An Foras Forbartha Teoranta
The National Institute for Physical Planning and Construction Research

Teach Mháirtín
Bóthar Waterloo
Áth Cliath 4
Telefón 64211
St. Martin's House
Waterloo Road
Dublin 4

CONSERVATION AND AMENITY ADVISORY SERVICE

A REPORT ON AREAS OF SCIENTIFIC INTEREST IN COUNTY MEATH

R. Young,
An Foras Forbartha,
March 1972.

This report is based on data in the files of the Conservation Unit, An Foras Forbartha, on published literature and on observations made in the field during the period November 1971 - February 1972.

The report consists of the following parts:-

Botanical nomenclature follows that of "Flora of the British Isles" Clapham, Tutin and Warburg. Second Edition, 1962.

The following people gave invaluable help in the preparation of this report and their contributions are gratefully acknowledged:

Mr. C. Breen; Dublin Naturalist's Field Club
Dr. A. Flegg; Geological Survey of Ireland
Dr. J. Jackson;
Mr. D. Synnott; National Museum Herbarium

SECTION A

PREFACE

In the present day Ireland can still justifiably be called 'The Green Isle'. In comparison with most countries in the western world a very high percentage of the country is still 'natural', unspoilt countryside untouched by industry, urbanization and often, even by modern farming techniques.

It is unrealistic to think that this situation will continue indefinitely. If the national economy is to improve, many areas of our countryside must be taken over by industrial and urban development and traditional farming methods must be 'modernised'. These trends have already become manifest and can be expected to continue over the coming years.

Fortunately, it is now realised that unspoilt countryside is itself a valuable asset to the community. It is generally appreciated that in the peace and quiet and scenic beauty of such countryside many people find relaxation and recreation - a fact that is of great importance to the Irish tourist industry. In addition to such amenity values however, many parts of the countryside are of scientific importance, either because of their research potential or their educational value.

The essence of conservation is planning in which these intrinsic values of the countryside are weighed against the needs of agricultural improvement and industrial and urban expansion. Its aims,are firstly to ensure that,as far as possible,the areas of countryside that will be 'lost' to development are those of least value from the points of view of amenity and scientific interest, and secondly,to ensure that development does not pollute or in any way clash with the intrinsic values of the surrounding countryside beyond a degree that is absolutely essential. Thus development can proceed without unnecessary impoverishment of our rich heritage of beautiful and scientifically important areas.

The responsibility for conservation in Ireland lies largely with the County Councils. It is clearly essential however, that adequate data on areas of scientific interest should be made available to them because, whilst such a characteristic of an area as scenic beauty is readily apparent to the discerning eye, the scientific values of a site are often hidden from all but the specialist.

It is the aim of the Conservation Advisory Service, An Foras Forbartha, to provide this information in a series of reports, each of which will deal with the areas of scientific interest within a single county.

SECTION B

VULNERABILITY OF AREAS OF SCIENTIFIC INTEREST

Areas of scientific interest can be damaged in many ways. They can, for example, be completely and rapidly destroyed by scrub or tree clearance, by turf cutting or by arterial drainage, or they can suffer insidiously through pollution, fertilisation, grazing or overuse for recreations.

Of these various instances the first poses the greatest threat because of the rapidity with which it can occur. In the absence of a fine large enough to be a sure deterrent, co-operation to maintain the county's deciduous woodlands at all levels of landowner, forester and the general public must be actively sought. It may not be sufficient merely to put a Tree Preservation Order on an area which would lose its value immediately the trees are felled. The voluntary organisations have a role to play in this acting as observers throughout the county.

Turf cutting on a small, private scale presents little threat to the countries' boglands in comparison with the activities of Bord na Mona. A representative series of Irish bogs should certainly be left untouched by commercial exploitation.

Drainage schemes of all kinds can have serious effects on wetland sites. Marshes, fens and bogs may dry out, lake levels may fall and the dredging of rivers results in the steepening of their banks and an increased rate of water flow. All these changes can result in the disappearance of particular communities or species.

The effects of pollution are most often encountered in aquatic sites, which are particularly vulnerable because the incoming material cannot be localised. but is transported throughout the water body. Toxic chemicals can obviously

have disasterous effects on aquatic communities but equally serious effects can be produced by sewage if sufficient quantities pass into the water. Such influx of sewage causes the nutrient levels of lakes to rise with consequent effects on the aquatic communities and water quality. A sign of this rise in nutrient levels, known as eutrophication, is the production of algal scums or 'blooms' on the water surface in warm weather.

Several farming operations are potentially destructive, apart from straightforward pollution by silage effluent or intensive livestock units. Excessive fertilization produces run-off of nutrients, especially nitrates and these are particularly bad for nutrient-poor ecosystems such as acid lakes and bogs. Introducing such run-off into any natural community will change the species composition.

Grazing has a similar effect. It can select out of the vegetation those species that are most resistant to constant cutting and/or those that are unpalatable, and therefore not grazed, and allow them to multiply at the expense of others. This reduces the diversity of the flora and often also its interest. Light grazing is seldom detrimental except that it prevents the natural colonisation of grassland by shrubs and trees, but as it is intensified such changes as those mentioned above occur and in extreme cases the vegetation may not be able to persist at all. Eskers and sand dunes are particularly vulnerable as their dry soils do not allow a fast recovery growth by grazed plants.

The last influence to be mentioned is recreation, the effects of which are most obvious today on sand dune systems. Heavy recreational use of dunes results in destruction of the vegetation which stabilises the dunes and serious erosion can result. The destructive effects of flower or plant collecting should perhaps also be mentioned. Opening up of areas with a rare noticeable plant may damage that species, but in general enough individuals escape notice so that it persists from year to year.

SECTION C

INTRODUCTION TO AREAS OF SCIENTIFIC INTEREST IN COUNTY MEATH

This report contains details of forty-two areas of scientific interest in County Meath. They range in importance from the internationally important brickwork's quarry at Grangegeeth to numerous sites (18) of merely local importance. The County Council has a responsibility to take the value of these sites into consideration when producing development plans under the Local Government (Planning and Development) Act, 1963, and when dealing with day to day planning applications.

Where areas are known to be threatened, and their preservation is considered to be justifiable, recommendations are made for their protection. An indication is also given as to the degree of urgency necessary if protective action is to be effective. As will be seen, only three areas have been assigned "A" priority and great urgency is required if these are to be protected.

A particular plea is made for immediate action to preserve the scientific values of the Lough Shesk area. This area is threatened by the Boyne Drainage Scheme; dredging of the tributaries of either the Athboy R., or the Stonyford R., up as far as the area, will undoubtedly have marked and deleterious effects on its ecology. The scientific values of this area far outweigh any advantages to be gained by its drainage and there should be co-operation between Meath County Council, Westmeath County Council and the Office of Public Works to ensure its protection.

The Boyne Drainage Scheme may in fact affect many of the areas of scientific interest. Generally, however, control over the dumping of material dredged from the river could minimise the effects of the works.

In view of the importance of the coast for recreational activity, the deterioration of the Mornington dune system must also be a matter of great concern and urgency. It is recommended that a detailed study of this dune system should

be carried out to establish the most appropriate method of dune stabilisation and to draw up future management plans for the area. This study could be carried out by the Conservation Advisory Service, An Foras Forbartha.

Finally, it must be emphasised that all assessments of the importance and priority of areas and all recommendations in this report have been made in the light of present knowledge. New scientific research or future planning applications make revisions necessary.

SECTION D

RATING OF AREAS OF SCIENTIFIC IMPORTANCE

This is a measure of the relative importance of areas of scientific importance.

The importance of each area is indicated in terms of the following categories:

International Importance

1. Only area of its type in Europe.
2. One of the few such localities in Europe.
3. One of a natural series in Europe.
4. Recognised international importance.
5. Specialised educational importance.

National Importance

1. Only area of its type in Ireland.
2. One of a few such localities in Ireland.
3. One of a natural series in Ireland.
4. Recognised national importance.
5. General or specialised educational importance.

Regional Importance

1. Only area of its type in province.
2. One of a few localities in Ireland.
3. One of a natural series in region.
4. Fine example of its kind.
5. General or specialised educational importance.

Local Importance

1. Only area of its type in county.
2. One of a few localities in province.
3. Fine example of its kind.
4. General educational importance.

PRIORITY OF AREAS OF SCIENTIFIC INTEREST

This is a measure of the relative urgency necessary for protection of the areas of scientific importance.

Each site is given a priority rating of A, B or C.

The rating of any area is based on a combination of the following criteria:-

a) the importance of the area

b) the vulnerability of the area

c) the nature and imminence of any threats to the area.

Areas of Scientific Importance in County Meath

Area	Page no.	Grid. Ref.	Rating	Priority	Interest
Brickworks quarry near Grangegeeth Crossroads	16	N. 953, 767	International	B	Geological. A very important fossil locality.
Ballinrig	18	N. 822, 499	National	C	Geomorphological. An example of an ice-contact delta and feeding eskers.
Galtrim moraine and esker	20	N. 86, 52	National	B	Geomorphological. An example of an esker crossing a moraine.
Ardagh area	22	N. 82, 95	National	B	Geological. An area of exhumed pre-Namurian topography, which also includes two important stream sections.
East of Ballyhoe Lough Kellystown	23	N. 864, 952	National	C	Geological. Exposures of brucite marble.
Altmush Stream	24	N. 790, 872	National	C	Geological. Shows a very important stratigraphical section from upper Carboniferous limestone facies, through Bolland Shales, into Millstone Grit.
Quarries north of Grangegeeth Crossroads	25	N. 955, 794	National	C	Geological. A rich, well-documented fossil fauna.

Area	Grid. Ref.	Rating	Priority	Interest
Cruicerath Quarry 26	O. 046, 717	National	C	Geological. An important fossil locality.
Lough Shesk 27	N. 62, 68	National	A	Ecological, botanical. An area with an exceptionally interesting variety of aquatic and wetland habitats, which contain a number of uncommon plants.
Riverside at Beauparc 30	N. 921, 715	National	B	Botanical. The only known Irish locality for the rare grass, Poa palustris.
Riverside at Rossnaree 31	O. 001, 717	National	B	Botanical. A locality for the rush, Juncus compressus, the first to be discovered in Ireland.
Riverside at Slane 33	N. 963, 736	National	B	Botanical. The only other known Irish locality for Juncus compressus.
Newtown area 34	N. 91, 86	Regional	C	Geomorphological. One of the best examples of the margin of the drumlin belt.
Benhead 35	O. 176, 686	Regional	C	Geomorphological. Here at the coast, a moraine which represents a re-advance of the ice-margin during the last ice-age, has been cut across, exposing its internal structure.

Area	Grid. Ref.	Rating	Priority	Interest
Painestown Quarry 36	N. 955, 700	Regional	C	Geological. A spectacular, recumbent, disharmonic fold.
Rockwood cliffs 37	N. 947, 735	Regional	C	Geological. Here can be seen the lateral passage from Waulsortian mudbank deposits to bedded limestones.
Riverbank near Tobermannan Bridge 38	N. 827, 967	Regional	C	Geological. A thin band of limestone in which a fossil blastoid is abundant.
Mornington dunes 39	O. 157, 75	Regional	A	Ecological, botanical, zoological. A well-developed system of highly-calcareous dunes on which occur several rare plants and a rare snail.
Crewbane 43	N. 990, 735	Regional	C	Ecological. An area of woodland and marsh, of scenic as well as scientific interest.
Corstown Loughs 45	N. 89, 91	Regional	C	Ecological. The area contains a great variety of habitats and plant communities.
Lough Doo area 47	N. 516, 735	Regional	C	Ecological. A small, badly-drained valley which poses interesting ecological problems.

Area	Grid. Ref.	Rating	Priority	Interest
Woodland and bog west of Duleek Thomastown Bog (22) 49	O. 010, 686	Regional	B	Ecological. A small raised bog completely surrounded by carr.
Doolystown bog 52	N. 753, 506	Regional	C	Ecological. A remnant of raised bog, part of which shows a very well-developed 'hummock and hollow' structure.
Riverside two miles east of Trim 55	N. 834, 566	Regional	A	Botanical. This riverside marsh is an unusual inland station for strawberry clover, Trifolium fragiferum.
River valley at Naul 57	O. 135, 613	Local	C	Geological, botanical. The gorge, cut into the carboniferous limestone strata, is a locality for the fern, Polypodium vulgare ssp. serrulatum.
Laytown dunes 58	O. 168, 700	Local	C	Ecological, botanical. These old acidic dunes form an interesting contrast to the nearby Mornington dunes. The only County Meath locality for lesser meadow rue, Thalictrum minus.
Bellewstown racecourse 60	O. 093, 674	Local	C	Ecological. An area of very poor acid grassland.

Area	Grid. Ref.	Rating	Priority	Interest
Flemingstown woodlands 61	N. 99, 66	Local	C	Ecological, botanical. Semi-natural woodlands which form a local refuge for several woodland flowering plants and bryophytes.
Riverside at Newhaggard 63	N. 774, 566	Local	B	Ecological, botanical, zoological. The effects of the old mill weir have produced an area rich in aquatic plants and insects typical of still or slow-flowing water.
'The Commons', Duleek 65	O. 043, 692	Local	C	Ecological, botanical. An area of marsh, shallow fen and poor, damp pasture in which occurs the spikerush, Eleocharis uniglumis.
Ballynabarny fen 66	N. 687, 459	Local	C	Ecological, botanical. A small fen with an interesting plant community.
Fen west of Greenanstown Cromwell's Bush Fen 68	O. 102, 647	Local	C	Ecological, botanical. An area containing marsh, fen, swamp and open water.
Roristown fen 70	N. 767, 550	Local	C	Botanical. This small fen contains several uncommon plants.
Mount Hevey bog 72	N. 630, 475	Local	C	Ecological. A fairly wet raised bog little affected by cutting and drainage, etc.

Area		Grid Ref.	Rating	Priority	Interest
Jamestown bog	74	N. 78, 66	Local	C	Ecological. A much cut-away area of raised bog.
Girley bog	75	N. 70, 70	Local	C	Ecological. An area of fairly dry raised bog.
Bog east of Hill of Down Mount Hevey Bog	77	N. 668, 470	Local	C	Ecological. A very dry area of raised bog, parts of which were recently severely burnt.
Bogtown bog	79	N. 600, 430	Local	C	Ecological. A large, generally dry raised bog, but with a few wet patches and a stream running across part of it.
Boyne estuary	81	O. 141, 767	Local	C	Ecological, botanical, ornithological. An area of saltmarsh and intertidal mudflats.
River Boyne at Trim	82	N. 813, 568	Local	It is inevitable that this site will be changed by the Boyne Drainage Scheme	Botanical. The sweet flag, Acorus calamus is well established in the river.
Breakey Loughs	83	N. 737, 907	Local	C	Ecological, botanical. A great variety of plant species in a small area.
Ballyhoe Lough	84	N. 845, 953	Local	C	Ecological, botanical. A fairly acid, peaty lough, contrasting with most loughs in the county which are alkaline.

SECTION F

DETAILED REPORTS AND MAPS OF EACH OF THE AREAS OF SCIENTIFIC INTEREST

Each report is written under the following sub-headings: -

Name of Area
Acreage
Grid Reference
Scientific Interest
Rating
Priority
Description of Area
Evaluation
Threats to the area
Recommendations

In the descriptions the abundance of the species may be indicated according to the following scale:-

a	-	abundant
c	-	common
f	-	frequent
o	-	occasional
r	-	rare
l	-	locally (as a prefix)

Name of Area	BRICKWORKS QUARRY NEAR GRANGEGEETH CROSSROADS
Acreage	c. 2·5 acres
Grid Reference	N. 953, 767
Scientific Interest	Geological
Rating	International Importance
Priority	B

Description of Area

The tongue-shaped quarry, which is still being worked, is within the area enclosed by the thick black line on Map 1. It has now been considerably extended beyond the area of the small quarry shown on this map.

The lower end of the quarry is partially flooded and only continual pumping allows the quarrying to continue.

The lowest beds exposed in the quarry are brown-weathering shales with calcareous concretions near their top. Only about 1 metre of these shales are exposed. Above them are a series of soft, light-grey shales about 30 metres thick, which have formed the bulk of the material quarried.

The lower shales and concretions contain an abundant and varied fossil fauna and are the type locality for the trilobite Decordinaspis bispinosa.

Further details of the fossil fauna and its stratigraphical significance can be found in:-

Brenchley, P. J., Harper, J. C. , Romano, M., and Skevington, D., New Ordovician Faunas from Grangegeeth, Co. Meath. Proceedings of Royal Irish Academy, Vol. 64, B. p 297-304.

Evaluation

The quarry is of international importance because of the occurrence there of the trilobite Decordinaspis bispinosa, unknown elsewhere. The abundance, variation and stratigraphical importance of the whole fauna contribute to this high rating.

Management of the area to preserve the scientific interest is unnecessary as long as the present pattern of quarrying continues and further extension of the quarry might well expose more fossil rich strata.

Current threats to the Area

None known.

Potential threats to the Area

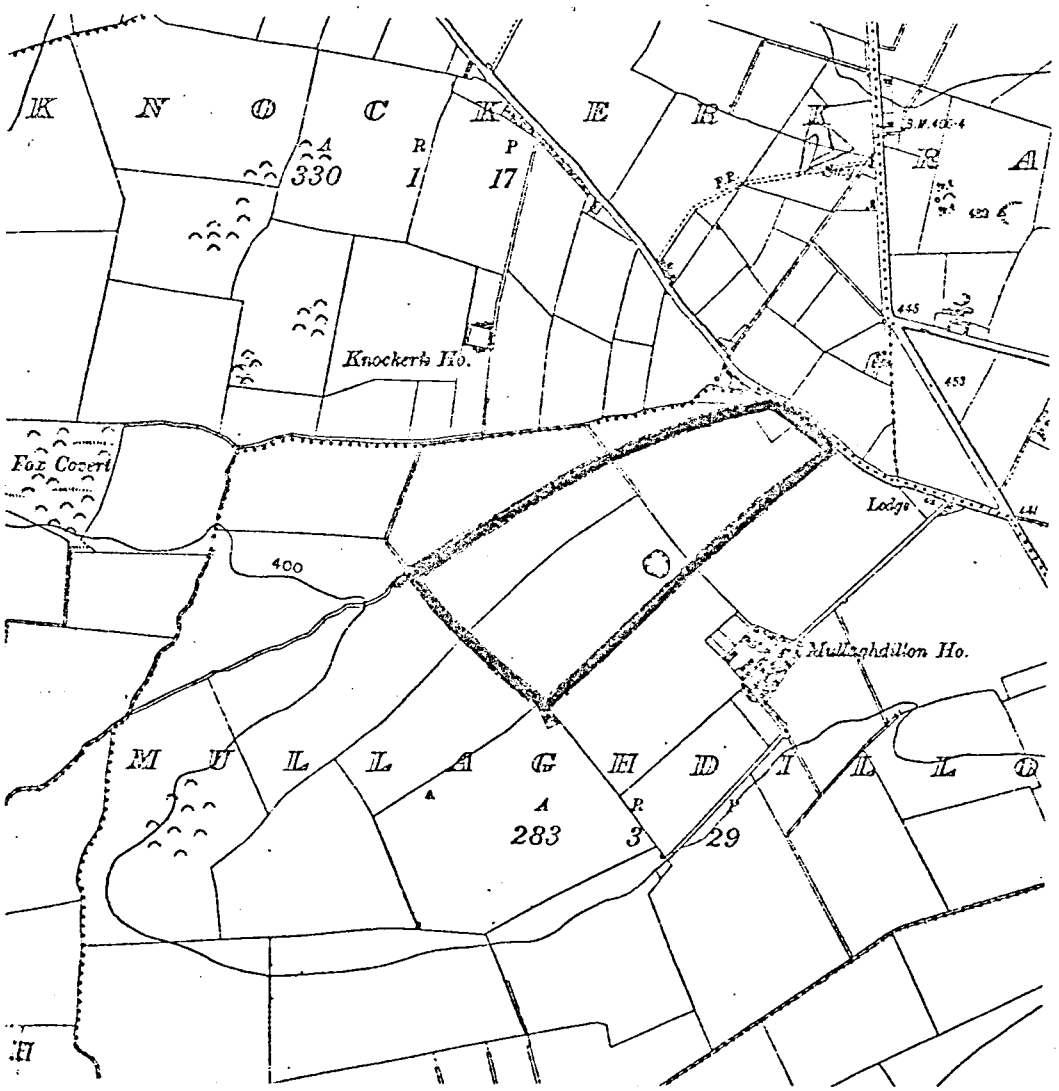
Cessation of the pumping associated with the present quarry workings would result in more extensive flooding of the quarry. Such flooding might obscure some of the fossil-rich strata.

Recommendations

An Foras Forbartha should be informed of any proposal to cease pumping in the quarry. The likely extent and impacts of flooding could then be accessed and plans for future management drawn up.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 1

Scale: 6 Inches to 1 Mile



Name of Area	BALLINRIG
Acreage	c. 35 acres
Grid Reference	N. 822, 499
Scientific Interest	Geomorphological
Rating	National Importance
Priority	C

Description of Area

In the area of Ballinrig and Dangan are the glacial deposits and landforms of an ice contact delta and feeding eskers. It is currently used as a teaching area for University parties.

The area of scientific interest outlined on Map 2 has been selected as the most interesting part of this general area. Its relationship to the area as a whole is shown in the following diagram (Fig. 1).

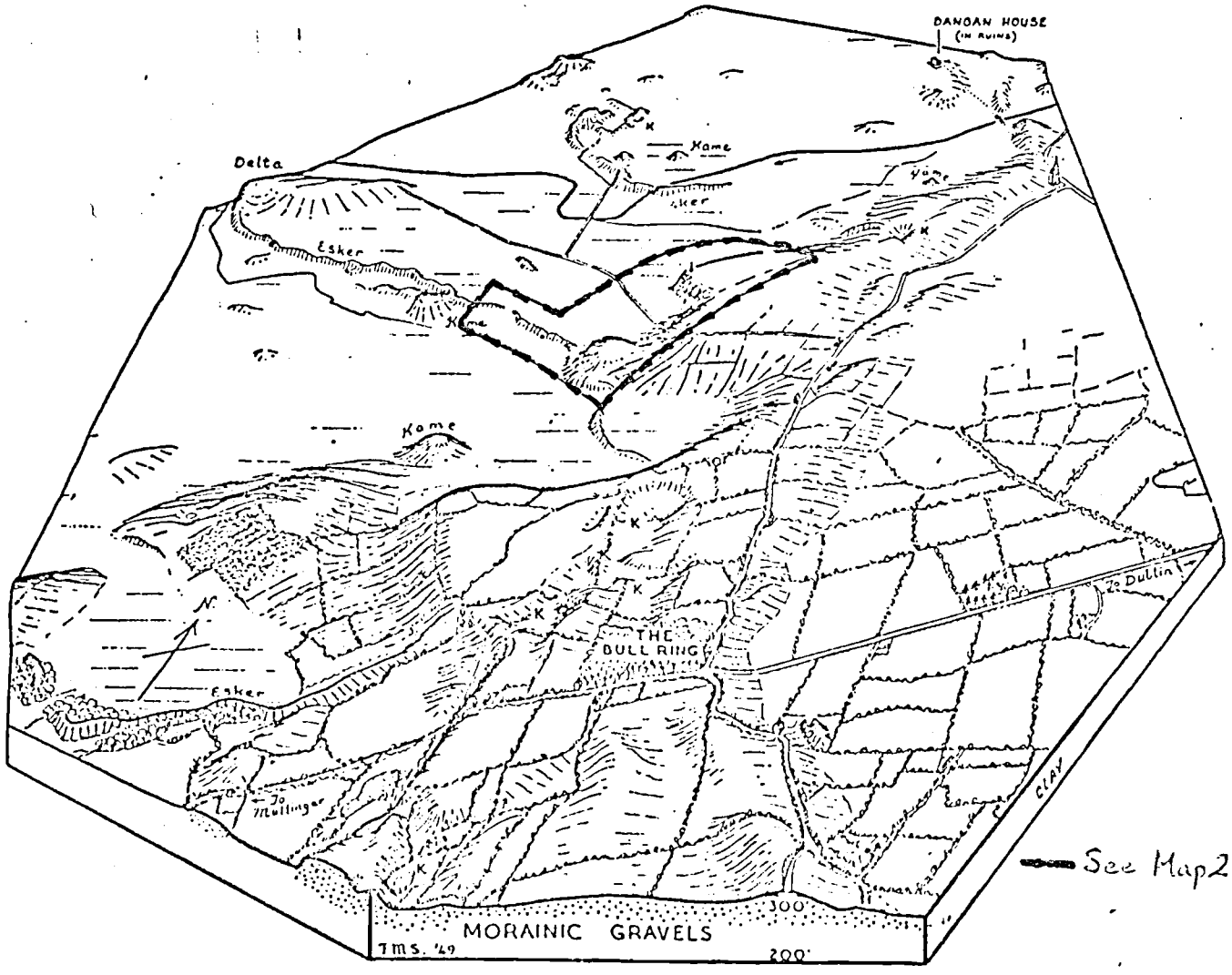


Fig. 1 Perspective block diagram of the Galtrim moraine and feeding eskers between Dangan and the Bull Ring

Dimensions of block, 1 3/4 miles long by 2 miles broad. Map constructed from 6" field-maps (Co. Meath, sheets 42 and 43), with the aid of photographs and field-sketches.

Note the position of the kames, and eskers on the level marshy surface of the 'tongue-basin' that adjoins the steep inner or ice-contact face of the moraine. East of the moraine, a spread of lacustrine clay forms a level plain. Kettle-holes (K), pit the upper surface of this delta-moraine; the Bull Ring itself is a kettle-hole.
(Prepared by Mr. F. M. Synge. Geol. Survey).

The area is pasture, with a little low scrub on the steep slope of the moraine, and its physical features can therefore be clearly seen.

Evaluation

This locality is the best example in Ireland of an ice-contact delta and feeding eskers. It is thus of national importance.

Threats to the Area

Although all the features of the area are intact at the moment, they could be quickly destroyed by gravel excavations.

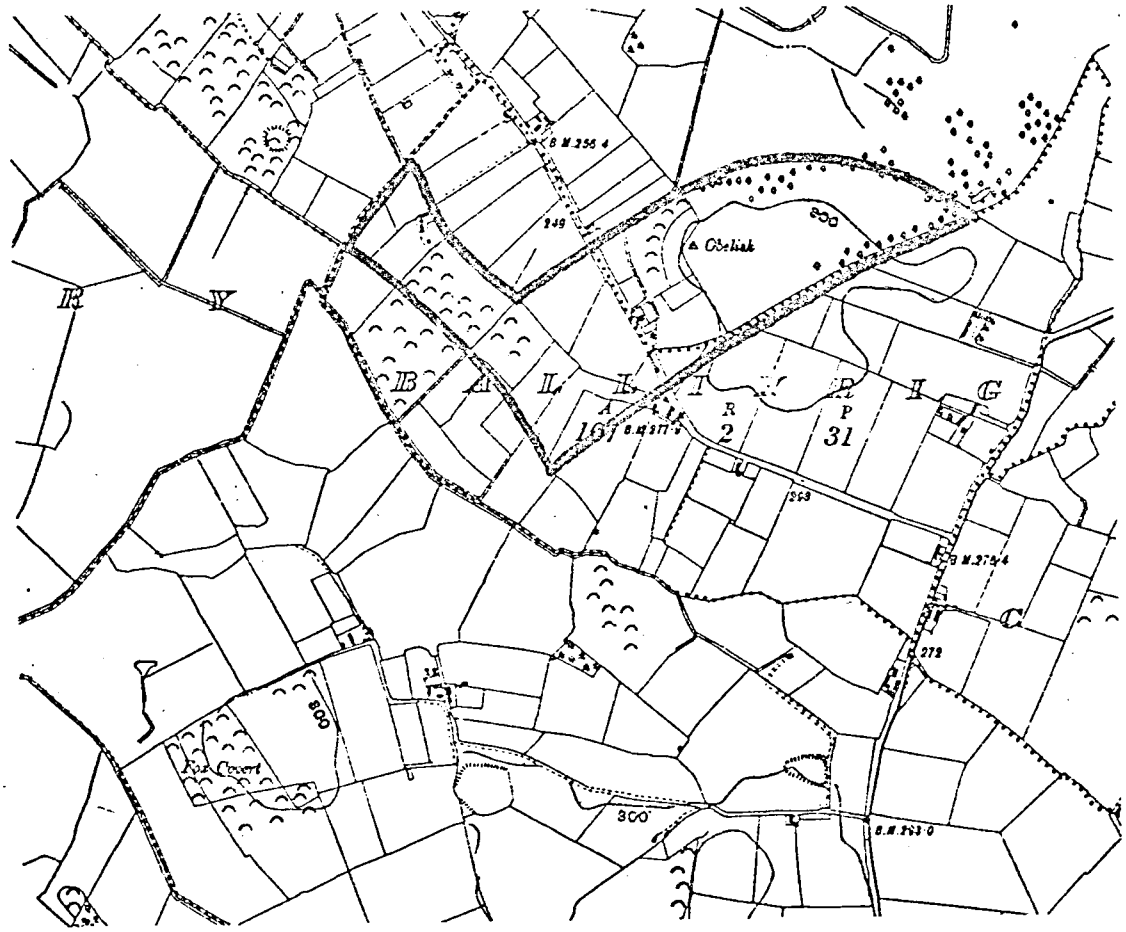
Recommendations

Quarrying for gravel within this area should be prevented.

In view of extensive gravel deposits close by, alternative sites for quarrying would be readily available.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 2

Scale: 6 Inches to 1 Mile



Name of Area	GALTRIM MORAINE AND ESKER
Acreage	c. 75 acres
Grid Reference	N. 86, 52
Scientific Interest	Geomorphological
Rating	National Importance
Priority	B.

Description of Area

The area of scientific interest is shown on Map 3.

Within this area the sharply-defined ridge of the Trim esker meets the wider, higher ridge of the Galtrim moraine. As can be seen from Fig. 2 the esker ridge continues across the moraine.

The land is pasture and bog and all the features can therefore be clearly seen.

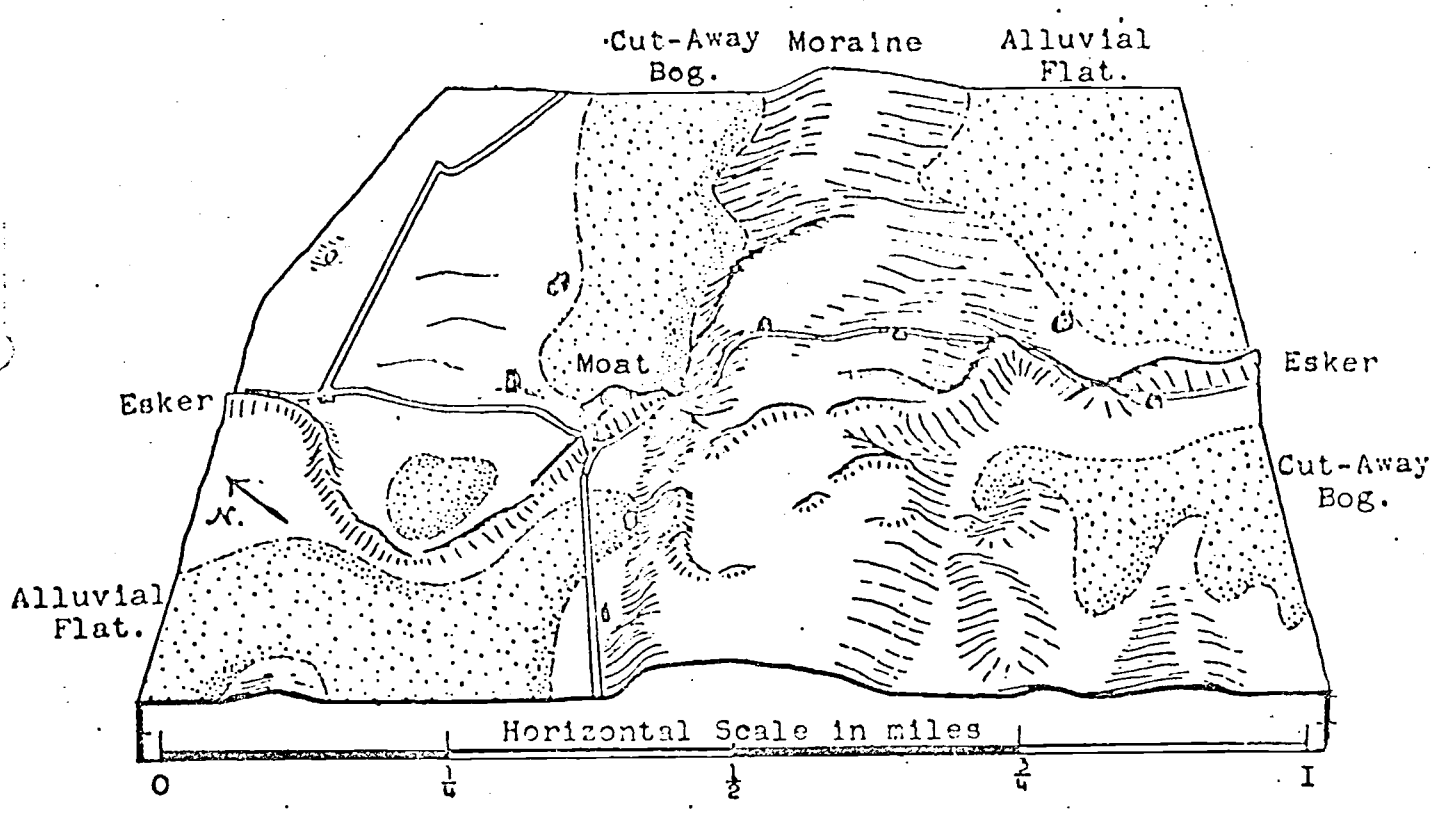


Fig. 2 - The Trim esker crossing the Galtrim moraine at Galtrim. Non-perspective block diagram constructed from the six inch to a mile field-map. Note steep ice-contact face along inner edge of moraine. The flat marshy ground at the foot of the inner edge of the moraine may be regarded as a tongue-basin. (Prepared by F. M. Synge, Geol. Survey).

Evaluation

This example of an esker crossing a moraine is unique in Ireland and is thus of national importance.

Threats to the Area

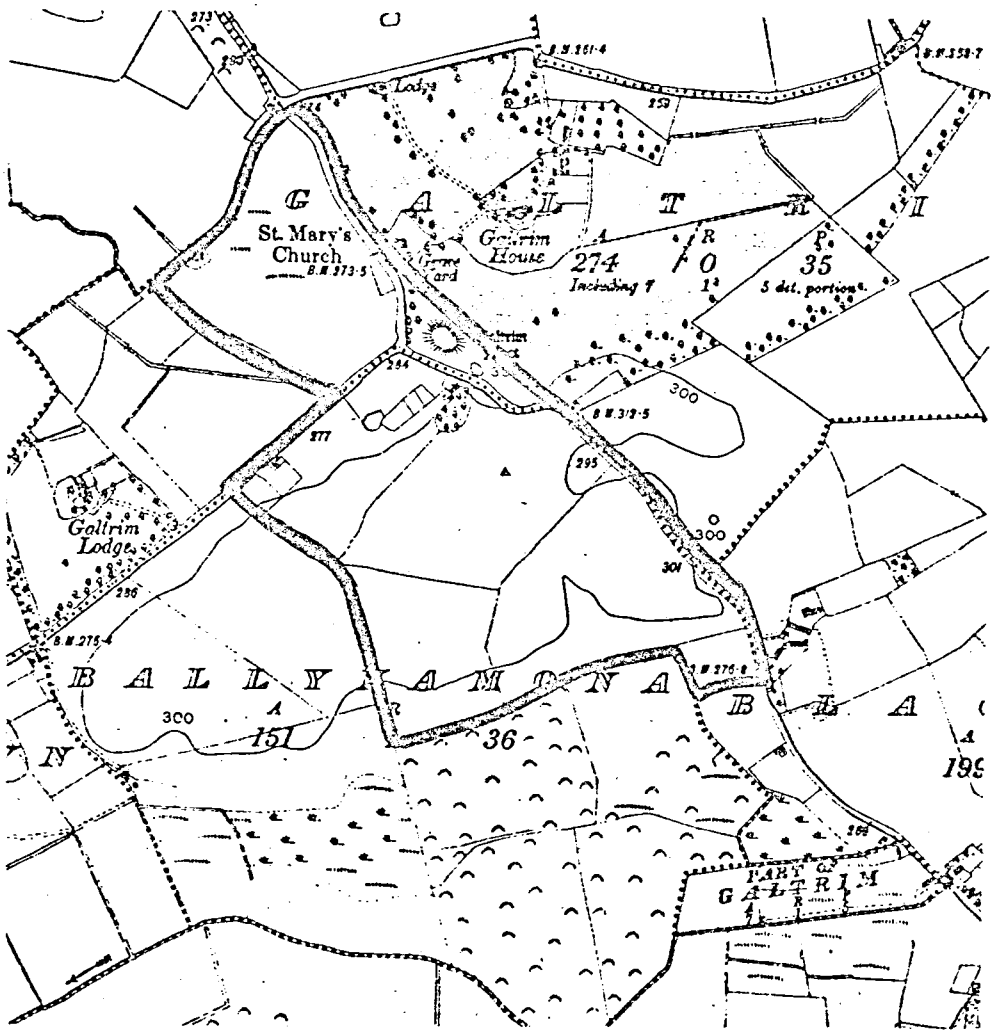
Gravel is currently being quarried within the area, which is endangered by this activity.

Recommendations

Quarrying within this area should be restricted or prevented so that this unique feature may be preserved.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 3

Scale: 6 Inches to 1 Mile



Name of Area	ARDAGH AREA
Acreage	c. 1·43 square miles or 915 acres
Grid Reference	N. 82, 95
Scientific Interest	Geological
Rating	National Importance
Priority	B

Description of Area

The area of interest is shown on Map 4.

Here can be seen an exhumed pre-Namurian topography of a semi-Karst type, partially overlaid by Namurian, Ardagh Shales. Within the area there are two important stream sections, one of which is complementary to the Altmush stream section (See p.24).

Evaluation

The two stream sections and the general geology within this area result in it being of national importance.

Threats to the Area

The two stream sections are in no great danger, but there is at present some quarrying of limestone within the area. This quarrying cannot be objected to unless the whole of the exhumed pre-Namurian topography is quarried away.

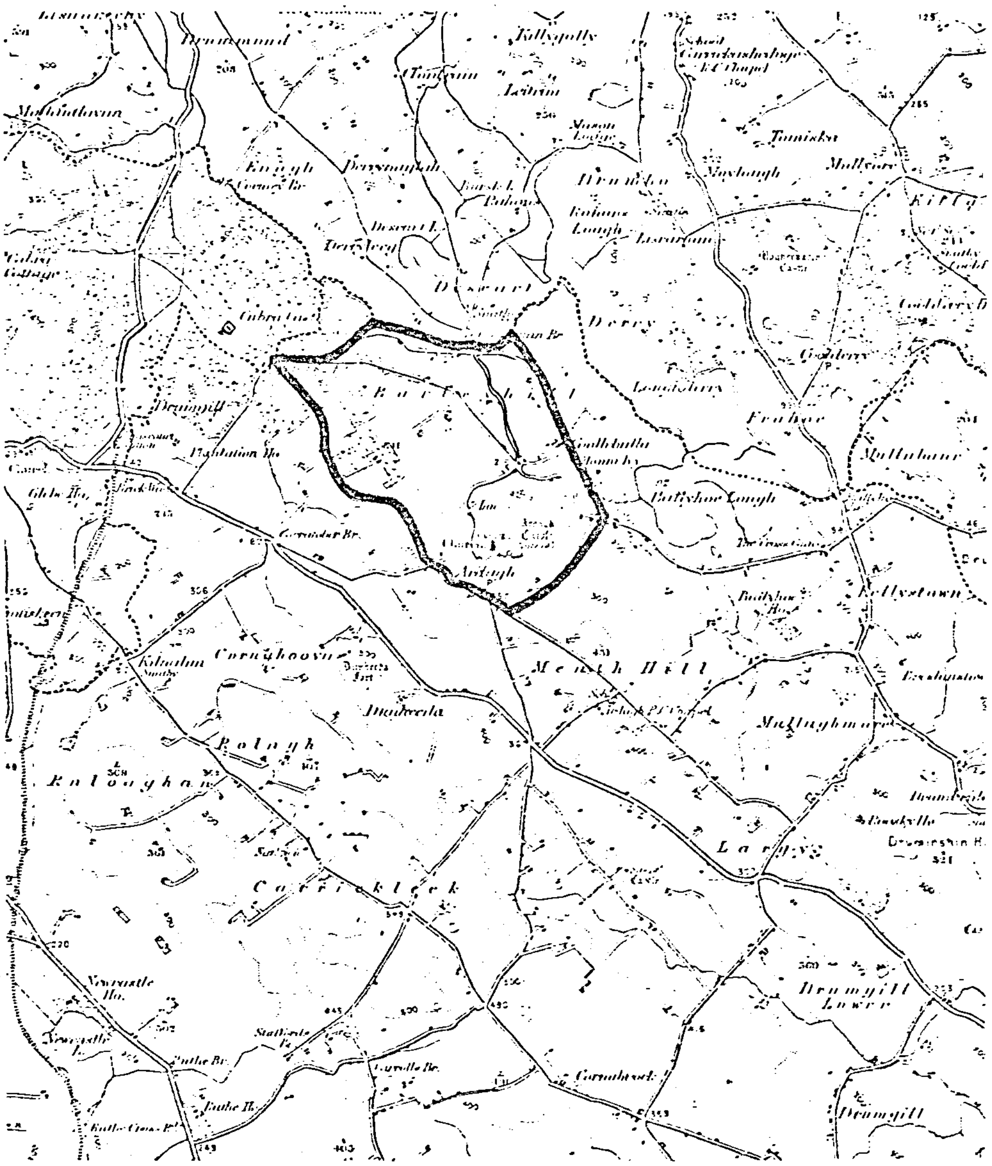
Recommendations

Quarrying within the area should be controlled so that some of the pre-Namurian topography will be preserved.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 4

Scale: 1 Inch to 1 Mile

N



Name of Area	EAST OF BALLYHOE LOUGH
Acreage	c. 3 acres
Grid Reference	N. 864, 952
Scientific Interest	Geological
Rating	National
Priority	C

Description of Area

The area of interest is shown on Map 5.

Here, a low, scrub-covered ridge runs at a slight angle to the road.

On the east side of this ridge are exposures of brucite marble.

Evaluation

Brucite marble is very rare in this country and the site is thus of national importance.

Threats to the Area

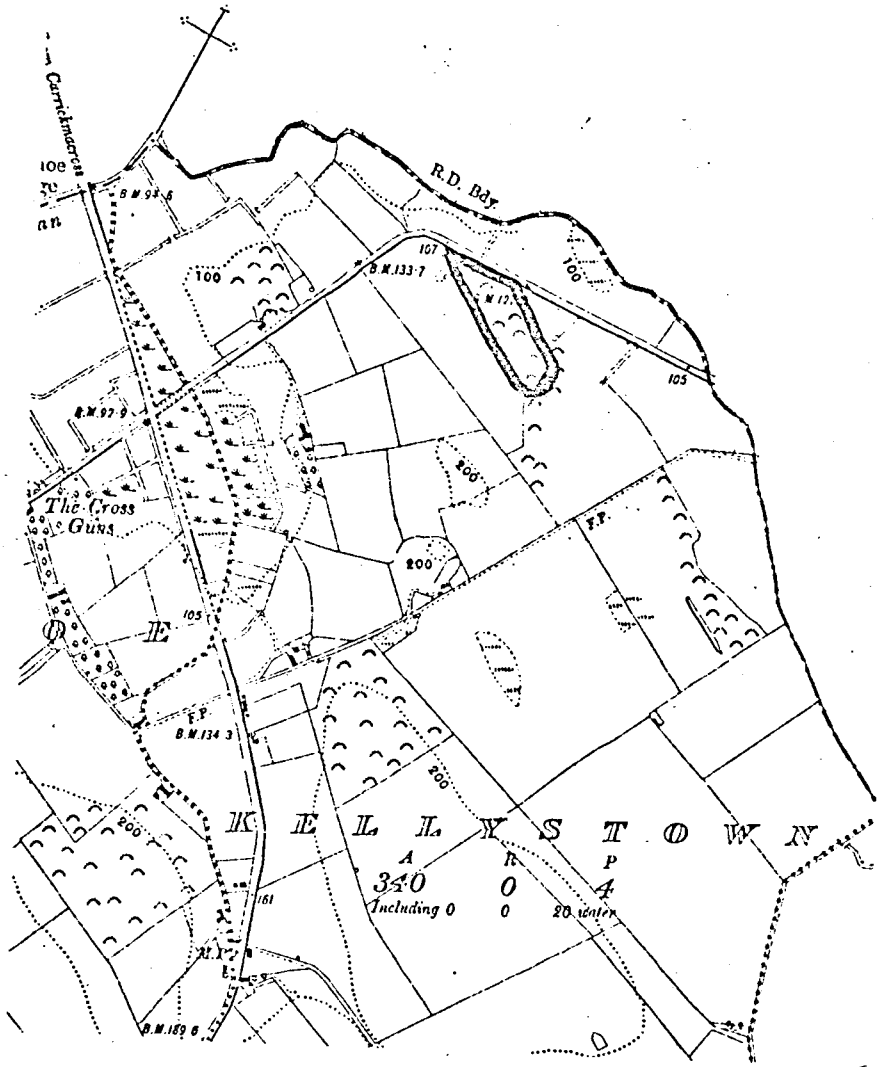
None known of.

Recommendation

Any development in this area should be controlled so as to neither cover the exposures nor limit access to them.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 5

Scale: 6 Inches to 1 Mile



Name of Area	ALTMUSH STREAM
Acreage	c. 5 acres
Grid Reference	N. 790, 872
Scientific Interest	Geological
Rating	National Importance
Priority	C

Description of Area

The area of interest is shown on Map 6.

Within this area the small stream has revealed an unbroken succession from the upper Carboniferous limestone facies, through Bolland Shales, into Millstone Grit.

Evaluation

The exposures of this particular sequence of rocks are unique in Ireland and the area is thus of national importance.

Threats to the Area

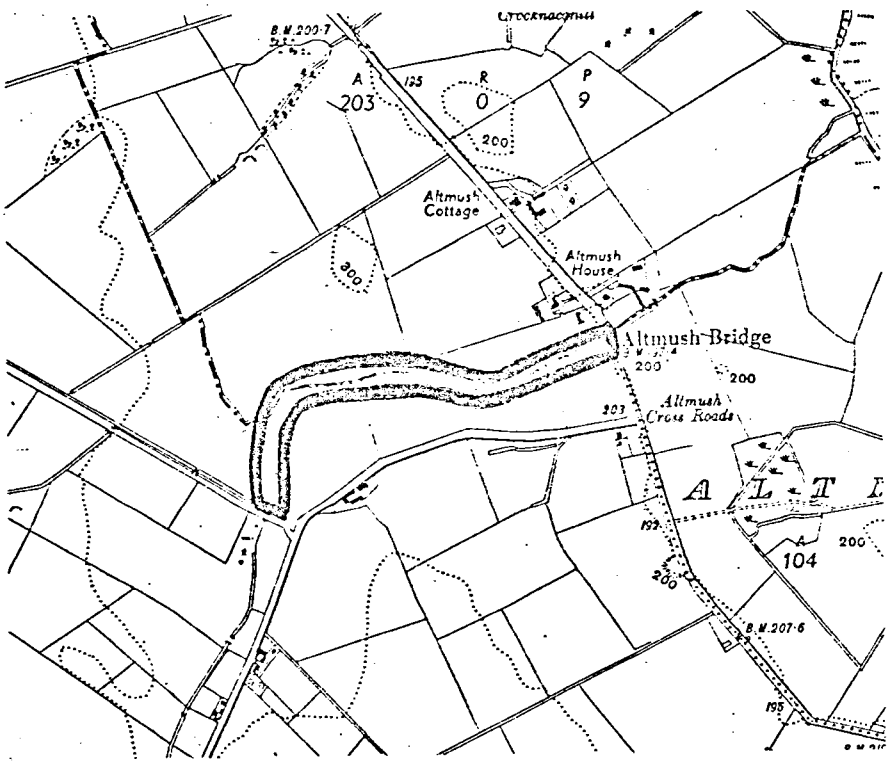
None known.

Recommendations

Development close to the stream should be controlled so as to neither obliterate the rock exposures nor restrict access to them.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —6

Scale: 6 Inches to 1 Mile



Name of Area	QUARRIES NORTH OF GRANGEGEETH CROSSROADS
Acreage	c. 2 acres
Grid Reference	N. 955, 794
Scientific Interest	Geological
Rating	National Importance
Priority	C

Description of Area

The area of interest is shown on Map 7.

Within this area are several disused quarries. West of the road there is a small, apparently very old quarry in the gulley cut by the stream. East of the road are two quarries, one small and the other, farthest from the road, larger and apparently more recently worked.

The two older quarries have a rich, well-documented, fossil fauna. Details can be found in:-

J. C. Harper. The Ordovician rocks between Collon (Co. Louth) and Grangegeeth (Co. Meath)
Scientific Proceedings of the Royal Dublin Society.
Vo. 26 (N.S.) p85 - 112.

Evaluation

These quarries, with their tremendously rich, fossil fauna, are the type locality for several species of brachiopod. They are thus of national importance.

Threats to the Area

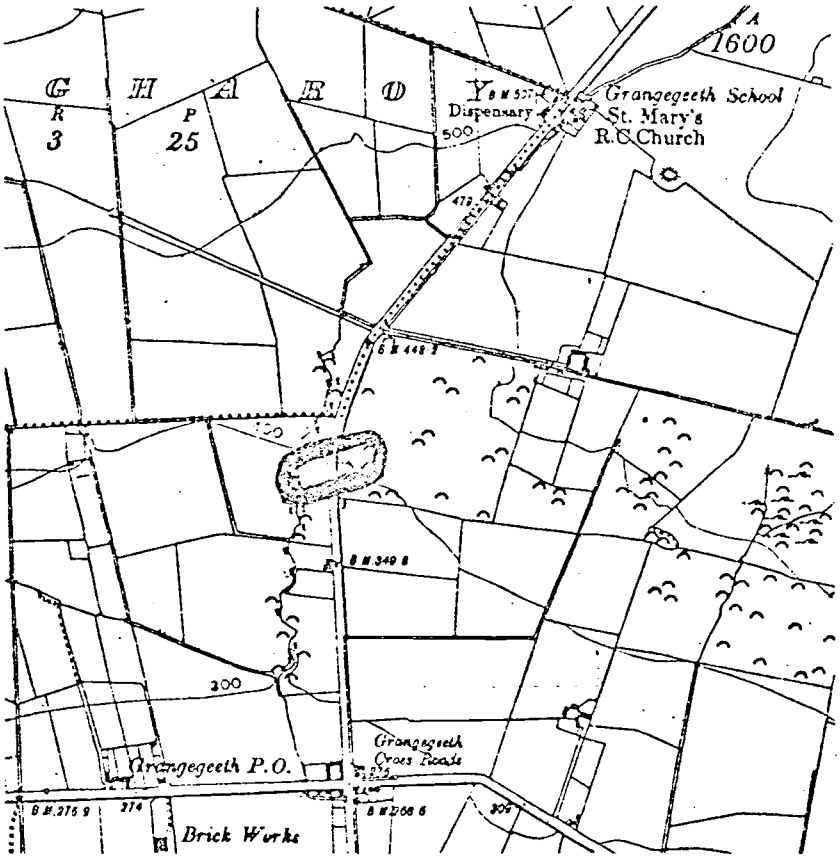
It is unlikely that the old quarry west of the road will be affected by any development. The quarries east of the road however, could be ruined by such developments as building or tipping.

Recommendations

Development in this small area should be prevented.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —7

Scale: 6 Inches to 1 Mile



Name of Area	CRUICERATH QUARRY
Acreage	c. 1 acre
Grid Reference	O. 046, 717
Scientific Interest	Geological
Rating	National
Priority	C

Description of Area

The area of interest is shown on Map 8.

The quarry is cut into the side of a small limestone knoll and shows complex and unusual carbonate breccias along with an extremely rich fossil fauna of the upper Visean D_1 - D_2 period - corals, brachiopods, goniatites and crinoids. In addition, calcareous sponges have been found here and are believed to be the same species (Spongiostroma spp) as similar specimens found in the limestone reefs of Derbyshire, England.

Evaluation

The quarry is of national importance as the only site in Ireland where Spongiostroma spp. have been found.

It is also the type locality for the upper Visean D_1 - D_2 facies in east central Ireland.

Threats to the Area

There has been a small amount of tipping in the quarry, but this does not obscure any of the quarry face. More extensive tipping could ruin the site.

Owing to the small size of the knoll, further quarrying operations could quickly destroy the site.

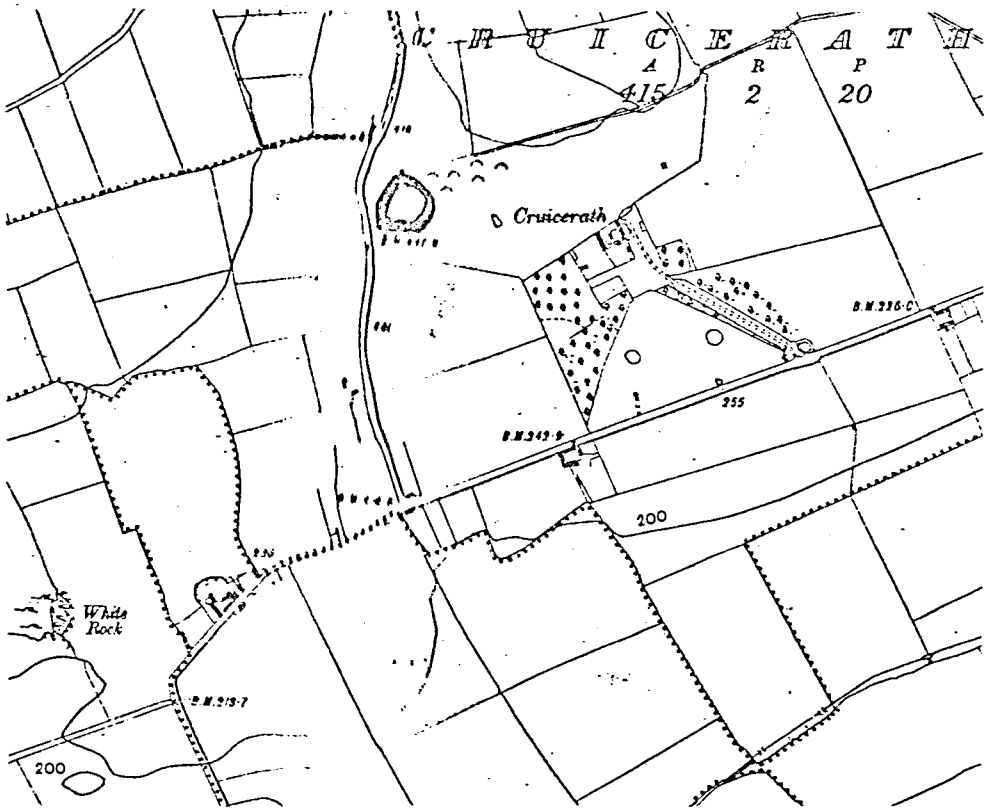
Recommendations

Tipping in the quarry should be prevented.

All but very small scale quarrying operations should be prevented.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —8

Scale: 6 Inches to 1 Mile



of the area the ground is much drier and firmer and the moss carpet, in which Sphagnum is now dominant, is covered with a dense growth of heather (Calluna vulgaris) and cranberry (Vaccinium oxycoccus). Many small gorse bushes Ulex europaeus) and three small pines (Pinus sylvestris) are also present.

Within the area several plants have been recorded that are local and rare in Ireland e.g. Carex dioica, Carex limosa and Hydrocharis morsus-ranae (See Figures 3, 4, and 5). Carex limosa is worthy of particular note as it is abundant in certain parts of this area.

Evaluation

Several features combine to make this an area of national importance:

(a) There is a great diversity of aquatic and wet-land habitats within a small area.

(b) Within the area are several quite exceptional text-book examples of stages in the transition from fen to raised bog.

(c) Several of the rarer Irish plants occur here in quantity.

The area has tremendous educational potential for students of ecology, and botany, and indeed zoology, for the area undoubtedly harbours a large and diverse fauna.

Threats to the Area

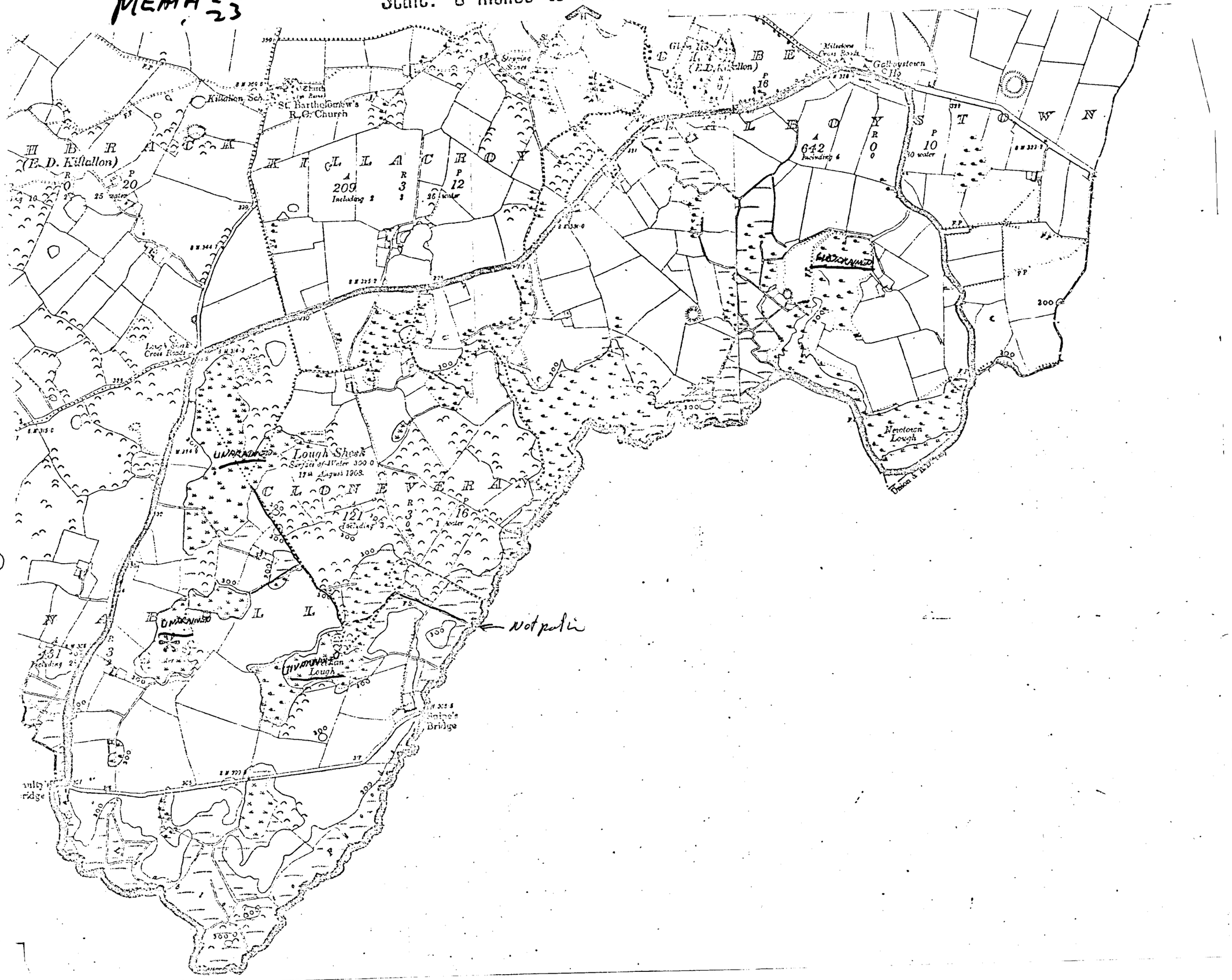
Undoubtedly the greatest threat to this area is the Boyne Drainage Scheme, the western part of the area draining to the River Boyne via the Stonyford River and the eastern part draining to the River Boyne via the Athboy River. The dredging of the river tributaries up as far as the area of scientific interest would undoubtedly ruin the area.

Minor threats are the dumping of refuse into the area and eutrophication that could result from influx of sewage or fertilisers.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —9

MEATH 22-23

Scale: 6 Inches to 1 Mile



Recommendations

This area should be protected by a Conservation Order as soon as possible, under Section 46, Local Government (Planning & Development) Act, 1963. This Conservation Order could be drawn up in draft form by An Foras Forbartha.

Drainage of the area should be prevented by ensuring that drainage works associated with the Boyne Drainage Scheme do not affect the area.

The present minor dumping within the area should be stopped and further dumping prevented.

Name of Area:	LOUGH SHESK AREA
Acreage:	c. 725 acres
Grid Reference:	N. 62, 68
Scientific Interest:	Ecological, botanical,
Rating	National Importance
Priority	A

Description of Area

The area of interest is shown on Map 9.

This is an area of large, steepsided, morainic hummocks, between which the land is very badly drained.

The hummocks are covered either by closely-grazed, improved pasture or by rough pasture with patches of gorse, Ulex europaeus). The following species were noted in the rough pasture:

Dactylis glomerata	(cock's-foot grass)	a
Agrostis tenuis	(common bent-grass)	c
Festuca sp	(fescue)	c
Centaurea nigra	(lesser knapweed)	f
Cirsium arvense	(creeping thistle)	f
Plantago lanceolata	(ribwort plantain)	f

The scientific interest of this area lies in the badly-drained land between the hummocks. Here there is a tremendous variety of habitats - open water, swamp, marsh, a range of fen types and several developing bogs.

Certainly the most interesting of these habitats from the ecological viewpoint are those fens that have reached that stage in their evolution when the transition to bog is occurring. Such a fen is marked * on the map. Around the margins of this fen the land surface is being raised above the winter water-level by dense patches of the moss Aulacomnium palustre, in which a little bog moss, Sphagnum spp also occurs. In the centre

Name of Area	RIVERSIDE AT BEAUPARC
Acreage	c. 1 acre
Grid Reference	N. 921, 715
Scientific Interest	Botanical
Rating	National Importance
Priority	B

Description of Area

The area of interest is shown on Map 10.

Here on the riverbank grows the rare grass Poa palustris.

Evaluation

This is the only locality in this country where Poa palustris occurs and the area is thus of national importance (see Fig. 6).

(The grass has recently been found in Northern Ireland, though this is not indicated on Fig. 6).

Threats to the Area

Whilst the R. Boyne downstream of Navan is not scheduled to be dredged under the initial proposals of the Office of Public Works, silting caused by dredging upstream may necessitate dredging of the lower river at some future date.

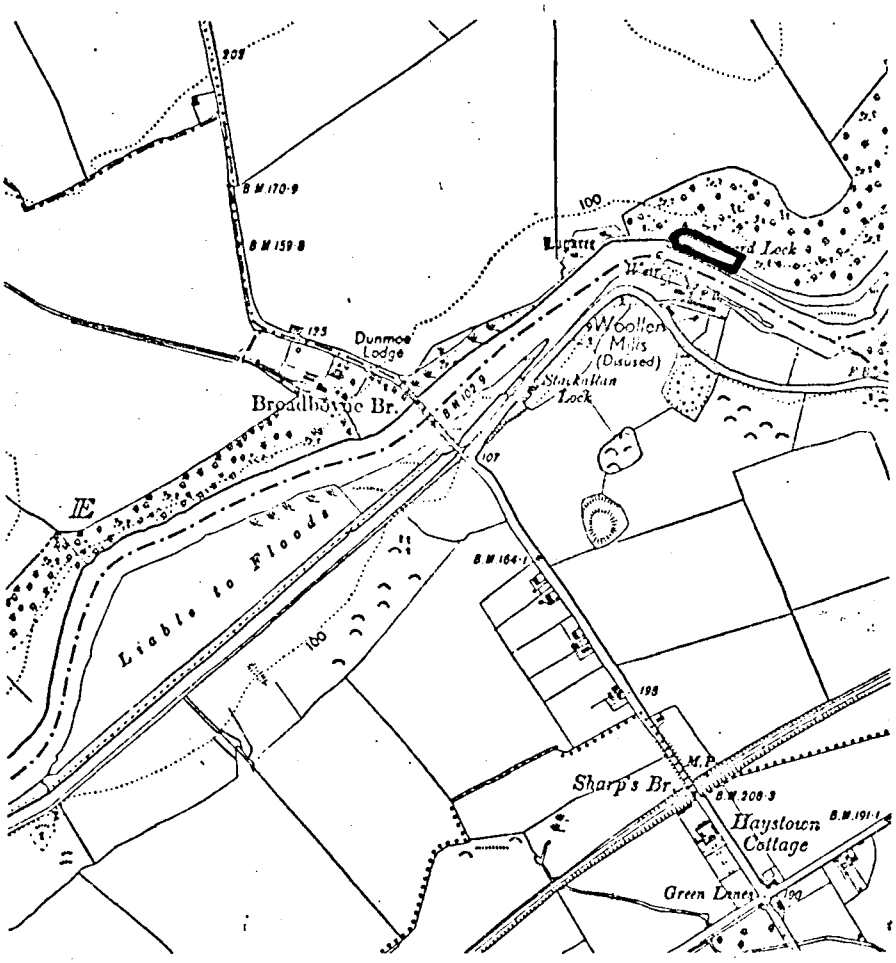
Recommendations

If dredging of this section of river does occur in the future, then silt removed should not be deposited in this area.

Any other development that would effect the ecology of this small area should be prevented.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —10

Scale: 6 Inches to 1 Mile



Name of Area	RIVERSIDE AT ROSSNAREE
Acreage	c 3 acres
Grid Reference	O. 001, 717
Scientific Interest	Botanical
Rating	National Importance
Priority	B

Description of Area

The area of interest is shown on Map 11.

The area consists of a single field which is often flooded in winter and, when dry, is grazed by cattle. In the middle of the field, over an area of about 1 acre, is a colony of the rush Juncus compressus.

A more detailed botanical description of the site can be found in:-

D. M. Synnott. 'Juncus compressus Jacq. in Ireland' Irish Naturalists' Journal. Vol. 16, No.4.

Evaluation

Juncus compressus is uncommon in Britain, becoming rarer northwards (see Fig. 7).

This colony, discovered in 1968, was the first record of the plant in Ireland (See p for details of another locality at Slane) and it is believed that the species may be native here at Rossnaree. Alternatively, however, it may be a recent introduction to this country. The problem can only be resolved by observation of the species in the coming years and the sites is thus of national importance.

Threats to the Area

A change in the use of this field by the farmer could result in the colony being destroyed.

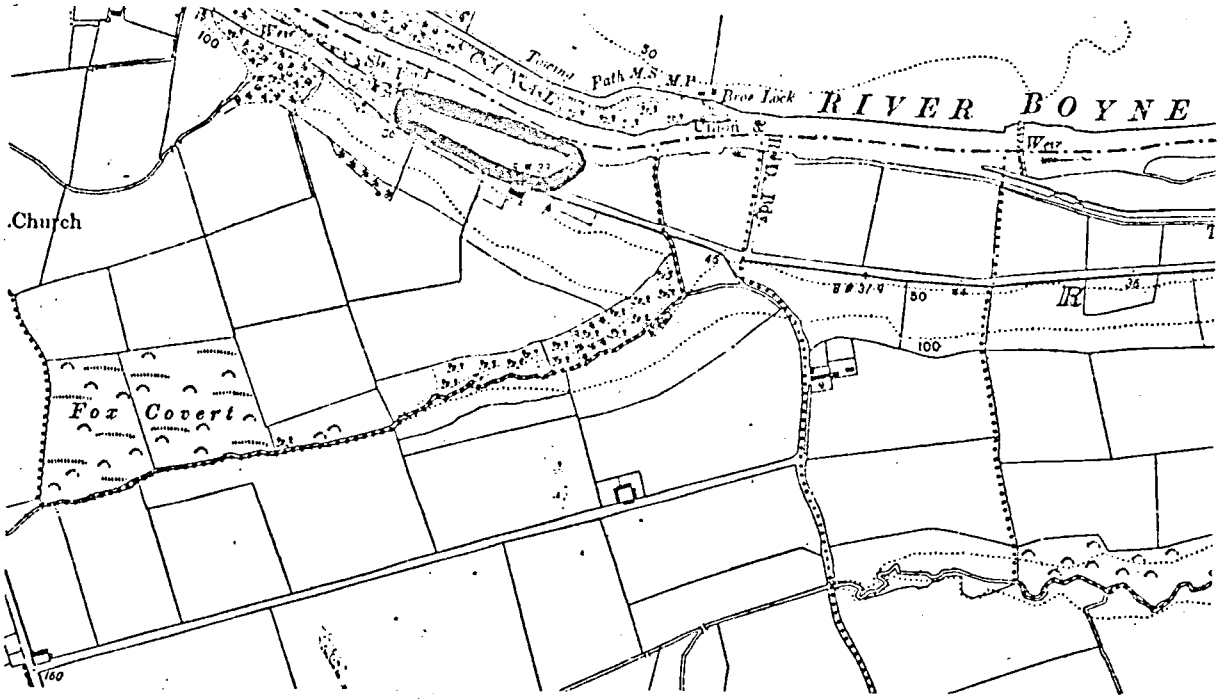
As with the riverside area at Beauparc this field may be affected by future works associated with the Boyne Drainage Scheme.

Recommendations

If dredging of this section of the river does occur in the future, then silt removed should not be deposited in this area.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —11

Scale: 6 Inches to 1 Mile



Name of Area	RIVERSIDE AT SLANE
Acreage	c. 2 acres
Grid Reference	N. 963, 736
Scientific Interest	Botanical
Rating	National Importance
Priority	B

Description of Area

The area of interest, a winter-wet, grazed field, is shown on Map 12.

On a busy path across the area grows a small colony of Juncus compressus, discovered in 1968.

Evaluation

It seems likely that Juncus compressus is a comparatively recent introduction to Slane and might have been carried there as seed on the footwear of an angler, either from Britain or the Continent, or from Rossnaree or some other Irish locality not yet known.

Comparative observations of this and the Rossnaree colonies over the coming years may yield evidence that will clarify the status of Juncus compressus in this country. This site is thus of national importance.

Threats to the Area

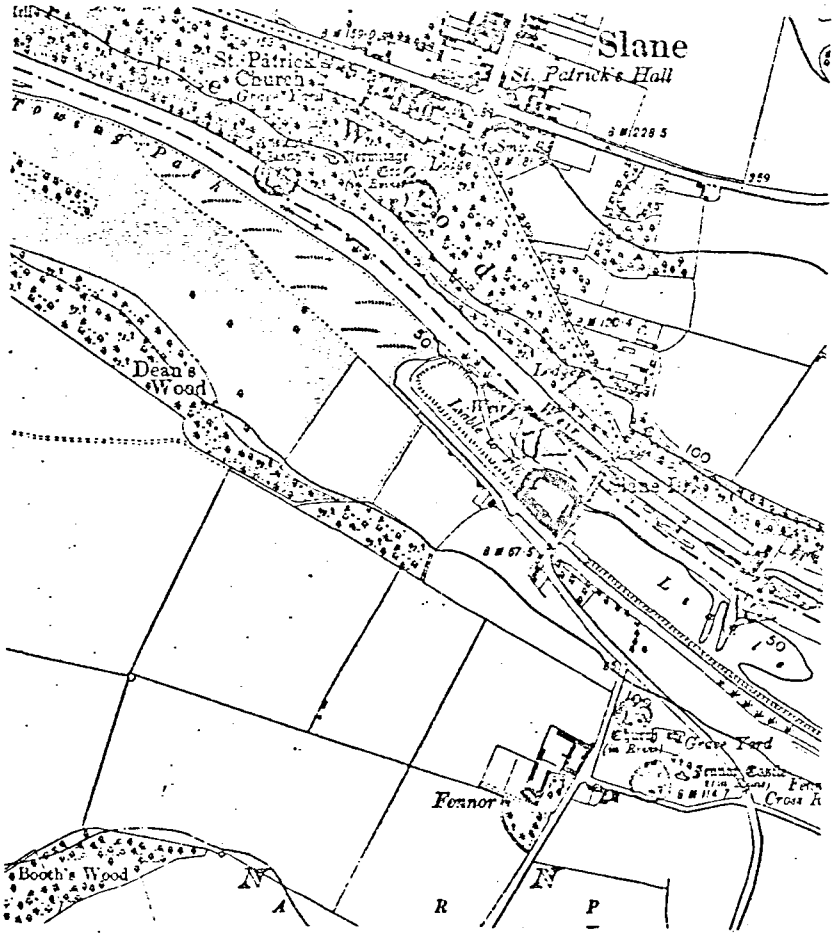
As Beauparc area (see page 30).

Recommendations

As for Beauparc area (see page 30).

MAP SHOWING AREA OF SCIENTIFIC INTEREST —12

Scale: 6 Inches to 1 Mile



Name of Area:	NEWTOWN AREA
Acreage	c. 4·3 square miles or 2,750 acres
Grid Reference:	N. 91, 86
Scientific Interest	Geomorphological, botanical
Rating:	Regional Importance
Priority:	C

Description of Area

The area of interest is shown on Map 13.

The area, which consists of low hills, ridges and marshy depressions, is part of the margin of the drumlin belt, the drumlins terminating to the south at the Kells moraine. The pattern of the drumlins reflects the course of the main glacial currents during the maximum glaciation.

In the north of the area is Mentrim Lough, by which grows the marsh fern, Thelypteris palustris, already a rare plant in Ireland and apparently becoming rarer (See Figure 8).

Evaluation

The area is of regional importance as one of the best examples of the margin of the drumlin belt.

The occurrence of Thelypteris palustris by Mentrim Lough is of local botanical interest.

Threats to the Area

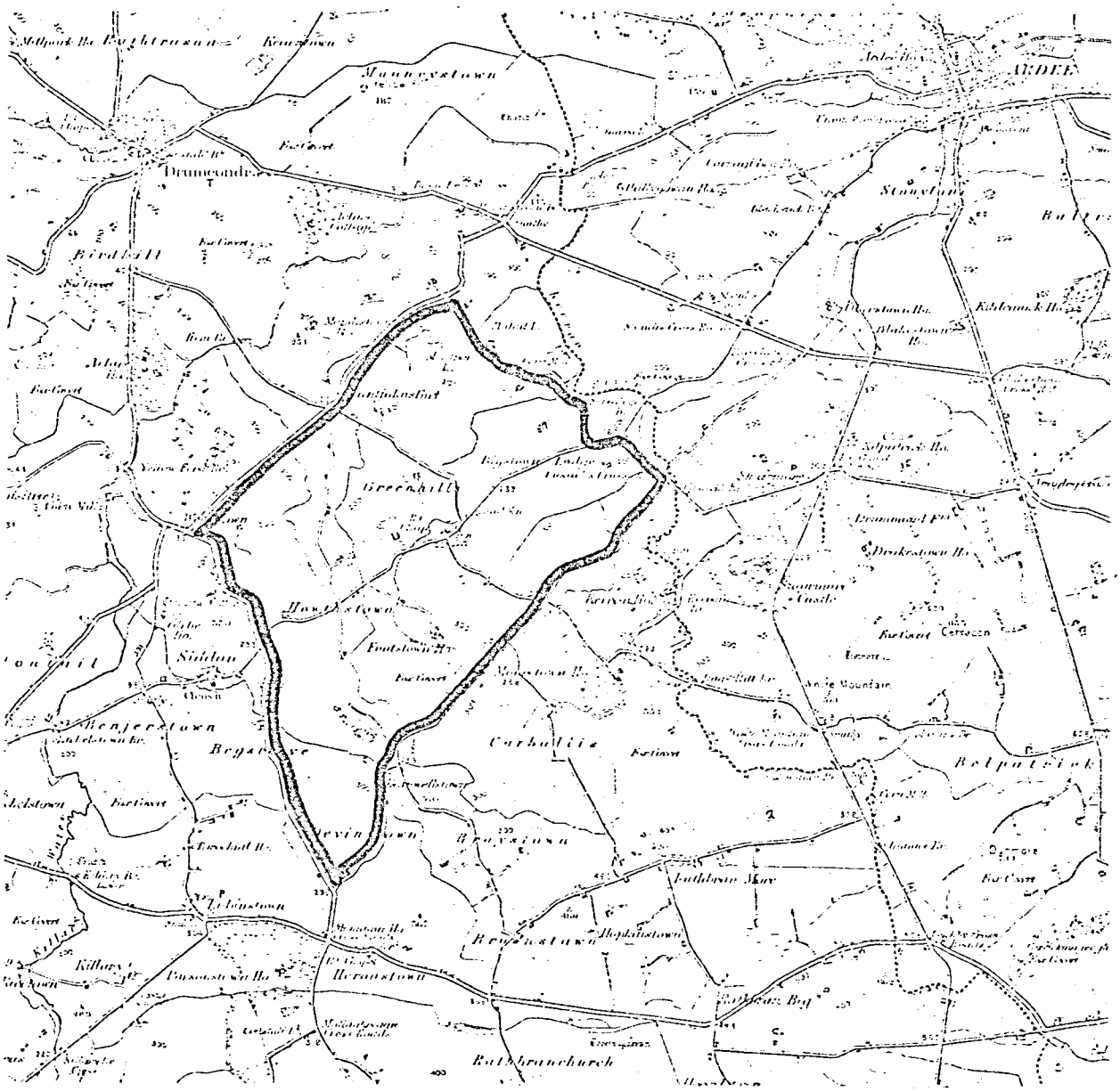
None known.

Recommendations

Any development within the area should be compatible with its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 13

Scale: 1 Inch to 1 Mile



Name of Area:	BENHEAD
Acreage:	c. 3 acres
Grid Reference:	O. 176, 686
Scientific Interest	Geomorphological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest in shown on Map 14.

The feature of interest is a low ridge formed by a moraine, which represents a readvance of the ice-margin during the last ice-age. At the coast the ridge has been cut in cross-section and the internal structure of the moraine can be seen.

Evaluation

The area is of regional importance because it affords an opportunity to examine the internal structure of this type of moraine.

Threats to the Area

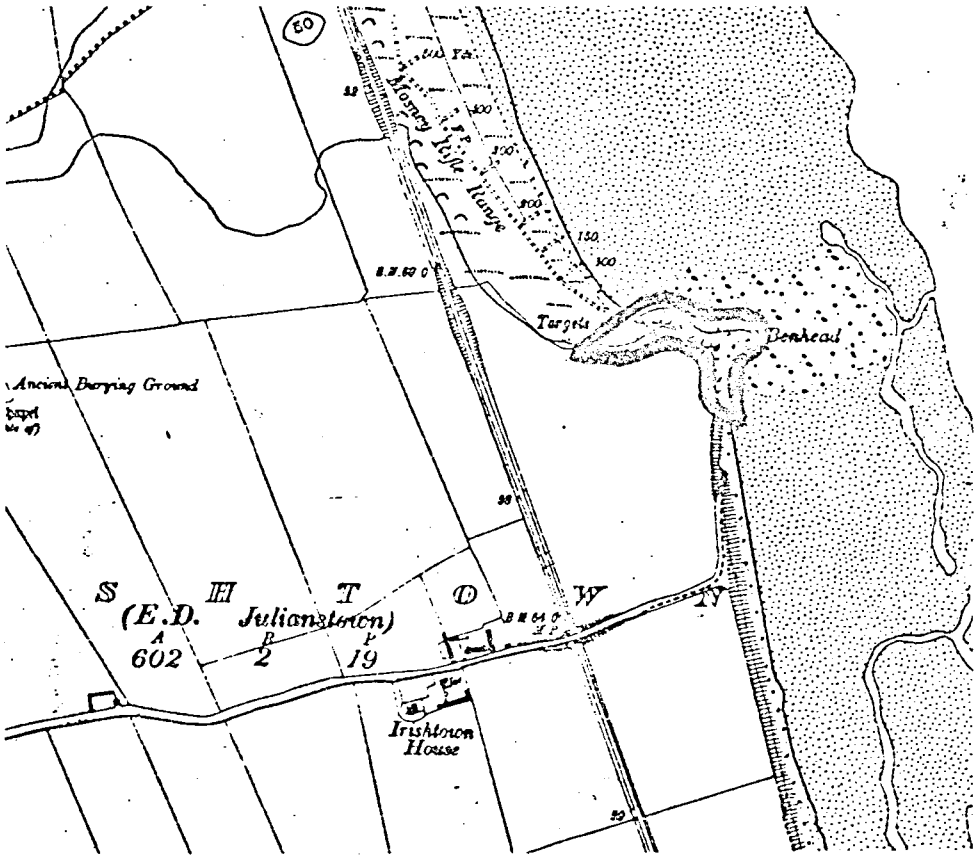
Possible development of this stretch of coast for recreational purposes, possibly in connection with Mosney Camp.

Recommendations

Development within this area should be prevented,

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 14

Scale: 6 Inches to 1 Mile



Name of Area:	PAINESTOWN QUARRY
Acreage:	c. 2 acres
Grid Reference:	N. 955, 700
Scientific Interest	Geological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 15.

This shallow, disused quarry was cut into thinly-bedded, upper Visean limestones and shales. In the north and east walls can be seen a spectalular, recumbent, dis-harmonic fold.

Evaluation

Similar examples of folded rock strata can be seen elsewhere in Ireland e.g. on the coast immediately south of Loughshinney, Co. Dublin. The fold at Painestown is very spectacular and easily accessible however, and the quarry is thus of regional importance.

Threats to the Area

In the past there has been some dumping of builders' rubble in the quarry. If dumping were to recommence the quarry could be quickly filled in.

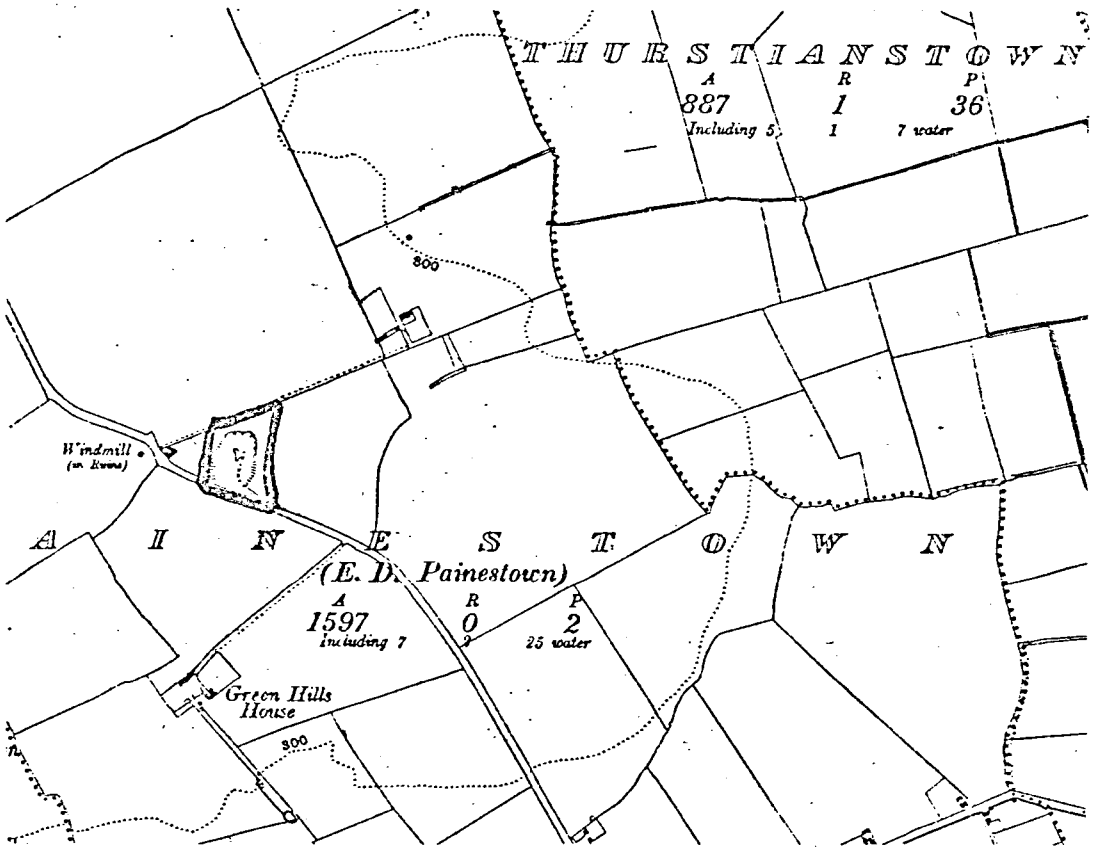
Recommendations

If the quarry is to be used for further dumping, then the quarry should not be completely filled. Instead a gap should be left between the quarry walls and dumped materials.

Ideally, further dumping in the quarry should be prevented.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 15

Scale: 6 Inches to 1 Mile



Name of Area:	ROCKWOOD CLIFFS
Acreage:	c. 10 acres
Grid Reference:	N. 947, 735
Scientific Interest:	Geological
Rating:	Regional Importance
Priority:	C

Description of Area:

The area of interest is shown on Map 16.

Study of the wooded cliff reveals Waulsortian mudbank limestone at the south end passing northwards into bedded limestone.

There is an east:west fault running across the cliff, causing an angular bend in the cliff-line.

At the north end of the area the cliff is low and easily accessible from the path below. As one goes southwards however, access to the cliff becomes progressively more difficult owing to its steepness and the thick vegetation. At two places a path ascends to the top and allows a section of the cliff to be more easily studied. At the south end the line of the cliff is offset towards the river and the overhanging cliff is 25 metres high. Here only the base of the cliff can be studied.

Evaluation

The fact that the lateral passage from mudbank deposits to bedded limestones can be seen here results in the area being of regional importance.

Threats to the Area:

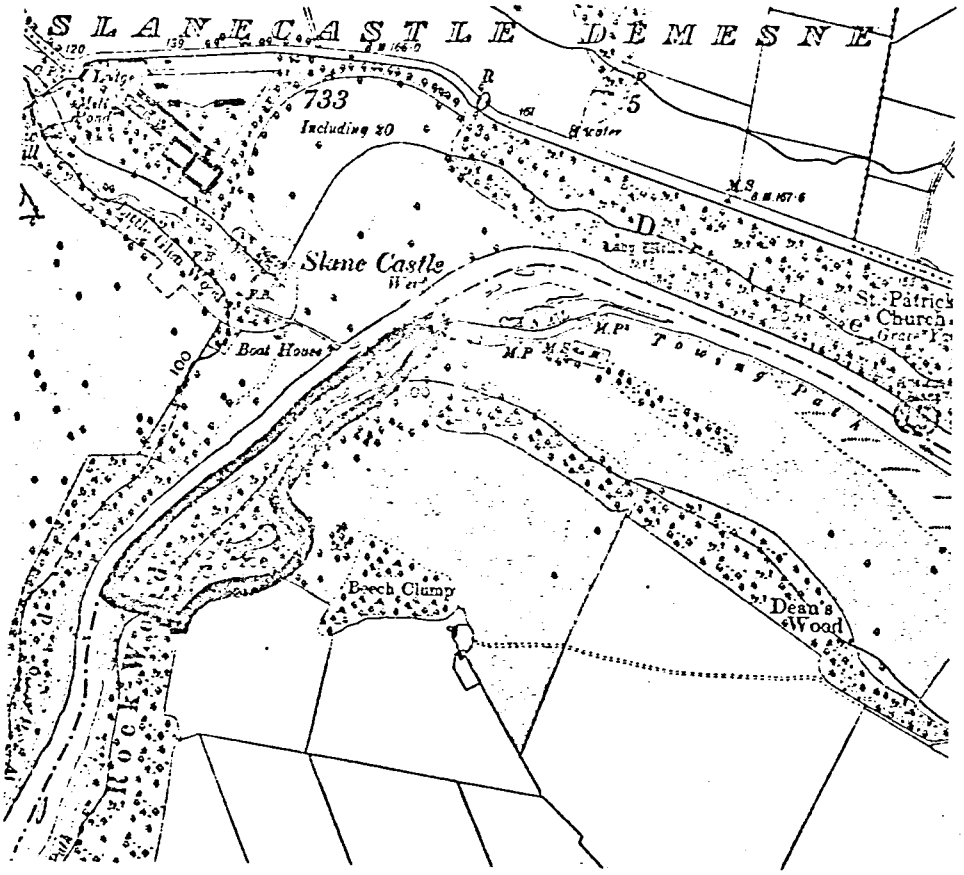
None known.

Recommendations

Any development plans for this section of the Boyne Valley should take into account the geological interest of this area.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —16

Scale: 6 Inches to 1 Mile



Name of Area:	RIVERBANK NEAR TOBERMANNAN BRIDGE
Acreage:	1 acre
Grid Reference:	N. 827, 967
Scientific Interest:	Geological
Rating:	Regional Importance
Priority:	C

Description of Area

The area of interest is shown on Map 17.

In this region the river is passing through flat pasture land. Generally its shallow channel has been cut through clays,but on this bend the river crosses a narrow band of limestone. In this limestone have been found large numbers of the fossil blastoid Orbitremites derbiensis .

Evaluation

Although this species of blastoid has been found in a number of other localities in Ireland, the extraordinary abundance of specimens at this site results in its being of regional importance.

Threats to the Area

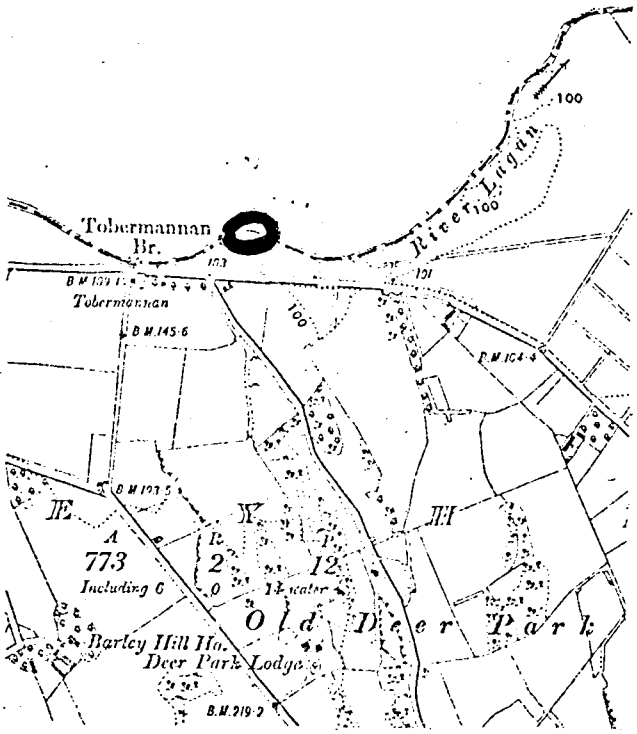
None know or foreseeable.

Recommendations

No development should be permitted that would destroy or restrict access to this site.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 17

Scale: 6 Inches to 1 Mile



Name of Area	MORNINGTON DUNES
Acreage	c. 130 acres
Grid Reference	O. 157, 75
Scientific Interest	Ecological, botanical, zoological
Rating	Regional Importance
Priority	A

Description of Area

The area of interest is shown on Map 18. It should be noted that there is now a road along the western boundary of the area which is not shown on this map.

The area consists of highly calcareous foredunes, which are particularly high and well-developed at the northern end, backed by stable dunes and dune grassland.

The stable dunes and grassland areas are used as golf links by the Laytown and Bettystown Golf Club.

Ecologically, the most interesting part of the area is the northern half, where the sand dune system is best developed. Here the following stages in dune development can be seen:

(a) Embryo foredunes: a narrow band only. These are being built up by Agropyron junceiforme, (sand couch-grass), which is common here. Other species present are:-

Elymus arenarius	(sea lyme-grass)	f
Salsola kali	(saltwort)	f
Ammophila arenaria	(marram grass)	o

(b) Unstable or yellow dunes: There is only a very narrow band of true unstable dune in this dune system, a continuous vegetation cover having developed on dunes very close to the shore.

Generally, the unstable dune community, dominated exclusively by Ammophila arenaria (marram grass), is only found on the dune slope running down to the shore. Several other species were noted amongst the marram but all were occassional or rare. A similar community can be found in areas receiving sand from the blowouts in the fixed dune areas.

(c) Fixed dunes: As already stated stabilisation of the sand surface by vegetation begins very close to the shore in this dune system. This must mean that the dune system is not being actively extended at the moment, owing to an inadequate supply of sand from the shore.

Twenty metres in from the shore a closed community can usually be found, in which the following species are important:-

Festuca rubra	(red fescue)	a
Ammophila arenaria	(marram grass)	c
Daucus carota	(wild carrot)	c
Lotus corniculatus	(bird's-foot trefoil)	c
Trifolium repens	(white clover)	c
Agrostis tenuis	(common bent-grass)	f
Carex arenaria	(sand sedge)	f
Dactylis glomerata	(cock's-foot grass)	f
Galium verum	(lady's bedstraw)	f
Senicio jacobea	(ragwort)	f
Vicia spp.	(vetches)	f
Viola tricolor	(wild pansy)	f
Echium vulgare	(viper's bugloss)	o, lc
Hieraceum pilosella	(mouse-ear hawkweed)	o, lc
Brachythecium albicans	(mosses)	c
Tortula ruraliformis		c

There is serious erosion on some parts of the fixed dune area. Particularly noticeable is a very large blowout at the northern extremity of the area.

(d) Dune grassland: This grassland community grades into the fixed dune community already described. It is basically similar, but marram grass is absent and Festuca rubra and other grasses are dominant. The grassland is kept short by the Golf Club.

(e) Dune slacks: There are two areas of dune slack within the area. In one of these areas the following species were noted:-

Equisetum variegatum	(variegated horsetail)	c
Potentilla anserina	(silverweed)	c
Centaurium erythraea	(common centaury)	f
Mentha aquatica	(water mint)	f
Ophioglossum vulgatum	(adder's tongue)	f
Potentilla reptans	(creeping cinquefoil)	f

From the purely botanical viewpoint the area is of interest in that it is the most northerly station in Ireland for the rare wild clary, Salvia horminoides, (see Figure 9). In addition, several other plants that are local and rare in Ireland occur here in profusion, e.g. Echium vulgare, Equisetum variegatum and Ophioglossum vulgatum, (see Figures 10, 11 and 12).

Zoologically, the area is of interest because of its colony of the rare snail, Helix pisana. A species that is only found on the Irish coast between south County Louth and north County Dublin.

Evaluation

This area is of regional importance because of the variety of sand dune habitats within it, the unusually high calcium content of the sand, and the occurrence of Helix pisana and several rare plants.

Threats to the Area

The stability of the sand dunes and hence the general ecology of the dune system is currently seriously threatened by erosion.

As already stated there is at present quite serious erosion of the high northern fixed dunes. Such erosion is the result of the destruction of vegetation, which binds together the surface layers of sand, and subsequent removal of sand by the wind. Unless some effort is made to control these areas of erosion (blowouts) by replanting, further spread is inevitable.

It is likely that the erosion was initially caused by public use of this part of the dune system, into which there is easy access from the shore. Any intensification of public recreational pressure on the dune system is likely to result both in more rapid extension of the present blowouts and in the beginnings of new blowouts elsewhere in the dunes.

The ease of public access to the area is also resulting in the dumping of small quantities of domestic rubbish throughout the dune system.

There are also dangers to the scientific values of the dune system from the cutting of turves by the Golf Club and the bulldozing of access tracks through existing sand dunes.

Recommendations

Planting of blowouts to curtail their spread should begin immediately.

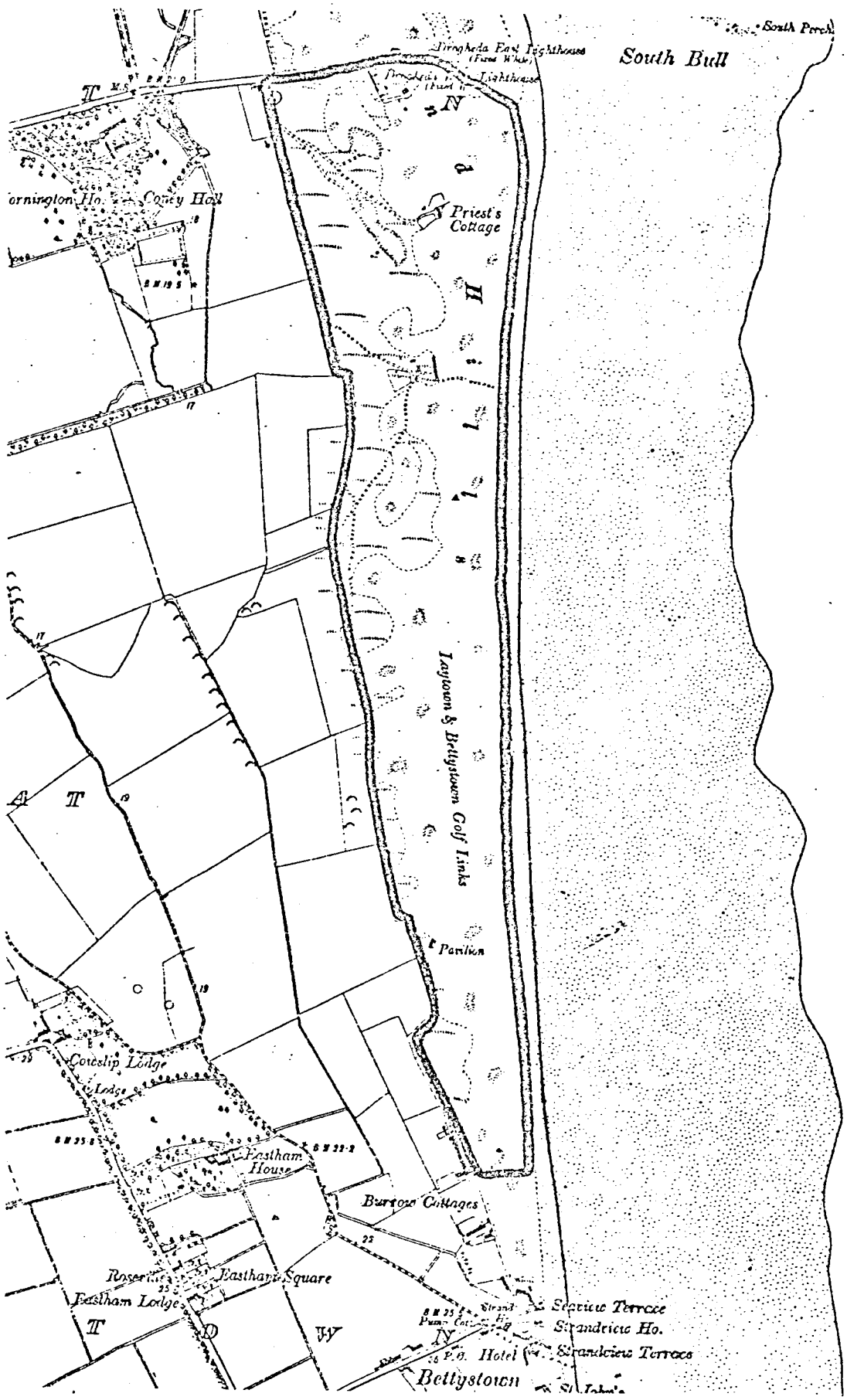
Attempts should be made to direct public pressure onto the areas north of the access road to the lighthouses.

Dumping within the dunes should be prevented.

The activities of the Golf Club should be carefully controlled to prevent their causing erosion or the elimination of rarities.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 18

Scale: 6 Inches to 1 Mile



Name of Area	CREWBANE
Acreage	c. 65 acres
Grid Reference	N. 990, 735
Scientific Interest	Ecological
Rating	Regional Importance
Priority	B

Description fo Area

The area of interest is shown on Map 19. As can be seen, it includes a steep hillside and a flat area liable to flooding by the river.

Most of the hillside is covered by woodland dominated by elder, Sambucus nigra, with scattered trees of buckthorn, Prunus spinosa. Areas without trees are dominated by bracken, Pteridium aquilinum.

The riverside fields are a mixture of damp grassland and lower-lying marsh. There is great variation in the plant communities of the marsh, the very wet eastern part being dominated by reed-grass, Glyceria maxima, whilst further west yellow flag, Iris pseudacorus becomes abundant.

When the area was visited in November 1971, a very noticeable feature of the area dominated by Glyceria maxima was the abundance of small spiders - 'money spiders', Linyphiidae. These were present in countless numbers, almost every flowerhead of the grass having dozens of the spiders upon it.

Evaluation

The unusual composition of the woodlands and the interesting marsh communities result in this area being of regional interest.

It is also worthy of note that these woodlands are an important feature of the attractive scenery in this part of the Boyne Valley.

Threats to the Area

No imminent threats are known of, but drainage of the marshes and clearance of the woodlands are possibilities.

Recommendations

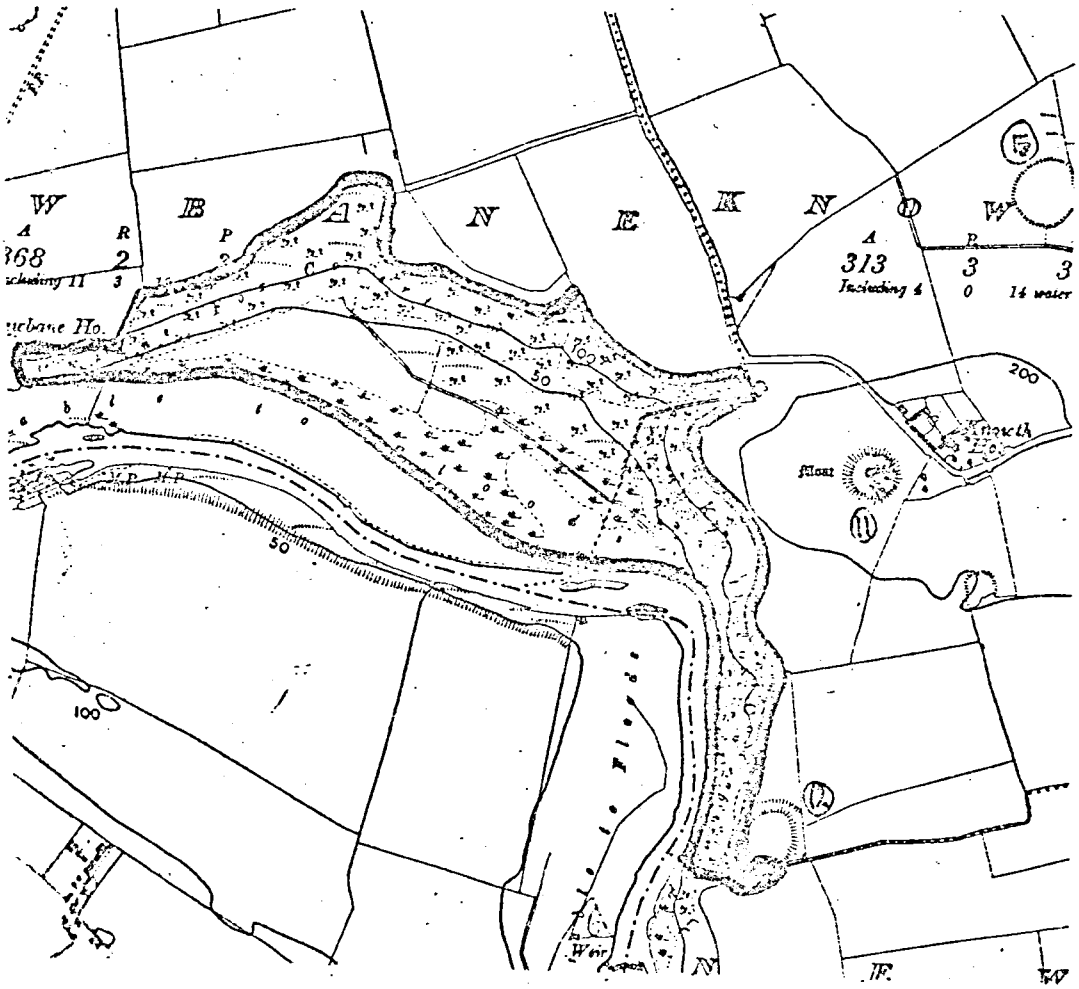
The scientific value of the marshes is not sufficient to justify opposition to any drainage scheme aimed at improving the quality of the farmland.

In view of the scientific interest and scenic value of the woodland, they should be preserved in their present condition. Any clearance or partial replanting with other species, e.g. exotic conifers, should be opposed.

The woodlands should be protected by a Tree Preservation Order under Section 45, Local Government (Planning & Development) Act, 1963.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 19

Scale: 6 Inches to 1 Mile



Name of Area	CORSTOWN LOUGHS
Acreage	c. 105 acres
Grid Reference	N. 89, 91
Scientific Interest	Ecological
Rating	Regional Importance
Priority	C

Description of Area

This area, which is shown on Map 20, contains a variety of habitats. In addition to the loughs themselves, there are extensive areas of carr and raised bog and an area of damp woodland east of the smaller lough.

A brief note on each of the habitats follows:-

Corstown Lough Great: A large lake with an almost continuous marginal reedswamp, consisting mainly of reed, Phragmites communis, but with some bulrush, Schoenoplectus lacustris, in places. There is a patch of carr on the north shore.

Corstown Lough Little: Surrounded by extensive Phragmites reedswamp and dense carr.

Around the two loughs can be seen considerable variation in the hydroseres depending on such factors as aspect, substratum etc.

Raised bog areas north and west of the larger lough:

These have been extensively cut-away. There is considerable variation in the plant communities from place to place, bracken, Pteridium aquilinum, heather, Calluna vulgaris and purple moor-grass, Molinia caerulea, all being locally dominant. There has been extensive invasion of most parts by birch, Betula sp.

Woodland east of the loughs: An area of thick, damp woodland dominated by alder, Alnus glutinosa, birch, Betula sp and willows, Salix spp.

Within the area occur several species of plant that are local and rare in Ireland, e.g. lesser reedmace, Typha angustifolia, tufted sedge, Carex elata and marsh fern; Thelypteris palustris (see Figs. 13, 14 and 18).

Evaluation

The variety of habitats within this area and the great variation of hydroseres around the two extremely calcareous loughs result in the area being of regional interest.

Threats to the Area

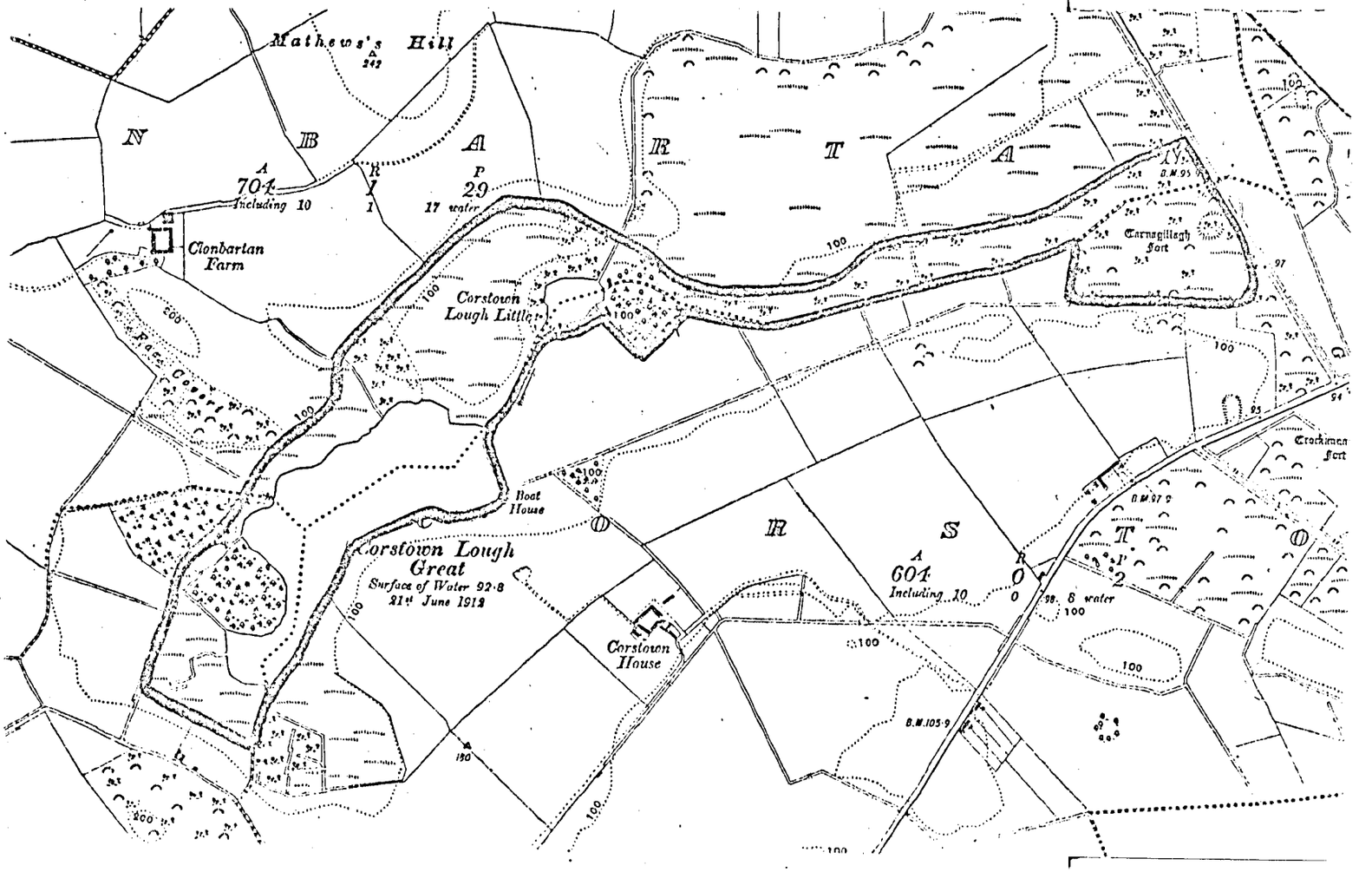
None known

Recommendations

Any development within this area should be carefully controlled in order to preserve its scientific value.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 20

Scale: 6 Inches to 1 Mile



Name of Area	LOUGH DOO AREA
Acreage	c. 35 acres
Grid Reference	N. 516, 735
Scientific Interest	Ecological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 21. It is a small, badly-drained valley containing four loughs and an area of damp deciduous woodland.

The main ecological interest of the area is in the contrast between Lough Doo and the other loughs. The reasons for this are not obvious, in view of the close proximity of the loughs and the fact that they are all connected by a wide ditch.

Lough Doo has a very limited aquatic and marginal vegetation. The bottom, as far out as could be seen from the shore, is covered by a continuous thick blanket of stonewort, Chara sp. The only other vegetation is a small, very sparse bed of reed, Phragmites communis, and a few isolated stems of this grass. Grassland extends right up to the edge of the lake. The bed of the lake is covered with a deep, soft deposit of a cream-coloured marl (white when dry) which on examination proves to be almost exclusively remains of the calcareous alga Chara. A layer of this marl lies beneath the highly-organic surface soil in the valley south of the lough, probably indicating that the whole valley was at one time a large lake.

In contrast to Lough Doo, the other loughs in the valley are surrounded by a wide, dense swamp, dominated by sedge, Cladium mariscus.

Evaluation

The variety of habitats within the valley and the ecological problems posed by the contrasting vegetation of the loughs result in this area being of regional

interest. The area has, in fact, recently been the venue of a Botanical Society of the British Isles field meeting.

Threats to the Area

It would appear that some effort is currently being made to improve the drainage of the valley, i.e. the ditch connecting the loughs has recently been recut. Such drainage is not objected to, provided the loughs themselves are not drained, as the wet land between the loughs is of limited scientific interest.

A possible future threat to the area is the mining of the highly-calcareous marl for use as fertiliser.

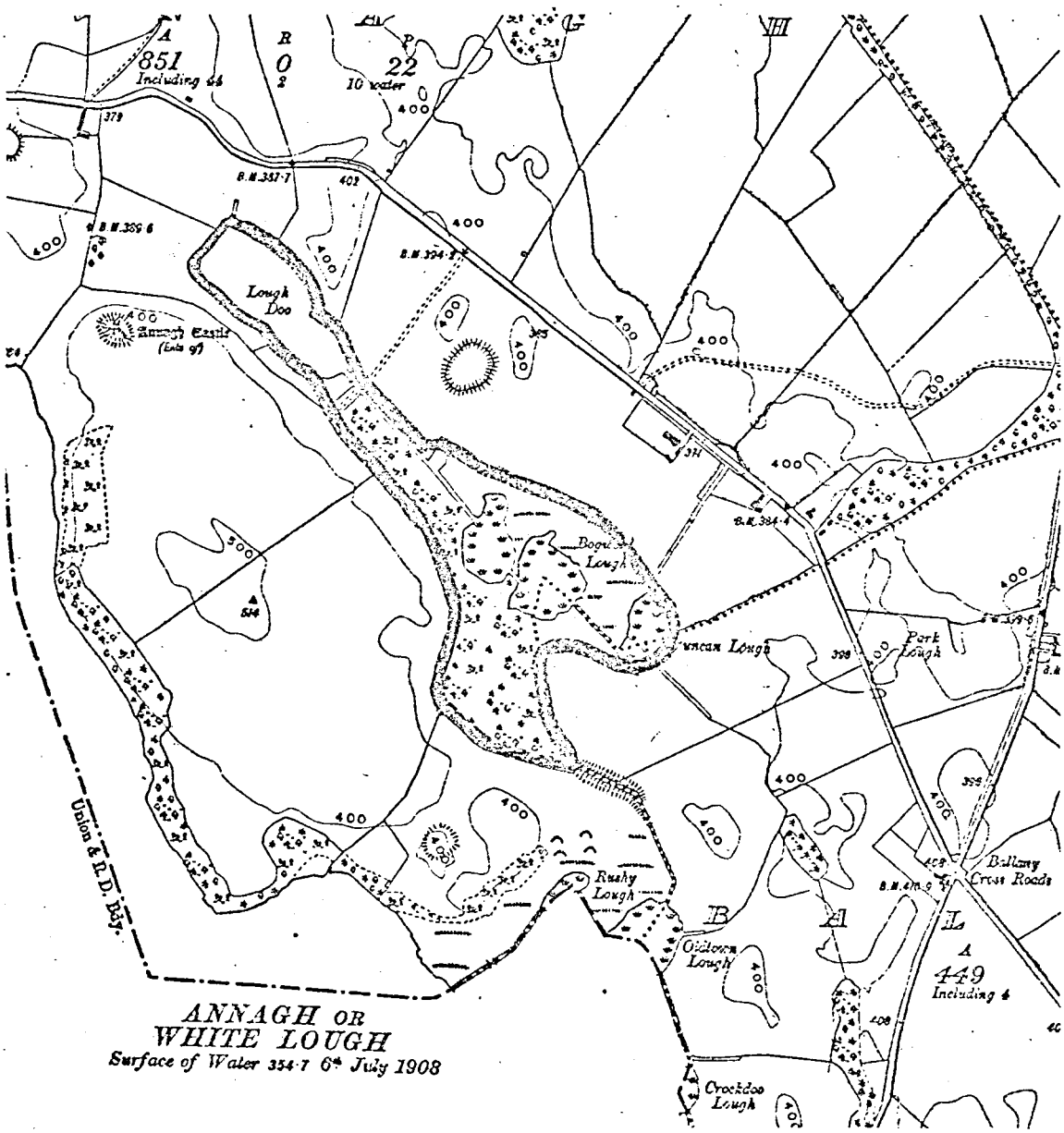
Recommendations

Mining of the marl should be prevented.

Any other development within the valley should be controlled to protect the scientific value of the area.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 21

Scale: 6 Inches to 1 Mile



Name of Area	WOODLAND AND BOG WEST OF DULEEK
Acreage	c. 85 acres
Grid Reference	O. 010, 686
Scientific Interest	Ecological, botanical
Rating	Regional Importance
Priority	B

Description of Area

The area of interest is shown on Map 22. There is a raised bog surrounded by a very wet woodland or carr.

The woodland area is in fact an extremely complex mosaic of swamp, fen and drier patches on which the trees are growing. The following species were noted:-

Trees and Shrubs:	Betula pubescens	(birch)	c
	Salix spp.	(willows)	c
	Alnus glutinosa	(alder)	o
	Quercus robor	(pedunculate oak)	o
	Pinus sylvestris	(scots pine)	r
Herbs:	Iris pseudacorus	(yellow flag)	c
	Typha latifolia	(great reedmace)	c
	Angelica sylvestris	(wild angelica)	f
	Dryopteris dilatata	(broad buckler fern)	f
	Filipendula ulmaria	(meadowsweet)	f
	Galium palustre	(marsh bedstraw)	f
	Phalaris arundinacea	(reed-grass)	f
	Ranunculus repens	(creeping buttercup)	f
	Rubus fruticosus	(blackberry)	f
	Solanum dulcamara	(woody nightshade)	f
	Holcus lanatus	(yorkshire fog)	o
	Juncus effusus	(soft rush)	o
	Molinia caerulea	(purple moor-grass)	o, lc

Potentilla palustris	(marsh cinquefoil)	o
Valeriana officinalis	(valerian)	o
Calluna vulgaris	(heather)	r
Sparganium erectum	(bur-reed)	r
Sphagnum spp	(bog mosses)	r
Vaccinium myrtilus	(bilberry)	r

Frog-bit, Hydrocharis mursus-ranae is apparently well-established here, but was not seen. (See Fig. 5).

The following species were noted on the central raised bog:-

Erica tetralix	(crossed-leaved heath)	c
Eriophorum vaginatum	(cotton-grass)	c
Molinia caerulea	(purple moor-grass)	lc
Calluna vulgaris	(heather)	f
Eriophorum angustifolium	(common cotton-grass)	f
Vaccinium oxycoccus	(cranberry)	f
Narthecium ossifragrum	(bog asphodel)	o
Aulacomnium palustre		
Sphagnum spp	(bog mosses)	

There has also been a considerable amount of recent invasion of the bog by seedlings of:-

Betula pubsecens	(birch)	f
Pinus sylvestris	(scots pine)	f
Ulex europaeus	(gorse)	o

Evaluation

The variety and richness of habitats within this area result in it being of regional importance.

Threats to the Area

There is currently a threat of pollution in the area. Effluent from nearby poultry farming is washing into the ditch which surrounds the area.

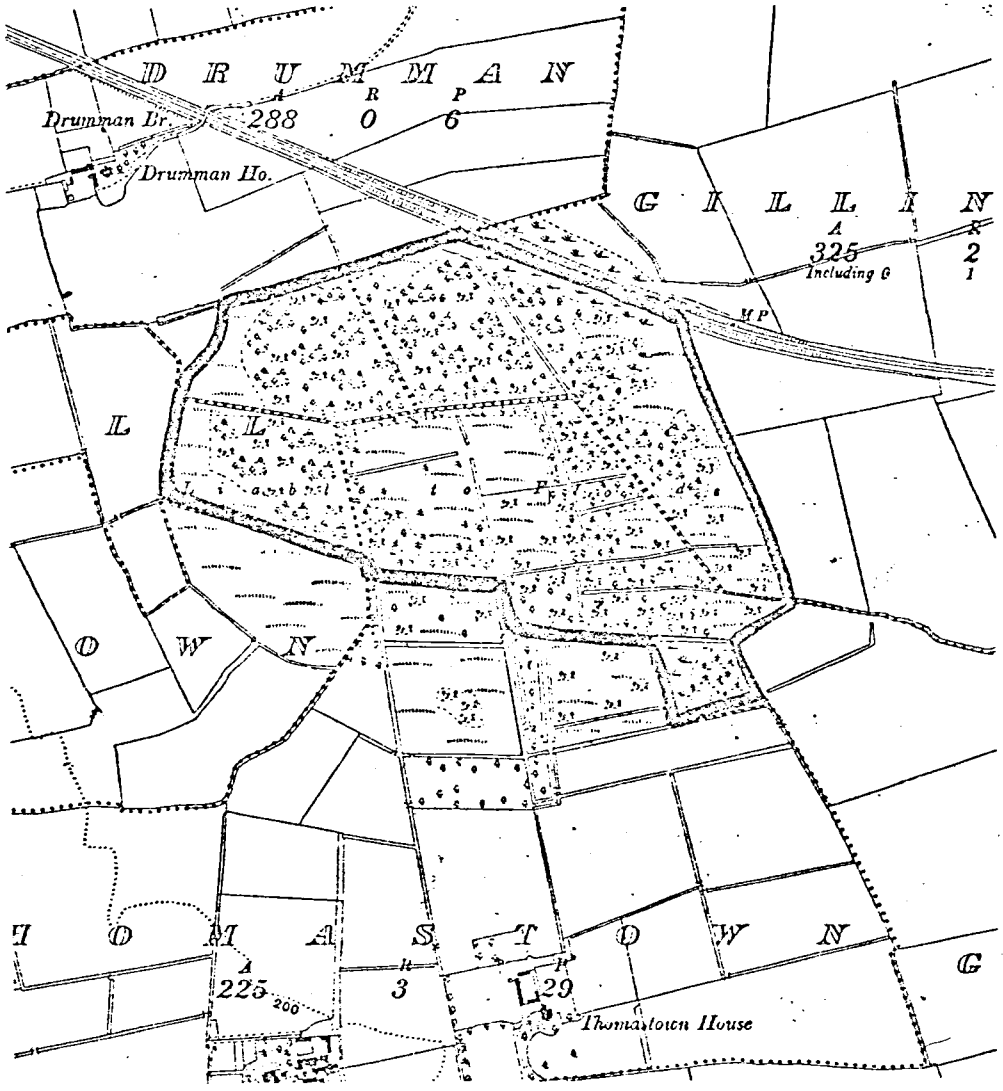
Recommendations

The pollution of this area should be stopped.

The area should be protected from all adverse development by a Conservation Order under Section 46, Local Government (Planning and Development) Act, 1963.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —22

Scale: 6 Inches to 1 Mile



Name of Area	DOOLYSTOWN BOG
Acreage	c. 90 acres
Grid Reference	N. 753, 506
Scientific Interest	Ecological
Rating	Regional Importance
Priority	C

Description of Area

The area of interest is shown on Map 23. There was previously a much larger raised bog here, but it has now been largely cut-away. The remaining portion forms the bulk of the area of scientific interest; the rest being cut-away bog.

An area of cut-away bog is marked * on Map 23. Here the ground is mostly very wet with the following species:-

Eriophorum angustifolium	(common cotton-grass)	c, la
Molinia caerulea	(purple moor-grass)	c
Carex rostrata	(bottle sedge)	lc
Carex lepidocarpa	(yellow sedge)	lc
Juncus acutiflorus	(sharp-flowered rush)	f, lc
Juncus effusus	(soft rush)	f, lc
Potentilla palustris	(marsh cinquefoil)	o
Ranunculus flammula	(lesser spearwort)	o
Salix sp	(willow)	o
Drosera rotundifolia	(common sundew)	r
Holcus lanatus	(yorkshire fog)	r
Sagina nodosa	(knotted pearlwort)	r

On drier, raised tussocks are:-

Calluna vulgaris	(heather)	c
Erica tetralix	(cross-leaved heath)	c
Potentilla erecta	(common tormentil)	f
Succisa pratensis	(devil's-bit scabious)	f

Moving SW from this area across the ditch brings one to the raised bog. Although there have obviously been attempts at drainage and some areas have been seriously burnt, this raised bog is the most interesting of those seen in the county in that it has parts with a very pronounced "hummock and hollow" surface topography. This feature is indicative of active build-up of the bog and is not typical of the other raised bogs described in this report.

The hummocks and drier parts of the bog surface are dominated by heather, Calluna vulgaris, with the lichen Cladonia arbuscula forming dense cushions on the ground and the stems of the Calluna. Other species noted in this Callunetum were:-

Eriophorum angustifolium	(common cotton-grass)	f
Eriophorum vaginatum	(cotton-grass)	o, lf
Erica tetralix	(cross-leaved heath)	o
Narthecium ossifragrum	(bog asphodel)	o
Betula sp	(birch)	r

Bracken, Pteridium aquilinium, is also frequent on the eastern parts of the bog.

Where they occur, the hollows in the bog have a vegetation completely different from that described above. Species in the hollow community are:-

Sphagnum spp.	(bog mosses)	a
Rhynchospora alba	(white beak-sedge)	c, la
Eriophorum angustifolium		c
Eriophorum vaginatum		c
Drosera anglica	(English sundew)	o, lc
Andromeda polifolia	(bog rosemary)	r
Narthecium ossifragrum		r

Evaluation

The pronounced hummock and hollow topography of parts of the bog surface results in this area being of regional importance.

The area could be used for educational purposes.

Threats to the Area

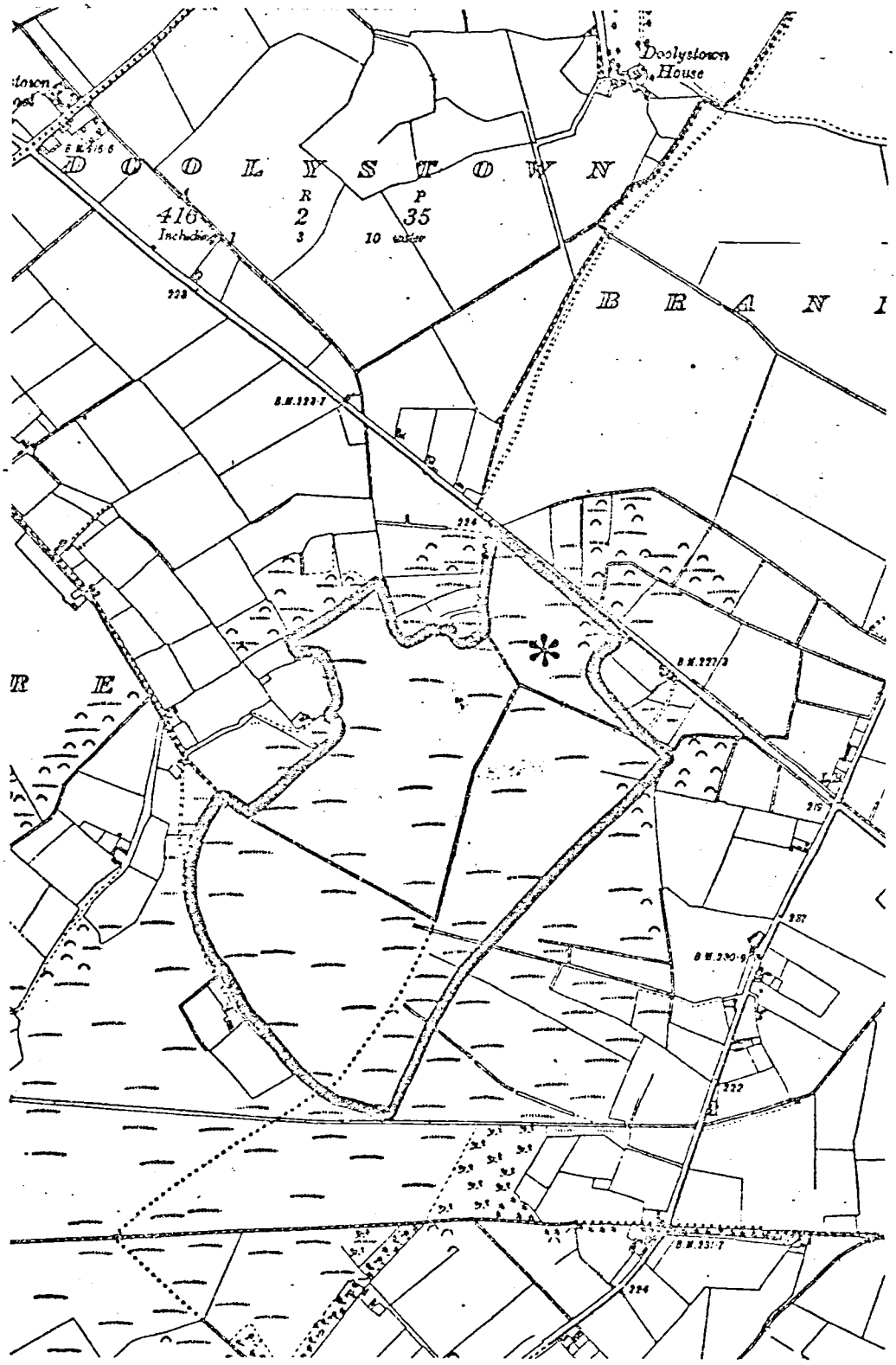
No imminent threats to the area are known of. Future threats may arise from forestry, large areas to the SW having been planted, or building development, as there seems to be a growing number of bungalows being built along the roadside nearby.

Recommendations

Future development around this area should be compatible with the scientific importance of the bog.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —23

Scale: 6 Inches to 1 Mile



Name of Area	RIVERBANK TWO MILES EAST OF TRIM
Acreage	c. 5 acres
Grid reference	N. 834, 566
Scientific Interest	Botanical
Rating	Regional Importance
Priority	A

Description of Area

The area of interest, a marsh liable to flooding by the river, is shown on Map 24.

The bulk of the area is dominated by yellow flag, Iris pseudacorus and tall grasses and sedges. At the south end, however, there are patches of a short herb community dominated by:-

Agrostis stolonifera	(fiorin)
Carex spp.	(sedges)
Trifolium repens	(white clover)

Within this community occurs the rare strawberry clover, Trifolium fragiferum (see Fig. 15). Marsh stitchwort, Stellaria palustris, is also present (see Fig. 16).

Evaluation

The occurrence here of Trifolium fragiferum, one of its few inland stations in Ireland, and its unusual association with the particular plants with which it occurs, result in this area being of regional importance.

Threats to the Area

The dredging of the nearby R. Boyne threatens this area in two ways:-

(a) the dredging of the river channel, and the dumping of spoil on the bank, may both alter the water table characteristics of the marsh and result in the interesting plant community dying away.

(b) material dredged from the river and dumped within the area could bury and hence destroy the plant community.

Recommendation

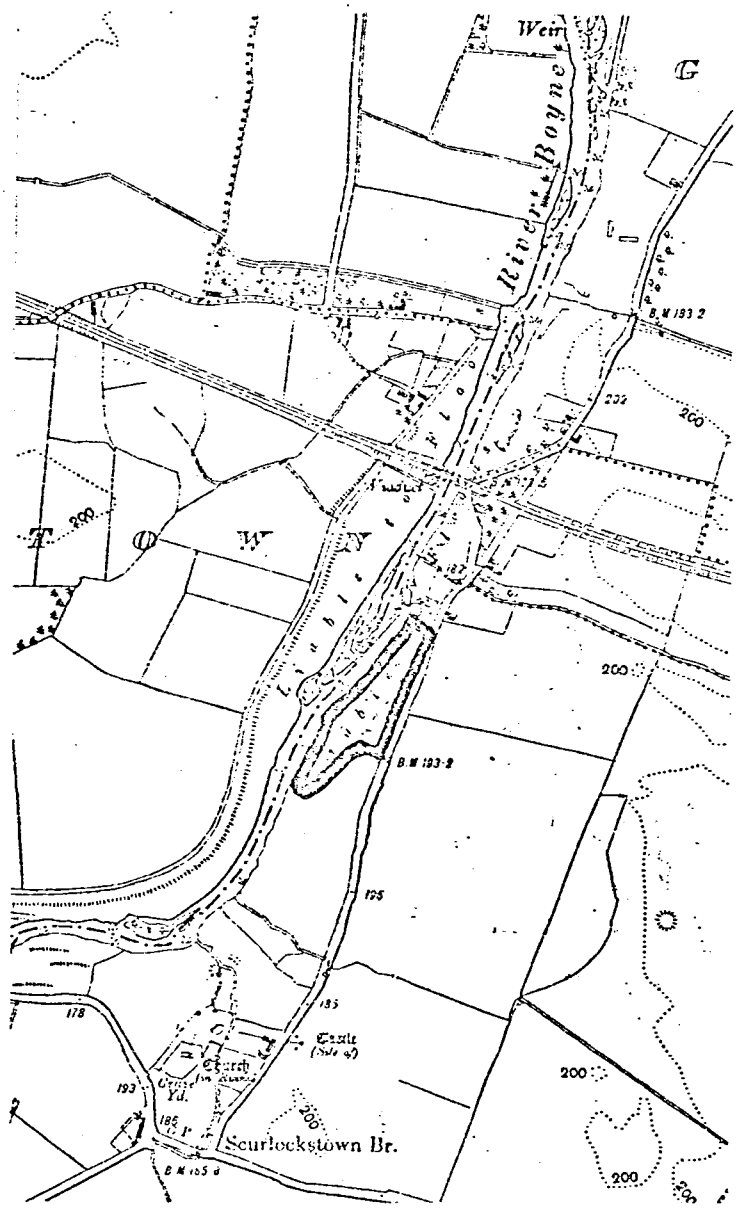
Control should be exercised over the dumping of dredged material within this area. Ideally, there should be no dumping on the riverbank within the area. If such dumping has to occur, however, the dredged material should be piled close to the river and not spread over the surface of the marsh.

A submission to this effect was made to the Office of Public Works by officials of the Dublin Naturalists' Field Club.

When this area was visited in November, 1971, dredging of this stretch of the river was being carried out by a machine on the west bank. The arrival of a machine travelling up the east bank was said to be imminent. Thus, if an effort is to be made to preserve this area, it is a matter of the utmost priority.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —24

Scale: 6 Inches to 1 Mile



Name of Area	RIVER VALLEY AT NAUL
Acreage	c. 5 acres
Grid Reference	O. 135, 613
Scientific Interest	Geological, botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 25. The river here has cut down through the carboniferous limestone to form a steep-sided, rocky valley. The valley is densely wooded and there is an old disused quarry at the eastern end on the south side of the river (in Co. Dublin).

The geology of the area is referred to in:
Smyth, L.B. The Carboniferous System in North County Dublin.
Journal of the Geological Society of London. Vol. 105, p. 295-326.

Botanically, the area is of interest because of the occurrence of the rare subspecies of the Polypody, Polypodium vulgare ssp serrulatum (see Fig. 17).

Evaluation

The types of rock exposed here result in the area being of local geological interest.

Threats to the Area

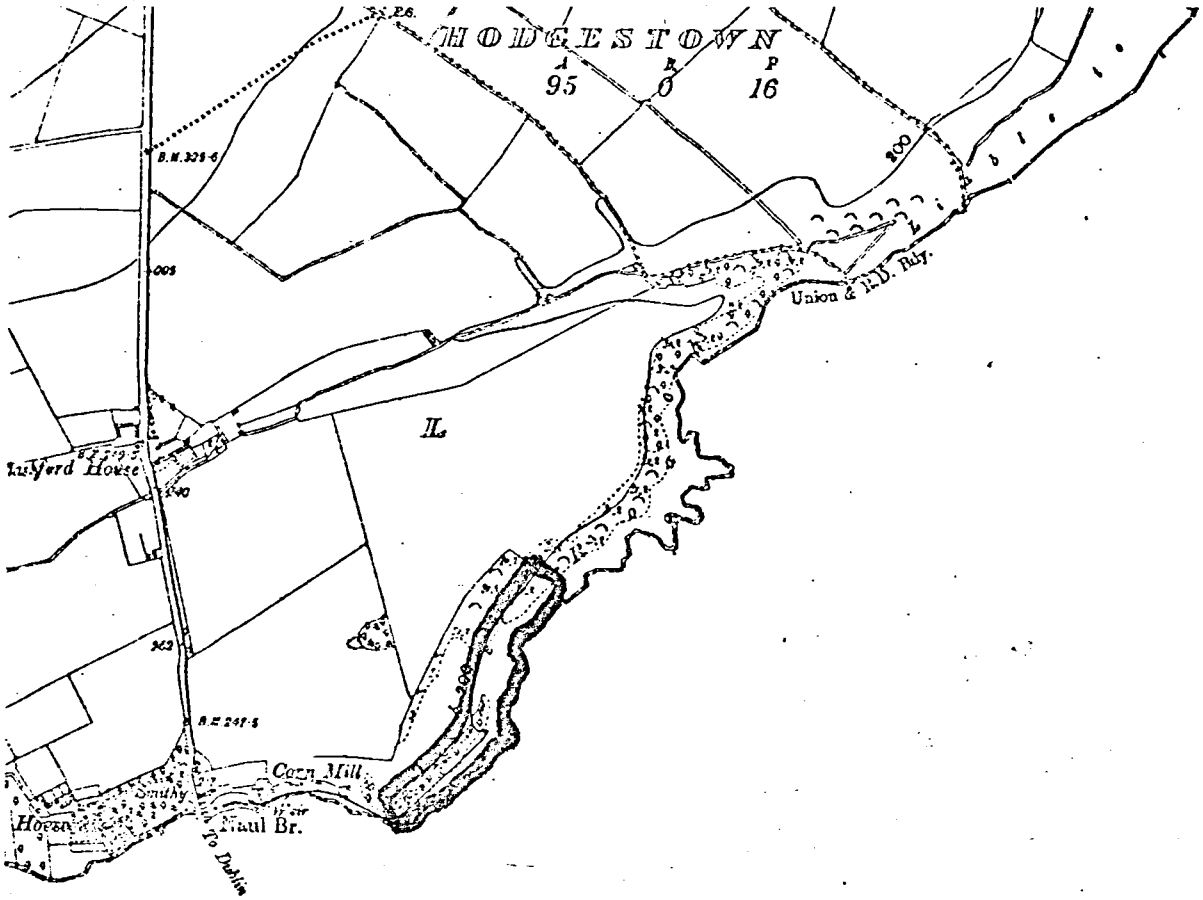
None known.

Recommendation

Development plans affecting this area should take into account its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 25

Scale: 6 Inches to 1 Mile



Name of Area	LAYTOWN DUNES
Acreage	c. 20 acres
Grid Reference	O. 168, 700
Scientific Interest	Ecological, botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest, shown on Map 26, consists of very old, low dunes. Apart from a very narrow strip bordering the beach,they are stabilised by a closed vegetation and are partially covered by a low scrub of gorse and bramble.

The flora of the fixed dunes contrasts sharply with that of the nearby highly-calcareous Mornington dunes (see p.39), presumably because leaching has resulted in the sand here at Laytown becoming acidic. The commonest species noted on the fixed dunes were:-

Agropyron repens	(twitch grass)	a
Festuca ? rubra	(red fescue)	a
Daucus carota	(wild carrot)	c
Lotus corniculatus	(bird's-foot trefoil)	c
Achillea millefolium	(yarrow)	f
Ammophila arenaria	(marram grass)	f
Arrhenatherum elatius	(sweet vernal-grass)	f
Dactylis glomerata	(cock's-foot grass)	f
Echium vulgare	(viper's bugloss)	f
Galium verum	(lady's bedstraw)	f
Hypochaeris radicata	(cat's ear)	f
Leontodon autumnalis	(autumnal hawkbit)	f
Plantago lanceolata	(ribwort plantain)	f
Ranunculus repens	(creeping buttercup)	f
Rubus fruticosus	(bramble)	f
Trifolium repens	(white clover)	f
Ulex europaeus	(gorse)	f

In addition to the presence of viper's bugloss, Echium vulgare, (see Fig. 10), the dunes are of botanical importance in being the only place in County Meath where the lesser meadowrue, Thalictrum minus, has been seen in recent years (see Fig. 18).

Evaluation

Interesting ecological comparisons can be made between these dunes and those nearby at Mornington. The dunes are thus of local importance.

The occurrence here of Thalictrum minus is also of local importance.

Threats to the area

The most likely threat to this area is development of this stretch of coastline for recreational purposes.

With regard to this, two points are of importance:-

(a) the dunes, being low with a coarse grassland and a partial cover of spiny scrub (gorse and brambles) are basically unattractive for many recreational activities, e.g. picnicing, walking, etc.

(b) the dunes could be expected to withstand considerable recreational use without serious erosion being caused (cf. the higher, less stable Mornington dunes - see p. 39).

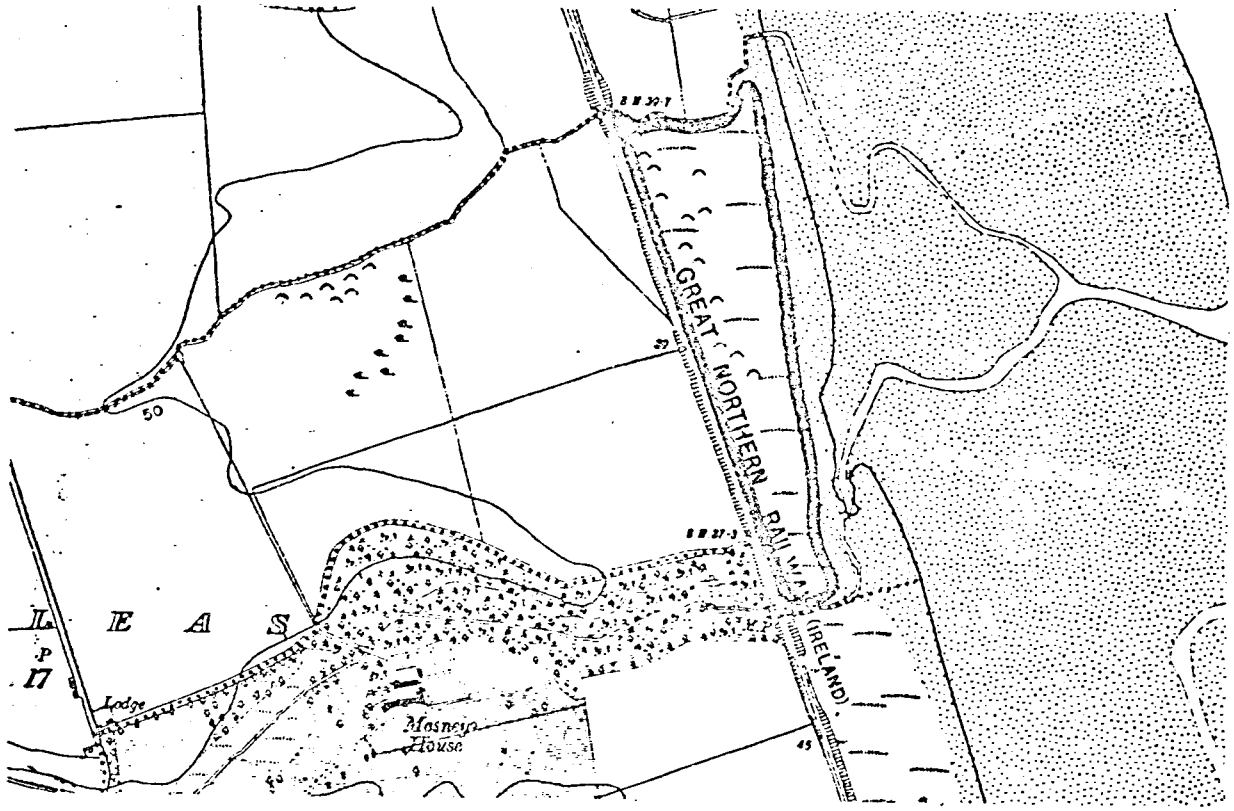
Recommendations

Any development plans affecting this area should take into account its scientific interest.

At least part of the dune area should be preserved in its present condition.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 26

Scale: 6 Inches to 1 Mile



Name of Area	BELLEWSTOWN RACECOURSE
Acreage	c. 80 acres
Grid Reference	O. 093, 674
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The area of interest, shown on Map 27, is very poor, acid grassland with fescue, Festuca spp, heath bedstraw, Galium saxatile and gorse, Ulex europaeus.

Evaluation

Though common in many parts of Ireland, this type of grassland is quite rare in County Meath and the area is thus of local importance.

Threats to the area

None known.

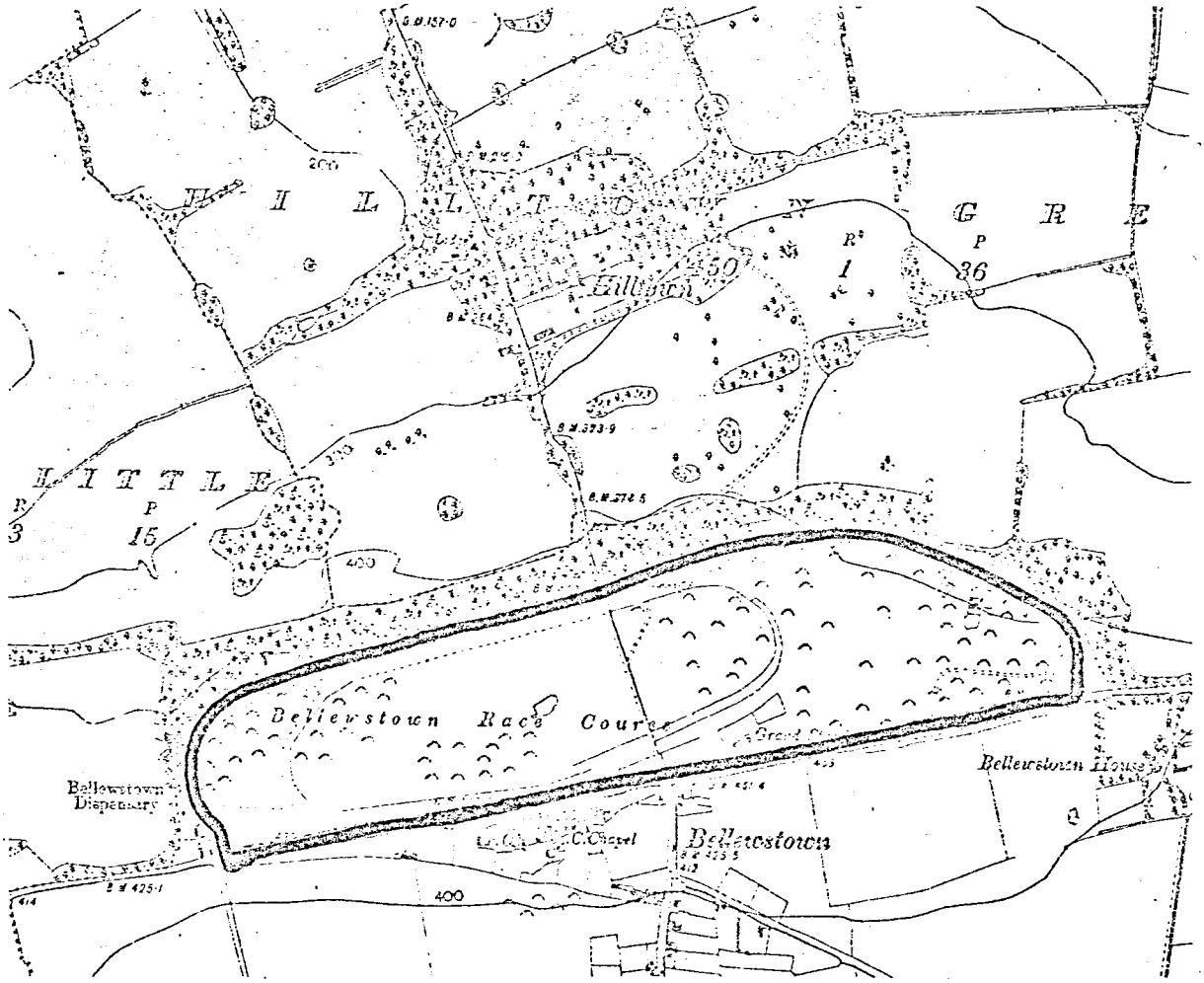
The area is unlikely to be altered in any way as long as the racecourse continues to be used.

Recommendation

Any development plans affecting this area should take into account its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 27

Scale: 6 Inches to 1 Mile



Name of Area	FLEMINGSTOWN WOODLANDS
Acreage	c. 70 acres
Grid Reference	N. 99,66
Scientific Interest	Ecological, botanical
Rating	Local Importance
Priority	B

Description of Area

The area of interest is shown on Map 28.

Though they are mainly dominated by oak the fact that these woodlands were originally planted is quite obvious from the variety of exotic and other native trees that can be seen in them:-

Aesculus hippocastanum	(horse-chestnut)
Alnus glutinosa	(alder)
Betula spp.	(birchs)
Crataegus monogyna	(hawthorn)
Fagus sylvatica	(beech)
Fraxinus excelsior	(ash)
Ilex aquifolium	(holly)
Picea sp	(spruce)
Salix spp.	(willows)

There has been much regeneration however since the original planting.

The woods are now the only place in County Meath where the hard shield-fern, Polystichum aculeatum, occurs, (see Fig. 19), and they form a local refuge for several other woodland flowering plants and bryophytes.

Evaluation

The scarcity of similar mature woodlands in County Meath results in this area being of local importance.

Threats to the Area

Clearance is a possible threat, though whether this is proposed or not is not known.

Recommendation

In view of the scientific interest and considerable scenic appeal of these roadside woodlands, they should be protected by a Tree Preservation Order under Section 45, Local Government (Planning and Development) Act, 1963.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 28

Scale: 6 Inches to 1 Mile

Name of Area	RIVERSIDE AT NEWHAGGARD
Acreage	c. 10 acres
Grid Reference	N. 774, 566
Scientific Interest	Ecological, botanical, zoological
Rating	Local Importance
Priority	B

Description of Area

The area of interest is shown on Map 29.

The R. Boyne flows very slowly at this point owing to the effect of the old mill weir and the south bank is a very rich area for aquatic plants and insects.

Seen growing in this area were:-

Carex riparia	(great pond-sedge)
Glyceria maxima	(reed-grass)
Iris pseudacorus	(yellow flag)
Lemna minor	(small duckweed)
Ranunculus lingua	(great spearwort)
Schoenoplectus lacustris	(bulrush)

Evaluation

This area is of local importance because of its lush vegetation and abundance of insects typical of this type of habitat.

The area could be used as a teaching area by local schools.

Threats to the Area

The area is certain to be drastically changed by the Boyne Drainage Scheme.

Recommendations

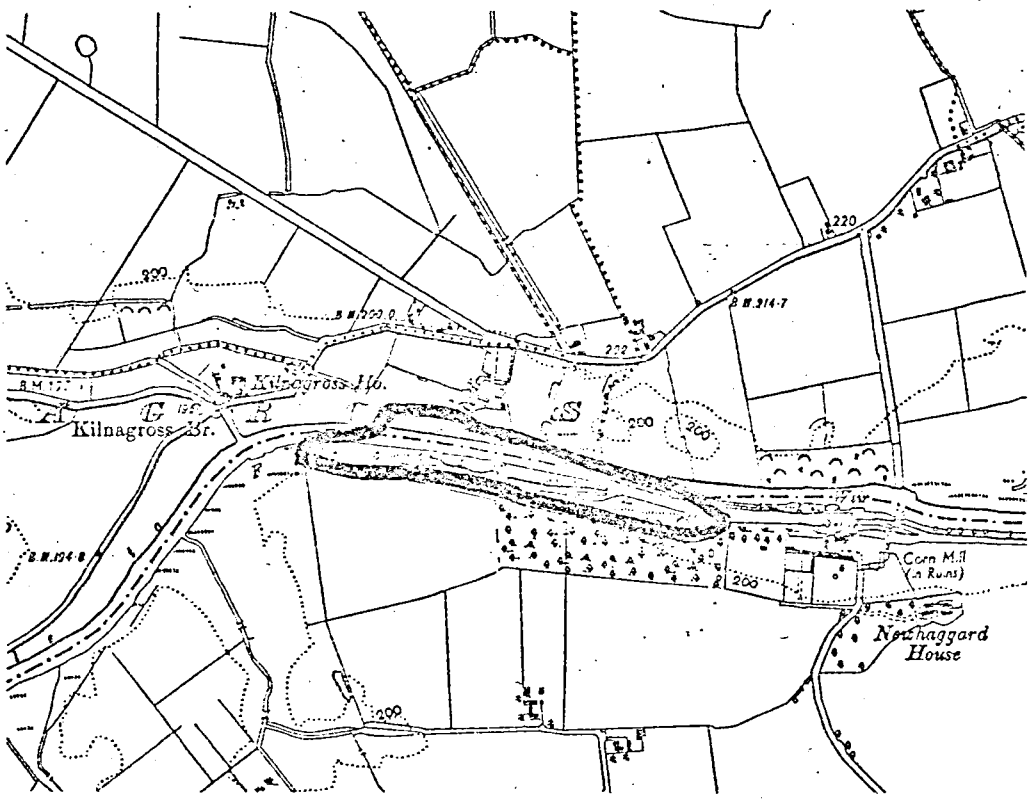
If the river is to be dredged at this point, then ideally material from the riverbed should not be dumped on the south bank in this area. If dredged material has to be dumped on the south bank, then it should be piled as near to the river as possible and not spread over the marshy area.

A submission to this effect should be made to the Office of Public Works.

The area should be re-examined in a few years in order to assess the effects of drainage.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 29

Scale: 6 Inches to 1 Mile



Name of Area	THE COMMONS, DULEEK
Acreage	c. 80 acres
Grid Reference	O. 043, 693
Scientific Interest	Ecological, botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 30.

This area is a mosaic of calcareous marsh, fen and poor, damp pasture, the latter being closely cropped grassland with clumps of hard rush, Juncus inflexus, and yellow flag, Iris pseudacorus. The whole area is grazed by cattle.

The rare spikerush, Eleocharis uniglumis occurs here in one of its very few inland stations (see Fig. 20).

Evaluation

The area is of local importance because of its variety of habitats and the occurrence of Eleocharis uniglumis.

Threats to the Area

No imminent threats are known of, but drainage and building development are threats that may arise.

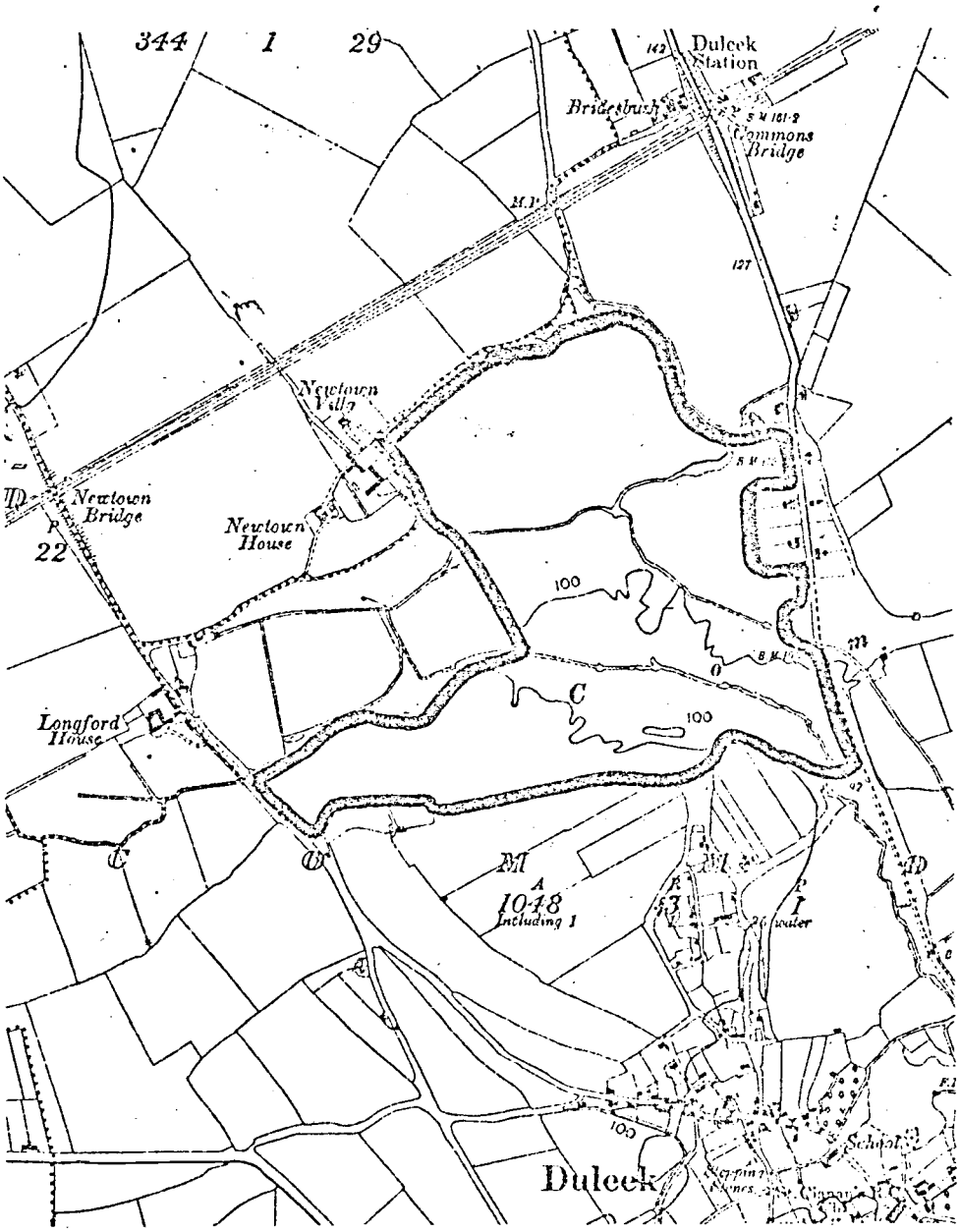
Recommendations

In view of the limited scientific interest of the area, drainage should not be opposed.

Building within the area should be discouraged.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —30

Scale: 6 Inches to 1 Mile



Name of Area	BALLYNABARNY FEN
Acreage	c. 4 acres
Grid Reference	N. 687, 459
Scientific Interest	Ecological, botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest, shown on Map 32, is a small fen. It lies in a small deep, artificially created valley, between the embankments of the canal and the railway.

The margins of the fen are dominated by purple moor-grass, Molinia caerulea, but the rest is much wetter and the commoner species present are:-

Carex diandra	(a sedge)	c, la
Carex lepidocarpa	(")	c
Equisetum variegatum	(variegated horsetail)	c
Eleocharis quinqueflora	(few-flowered spike-rush)	lc
Carex disticha	(brown sedge)	f
Carex panicea	(carnation-grass)	f
Agrostis stolonifera	(fiorin)	o
Carex flacca	(carnation-grass)	o
Carex rostrata	(bottle sedge)	o
Parnassia palustris	(grass of parnassus)	o

Map 32 shows a patch of open water within the fen. This has now disappeared, however.

Evaluation

The abundance in this small fen of several fairly uncommon plants, e.g. Equisetum variegatum (see Fig. 11), results in the area being of local importance.

Threats to the Area

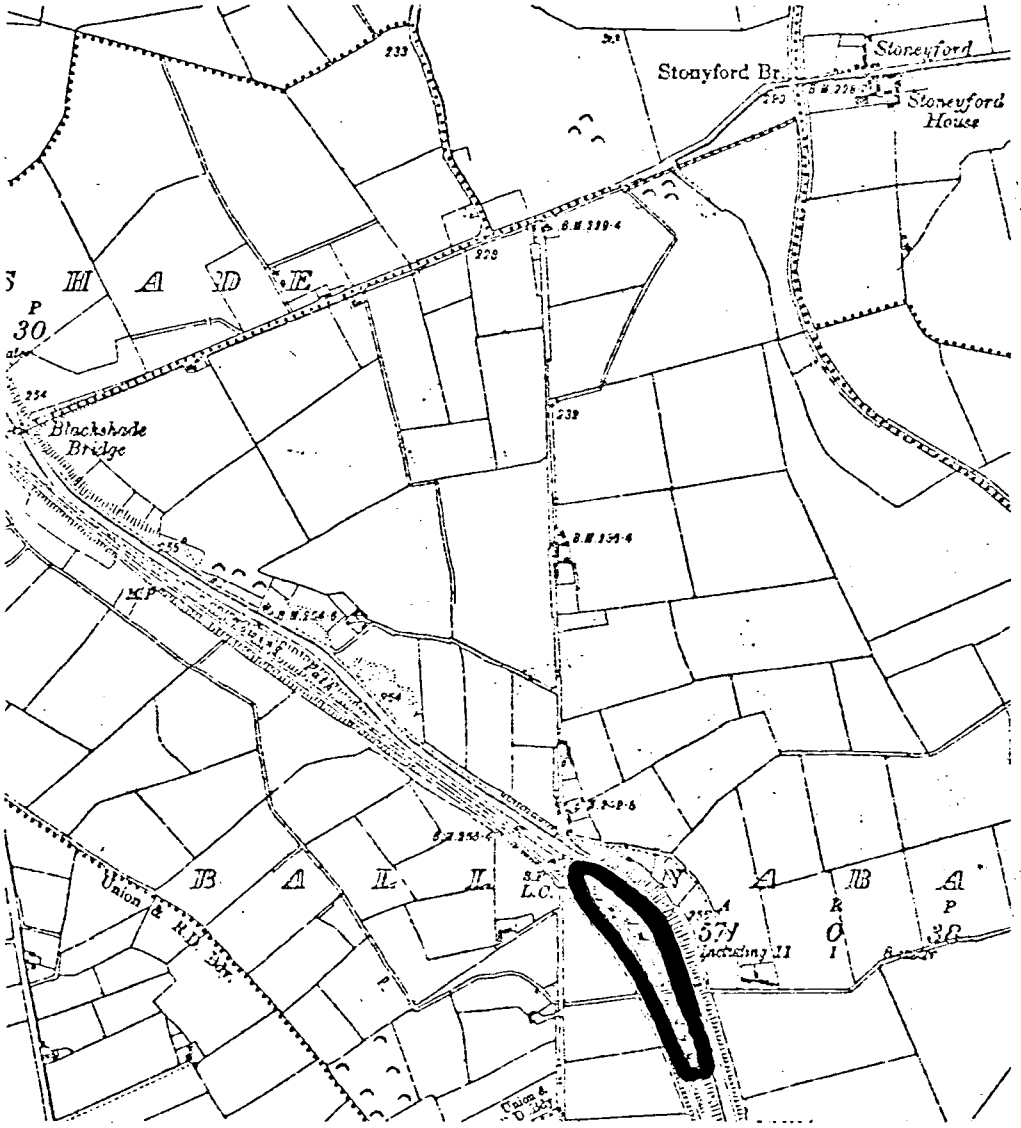
The only foreseeable threat to this area is dumping of domestic rubbish into the fen. In view of the remoteness of the area this should not be a serious threat, but there has, in fact, already been a very small quantity of rubbish dumped.

Recommendation

Dumping into this area should be prevented.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —32

Scale: 6 Inches to 1 Mile



Name of Area	FEN WEST OF GREENANASTOWN
Acreage	c. 20 acres
Grid Reference	O. 102, 647
Scientific Interest	Ecological, botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest, shown on Map 33, contains marsh, fen and swamp communities and several patches of open water.

Much of the northern half of the area is dominated by reedmace, Typha angustifolia, the rest being a coarse grass/sedge vegetation in which scattered russocks of the panicled sedge, Carex paniculata, are conspicuous.

The southern end is much wetter and is mainly Phragmites reedswamp.

The rare frogbit, Hydrocharis mursus-ranae, has been recently seen growing in the fen.

Evaluation

The variety of communities in this area results in it being of local importance.

The value of this area is enhanced by the fact that there are very few similar areas in County Meath.

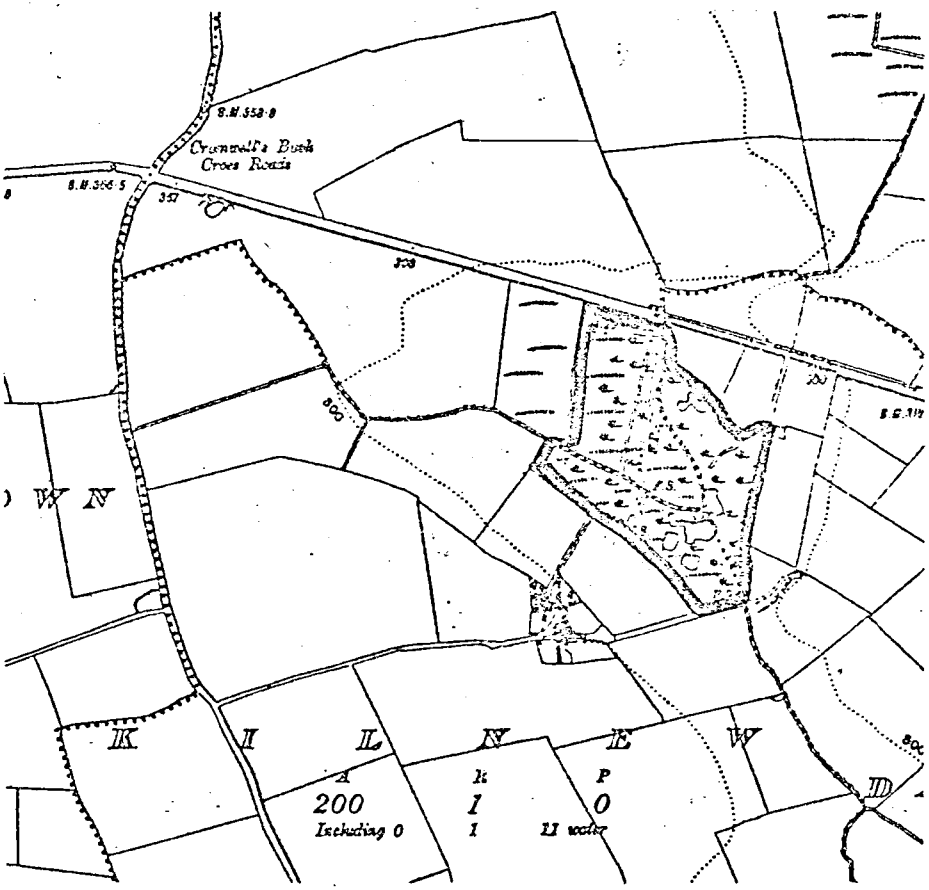
Threats to the Area

Drainage would appear to be the most likely threat to this area.

Entrophication by sewage could be a problem if any houses were to be built nearby.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 33

Scale: 6 Inches to 1 Mile



Name of Area	RORISTOWN
Acreage	c. 3 acres
Grid Reference	N. 767, 550
Scientific Interest	Botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest, shown on Map 34, is a small fen connected to the river by a ditch.

The fen is dominated by a tall herb vegetation in which the following are conspicuous:-

Agrostis stolonifera	(fiorin)
Deschampsia cespitosa	(tufted hair-grass)
Filipendula ulmaria	(meadowsweet)
Phleum pratense	(timothy grass)
Schoenus nigricans	(bog-rush)

Also present are three much rarer plants (see Figs. 3, 21 & 22):-

Carex dioica	(dioecious sedge)
Epipactis palustris	(marsh helleborine)
Eriophorum latifolium	(broad-leaved cotton-grass)

The ditch is included in the area of scientific interest because of the great meadow-rue, Thalictrum flavum, growing on its banks.

Evaluation

The uncommon plants that grow here result in this area being of local importance.

Threats to the Area

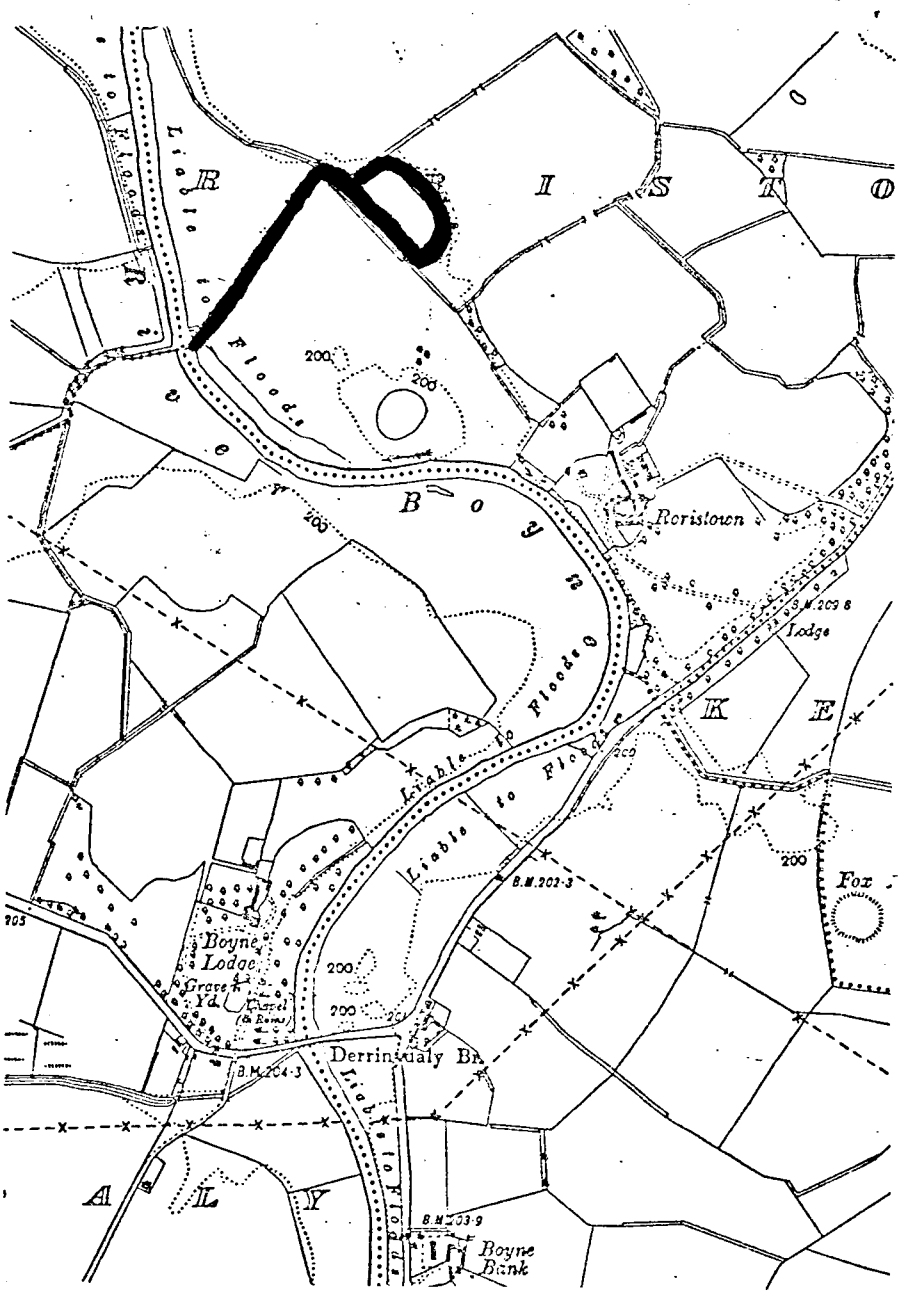
The area may well be affected by the Boyne drainage scheme.

Recommendation

The ditch connecting the fen to the R. Boyne should not be re-cut as part of the drainage works, neither should its exit be blocked by material dredged from the river.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 34

Scale: 6 Inches to 1 Mile



Name of Area	MOUNT HEVEY BOG
Acreage	c. 460 acres
Grid Reference	N. 630, 475
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 35.

This is a fairly wet raised bog showing some hummock and hollow surface topography. The hummocks are only a matter of c 30 cms higher than the bottom of the hollows however, in contrast to the very pronounced hummocks and hollows in the regenerating area of Doolystown bog (see p 52).

The following species were noted on the bog:-

(a) on hummocks and drier parts:

Calluna vulgaris	(heather)	c
Erica tetralix	(cross-leaved heath)	c
Sphagnum spp.	(bog mosses)	c
Narthecium ossifragrum	(bog asphodel)	o
Trichophorum cespitosum	(deer sedge)	f
Eriophorum angustifolium	(common cotton-grass)	f

The lichen, Cladonia arbuscula, is also common over most of the bog and abundant on the part north of the railway.

(b) in hollows:-

Sphagnum spp	(bog mosses)	a
Rhynchospora alba	(white beak-sedge)	c
Eriophorum angustifolium	(common cotton-grass)	c
Andromeda polifolia	(bog rosemary)	f
Drosera spp	(sundews)	o

There has been very little cutting of the edges of the bog and little attempt at drainage. There has, however, been some forestry planting on the eastern end.

Evaluation

Though there is some hummock and hollow structure on this bog, this is poorly developed in comparison with that at Doolystown and the area is only of local importance.

Threats to the Area

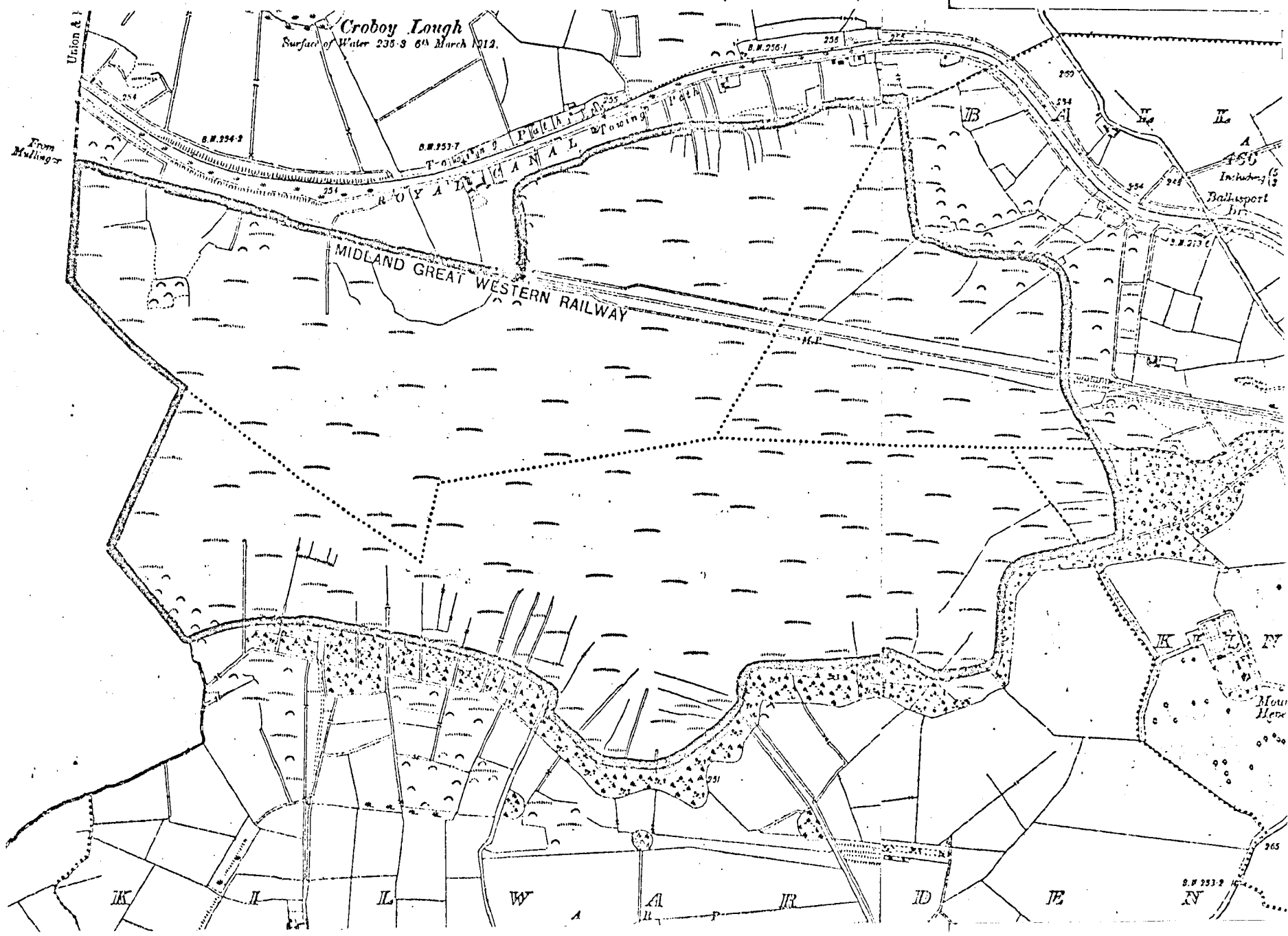
Extension of the forestry planting would appear to be the main threat, though planting of many parts of the bog would probably have to be preceeded by drainage.

Recommendation

If the bog were to be drained and planted, a wetter part of the bog should be preserved intact. The part north of the railway would be most suitable for this purpose.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —35

Scale: 6 Inches to 1 Mile



Name of Area	JAMESTOWN BOG
Acreage	Not mapped in sufficient detail to be measured
Grid Reference	N. 77, 66
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The raised bog formerly in the area enclosed by the dotted line on Map 36 has been largely cut-away. Some areas of bog do remain however, but are very dry. They are dominated by heather, Calluna vulgaris.

Evaluation

In view of the fact that only dry remnants of the original bog remain, and because there are several similar areas of bog in the county, the area is only of local interest.

Threats to the area

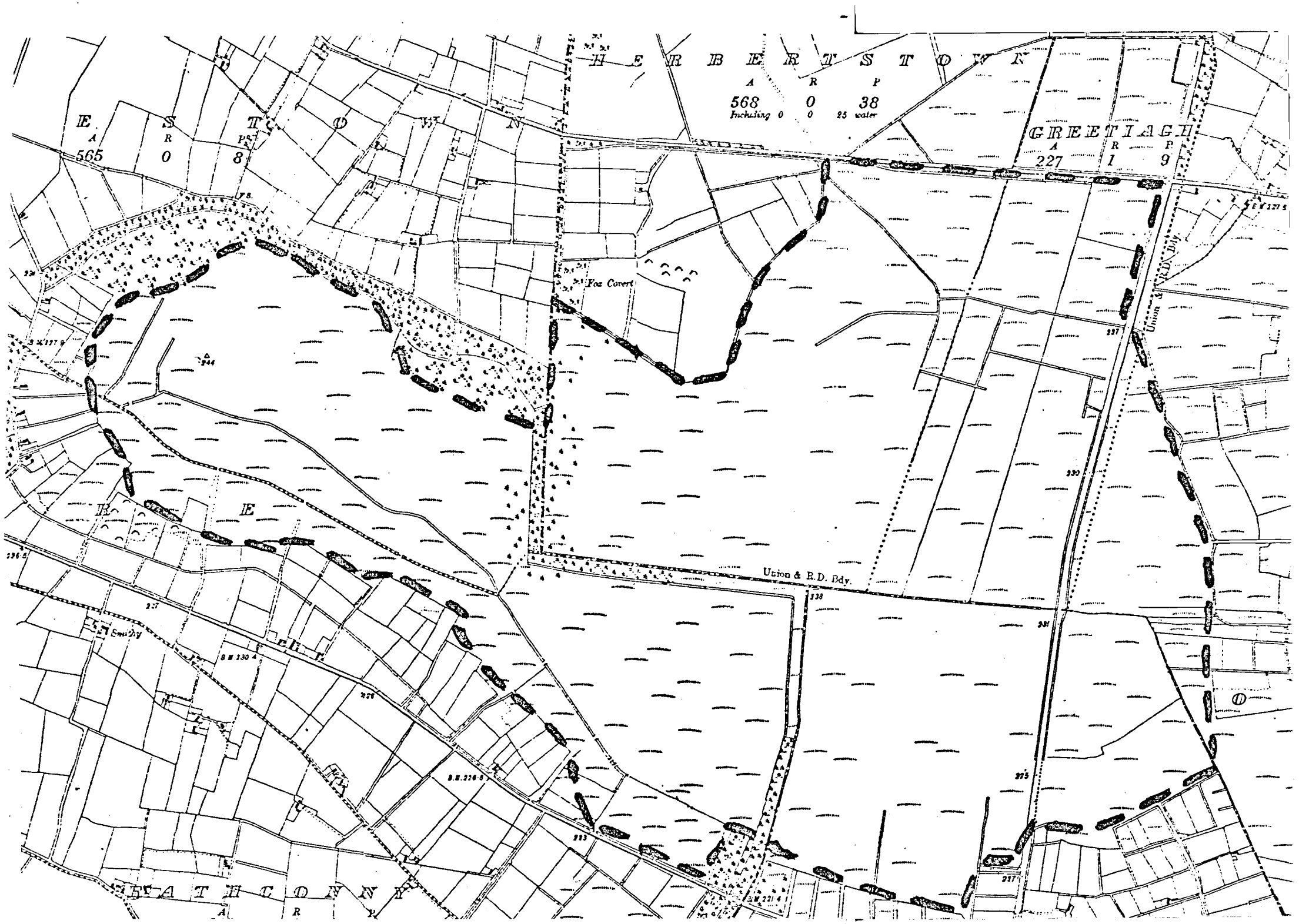
None known of.

Recommendation

See p. 80.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —36

Scale: 6 Inches to 1 Mile



Name of Area	GIRLEY BOG
Acreage	c. 260 acres
Grid Reference	N. 70, 70
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 37.

This is a well-developed raised bog, which is now however very dry with no evidence of active growth of peat. Much of the bog has been planted with conifers and is not included in the area of scientific interest.

Species noted within the area were:-

Calluna vulgaris	(heather)	a
Trichophorum cespitosum	(deer-sedge)	f
Erica tetralix	(cross-leaved heath)	f
Narthecium ossifragrum	(bog osphodel)	f

Also said to occur here are:-

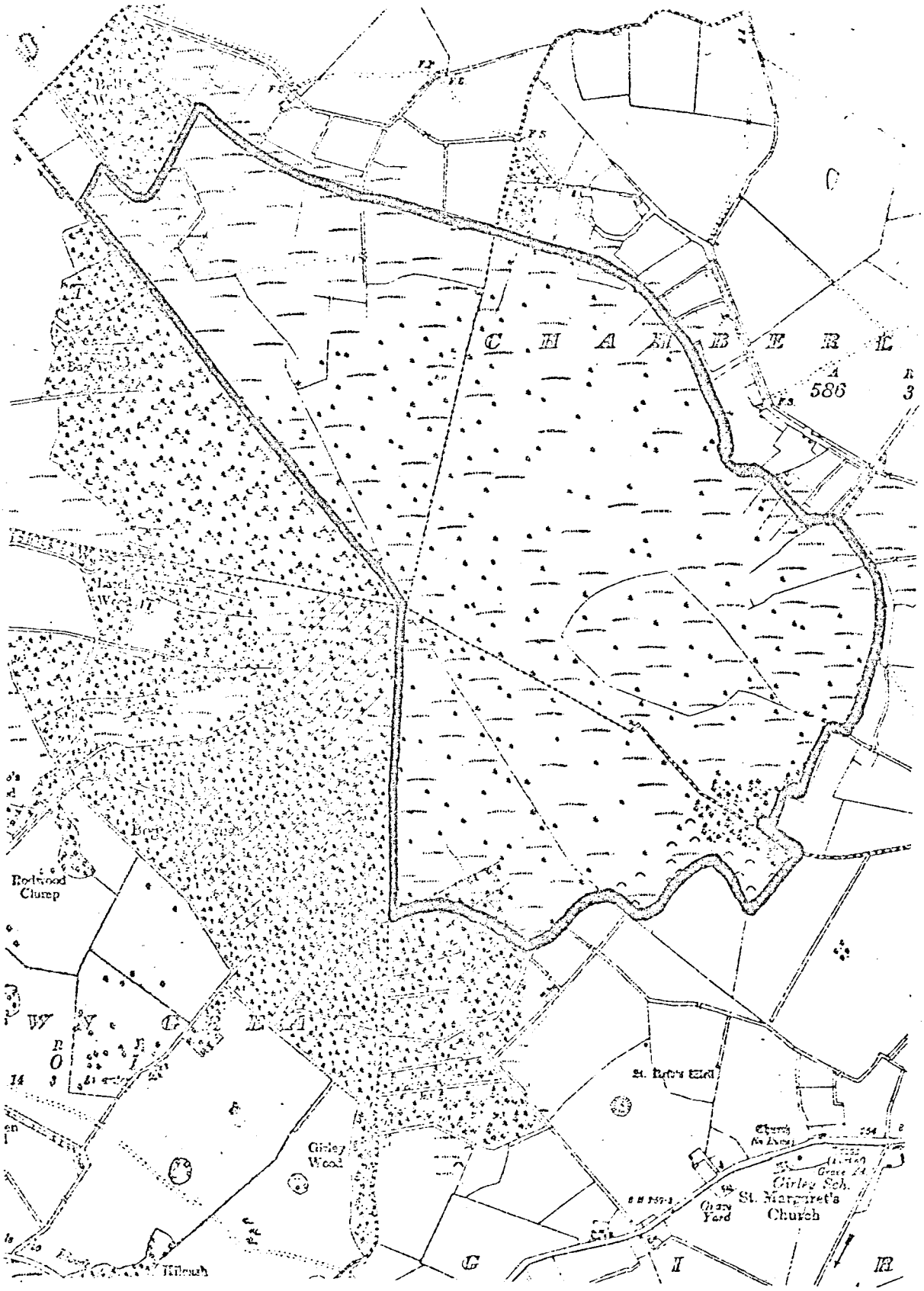
Andromeda polifolia	(bog rosemary)
Drosera anglica	(English sundew)
Rhynchospora alba	(white beak-sedge)

Evaluation

Because of the existence of several other very similar raised bogs in the county this area is only of local importance.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —37

Scale: 6 Inches to 1 Mile



Name of Area	BOG EAST OF HILL OF DOWN
Acreage	c. 145 acres
Grid Reference	N. 668, 470
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The area of interest, a dry raised bog, is shown on Map 38.

The vegetation on the bog is generally very short and the following species were noted:-

Calluna vulgaris	(heather)	c
Erica tetralix	(cross-leaved heath)	c
Trichophorum cespitosum	(deer-sedge)	c
Sphagnum spp.	(bog mosses)	c
Eriophorum angustifolium	(common cotton-grass)	f
Narthecium ossifragrum	(bog osphodel)	f
Andromeda polifolia	(bog rosemary)	r

Recently a large area near to the railway has been very severely burnt. Recolonisation of the bare peat is beginning, but as yet, there is only about 5% vegetation cover.

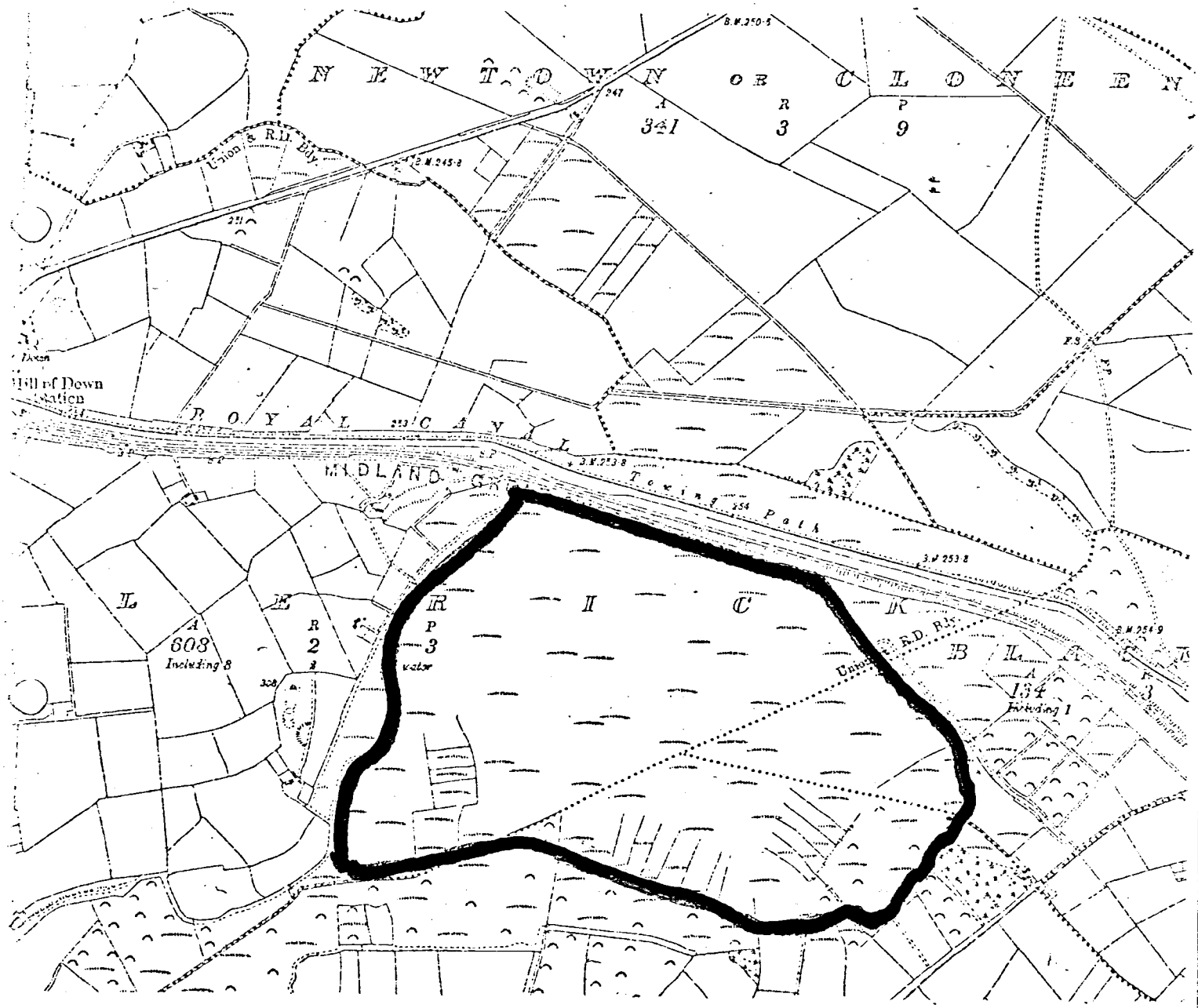
Evaluation

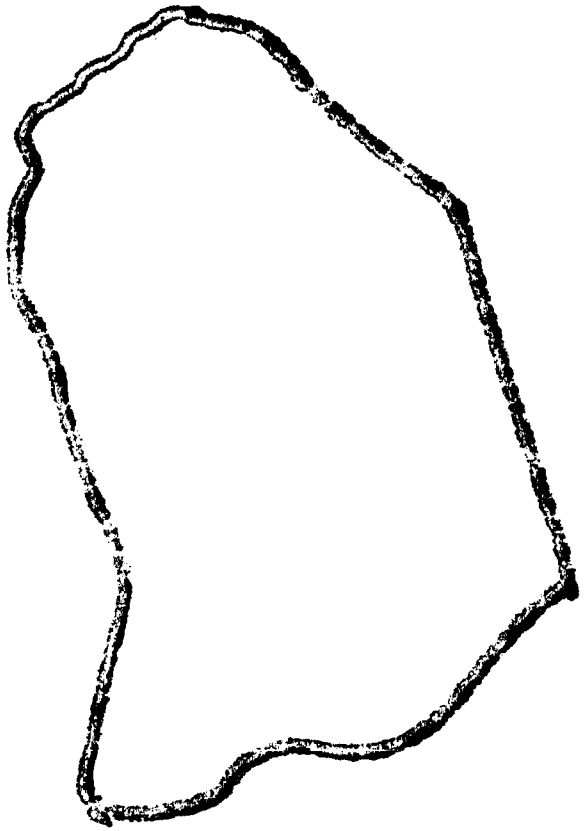
Because of the existence of several other very similar bogs in the county this area is only of local importance.

The burnt area of the bog provides an excellent site for recolonisation studies.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —38

Scale: 6 Inches to 1 Mile





Name of Area	BOGTOWN RAISED BOG
Acreage	c. 820 acres
Grid Reference	N. 600, 430
Scientific Interest	Ecological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 39.

The majority of the bog is covered by a short growth of:-

Calluna vulgaris	(heather)	a
Erica tetralix	(cross-leaved heath)	c
Narthecium ossifragrum	(bog osphodel)	c
Sphagnum spp	(bog mosses)	f, la
Eriophorum angustifolium	(common cotton-grass)	f
Trichophorum cespitosum	(deer-sedge)	f

The purple moor-grass, Molinia caerulea, is common on the north-west part of the bog.

An interesting feature of this bog is the small stream running across the bog from about its centre to the northern edge. This stream runs partly in a tunnel beneath the peat and is therefore only visible for part of its length. The course of the subterranean part can be easily picked out however, because along the length of the stream is a conspicuous band of a Molinia dominated community, containing:-

Molinia caerulea	(purple moor-grass)	a
Eriophorum angustifolium	(common cotton-grass)	c
Myrica gale	(bog myrtle)	c
Calluna vulgaris	(heather)	o
Carex panicea	(carnation sedge)	o
Juncus effusus	(soft rush)	o

Rubus fruticosus	(bramble)	r
Salix sp.	(willow)	r

There is a large patch of this community in the area marked * on Map 39, presumably because this area is wetter than the surrounding Calluna dominated areas. The area of open water shown on the map has now disappeared.

Evaluation

Because of the existence of several other similar bogs in the county, this area is only of local importance.

Threats to the Area

None known of.

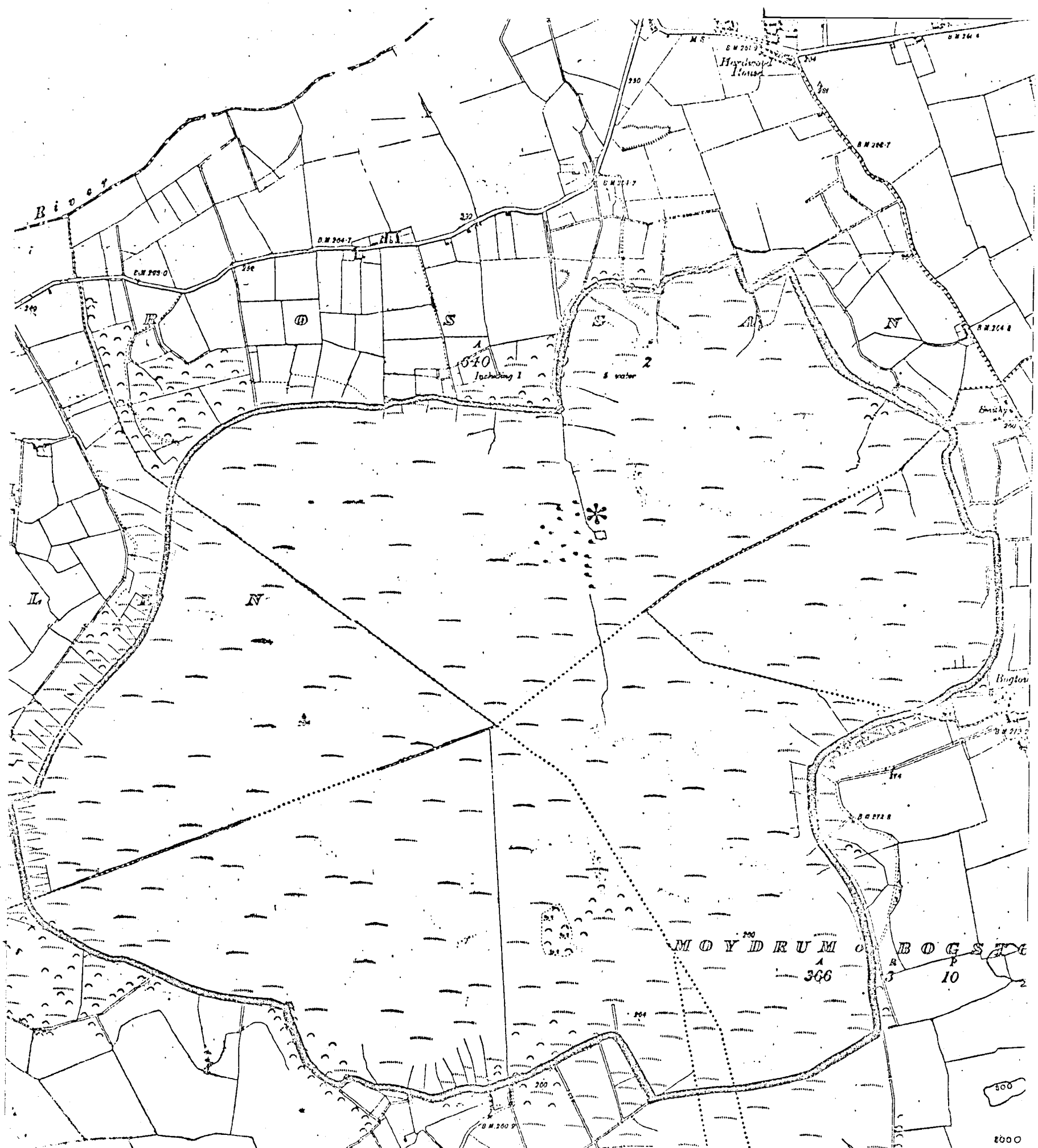
Recommendations

Currently, neither this bog nor those described on pages 74 to 78 merit any positive action being taken to protect them.

If three of them were to be drained, planted or cut-away however, the importance of the remaining bog would increase. Should this happen in the future, the importance of the reamining bog would have to be reassessed.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —39

Scale: 6 Inches to 1 Mile



Name of Area	BOYNE ESTUARY
Acreage	c. 210 acres
Grid Reference	O. 141, 767
Scientific Interest	Ecological, botanical, ornithological
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 40.

An area of saltmarsh and intertidal mudflats, of botanical note because of the occurrence of all the three British species of eelgrass, Zostera spp (see Figs. 23, 24 and 25).

The area holds large numbers of waders, ducks and swans.

Evaluation

The botanical and ornithological interest of this area, together with its proximity to Drogheda, result in it being of local importance.

Threats to the Area

There has recently been a new factory built by the estuary and further industrial development nearby is a possibility. Pollution or disturbance associated with such development would reduce the scientific value of the area.

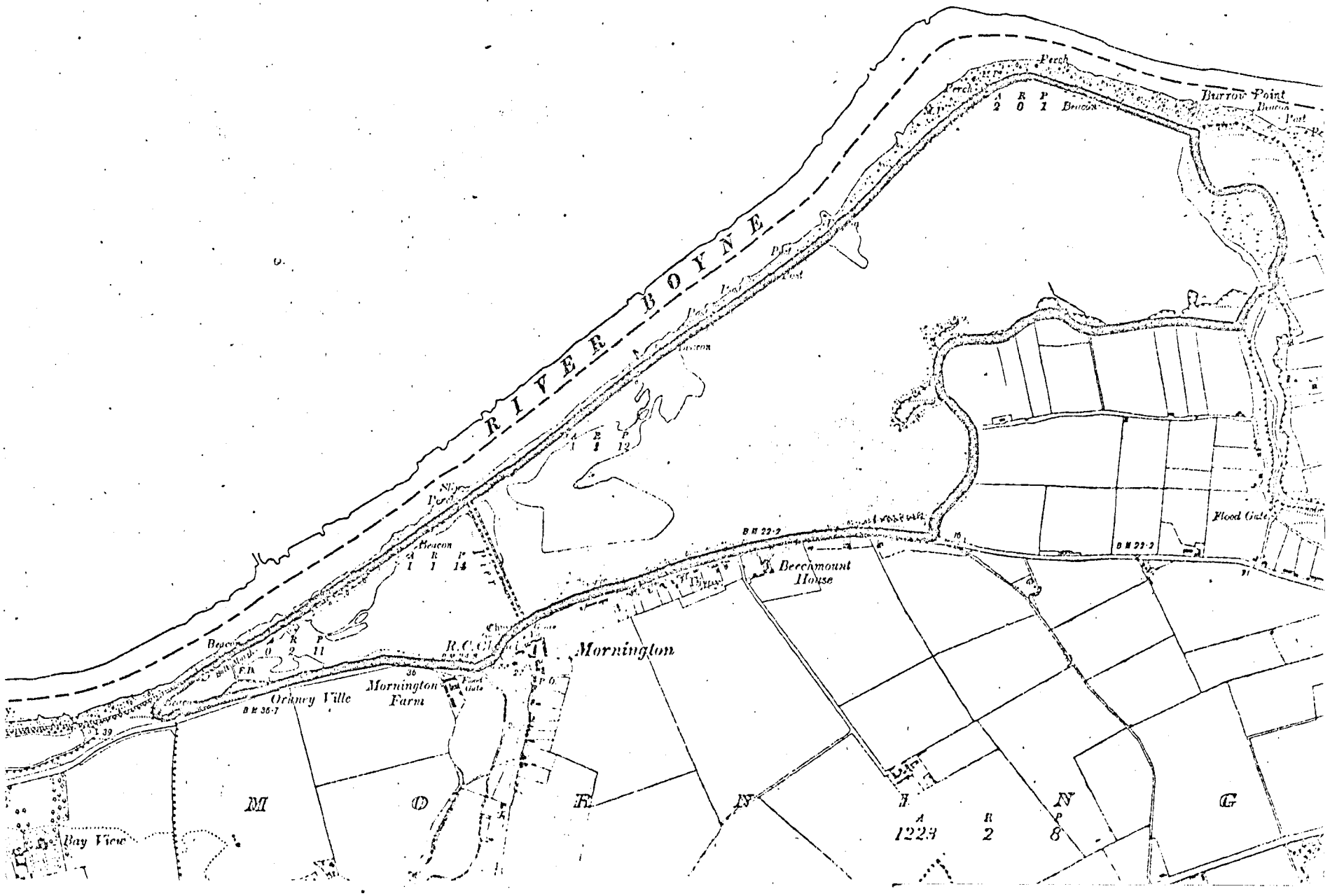
Obviously, pollution of the river further upstream would also be deleterious to the ecology of the estuary.

Recommendations

If the scientific values of the estuary are to be maintained it is essential that development is controlled on both sides of the estuary. There should, therefore, be close co-operation between the Councils of Counties Meath and Louth in controlling development in the area of the estuary.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —40

Scale: 6 Inches to 1 Mile



Name of Area	RIVER BOYNE AT TRIM
Acreage	c. 2 acres
Grid Reference	N. 813, 568
Scientific Interest	Botanical
Rating	Local Importance
Priority	C: this site will inevitably be radically affected by the Boyne Drainage Scheme.

Description of Area

The area of interest is shown on Map 41.

Here in the river, between the Abbey and the road-bridge, is a colony of sweet flag, Acorus calamus.

The plant probably owes its presence here to the past occupants of the Abbey as, smelling of tangerines when crushed, it was once used for incense.

Evaluation

Acorus calamus is a rare plant in Ireland (see Fig. 26), and this area is thus of local importance.

Threats to the Area

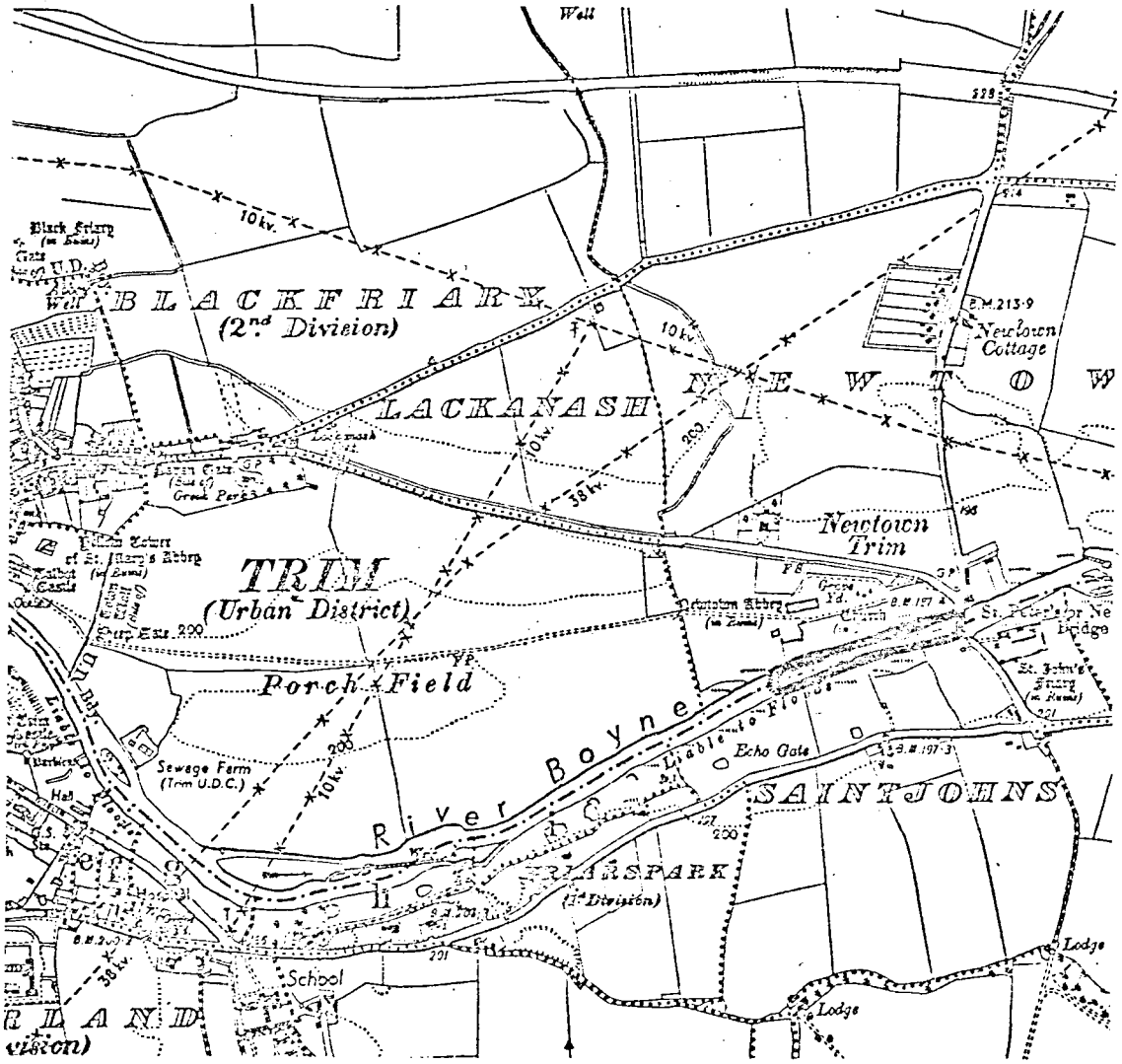
The colony may well be completely destroyed by dredging associated with the Boyne Drainage Scheme.

Recommendations

The area should be re-examined after completion of the drainage works to establish whether any of the colony has survived.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —41

Scale: 6 Inches to 1 Mile



Name of Area	BREAKEY LOUGHS
Acreage	c. 65 acres
Grid Reference	N. 737, 907
Scientific Interest	Ecological, botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 42.

Two small loughs separated by an area of swamp and bog. In spite of its small size the area contains a great variety of plant species.

Evaluation

Though no very rare plants occur here the variety of species in the area makes the area of local importance.

Threats to the Area

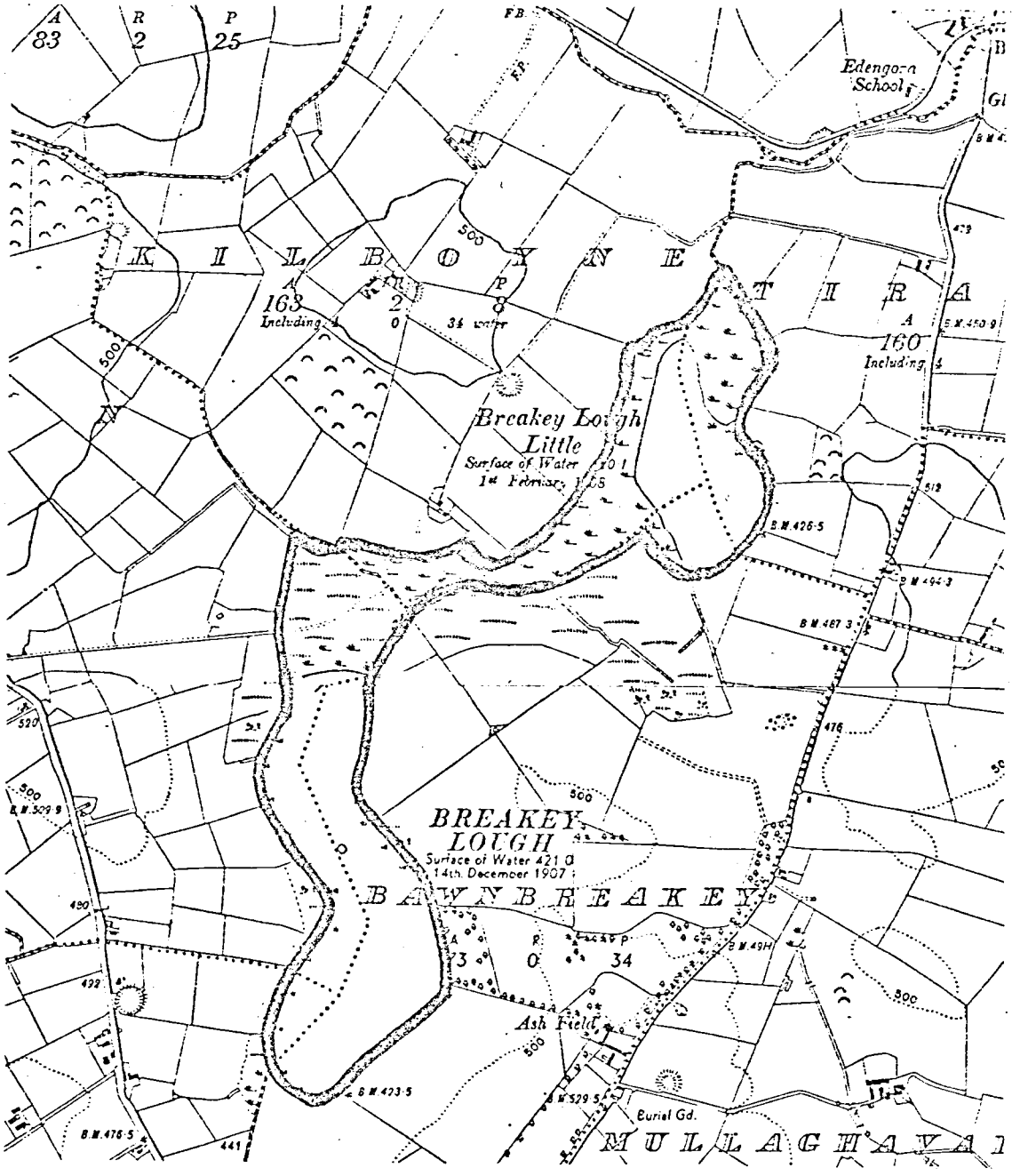
None known of.

Recommendation

Any development plans affecting this area should take into account its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 42

Scale: 6 Inches to 1 Mile



Name of Area	BALLYHOE LOUGH
Acreage	c. 130 acres (in County Meath)
Grid Reference	N. 845, 953
Scientific Interest	Ecological, botanical
Rating	Local Importance
Priority	C

Description of Area

The area of interest is shown on Map 43.

This is a fairly acid, peaty lough, contrasting markedly to most of the loughs in County Meath, which are calcareous.

The islands in the lough are covered with trees and shrubs and, like the lakeshore, fringed with reed, Phragmites communis. They are believed to be crannogs.

In the south-west corner is a well-developed carr, i.e. a wet woodland dominated by willows, etc.

Evaluation

The lough is of local importance mainly because it is acid and peaty, in contrast to most loughs in County Meath.

Threats to the Area

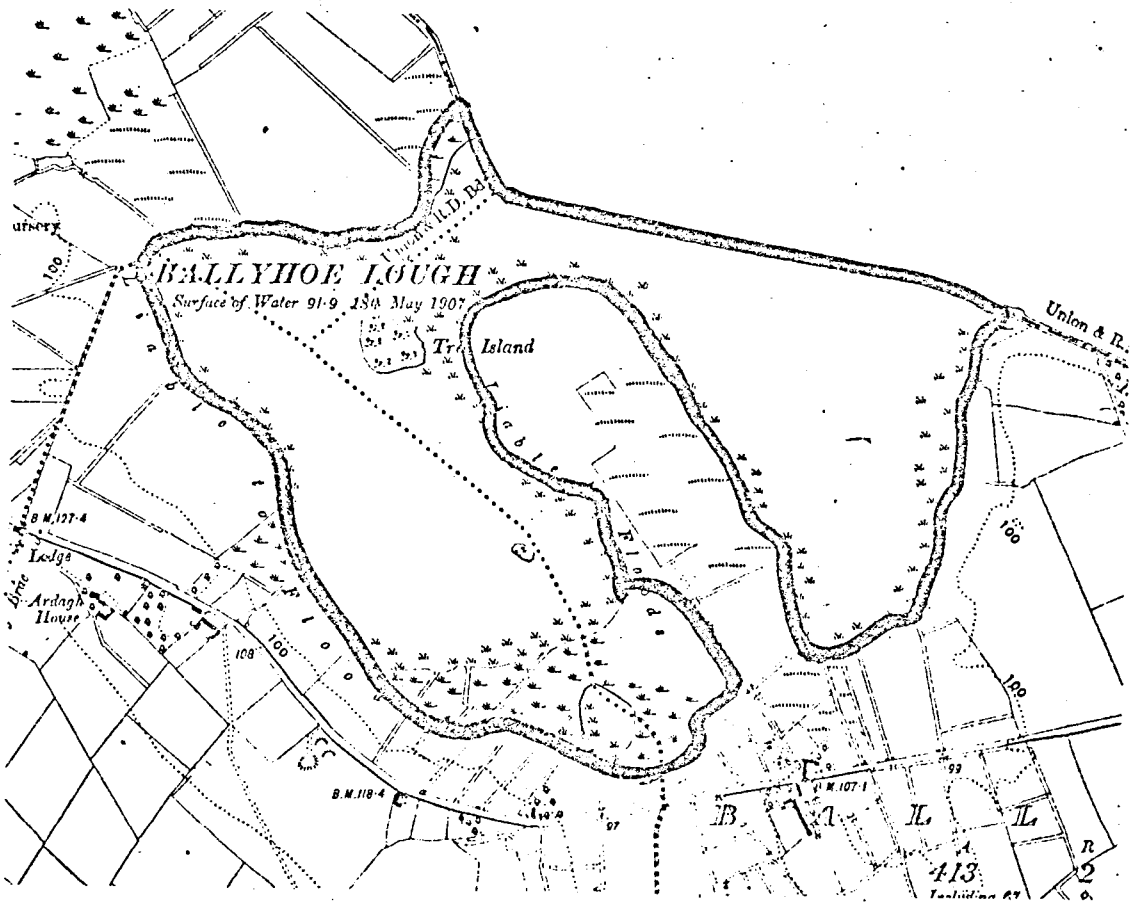
None known of.

Recommendation

Any development plans affecting this area should take into account its scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 43

Scale: 6 Inches to 1 Mile



Recommended action for each area of scientific interest

	General Planning Control	Conservation Order	Tree Preservation Order	PRIORITY
Grangegeeth, brickworks quarry	*			B
Ballinrig	*			C
Galtrim moraine and esker	*			B
Ardagh area	*			B
East of Ballyhoe Lough	*			C
Altmush stream	*			C
Quarries N of Grangeeth crossroads	*			C
Cruicerath quarry	*			C
Lough Shesk		*		A
Riverside at Beauparc				B
Riverside at Rossnaree				B
Riverside at Slane				B
Newtown area	*			C
Benhead	*			C
Painestown quarry	*			C
Rockwood cliffs	*			C

	General Planning Control	Conservation Order	Tree Preservation Order	PRIORITY
Riverbank near Tobermannan Bridge	*			C
Mornington dunes	*			A
Crewbane			*	B
Corstown Loughs	*			C
Lough Doo area	*			C
Woodland and bog west of Duleek		*		B
Doolystown Bog	*			C
Riverside 2 miles east of Trim	*			A
River valley at Naul	*			C
Laytown dunes	*			C
Bellewstown racecourse	*			C
Flemingstown woodlands			*	B
Riverside at Newhaggard	*			B
The Commons, Duleek	*			C
Ballynabarny fen	*			C

	General Planning Control	Conservation Order	Tree Preservation Order	PRIORITY
Fen west of Grennanstown	*			C
Roristown fen	*			C
Mt. Hevey bog	*			C
Jamestown bog	*			C
Girley bog	*			C
Bog east of Hill of Down	*			C
Bogtown bog	*			C
Boyne estuary	*			C
River Boyne at Trim	*			C
Breakey Loughs	*			C
Ballyhoe Lough	*			

Fig. 3 Distribution of Carex dioica in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

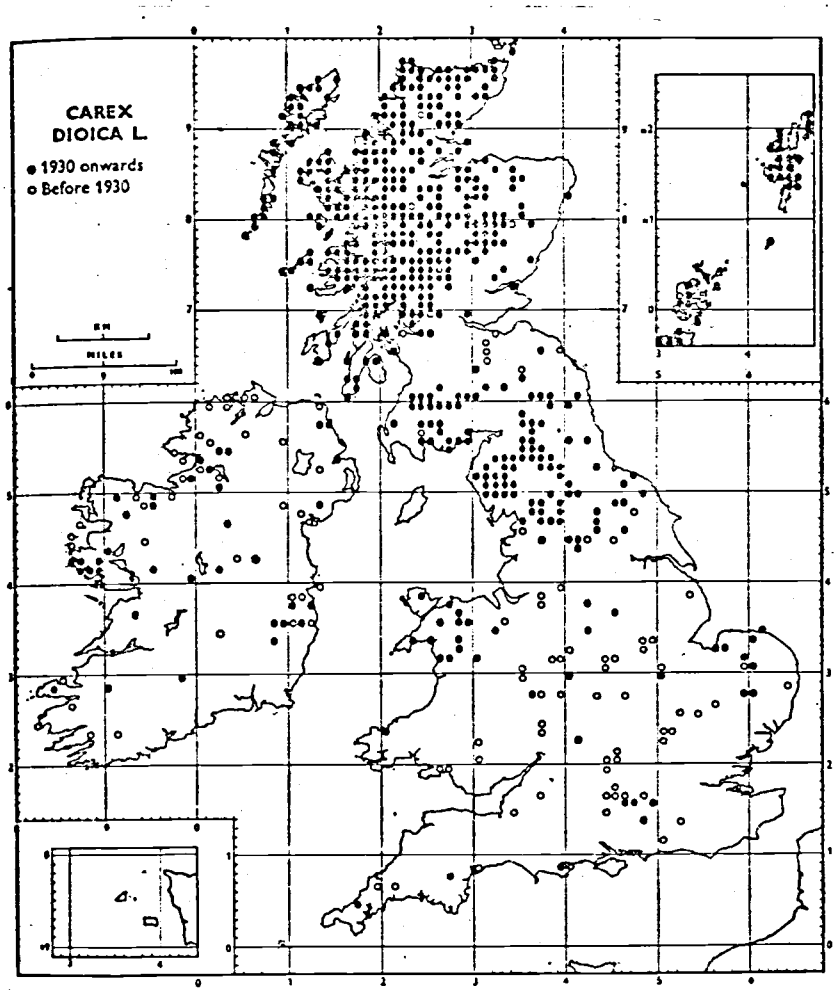


Fig. 4 Distribution of Carex limosa in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

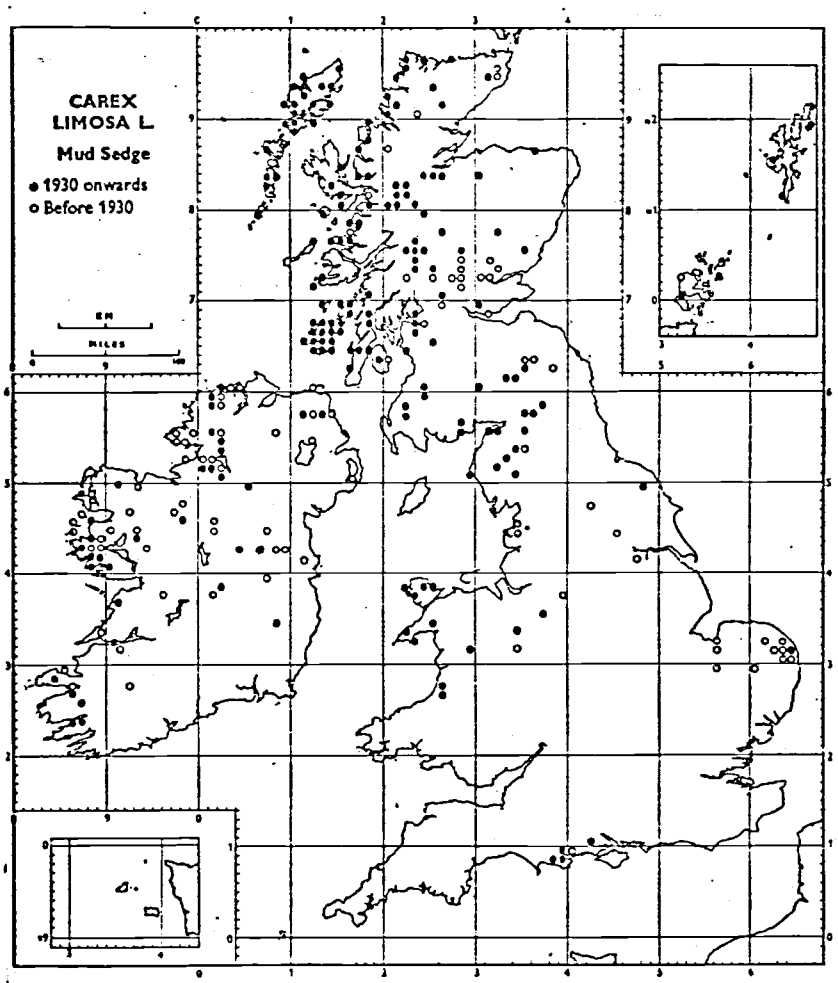


Fig. 5 Distribution of Hydrocharis morsus-ranae in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

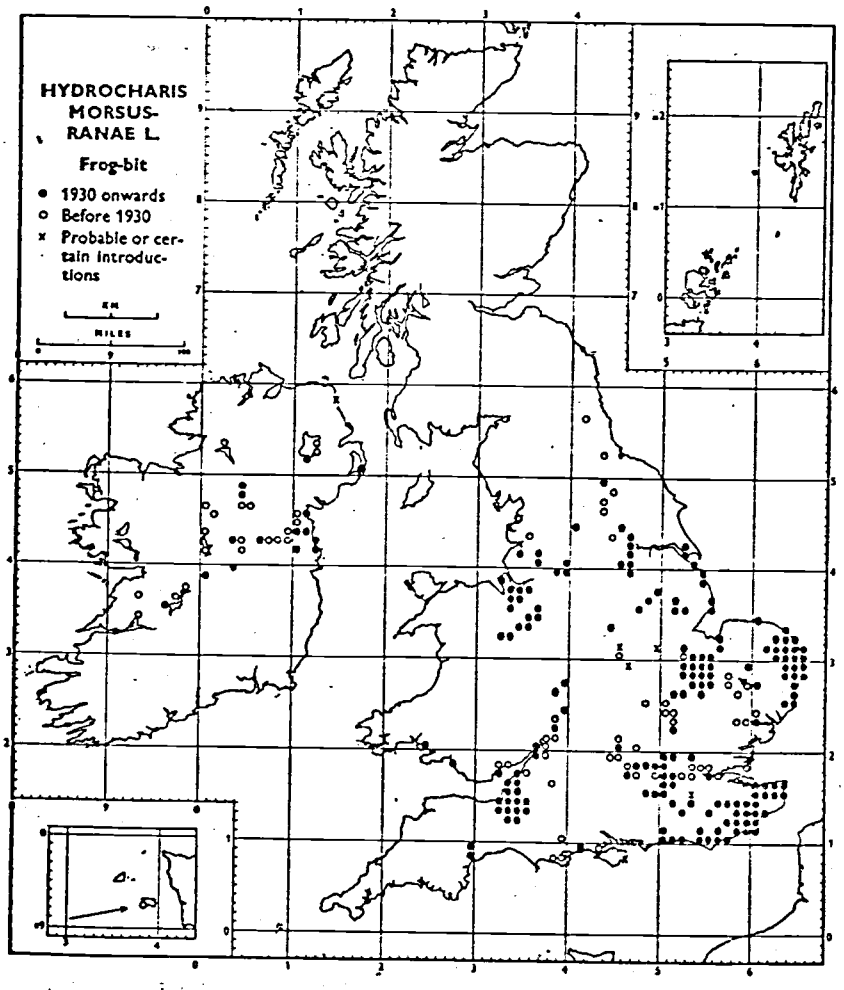


Fig. 6 Distribution of Poa palustris in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

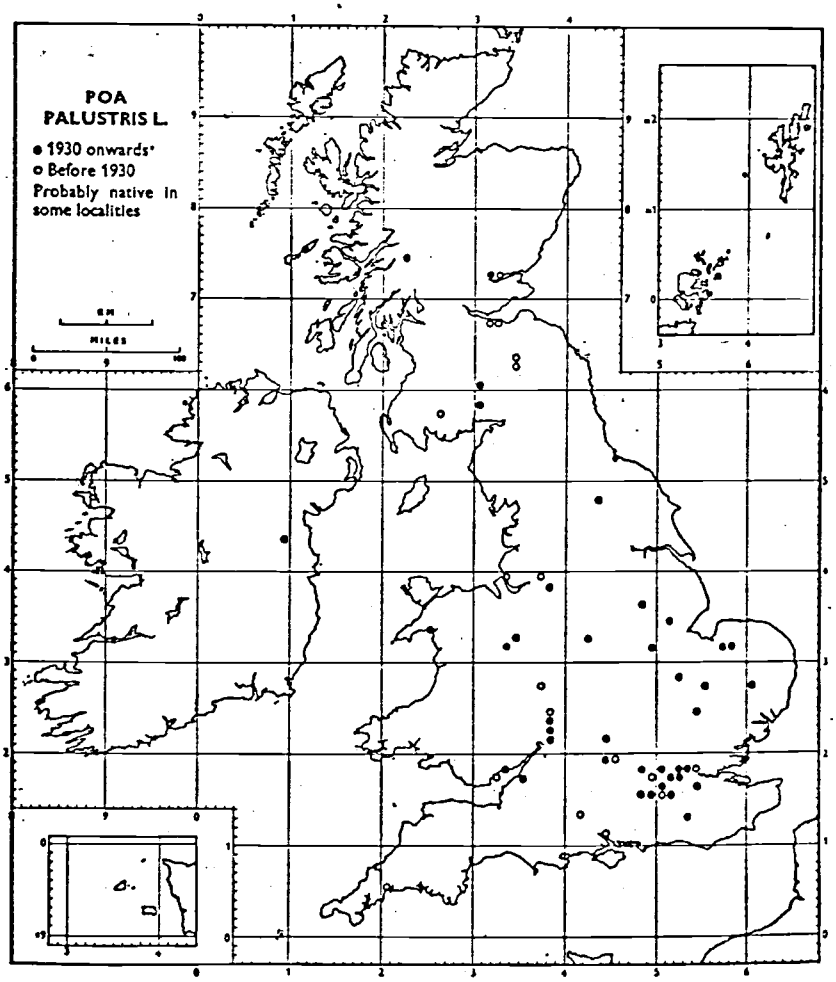


Fig. 7 Distribution of Juncus compressus in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

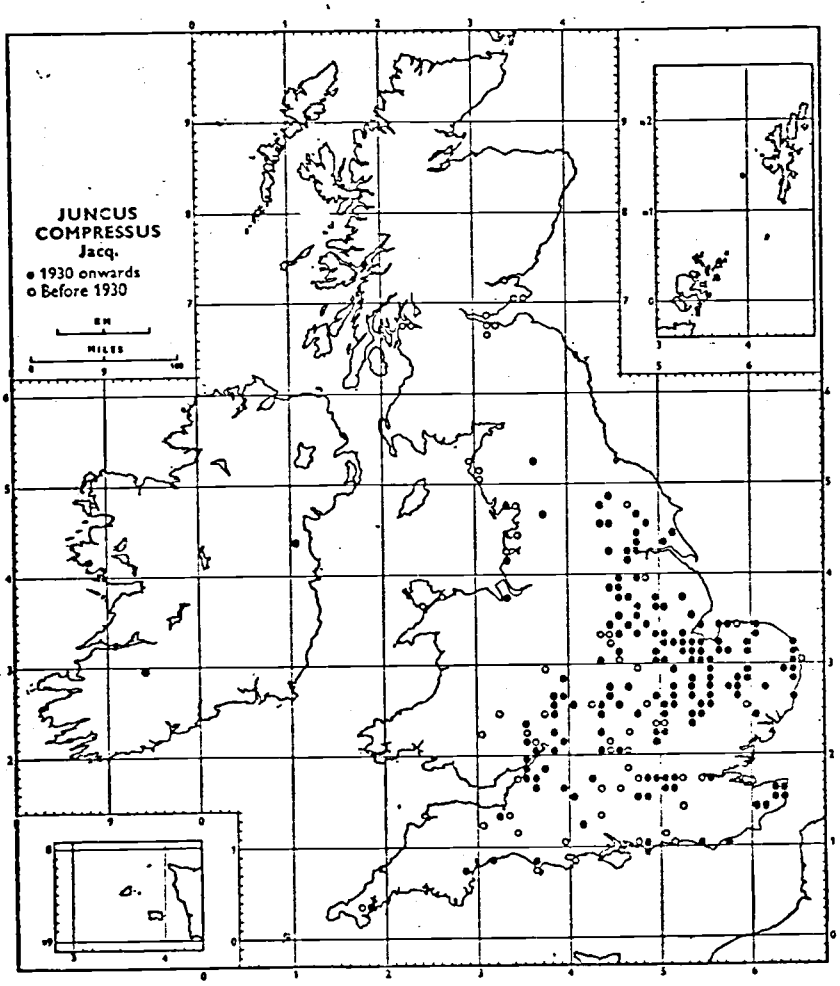


Fig. 8 Distribution of Thelypteris palustris in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

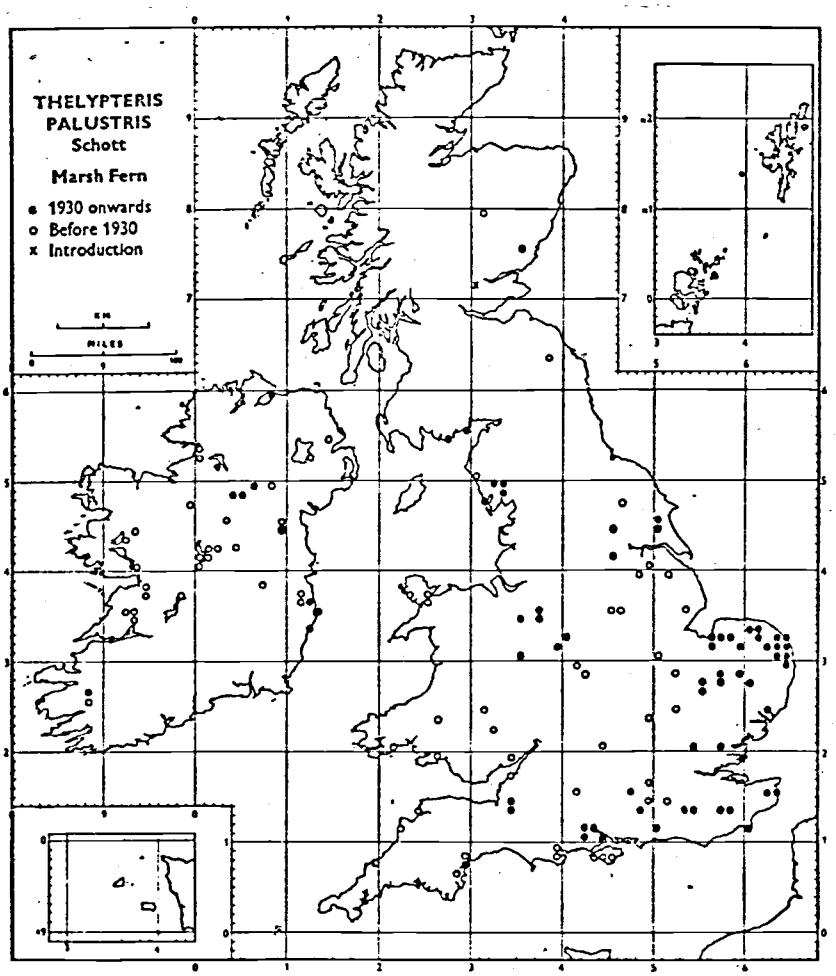


Fig. 9 Distribution of Salvia horminoides in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

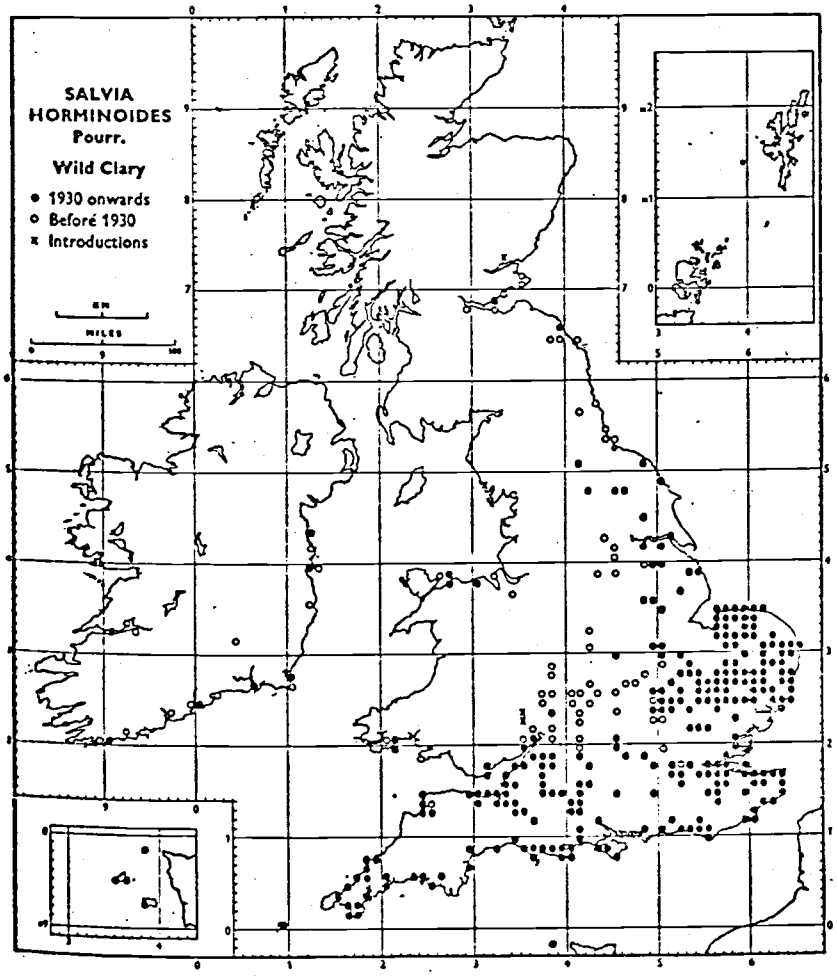


Fig. 10 Distribution of Echium vulgare in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

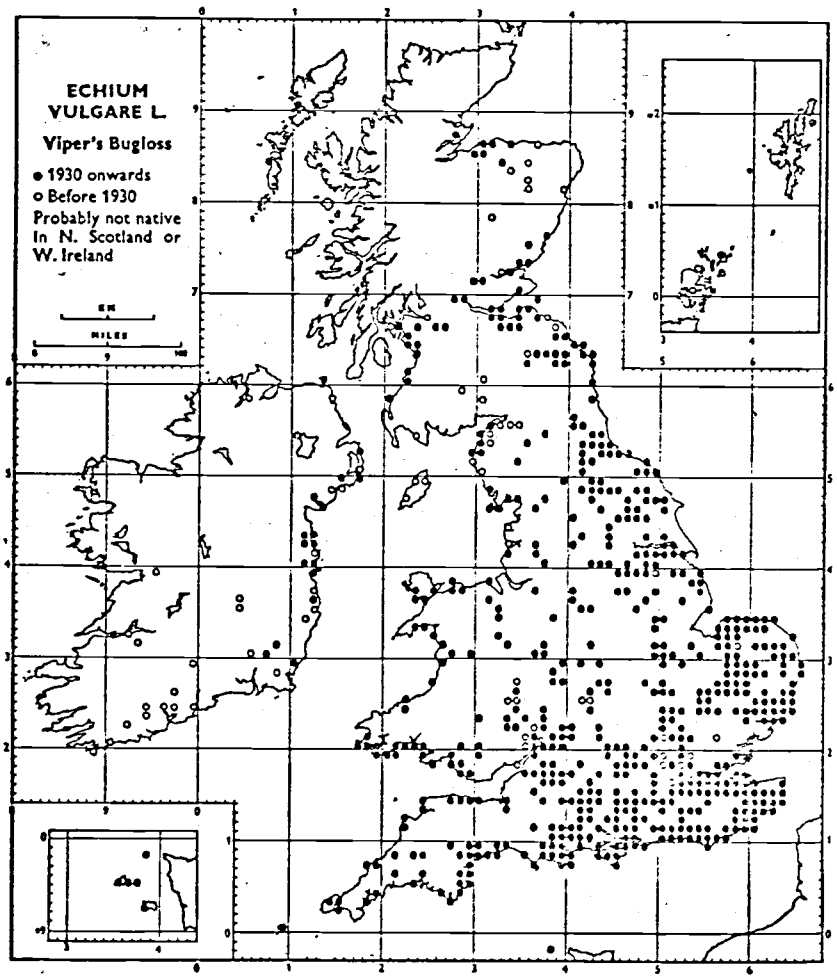


Fig. 11 Distribution of Equisetum variegatum in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

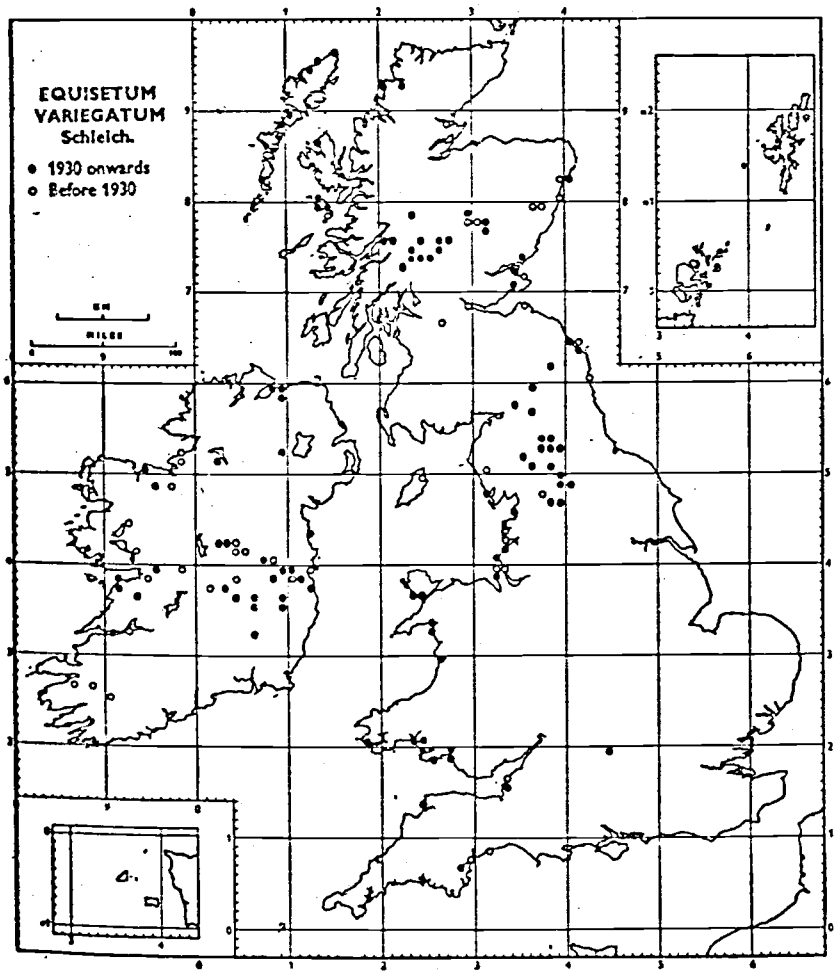


Fig. 12 Distribution of Ophioglossum vulgatum in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

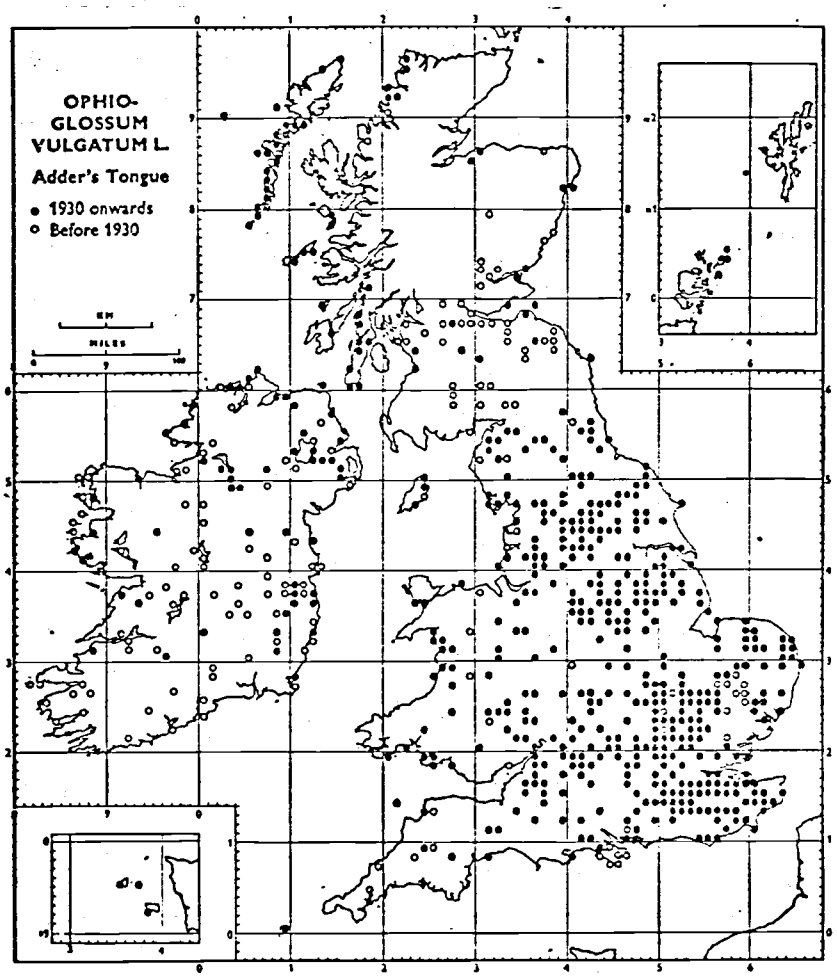


Fig. 13 Distribution of Typha angustifolia in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

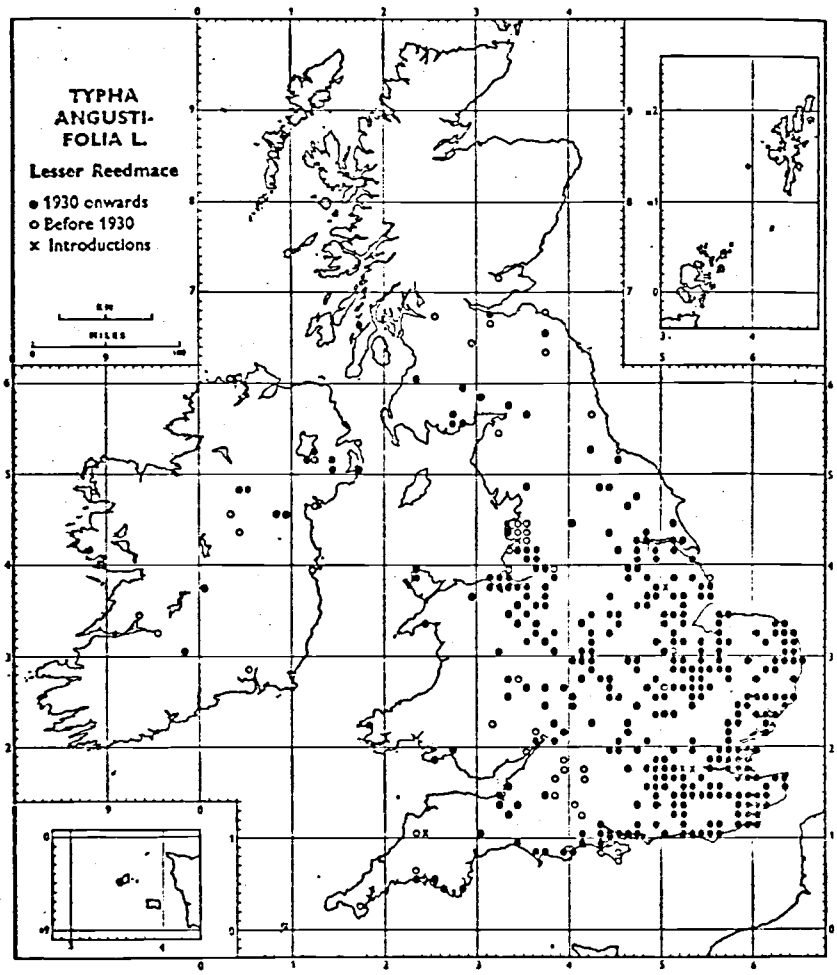


Fig. 14 Distribution of Carex elata in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

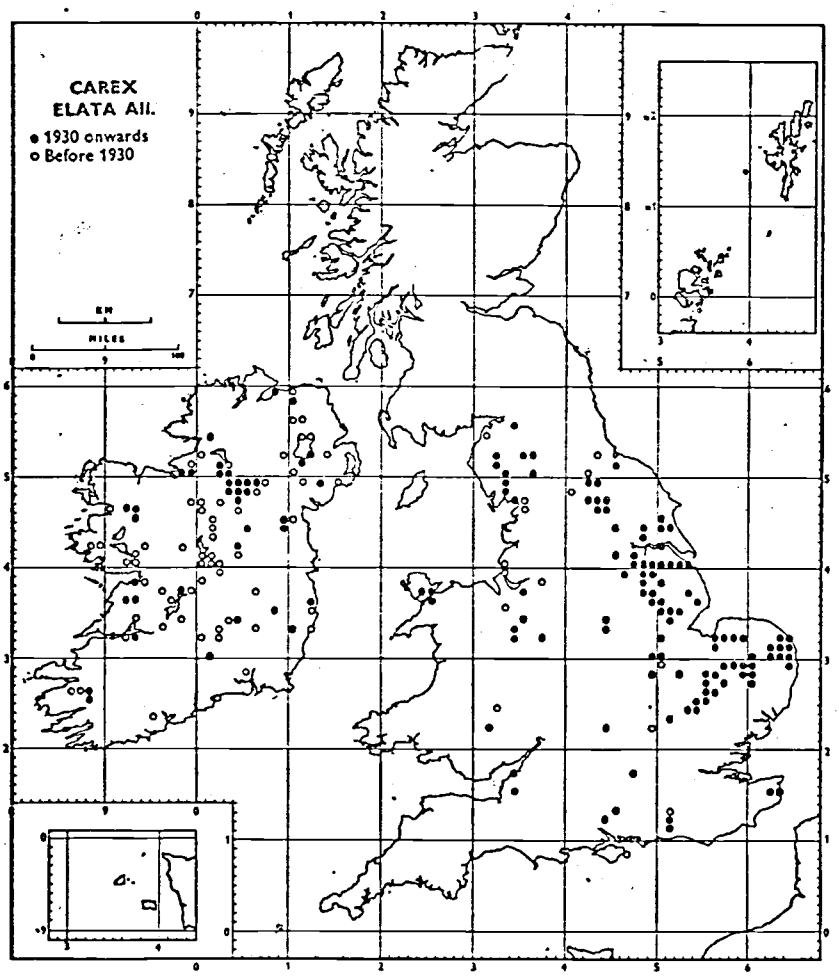


Fig. 15 Distribution of Trifolium fragiferum in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

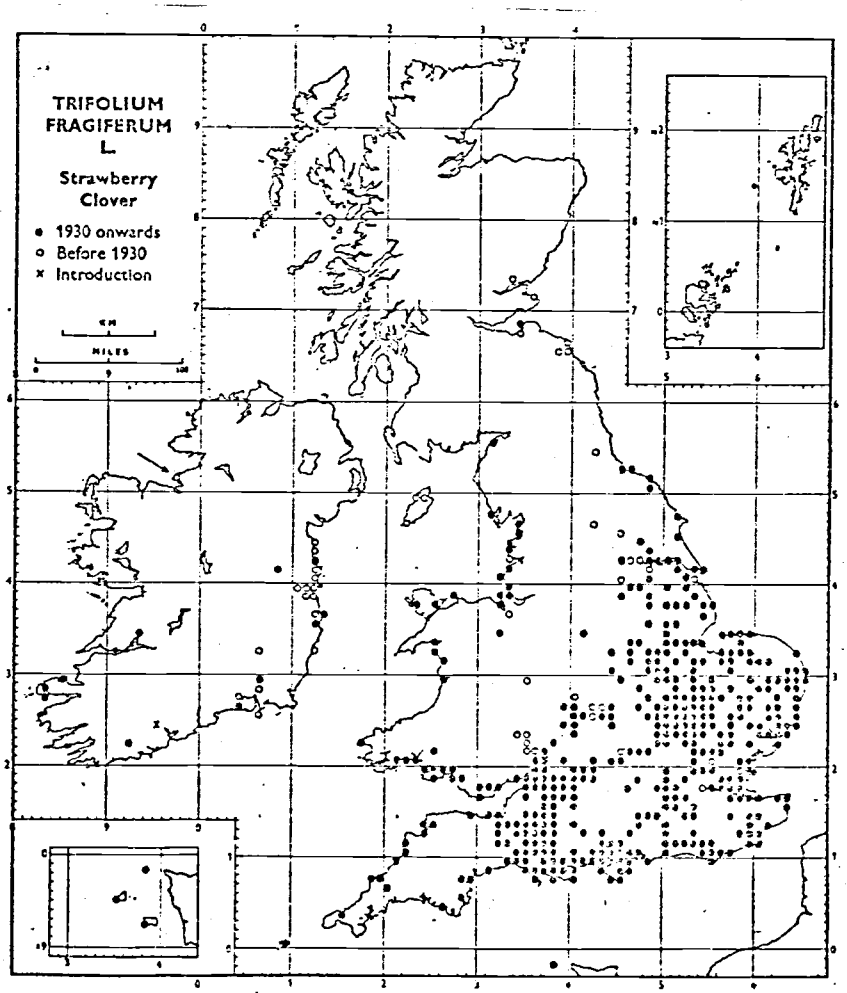


Fig. 16 Distribution of Stellaria palustris in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

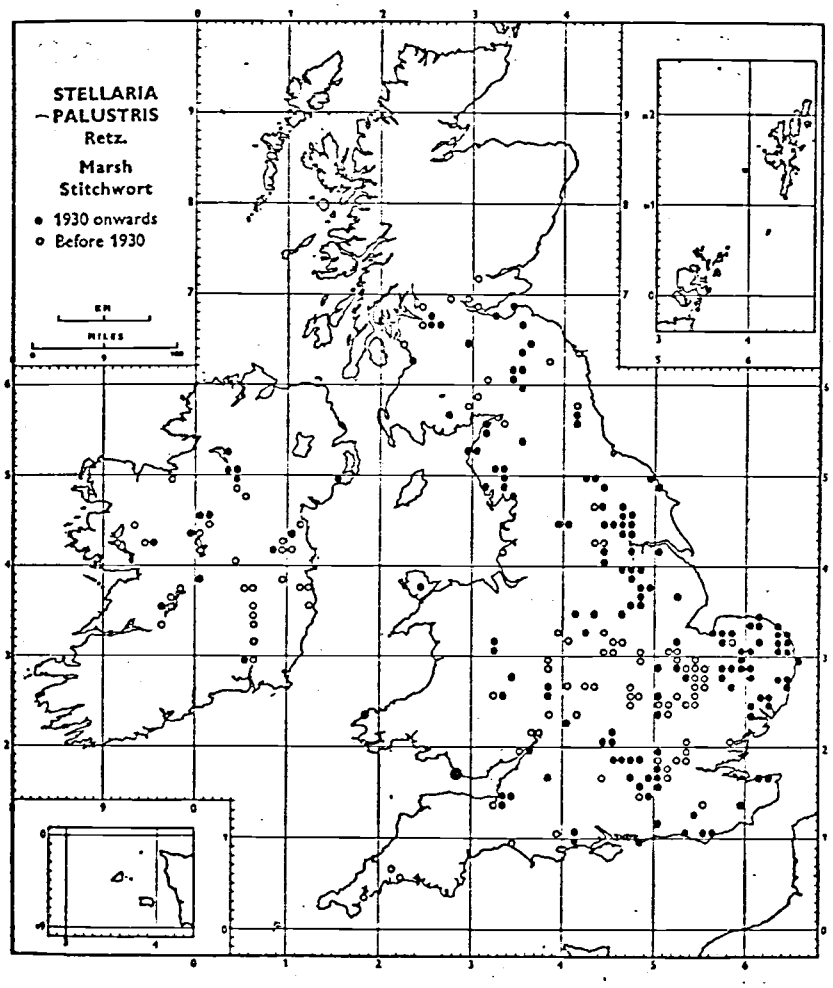


Fig. 17 Distribution of Polypodium vulgare serrulatum in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

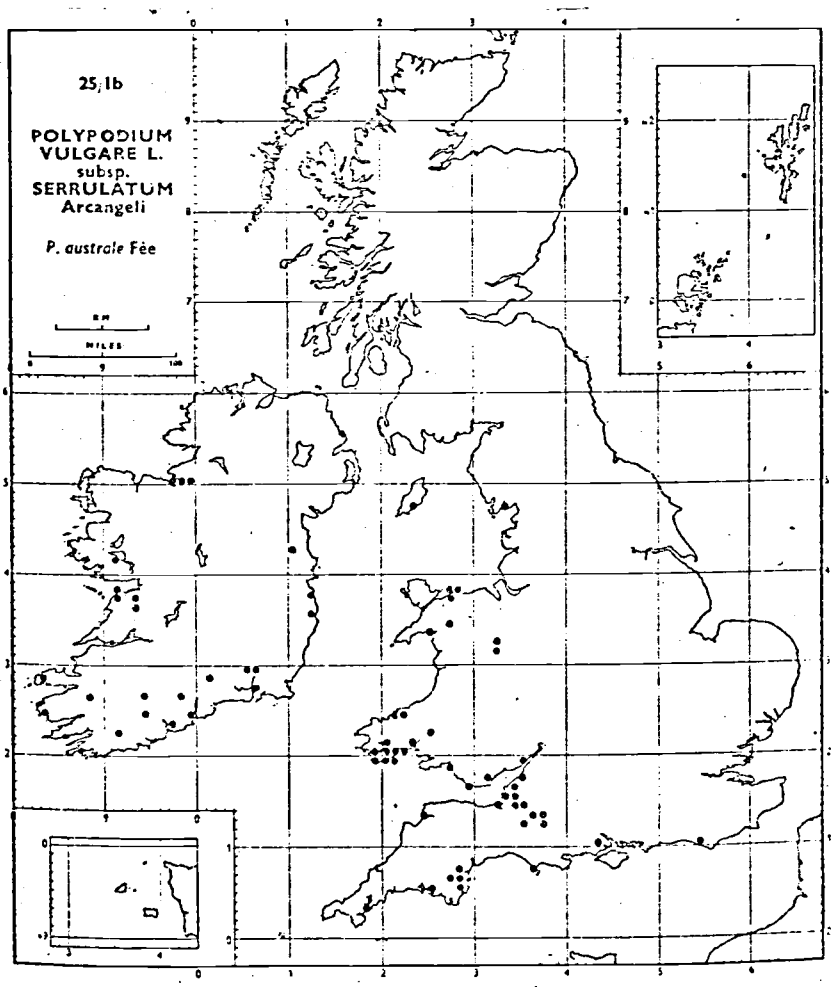


Fig. 18 Distribution of Thalictrum minus in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

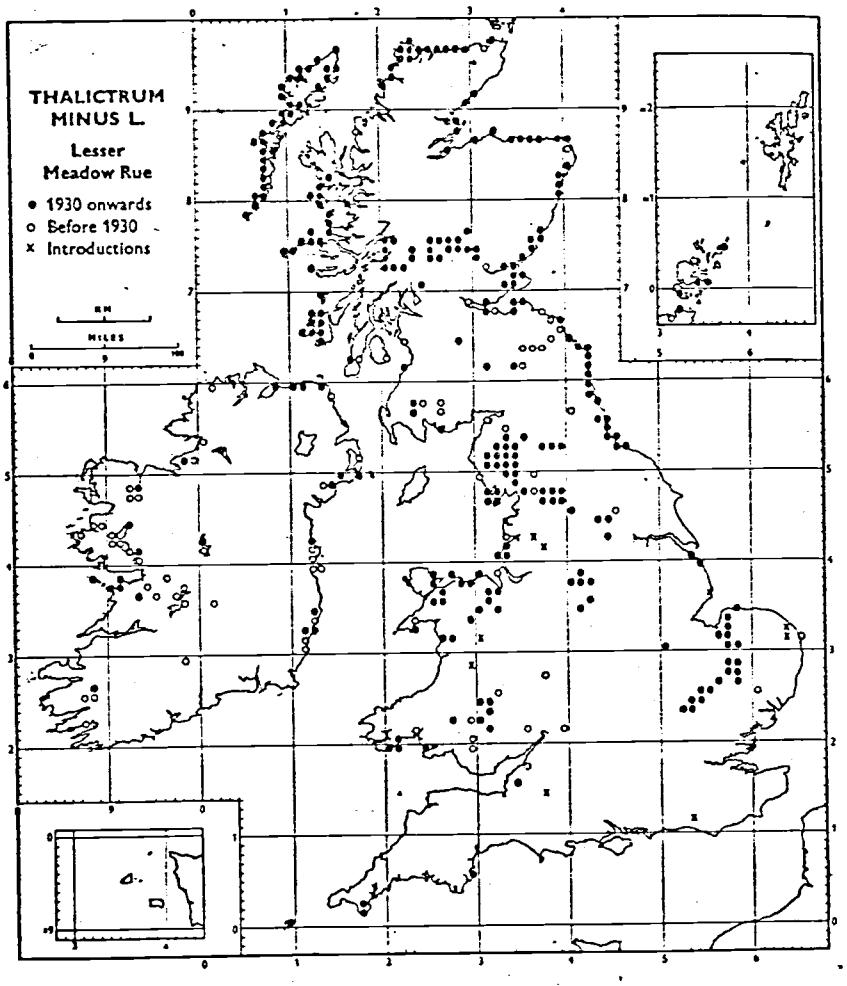


Fig. 19 Distribution of Polystichum aculeatum in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

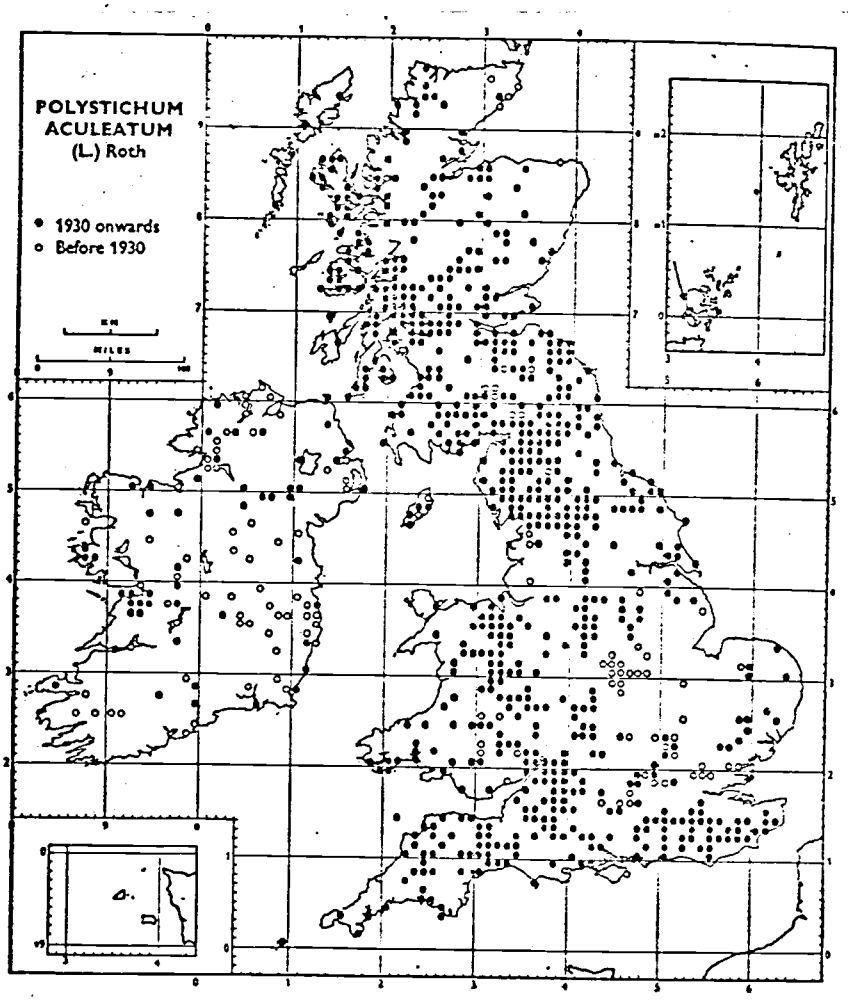


Fig. 20 Distribution of Eleocharis uniglumis in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

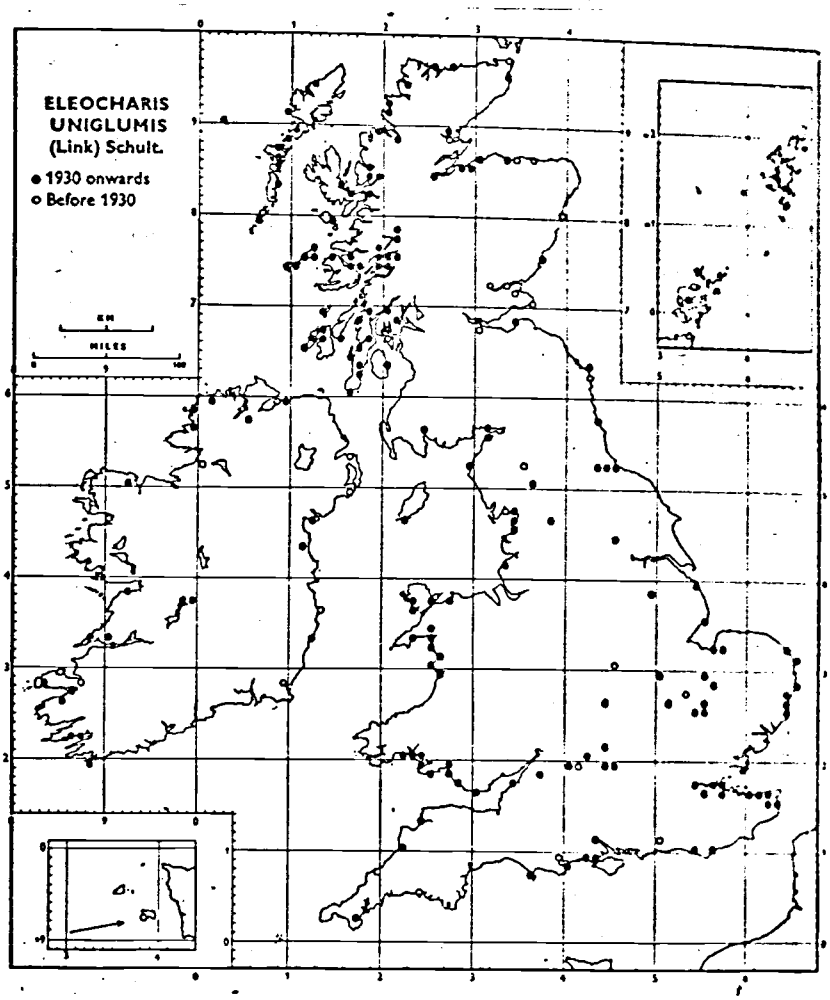


Fig. 21 Distribution of Epipactis palustris in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

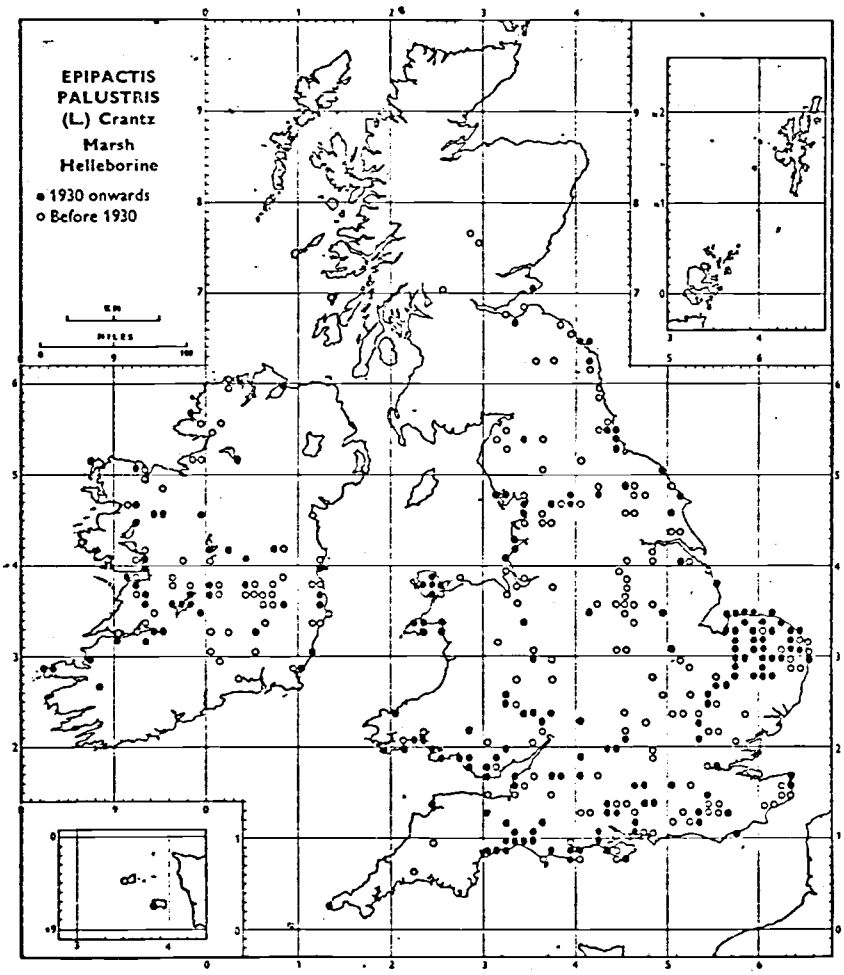


Fig. 22 Distribution of Eriophorum latifolium in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

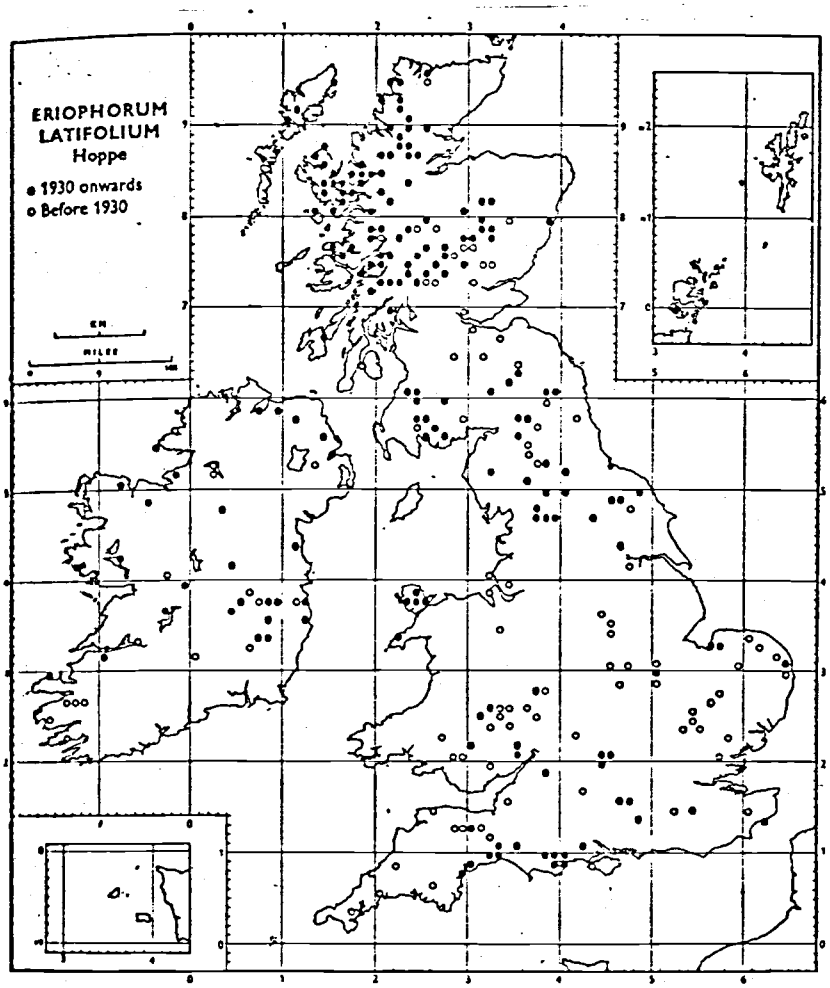


Fig. 23 Distribution of Zostera marina in Britain and Ireland

Taken from "Atlas of the British Flora"; prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

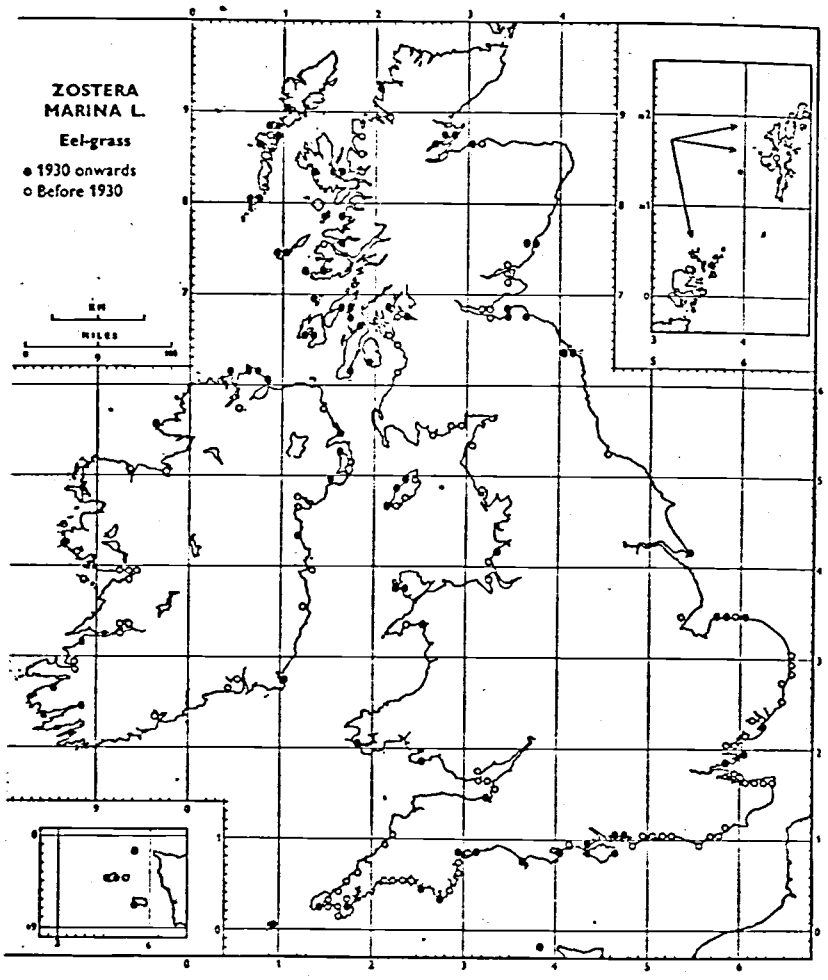


Fig. 24 Distribution of Zostera angustifolia in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

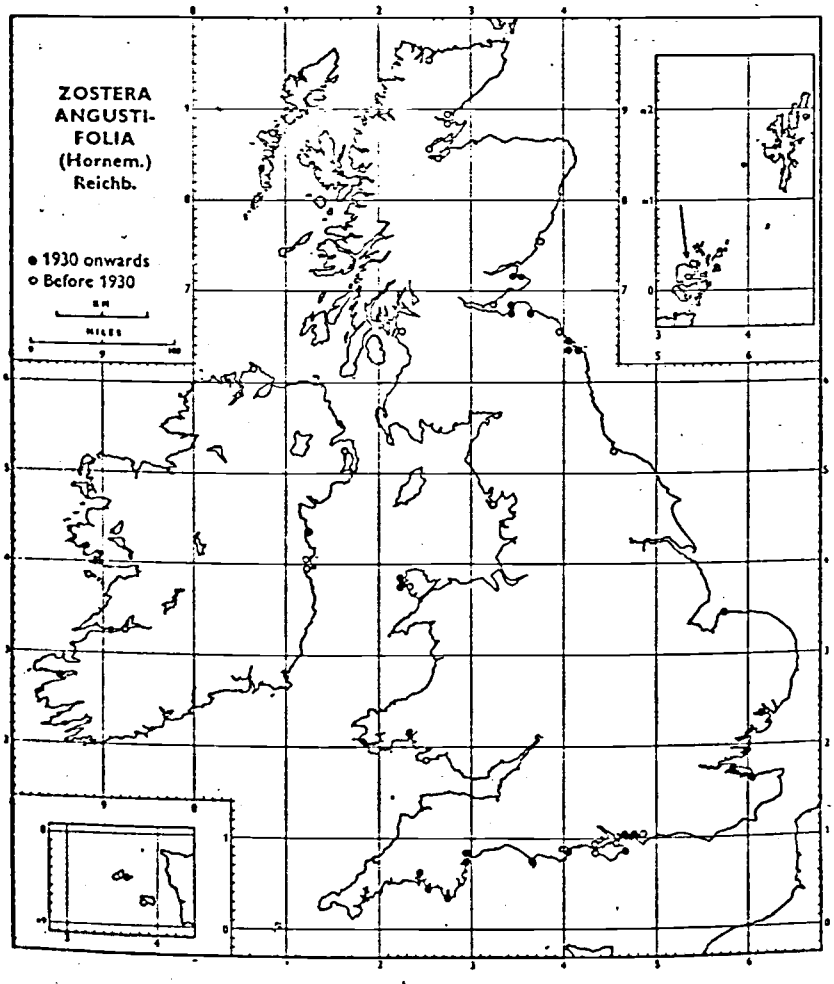


Fig. 25 Distribution of Zostera noltii in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.

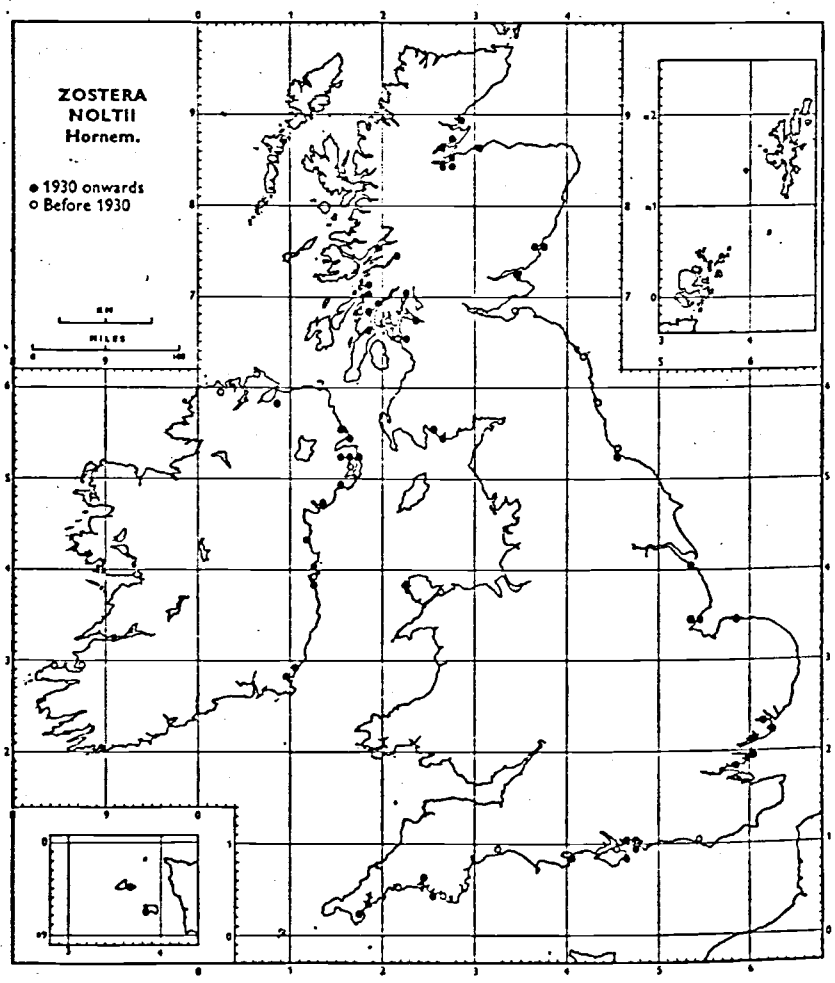


Fig. 26 Distribution of Acorus calamus in Britain and Ireland

Taken from "Atlas of the British Flora", prepared by the Botanical Society of the British Isles.

Each symbol on the map records the presence of this species in a 10-kilometre square of the Ordnance Survey National Grid, which was extended to cover Ireland for the purpose of this survey.