasing. Ruppia now absent. Charophyte cover more or less constant.		

Site: Durnesh Lake	Transect code: E	
Location: Schoenoplectus swamp	Sample point: 4 Marginal	
Sample area: 100m2 (10x10)	Substrate: Sand	
Depth: 50 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Schoenoplectus lacustris ssp tabernaemontani	180	90
Potamogeton pectinatus	50	30
Description: Tall dense single species S. lacustris swamp for 30m, with frequent Potamogeton pectinatus the only aquatic associate.		

Site: Durnesh Lake	Transect code: E	
Location: Schoenoplectus swamp	Sample point: 5 Marginal	
Sample area: 100m2 (10x10)	Substrate: Sand	
Depth: 50 cm	Salinity: 4 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		30
Higher Plant		25
Schoenoplectus lacustris ssp tabernaemontani	180	10
Potamogeton pectinatus	60	15
Algae		5
Chara aspera var. aspera	6	< 5
Chara hispida var. major	30	< 5
Description: Open Schoenoplectus swamp for 20m, with P. pectinatus sparse but dominant in aquatic zone over associated charophytes.		



Site: Durnesh Lake	Transect code: E	
Location: Schoenoplectus swamp	Sample point: 7 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt (de-oxygenated)	
Depth: 20 cm	Salinity: 3 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Schoenoplectus lacustris ssp tabernaemontani	180	100
Agrostis stolonifera	30	20
Description: Tall dense S. lacustris swamp for 50m with frequent Agrostis.		



Site: Durnesh Lake	Transect code: F	
Location: Typha swamp	Sample point: 1 Aquatic - 2m out - grapnel	
Sample area: Grapnel only	Substrate: Silt	
Depth: 80 cm +	Salinity: 2 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Potamogeton pectinatus		
Ruppia sp.		
Enteromorpha		
Description:		



Site: Durnesh Lake	Transect code: F	
Location: Typha swamp	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt (de-oxygenated)	
Depth: 0 - 50 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Typha latifolia	200	100
Alisma plantago-aquatica	70	< 1
Lemna minor		< 1
Description: Tall dense Typha swamp with sparse freshwater associates. 10m		
Backing to Lolium perenne - Holcus lanatus - Cynosaurus cristatus grassland,		
15m on c.15 degree slope. Grazed.		
Backing line of trees, 10m on c.35 degree slope to c.6m height - Corylus avellana		
Prunus spinosa, Crataegus monogyna.		
Backing Lolium - Holcus - Cynosaurus pasture.		

[illegible]

Site: Durnesh Lake	Transect code: G	
Location: Freshwater inflow	Sample point: 2 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 30 - 70 cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		100
Phragmites australis	270	100
Lemna minor		30
Description: Dense Phragmites swamp for 30m with Lemna cover increasing to landward.		

Site: Durnesh Lake	Transect code: G	
Location: Freshwater inflow	Sample point: 3 Marginal	
Sample area: 100m2 (10x10)	Substrate: Silt	
Depth: 0 - 20cm	Salinity: 0 parts per thousand	
NVC community:		
	Height (cm)	Cover (%)
Total Plant		
Phragmites australis	270	100
Nasturtium officinale	15	60
Lemna minor		30
Myosotis scorpioides	10	5
Galium palustre	20	< 1
Equisetum fluviatile	50	< 1
Description: Dense Phragmites swamp with Rorippa dominant amongst species-poor understorey of freshwater species. 15m.		

Site: Durnesh Lake		Transect code: G	
Location: Freshwater inflow		Sample point: 4 Marginal	
Sample area: 100m2 (10x10)		Substrate:	
Depth: 0 cm		Salinity: -----	
NVC community:			
	Height (cm)	Cover (%)	
Total Plant		100	
Phragmites australis	180	80	
Equisetum fluviatile	40	75	
Nasturtium officinale	15	5	
Filipendula ulmaria	120	5	
Galium palustre	30	< 1	
Lythrum salicaria	60	< 1	
Mentha aquatica	20	< 1	
Agrostis stolonifera	20	< 1	
Description: Reduced Phragmites cover with Equisetum dominant amongst species-poor fen vegetation. 20m.			
Grading to willow carr strip 30m width - Salix cinerea dominant, average height c. 5m, with epiphytic mosses and lichens. Equisetum fluviatile dominant below.			
Backing to public road.			

## CONCLUSION

This section comprises a brief summary of the survey findings for each site, a grading of each site according to specified criteria and recommendations for further survey.

The criteria employed in the assessment and grading of each site are species composition, diversity and abundance, the presence of rare species and whether or not a site is representative of a certain 'type'.

Both aquatic species and marginal communities are taken into account, though particular importance is put on aquatic macrophytes. Due to the difficulties in obtaining determinations for filamentous green algae, such species have not been taken into account here.

Sites are graded as 'Valuable', 'Potentially Valuable' and 'Not Valuable'.

A 'Valuable' site is one that is shown to be of particular interest and that is considered to be worthy of conservation/protection.

A 'Potentially Valuable' site is one which this survey indicates may be of interest and which may prove to be valuable following further survey.

A 'Not Valuable' site is one that is shown to be of little or no interest.

The fact that this is primarily a shore-based survey and not a full aquatic survey (see 'Constraints' section of the Introduction) makes a complete assessment of many sites impossible. Further aquatic survey of sites where recommended is to be encouraged.

## LADY'S ISLAND LAKE, Co. Wexford

### 'Valuable'

This large site was surveyed by transects only. Therefore, the information available upon which to make this assessment is limited compared with most other sites. Six transects were carried out at the lagoon and one in a semi-isolated pool in the south west of the site.

This is one of the two Irish sites at which *Lamprothamnium papulosum* had been recorded prior to this survey. This rare charophyte was found in the course of this survey at the western end of the barrier and in a sheltered bay in the north east corner. Its presence alone qualifies this as a valuable site.

*Ruppia* was found at all six lagoon transects, with a cover of 50% or more at three of these, one in each of the two northern bays and one at the west end of the barrier. It is notable that both *Ruppia cirrhosa* and *R. maritima* occur here.

*Potamogeton pectinatus* was not found in the lagoon but was abundant in the semi-isolated pool, which had a much lower salinity level (5 parts per thousand) than the lagoon itself (14-23 parts per thousand).

Marginal vegetation does not seem to be of particular interest here. *Scirpus maritimus*, *Schoenoplectus lacustris* ssp *tabernaemontani* and *Phragmites australis* swamps all occur at this site, but are nowhere extensive. *Juncus gerardii* dominated salt tolerant community occurs on more open shores.

The basis for the designation of Lady's Island Lake as valuable is the presence of *Lamprothamnium papulosum* and both *Ruppia* species and the apparent wide distribution of all these species.

Further survey is recommended.

## TACUMSHIN LAKE, Co. Wexford

### 'Valuable'

This large site was surveyed by transects only. Therefore, the information available upon which to make this assessment is limited compared with most other sites. Five transects were carried out at the lagoon itself and one at a channel at the western end of the site.

This is one of the two Irish sites at which *Chara canescens* had been recorded prior to this survey. This rare charophyte was found on this occasion growing sparsely in a northern bay. It was also found in a western channel during a previous site visit. Its presence alone is reason enough to regard Tacumshin Lake as a valuable site.

*Ruppia* c.f. *maritima* was found at four out of five lagoon transects. It grows in occasional dense beds within 50 metres of the barrier shore.

*Potamogeton pectinatus* was found at the two northern transects and in a western channel, forming more or less dense beds at all of these.

A previous site visit found *Potamogeton pusillus*, *Zannichellia palustris*, *Myriophyllum spicatum* and *Ranunculus baudotii* at low salinities (0-4 parts per thousand) in western and north western channels amongst swamp vegetation.

Salinity range was great at time of survey (13-35 parts per thousand in the main body of the lagoon and 4 -35 parts per thousand taking the surveyed western channel into account). This variation is reflected in the relatively high degree of species diversity found at the site.

The most notable feature of the marginal vegetation is the extent of swamp species. *Phragmites* and *Schoenoplectus* beds fill the two north western bays and much of the south western area. These species and *Scirpus maritimus* fringe much of the north shore and are again extensive in the north central and the north eastern bayheads.

Tacumshin Lake is considered valuable for its species diversity and spatial salinity variation, for its extensive swamps and for the presence of *Chara canescens*.

Further survey is recommended.

## LOUGH MUREE, Co. Clare

### 'Valuable'

The vegetation of Lough Muree is notable for its species composition and for the abundance of these typically brackish water plants.

Salinity levels varied across the site from 13-24 parts per thousand at time of survey. There is no freshwater inflow stream. No marine higher plant or algal species were found here. Neither were there any aquatic angiosperms associated with mildly brackish conditions.

*Ruppia* and *Potamogeton pectinatus* occur within 20 metres of all but the north eastern shores. *P.pectinatus* is dominant in dense beds along the eastern and western shores with more or less sparse *Ruppia*. *Ruppia* is locally dominant over *P.pectinatus* in mixed beds along the southern shore.

It is notable that both *Ruppia cirrhosa* and *R.maritima* occur at this site.

Two rare charophytes were known to occur here - *Lamprothamnium papulosum* and *Chara canescens*. Prior to this survey, Lough Muree was one of only two Irish stations for both these species. Both are occasional along the western shore. *Lamprothamnium* is abundant along the southern half of the eastern shore and both species are frequent to locally abundant amongst *Ruppia* and *P.pectinatus* to at least 20 metres out from the southern shore. The presence of these rare charophytes is reason enough in itself to regard this site as valuable.

Marginal vegetation is fairly uniform. *Scirpus maritimus* fringes all shores, typically forming a more or less narrow strip interrupted by occasional open stands of *Juncus gerardii* dominated vegetation. Limestone pavement forms the north eastern shore and here *Scirpus* grows in the fissures between the bedrock slabs.

Lough Muree seems to present a good example of a brackish water community subject to a middling range of salinity. Its macrophytes are abundant and its charophyte species particularly notable.

Full aquatic survey is recommended.

LETTERMULLEN POOL, Co. Galway

'Valuable'

Lettermullen is a small rocky site of high salinity (34-35 parts per thousand at time of survey) and interesting species composition.

The presence of marine algae could be expected at such a site and several species are found here. *Corallina officinalis* is abundant. *Chondrus crispus*, *Lomentaria clavellosa*, *Codium tomentosum* and *Polysiphonia elongata* all occur at varying degrees of frequency.

*Zostera marina* could also be expected and is abundant here. Particularly interesting is the occurrence of these marine species with abundant *Ruppia cirrhosa* and with *Lamprothamnium papulosum*.

*Lamprothamnium* is a rare charophyte which was known from only two Irish sites (Lady's Island Lake, Co. Wexford and Lough Muree, Co. Clare) before this survey took place. Its presence at Lettermullen is alone reason enough to regard the site as valuable. *Lamprothamnium* is very locally abundant in shallow areas close to the northern shore and was also found in deeper water (>1m) by grapnel survey from the southern and western shores.

The distribution of species is also interesting in that a distinct zonation occurs along the steeper, rocky shores with algal species forming a 1-2m wide belt below the shore with a dense mixed *Ruppia* and *Zostera* bed beyond.

Marginal vegetation is restricted due to the rocky, steep-sided nature of the site. No emergent species occur here. *Juncus maritimus* over species-poor salt tolerant vegetation is the dominant community.

Lettermullen Pool is a good representative of an isolated (i.e. having no permanent connection to the sea) highly saline lagoon. Species composition and shore zonation are interesting, species diversity and abundance are high and a rare charophyte occurs here.

A full aquatic survey is recommended.

## LOCH TANAI, Co. Galway

### 'Valuable'

This site shows a high degree of spatial salinity variation (5-32 parts per thousand at time of survey), with low salinities around the major freshwater inflow and high salinities around the outlet channel and elsewhere. Species composition seems to suggest that the freshwater influence is localised.

Fucoid algae are abundant and well distributed around the shore. *Phyllophora pseudo ceranoides* also occurs here. *Ruppia* and *Zostera marina* are abundant around much of the site in dense, often mixed stands. It is considered notable that both *Ruppia maritima* and *R. cirrhosa* occur here.

This is the second new Irish station for the rare charophyte *Lamprothamnium papulosum* (the other being Lettermullen Pool), previously known from only two sites (Lady's Island Lake, Co. Wexford and Lough Muree, Co. Clare). *Lamprothamnium* is more or less frequent around most of the shore and abundant in places, often growing amongst *Ruppia* beds. Its presence here is reason enough in itself to regard this site as valuable.

A distinct zonation of algal and higher plant species occurs along the rockier shores with dense *Ruppia* and *Zostera* beds, frequently with *Lamprothamnium*, lying beyond a narrow belt of fucoids.

Marginal vegetation is restricted due to the rocky, steep-sided nature of much of the site. No emergent species occur here. The dominant marginal community is species-poor salt tolerant vegetation dominated by *Juncus maritimus*.

Loch Tanai is a good representative of a highly saline lagoon with a permanent connection to the sea. Species composition and shore zonation are interesting, frequency and abundance of most species are high and a particularly rare charophyte has been found here in abundance.

A full aquatic survey is recommended.

LOUGH ACONEERA, Co. Galway

'Valuable'

*Chara baltica* was found here during the course of this survey. This is the first Irish record for this charophyte species and is grounds in itself for the designation of this site as valuable. It occurs frequently around the site within approximately 10m of the shore and was found in abundance in the vicinity of the major freshwater inflow at the western end of the lagoon during a diving survey undertaken by Jim Ryan of the National Parks and Wildlife Service.

*Ruppia cirrhosa* and *Potamogeton pectinatus* were found growing in dense mixed and single species beds at the western end to a depth of about 2.5 metres.

Both species are frequent within ten metres of the shore around most of the site with *P. pectinatus* particularly dense in sheltered bays.

A fucoid species occurs more or less abundantly along the rockier southern shores and around the mouth of the outlet channel.

Marginal vegetation shows some degree of diversity. The southern and eastern shores are largely exposed bedrock with occasional low peat cliff. *Juncus maritimus* dominated saltmarsh vegetation occurs here and along most of the northern shore. *Schoenoplectus lacustris* ssp *tabernaemontani* occurs in small occasional stands around much of the site, frequently with *Phragmites* in sheltered eastern bays. *Phragmites* forms dense beds at the eastern end, one associated with a freshwater spring and another, with frequent *Schoenoplectus*, associated with the major inflow stream.

Lough Aconeera is regarded as valuable primarily for the presence of *Chara baltica* and for its extensive stands of aquatic macrophytes.

A full aquatic survey is recommended.

DURNESH LAKE, Co. Donegal

'Valuable'

This large site was surveyed by transects only. Therefore, the information available upon which to make this assessment is limited compared to most other sites. Seven transects were carried out.

*Chara canescens* was found growing fairly sparsely in the vicinity of the outlet pipe. This rare charophyte was previously known from only two Irish sites (Lough Muree and Tacumshin Lake). Its presence at Durnesh is reason enough to regard the site as valuable.

*Chara aspera* var. *aspera* was found at five transect sites, indicating a wide distribution.

*Chara hispida* var. *major* was found growing with *C. aspera* var. *aspera* in an area of open water in a *Schoenoplectus* swamp.

*Ruppia* was found at five transect sites, which indicates a wide distribution here. Dense patches occur near the outlet pipe. Elsewhere *Ruppia* was sparse or found by grapnel survey only. It is notable that both *R. cirrhosa* and *R. maritima* occur here.

*Potamogeton pectinatus* occurred in all seven transects. Dense stands of this species were found at two of these sites.

*Littorella uniflora* was found at the two northernmost transect sites. *Myriophyllum spicatum* occurred at two sites in the southern half of the lake.

*Potamogeton* c.f. *obtusifolius* and *Callitriche stagnalis* occurred with *P. pectinatus* and *Myriophyllum spicatum* at the major freshwater inflow.

Marginal vegetation shows little variation. *Phragmites* and *Schoenoplectus* swamps are extensive in places and *Typha latifolia* is locally dominant in the southern half of the site, indicating the lower salinities here. The surveyed open shores were dominated by a *Juncus gerardii* - *Agrostis stolonifera* community.

Salinity levels were low at time of survey, varying from 0 parts per thousand at the freshwater inflow in the south to 5 parts per thousand around the outlet pipe in the north.

Durnesh Lake is regarded as a good representative of a low salinity lagoon, with high species diversity and a species composition and distribution which reflect the spatial variation in conditions from freshwater to brackish.

Further survey is recommended.

KILKERAN LAKE, Co. Cork

'Potentially Valuable'

Kilkeran is a medium-sized lagoon, mildly brackish at time of survey (2 parts per thousand), with an interesting species composition.

*Potamogeton pectinatus* is abundant, occurring in extensive, dense beds to 5-15 metres out from most of the eastern and western shores and covering the entire water surface of the eastern bay.

*Ruppia maritima* occurs here but was found by grapnel survey near the mouth of the outlet channel only. Its abundance and distribution is unknown.

A small amount of *Chara aspera* var. *aspera* was found at the same location. Its abundance and distribution is also unknown.

*Polygonum amphibium* is occasional along the western shore.

Marginal vegetation comprises a narrow fringing strip of *Scirpus maritimus*, *Schoenoplectus* and *Phragmites*, each locally dominant along the eastern and western shores, with a broader band of *Phragmites* along the southern shore and an extensive *Phragmites* bed associated with the freshwater inflows in the north.

Kilkeran Lake presents a good, though seemingly species-poor example of mildly brackish conditions. It is interesting to note the presence of *Ruppia maritima* and *Polygonum amphibium* in the same environment.

Further aquatic survey is recommended.

FARRANAMANAGH LAKE, Co. Cork

‘Potentially Valuable’

This is a rocky site of fairly high salinity (16-25 parts per thousand) at time of survey.

*Ruppia* was the only aquatic higher plant found during this survey. It is well distributed around the site, occurring within two metres of the shore at sparse to patchy cover in most areas. It was not possible to identify samples to species.

A *Fucus* species is locally abundant in the mouth of the outlet channel.

Marginal vegetation shows no notable diversity. *Schoenoplectus lacustris* ssp *tabernaemontani* single species swamps fringe the eastern and north eastern shores and also occur at the freshwater inflow and in places along the southern shore. *Scirpus maritimus* swamp occurs along parts of the southern shore. The eastern shore consists of exposed bedrock alternating with stretches of low earth cliff. Small *Scirpus*, *Schoenoplectus* and *Eleocharis palustris* swamps occur at one point here approximately half way along the shore.

This seems to be a very species-poor site, although it is possible that additional aquatic species are present in deeper parts of the lagoon more than ten metres out from the shore.

Further survey is recommended.

DRONGAWN LOUGH, Co. Kerry

'Potentially Valuable'

This is a tidal, rocky lagoon. Salinity was high at time of survey (34 parts per thousand in the main body of the lough). There is no major freshwater inflow stream.

Two fucoid species (*Fucus serratus* and an unidentified species) are abundant along the rocky stretches of the eastern and south eastern shores. *Codium tomentosum* is occasional in the vicinity of the outlet to the sea.

*Ruppia* c.f. *cirrhus* is abundant and well distributed. It occurs in dense beds, usually more than ten metres out from the shore, around the whole site with the exception of the outlet area. Dense patches are found in the narrow sheltered bays of the north east.

*Zostera* fragments were found washed up on the shore but their origin is unknown.

Marginal vegetation is limited to a *Juncus maritimus* salt tolerant community, typically forming a narrow strip associated with low peat cliffs, with occasional areas of bedrock shore.

Drongawn Lough seems to be a good representative of a tidal, high salinity lagoon. Its *Ruppia* beds are extensive and other interesting aquatic species may be present.

Aquatic areas were surveyed almost entirely from the shore due to water depth.

Full aquatic survey is recommended.

LOUGH GILL, Co. Kerry

'Potentially Valuable'

This large sandy site was surveyed by transects only. Therefore, the information available upon which to make this assessment is limited compared to most other sites. Six transects were carried out.

*Ruppia maritima* was found growing in fairly dense patches near the freshwater inflow, the outlet channel and the south east shore. It is extensive around the outlet, growing in dense beds to 50 metres out from the shore.

*Potamogeton pectinatus* was found at the same three transects at more or less sparse cover. Both species are seen to have a wide distribution across the site.

Locally abundant *Zannichellia palustris* grows with the last two species at the freshwater inflow and south eastern transect sites. *Myriophyllum spicatum* was found at three places in the western half of the lagoon.

*Chara aspera* var. *aspera* showed a wide distribution, occurring at the south western, south eastern and north central transect sites.

There is a notable diversity of marginal species and communities here. *Phragmites*, *Schoenoplectus* and *Scirpus maritimus* all occur in fairly extensive mixed and single species swamps. *Typha latifolia* occurs with *Phragmites* along the north shore and *Iris pseudacorus* is locally dominant on the south eastern shore. Freshwater *Phragmites* fen can be found in the south east and associated with the main freshwater inflow. *Rumex hydrolapathum* occurs in this community.

Lough Gill is representative of mildly brackish conditions. Aquatic species composition is interesting and distribution and abundance worthy of further study. Diversity of marginal communities is fairly high.

Full aquatic survey is recommended.

MILL LOUGH, Co. Galway

'Potentially Valuable'

This is a rocky site with a high degree of spatial salinity variation at time of survey (5 parts per thousand in the sheltered bays of the north east and south east, 21 parts per thousand around the mouth of the outlet channel and along the western shore).

A *Fucus* species has a fairly wide distribution, occurring frequently along the rocky shores of both the east and west to within approximately 100 metres of the main freshwater inflow.

*Ruppia cirrhosa* occurs around the whole site. It has a sparse cover near the shallower shores and was not found in dense beds in this site.

Some *Zostera* fragments were found washed up on the shore in places.

Marginal vegetation is more or less uniform. *Juncus maritimus* salt tolerant community is dominant between stretches of bedrock shore. Small open *Phragmites* swamps occur in sheltered areas of the north and south east.

Mill Lough would seem to be a species-poor site with no particularly notable aquatic species. However, *Ruppia cirrhosa* is frequent to abundant and, bearing in mind the restricted nature of aquatic survey at this site, a more in depth survey could well yield more interesting results.

Full aquatic survey is recommended.

CORRAGAUN LOUGH, Co. Mayo

'Potentially Valuable'

This is a small sandy lagoon of low salinity (0-4 parts per thousand) at time of survey.

*Ruppia* c.f. *maritima* was the only aquatic macrophyte recorded during this survey. It has a wide distribution around the site at sparse to patchy cover and is low-growing.

Filamentous algae and *Enteromorpha* were the only other aquatic plants found during this survey.

Diversity of marginal communities is notable here. *Scirpus maritimus*, *Schoenoplectus lacustris* ssp *tabernaemontani* and *Phragmites* swamps occur west of the rocky promontory on the north shore and more extensively at the eastern end of the lough, associated with the major freshwater inflow.

*Juncus maritimus* dominated salt tolerant community occurs above low peat cliff along much of the northern shore. Exposed bedrock forms most of the southern shore with one open stony area of *Eleocharis palustris* dominated salt tolerant vegetation. *Puccinellia maritima* - *Glaux maritima* saltmarsh borders the lagoon on its low, sandy western shore.

This would seem to be a particularly species-poor lagoon but deeper areas of the eastern and central areas were not surveyed and could contain additional species.

Full aquatic survey is recommended.

ROONAH LOUGH, Co. Mayo

'Potentially Valuable'

This is a shallow sandy lagoon of low salinity at time of survey (0-2 parts per thousand) with a fairly large freshwater input.

*Ruppia maritima* was the only aquatic higher plant species found at this site. It has a wide distribution but is low-growing and was not found in dense beds.

Two charophytes, *Chara globularis* var. *virgata* and *C.globularis* var. *annulata*, occur close to the north eastern shore, where both species grow at sparse cover with equally sparse *Ruppia*.

Marginal communities show some diversity. Both mixed and single species *Scirpus maritimus* and *Schoenoplectus* swamps are found along parts of the south eastern and southern shores. *Eleocharis palustris* dominated swamp also occurs here and along the western shore. Much of the eastern shore is low earth cliff backing to wet grassland.

*Ruppia* has a wide distribution here and may occur at higher cover in deeper areas. The presence of two charophyte varieties is notable. This site is considered worthy of further survey as this may prove it to be a good representative of a low salinity sandy lagoon.

Full aquatic survey is recommended.

FURNACE LOUGH, Co. Mayo

'Potentially Valuable'

This large, deep lagoon was surveyed by transects only. Therefore, the information available upon which to make this assessment is limited compared to most other sites.

*Ruppia* has a wide distribution, being found at all transect sites but that at the mouth of the outlet to the sea. *Ruppia maritima* occurs here and one sample has been determined as *Ruppia* c.f. *cirrhus*.

*Potamogeton pectinatus* occurred at two transect sites, one in a sheltered south eastern bay and the other in the narrow channel south of Inishower.

*Littorella uniflora* occurred at three sites and was associated with an *Eleocharis palustris* swamp community.

*Chara aspera* var. *aspera* was found in two places, an exposed promontory head and the nearby mouth of the Yellow River.

A *Fucus* species occurred at the mouth of the outlet channel. No aquatic higher plants were found here.

There is little variation in marginal vegetation. Marginal areas are typically narrow and rocky. *Phragmites* swamp occurs at the inflow from Lough Feeagh, in sheltered bays and fringing the two small southern islands. These are typically of open cover.

Furnace Lough is a site of notable environmental variation. Salinity levels at time of survey were 0-5 parts per thousand in the main body of the lough but rose to 17-20 parts per thousand in the more enclosed south west quarter around the weir north of Inishowen and the outlet channel. This is also a relatively deep lagoon. This survey indicates an interesting species composition. For these reasons, a more thorough survey of its aquatic plant life is desirable.

Full aquatic survey is recommended.

LISSAGRIFFIN LAKE, Co. Cork

'Not Valuable'

This is a shallow sandy lagoon. Salinity was 0-20 parts per thousand at time of survey over the site as a whole, 0-6 parts per thousand within the eastern section landward of the causeway. The whole eastern section and most of the western section were surveyed by means of wading.

*Ruppia* is the only aquatic higher plant. It is confined to the southern half of the eastern section and occurs at a sparse to patchy cover. It is low-growing here. It was not possible to identify this *Ruppia* to species.

*Ulva lactuca* and a *Fucus* species are occasional in the western section of the site, where no higher plant species occur.

Marginal communities are fairly diverse. *Phragmites* is extensive around the freshwater inflows at the eastern end and fringes the north eastern shore. *Scirpus maritimus* and *Schoenoplectus lacustris* ssp *tabernaemontani* occur in single species swamps along south eastern shores and with saltmarsh species along southern shores. *Puccinellia maritima* dominated saltmarsh occurs at the western end on either side of the mouth of the outlet channel.

Lissagriffin Lake is a very species-poor site with no species or communities of notable interest.

Further survey is not recommended.

CLOONCONEEN POOL, Co. Clare

'Not Valuable'

This is a small peaty lagoon of high salinity at time of survey (33 -36 parts per thousand).

*Ruppia maritima* was the only aquatic higher plant species. It is more or less sparse but frequent around most shores and forms fairly dense beds in the south eastern bay. It has a wide distribution, but is absent from the vicinity of the inflow channel.

Marginal communities and species show some diversity. *Scirpus maritimus* and *Juncus maritimus* are the dominant species around most shores, typically associated with a sparse understorey of salt tolerant species and grading to *Juncus gerardii* - *Festuca rubra* saltmarsh.

*Puccinellia maritima* saltmarsh occurs at the western end, including one stand on the barrier shore with an open *Phragmites* cover. *Spartina anglica* is locally dominant on the north western shore and there is one small area of open *Salicornia* cover on a muddy shore in the same area.

Extensive stands of *Phragmites* and *Spartina* lie to the west of the site, associated with the inflow channel which joins the lagoon at its western end.

This seems to be a particularly species-poor lagoon.

Further survey is not recommended.

LOUGH DONNELL, Co. Clare

'Not Valuable'

This is a shallow sandy lagoon with low salinity (0-5 parts per thousand) at time of survey. Water depth exceeded 50cm at the outlet and the freshwater inflow only. Therefore, the aquatic species of this lagoon were more comprehensively surveyed than those of most sites.

*Ruppia maritima* is the only aquatic higher plant species. It is widely distributed across the site, being completely absent from the vicinities of the outlet pipe and the freshwater inflow and the area of periodic flooding to the south only. *Ruppia* has a patchy cover to the north of the freshwater inflow and a more extensive cover to the south. It is typically low-growing.

There is a high diversity of swamp and other marginal communities. *Scirpus maritimus*, *Schoenoplectus* and *Phragmites* occur in mixed and single species stands on the eastern and southern shores. These are all fairly extensive in places. Eastern swamps grade to freshwater *Phragmites* fen.

A community of salt tolerant species with dominant *Eleocharis uniglumis* and *Agrostis stolonifera* occurs in the south. An open shore community consisting of *Glaux maritima*, *Spergularia marina* and *Triglochin maritima* is found in the north and south of the site and *Puccinellia maritima* dominated saltmarsh vegetation borders part of the barrier shore.

Lough Donnell is an interesting site in terms of the diversity of its marginal communities. However, aquatic species composition is poor.

Further survey is not recommended.

AUGHINISH LAGOON, Co. Clare

'Not Valuable'

This is a high salinity site (31-33 parts per thousand at time of survey) with no major freshwater inflow.

No aquatic higher plant species occur here.

*Cystoseira foeniculata* is frequent around most of the site and is typically the dominant species, with the exception of the southern shore.

*Fucus serratus*, *Ulva lactuca* and *Codium tomentosum* are frequent and locally abundant along the southern shore. *Polysiphonia elongata* is occasional here.

*Plocamium cartilagineum* is occasional up to 20m out from the northern barrier shore. *Osmundia hybrida* is rare here and near the northern shore of the eastern section of the site.

The dominant marginal community is saltmarsh dominated by *Puccinellia maritima*, *Suaeda maritima* and *Salicornia*. This forms a narrow strip along the southern shores and a more extensive cover on the lower-lying ground to the north of the site.

Further survey is not recommended.

BRIDGE LOUGH, Co. Galway

'Not Valuable'

This is a shallow silty lagoon. Salinity was high (32 parts per thousand) at time of survey.

*Ruppia maritima* is the only higher plant species here and is restricted to a small area landward of a dry stone wall that runs parallel to the south western shore.

Elsewhere, filamentous algae has an almost complete cover over the entire site.

Marginal vegetation shows no notable variation. *Puccinellia maritima* dominated saltmarsh forms a more or less narrow strip around most of the site with *Schoenoplectus lacustris* ssp *tabernaemontani* locally dominant in a small bay in the south west corner of the site.

This is a very species-poor site of no botanical interest.

Further survey is not recommended.