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**The National  
Institute  
for Physical  
Planning and  
Construction  
Research**



CONSERVATION AND AMENITY  
ADVISORY SERVICE

A PRELIMINARY REPORT ON THE AREA/  
SCIENTIFIC INTEREST IN  
COUNTY WICKLOW

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JULY, 1972

*cut of date see 1976 Report*

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Area	Map No.	Grid Ref.	Rating	Priority	Interest
Kilcoole Marshlands <i>24</i>	1	O.313,060	International	A	Ornithological, Botanical, Ecological and Zoological: an ecotype containing a varied flora and fauna. Also an overwintering area for wildfowl.
Slieveroe <i>28</i>	2	T.211,888	International	B	Geological: a rare fossil locality
Kippure and Sally Gap blanket bogs <i>31</i>	3	O.150,150 & O.130,115	International	B	Botanical and Ecological: some of the best blanket bog in the Wicklows.
Lough Bray Corries <i>34</i>	4	O.130,160	International	B	Geological: good example of a corrie with spectacular moraine development.
Athdown moraine <i>36</i>	5	O.070,140	International	B	Geological: the site dates the mountain glaciers.
Lough Dan and Luggula <i>38</i>	No Map	O.155,035	National	B	Zoological: the lakes contain a rare fish species.
Broad lough <i>39</i>	6	T.3.5,970	National	A	Ornithological, Ecological, Botanical and Zoological: varied habitats supporting a typical flora and fauna.
Upper Lockstown delta <i>44</i>	7	N.980,020	National	A	Geological: the site is a valley moraine.
Buckronev Sand Dunes <i>46</i>	8	T.290,795	National	B-A	Ecological, Botanical and Zoological: a good example of a stable sand dune system with some rare plant species.

Area	Map No.	Grid Ref.	Rating	Priority	Interest
Glen of the Downs <i>Nature Reserve</i> 50	9	T.260,110	National	B	Ecological, Botanical, Zoological and Geological: an oak forest in a glacial over-flow channel.
Glendalough Upper Lake 53	10	T.100,960	National	B	Zoological: the lake contains a rare fish species.
Wicklow town glebe land 55	11	T.315,945	National	B	Botanical: site of two rare species
Shore line of lower lake at Glendalough 58	12	T.117,965	National	B	Botanical, Ecological and Zoological: wetland habitat containing rare plant species.
Sand dunes at Maherabeg 60	13	T.323,875	National	B	Ecological, Botanical and Zoological: a good example of a stable dune system; having a rare sedge species.
Lough Ouler 62	14	O.090,022	National	B	Botanical and Geological: an alpine flora occurs at the site which has a good succession of moraines.
Rathdangan end moraine 65	15	S.970,860	National	B	Geological: a moraine of significance as an indication of the limit of the last midland ice sheet.
The Motte Stone 67	16	T.200,830	National	C	Geological: the feature is a spectacular erratic.
Upper Glenmalur Valley 69	17	T.070,930	National	C	Geological: general glacial features.

Area	page no	Map No.	Grid Ref.	Rating	Priority	Interest
Toor Channel	71	18	N.950,030	National	C	Geological: a glacial lake outlet.
Templerany end moraine and pingoes	73	19	T.250,770	National	C	Geological: site marks last glacial advance from Irish sea.
Great Sugarloaf	75	20	O.240,130	National	C	Geological: the site is a glacial nunatak.
Glenmacnass	77	21	O.110,020	National	C	Geological: site is of stratigraphic importance.
Powerscourt Waterfall	79	22	O.195,118	National	C	Geological: stratigraphically and geomorphologically significant.
Avondale Forestry school	81		T.195,855	National	C	Ecological and Botanical: experimental plots show tree growth of various species.
Bray Head (A)	82	23	O.286,174	National	C	Geological and Ornithological: stratigraphic features are important to the Cambrian era. The site is a nesting place for sea birds.
Askintinny	84	24	T.255,696	Regional	A	Botanical and Ecological: a good example of a sand dune system, having some rare plant species.
Shelton Abbey Wood and Garden	87	25	T.222,753	Regional	A	Ecological, Botanical and Zoological: a good woodland and garden containing naturalised exotics.
Ballingee Wood		No Map	O.040.010	Regional	?	Botanical and ecological remnant

Area	Page no	Map. No.	Grid Ref.	Rating	Priority	Interest
Arklow dune system	90	26	T.255,743	Regional	A	Ecological, Botanical and Zoological: good example of a dune system having a rare plant species.
Buckronev Marsh	93	27	T.293,810	Regional	A	Ecological, Botanical and Zoological: the site is a good example of a marsh.
Marshes near Lemonstown	96	28	N.923,051	Regional	A	Ecological, Botanical and Zoological: a good example of a marsh system.
Arklow Head	99	29	T.240,700	Regional	A	Geological: a volcanic exposure.
Woodlands in the Vale of Clara near Lara and Glendalough	101	30	T.135,960	Regional	B	Ecological, Botanical and Zoological: deciduous with some coniferous woodland.
Bray Head (B)	103	31	O.286,174	Regional	B	Botanical, Zoological and Ecological: an early-spring flora and fauna are well established.
Holdenstown Bog	106	32	S.883,850	Regional	B	Ecological, Botanical and Zoological: the site is a raised bog.
Woodlands in the Avoca River Valley	108	33	T.215,755	Regional	C	Ecological, Botanical and Zoological: mixed woodlands.

Area	page no	Map No.	Grid Ref.	Rating	Priority	Interest
Dargle River Valley	110	34	O.241,169	Regional	C	Geological: stratigraphic exposure.
West Bank of Vartry Reservoir	112	35	O.100,062	Regional	C	Botanical and Ecological: a wetland having a rare plant species.
Rathdrum Railway Cutting	115	36	T.205,894	Regional	C	Geological: a rare fossil site.
Wicklow coast site	117	37	T.309,955	Regional	C	Botanical: the site of a rare species.
Hollywood Glen	119	38	N.930,015	Regional	C	Geological: a dry valley.
Site along the King's River	121	39	N.980,032	Regional	C	Botanical: site of a rare plant species.
Poulaphouca Reservoir	124	40	O.00,10	Regional	C	Ecological, Ornithological, Botanical and Zoological: a large lake.
Walpole's Garden Mount Usher	127	No Map	T.270,972	Regional	C	Botanical and Ecological: exotic plants growing as naturalised.
Powerscourt Demesne	128	No Map	O.215,165	Regional	C	Ecological: an area of woods, park and cultivated land.
Lugnaquilla	129	41	T.030,920	Regional	C	Botanical, Ecological and Zoological: an area of high moorland.
Glendalough Mines	131	No Map	T.090,960	Regional	C	Geological: typical Wicklow lead mines.
Ballinacor Wood	133	42	T.130,885	Local	A	Ecological, Botanical and Zoological: an oak woodland.

Area	Page no.	Map No.	Grid Ref.	Rating	Priority	Interest
The Quill Woodland	135	43	O.240,135	Local	A	Ecological, Botanical and Zoological: a mixed deciduous wood.
Lowntown Marsh	136	44	S.845,923	Local	A	Ecological: a marsh with a typical fauna and flora.
Lough Nahanagan	141	45	T.080,991	Local	B	Botanical: an alpine flora occurs on the corrie side.
Annamoe Fens	143	46	T.187,997	Local	B	Ecological, Botanical and Zoological.
Glencree Woodland	147	47	O.165,160	Local	B	Botanical, Ecological: a wet, deciduous woodland.
Ballynamona marsh	150	48	T.270,823	Local	B	Ecological, Botanical and Zoological.
Dunlavin Marshes	153	49	N.853,025	Local	B	Ecological, Botanical and Zoological: marsh containing typical fauna and flora.
Oak Woods by Lough Dan	156	50	O.158,048	Local	B	Ecological and Botanical: a deciduous woodland with typical flora and fauna.
Brittas Bay sand dunes	159	51	T.310,840	Local	B	Ecological, Botanical and Zoological.
Devil's Glen	161	52	T.250,985	Local	B	Ecological, Botanical, Zoological and Ornithological: oceanic type deciduous woodland.
Tinahely Wood		No Map	T.070.740	Local	?	Botanical and ecological: natural oakwood

Area	page no	Map No.	Grid Ref.	Rating	Priority	Interest
Marsh close to the Glen of the Downs	163	53	O.253,134	Local	B	Ecological: typical marsh.
Arklow reserve	165	54	T.255,735	Local	C	Ornithological: an artificial pond for waterfowl.
Coniferous woodlands Glenmalur Valley and environs including Ballyteige Wood	167	55	T.100,910	Local	C	Ecological: well developed coniferous forests.
Rathrum and Glenealy forests	170	56	T.245,990	Local	C	Ecological, Botanical and Zoological: mixed forests.
Ballycore Rath	172	57	S.815,942	Local	C	Botanical and Ecological: unusual grass-land plant species.
Wicklow Head	175	58	T.345,924	Local	C	Botanical, Zoological, Ornithological and Ecological: a rocky marine headland with typical plant and animal communities.
Gorge at Poulaphouca	177	59	N.947,085	Local	C	Botanical and Ecological: the site has a rich flora.
Glen Ding	179	60	N.163,155	Local	C	Geological: the site is a dry valley.



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 a 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.

SECTION E

<u>Name of Area</u>	KILCOOLE MARSHES
<u>Acreage</u>	1,360
<u>Grid Reference</u>	O. 313, 060
<u>Scientific Interest</u>	Ornithological, Botanical, Ecological and Zoological
<u>Rating</u>	International Importance
<u>Priority</u>	A

Description of Area See Map 1.

The vegetation of the area is similar to that at Broad Lough, further south. The site consists of mud flats, salt marsh areas and reed marsh and is tidal. There are some trees and pasture bordering the mud flats. The beach adjoining the marsh is included in the area of scientific importance.

Evaluation

Ecologically, botanically and zoologically the area is of importance because it contains a number of habitats, terrestrial and aquatic. At the northern end of the site there is a fresh water marsh and to the south this gradually becomes marine.

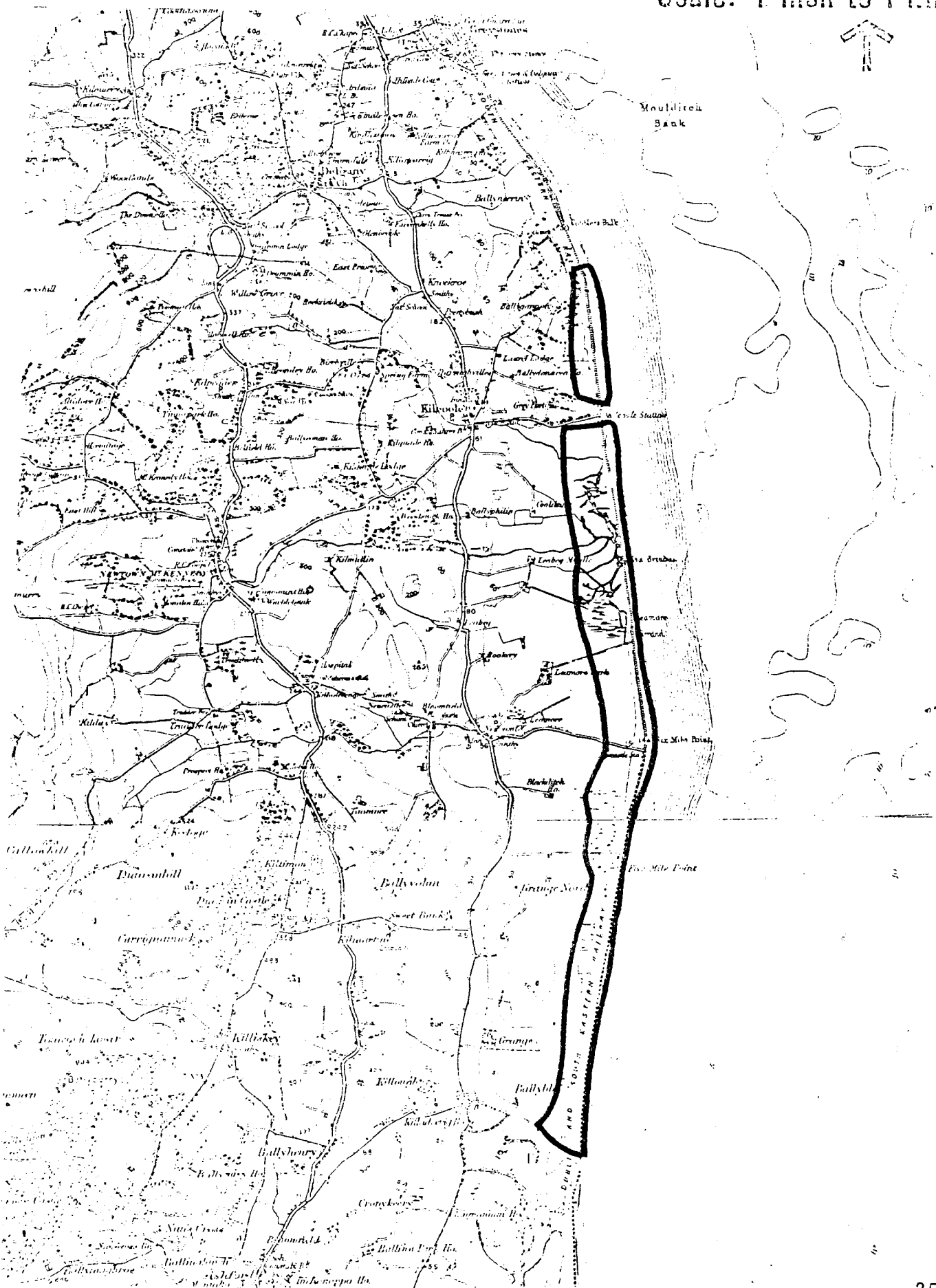
The site is, however, of greatest importance ornithologically. The following is a list of birds breeding there:

<u>Confirmed</u>	<u>Possible and Probable</u>
Lapwing	Water-rail
Redshank	Teal
Sedge warbler	Kestrel
Moorhen	Sparrowhawk
Shellduck	Merlin
Black-headed gull	Snipe
Mallard	Common sandpiper
Mute Swan	Collared dove
Heron	Kingfisher
Pheasant	Grass warbler

A six-inch map of the area will be retained by An Foras  
and will be available on request .

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 1

Scale: 1 Inch to 1 Mile



Confirmed

Coot  
Ringed plover  
Curlew  
Common tern  
Little tern  
Stock dove  
Wood pigeon  
Cuckoo  
Skylark  
Swallow  
House martin  
Hooded crow  
Rook  
Jackdaw  
Magpie  
Great tit  
Coal tit  
Blue tit  
Long tailed tit  
Wren  
Mistle thrush  
Song thrush  
Blackbird  
Stonechat  
Robin  
Sedge warbler  
Willow warbler  
Goldcrest  
Spotted flycatcher  
Dunnock  
Meadow pipit  
Red wagtail  
Yellow wagtail  
Starling

Possible and Probable

Blackcap  
Whitethroat  
Chiffchaff  
Yellowhammer

Confirmed

Greenfinch

Linnet

Bullfinch

Chaffinch

Reed bunting

House sparrow

Tree sparrow

Grey wagtail

The area is of greater importance as an overwintering and feeding place.

Maximum numbers from spot checks during 1968 are given below:

Mallard	16
Teal	7
Wigeon	1,225
Pintail	390
Shelduck	23
Mute Swan	6
Whooper Swan	30
Greylag goose	5

Threats to the Area

The area could be basically altered by any one of the following factors:

Fresh water or marine pollution, drainage, over-grazing the marsh area, disturbance to the beach by removal of material or tourist or recreational developments. The wildfowl populations are being overshot at present.

Recommendations

A great deal of interest is shown in this area by Naturalists' clubs, etc. It should be managed as a wildfowl reserve and shooting controlled or prohibited. Urgent consideration should be given to the use of a conservation order on this site.

Name of Area SLIEVEROE  
Acreage less than 1  
Grid Reference T. 211, 088  
Scientific Interest Geological  
Rating International importance  
Priority B

Description of Area See Map 2.

The facies are a shelly faunal deposit in Caradocian (Ordovician) volcanic ash. The site consists of an outcrop across a laneway.

Publications

McCoy, F. 1846. A synopsis of the Silurian fossils of Ireland.  
Univ. Press Dublin.

Jukes, J. B. & J. H. Haughton 1859. The lower Palaeozoic Rocks of the S.E. of Ireland and their associated igneous rocks. Trans. Roy. Ir. Acad., 23: 564 - 621.

Dean, W. T. 1963 The Ordovician Trilobite fauna of S. Shropshire III  
Bull. Brit. Museum (Nat. Hist.) Geology,  
Vol. 7, No. 8 London.

Evaluation

The site is the only shelly locality in the northern belt of volcanics on survey sheet 130.

The site is of historic importance, having been treated in publications from 1846 to 1963. The site is a type locality for Calymene forcipata and Platylchas laxatus (Trilobita), two important fossils.

Threats to the Area

One site could be permanently enclosed by road metalling. Building is a possibility

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 2

Scale: 6 Inches to 1 Mile





Recommendations

This area is small and should be kept free of buildings. If road metalling is to take place, at least three months' notice should be given to the Geological Survey office or An Foras so that research on the fossils may be completed.

<u>Name of area</u>	KIPPURE AND SALLY GAP BOGS
<u>Acreage</u>	4,000
<u>Grid reference</u>	O. 150, 150 & O.130,115
<u>Scientific interest</u>	Botanical, ecological and zoological
<u>Rating</u>	International importance
<u>Priority</u>	B

Description of the area See Map 3

The flora of the deep peat is dominated by the heathers

	<u>Calluna vulgaris</u>	ling
and	<u>Erica tetralix</u>	cross leaved heath

In places the fern Pteridium aquilinum is dominant.

The drier parts of the area contain the following:

<u>Vaccinium myrtillus</u>	bilberry
<u>Dryopteris carthusiana</u>	narrow buckler fern
<u>Vaccinium vitis-idaea</u>	cowberry
<u>Blechnum spicant</u>	hard fern

An under-layer of the following plant species occurs:

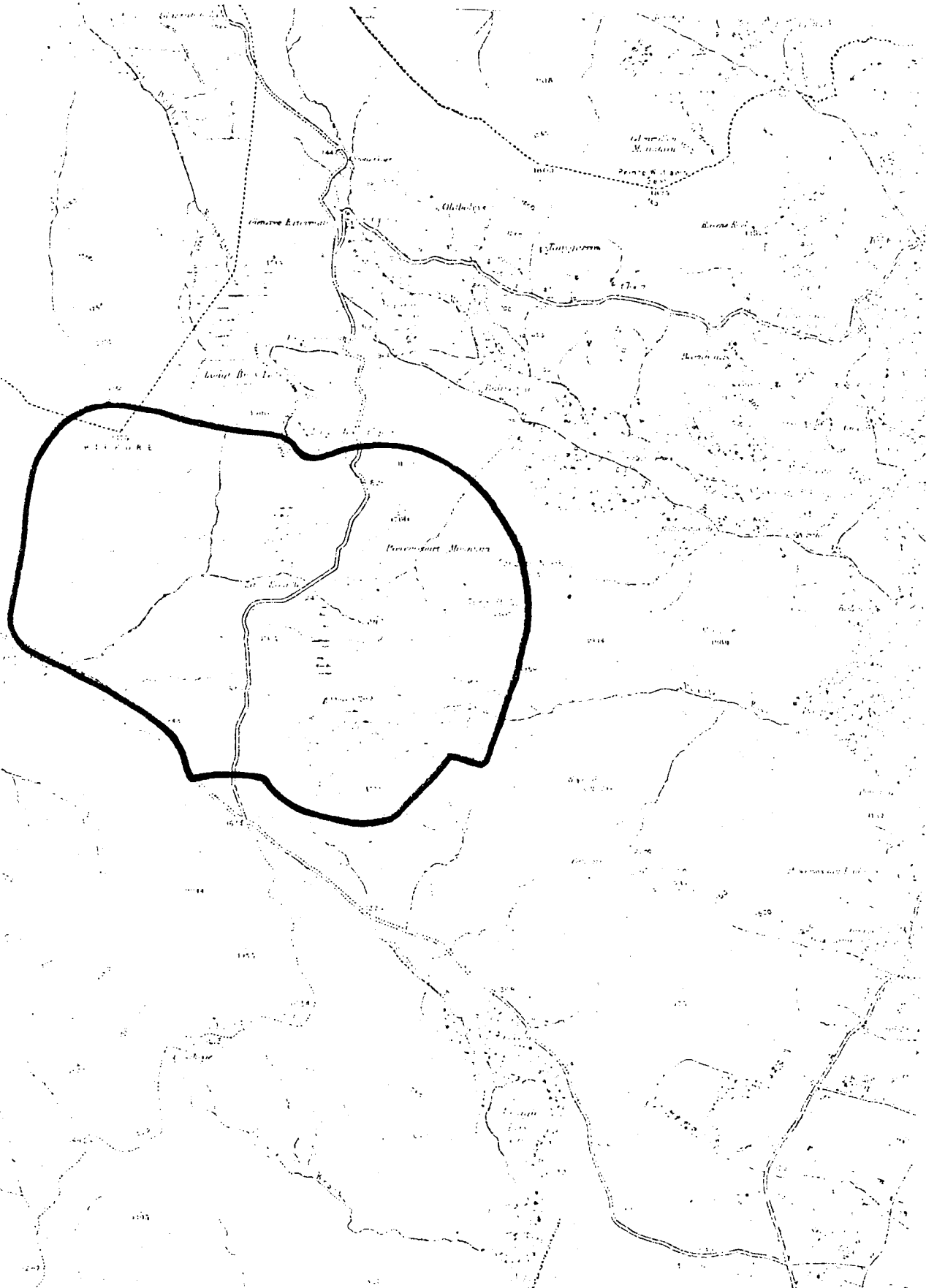
<u>Polytrichum commune</u>	moss
<u>Hypnum cupressiforme</u>	"
<u>Cladonia</u> spp.	lichens
<u>Rhytidiadelphus squarrosus</u>	moss
<u>R. triqueter</u>	"
<u>Thuidium tamariscinum</u>	"
<u>Oxalis acetosella</u>	wood sorrel

The wetter areas contain:

<u>Eriophorum angustifolium</u>	bog cotton
<u>E. vaginatum</u>	"
<u>Juncus conglomeratus</u>	

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 3

Scale: 1 Inch to 1 Mile



Earlier cutting of the bog for fuel has resulted in the formation of trenches ( 1 - 2 ft deep) in which bog regeneration is taking place and Sphagnum growth has resumed.

#### Evaluation

The blanket bogs of the Kippure area are a good example of high altitude blanket bogs in Ireland. This site is one of those listed by project Telma as worthy of preservation

#### Threats to the area

Turf harvesting would, if carried out without controls, result in the drainage of the peat-lands.

#### Recommendations

The area should be preserved as at present and turf removal should be controlled or, preferably, not permitted. Consideration might be given to the use of a conservation order in the future

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NOTE The maps presented in this report are based on the Ordnance Survey by permission of the Government (Licence Number 121/72).

## SECTION A

### PREFACE

This report concerns country-planning. It should enable the county council to pick out those areas that are important on a national or local level and whose conservation can be based on strong scientific or educational grounds. The Conservation and Amenity Advisory Service is attempting to identify a representative range of natural or semi-natural habitats throughout Ireland and also to list sites of special significance, usually containing a rare species or a rare natural phenomenon. Around these areas, development can proceed with relative impunity, once amenity and waste-disposal problems have been surmounted. It may be stressed that the amount of land available is such that development will very seldom mean the impoverishment of the national heritage, if it is properly planned. On the contrary, in selected examples it will allow more people to obtain meaningful recreation in the countryside.

However, scenically attractive areas which appeal because of the combination of hills, and water with woodland or rock may introduce conflicts. They are naturally sought after by housing or recreation interests but, at the same time, they often contain communities of plants and animals interesting because of their isolation from rural or urban development. Usually it will be possible to compromise between these interests but occasionally development will have to be curtailed to preserve the scientific interest in the area.

Conservation of natural communities may be important for amenity, scientific or recreational reasons or any combination of the three. Frequently the natural vegetation of an area gives to it a characteristic atmosphere, an indefinable value but very real to those that walk or drive through it. Diversity is the key quality of the environment that attracts people to an area or that makes them find relaxation there: the contrast between cultivation and wilderness, between water and land or between trees and grass. Fortunately, diversity is also the sine qua non of rich biological communities.

Examples of all habitats must be preserved for scientific research. Uncultivated areas are essential as reservoirs for organisms that may be useful for soil

conditioning or pest control in the future. Quite apart from their inherent interest and complexity they are needed also as control areas. Without them it would be impossible to judge the effectiveness of, or to improve man's attempts at land management. For example, how can pollution be controlled if no unpolluted watercourse or lake remains in which to decipher the natural breakdown processes? How can cutover bog be best used for tree growing if no natural self-sustaining bog community or no wooded peaty areas exist? These questions are of growing importance in a competitive world that demands efficiency and an optimum level of food production compatible with little damage to the ecosystem.

In education, field studies of all sorts are of immense value, and biological field studies are a stimulus that many other disciplines envy. Natural communities provide some of the clearest expositions of the ecological principles that operate through all growing and harvesting methods. In addition, there is the challenge of identifying and getting acquainted with numerous and very different species. Field work attracts practically all children at some stage and enables everyone to better appreciate being in rural surroundings. Already, since the introduction of biology teaching in Ireland, there is greater awareness of the environment and interest in wildlife. Such constructive recreation should be encouraged by the maintenance of variety in the countryside.

It is the intention of this survey to encourage the use of the countryside by drawing attention to scientifically interesting places. All of those mentioned can support much greater numbers of people - less so in certain cases of marshes and bogs, or at certain times of the year. But the carrying-capacity of each site will eventually have to be analysed. How much recreational use can co-exist with a nesting wildfowl population? How many people can walk a woodland floor without damaging the plant cover? Or what number of trees can be felled each year while preserving the attractive features of the wood? The idea of preserving any but the smallest areas intact and without change is unrealistic and multiple use should be encouraged. Many of the areas would respond to sound management and become much more productive.

The majority of the sites listed are now productive in the crude sense of producing fish, game birds or timber. All are productive if they encourage people to visit

the area and make use of services nearby, and we believe that all contribute to the relaxation, mental health and happiness of the community, especially the generation of town dwellers that now form most of our nation.



## SECTION B

### INTRODUCTION I VULNERABILITY OF THE VARIOUS HABITATS

Areas of scientific interest can be damaged in many ways. They can be completely destroyed by scrub or tree clearance, by turf cutting or by arterial drainage; they may be obliterated by development or can suffer insidiously through pollution, fertilization, grazing or over-use in recreation.

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 woodland at all levels of landowner, forester and the general public must be actively sought. It will seldom be sufficient to put a protection order on an area which would lose its value immediately the trees are felled, though it is an important first step. The voluntary organisations have a role to play in this, acting as observers throughout the county.

Drainage schemes of all sorts have serious consequences for the scientific interest of aquatic sites.

As is well known, pollution of lakes or rivers changes their character to begin with, and if it is continued has bad effects on water quality and fish life. For this reason, development upstream of important areas must be carefully controlled and alternative sites for domestic or agricultural installations, or drainage routes from them, must always be considered if such an area is involved. Where a greater distance of stream bed is available, it can be used within reason to deal with larger quantities of effluent.

Several farming operations are potentially destructive in other ways. Excessive fertilisation 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. Fertilisation at any intensity changes the plants of grassland and where grassland is scientifically important, as on the blanket bogs of parts of the Wicklow moorlands, it should be actively restricted.

The last influence to be mentioned is that of recreation, which has two facets: excessive use of fragile ecosystems and the collecting of noticeable plants. Without management, sand dunes that have a high density of usage undergo self-destruction by wind erosion. Altering access paths to the beach and fencing off the bare sand of blowouts are often effective ways of combating this. The dunes at Brittas Bay need such attention. Opening up an area with a rare noticeable plant may damage that species but, in general, enough individuals escape so that it persists from year to year. County Wicklow has so many species of this type that it is scarcely 'opening it up' to put conservation orders on individual areas. This would, however, provide some measure of control.

Because of its proximity to Ireland's capital, County Wicklow is likely to come under increasing recreational and domestic pressures in the future. Industry is also likely to expand and, in this context, it is unfortunate that the regions surrounding Arklow and Wicklow should have the problems they do. The full use of the resources the county possesses for residential, amenity and industrial purposes will necessitate careful planning and management.

The most significant impact on the scientific heritage of County Wicklow is likely to come from activities associated with human habitation and communications. The wilderness component of the high mountain scenery will have to be rigidly defended if it is to retain its scientific and amenity values. The widening of existing and the creation of further roads will be critical in the destruction of the present solitude and its amenity value.

Some minor points require mention here:

Roadside verges are being extensively sprayed with selective weedkillers throughout the county. Apart from the unfavourable long term effects of selective herbicides, roadside verges are reservoirs of plant and invertebrate life and their maintenance as such is biologically desirable. To prevent

the spread of obnoxious plants to cultivated land or the screening effects of high plants, roadside cutting or, in some cases where possible without danger, burning is to be recommended. Spraying should be resorted to only where these methods are not applicable.

A second trend which is visible in the countryside above Woodenbridge is the disappearance of hedge boundaries. These are not only biologically desirable but safeguard the landscape from wind erosion. In the majority of cases where a paling replaces a hedge the local authority may be powerless to influence the decision but the point is mentioned in case opportunities to do so arise.

Third is the burning of moorland vegetation. In accordance with the Game Preservation Act (1930), Section 28(1), this must be completed before 31st March yet this year extensive firing was taking place as late as May. At Lough Ouler, a site of national scientific importance; the rare mountain flora was burned on the 26th April when young growth for 1972 had already been under way for some time. In the interests of maintaining the scientific heritage for game management, etc. existing legislation should be extensive.

Finally, mention should be made of the wild deer of County Wicklow. Sika deer are known to range between Lough Nahanaghan and Glenmalur and red deer are reported at Mullaghcleevaun. The red deer are especially characteristic of highland areas and an effort should be made to protect them.

## SECTION B

### INTRODUCTION II THE SCIENTIFIC HERITAGE OF COUNTY WICKLOW

The county contains the largest area of highlands in the country and is in many respects similar to the high terrain in most of the English national parks. Undoubtedly, much of the value of such areas resides in the changing scenery but additional features of interest are the fauna and flora in which an increasing interest is being shown in Ireland in recent years.

The report as it stands is necessarily unfinished. Constant re-appraisal and assessment of the areas concerned must be carried out in the future. Further sites almost certainly remain to be discovered, as, for example, where quarries are opened to expose geological phenomena, or coniferous forests develop to a size where they become interesting. Some of the areas already identified in this report remain to be explored: the high mountain tarns like Lough Cleevaun (at 2,244 ft. the highest tarn in Ireland), almost certainly contain unusual fauna and work will be carried out on these in the future. Other ecotypes, like the marshes south of Baltinglass, were cursorily examined and a more detailed report on their conservation should be prepared.

### GEOLOGY

County Wicklow is dominated by a Caledonian batholith of granitic rock intruded into Lower Palaeozoic slates. The hot molten state of the intrusives converted the surrounding slates to schists and these form a cover (aureole) of 2 miles thickness over the granite. In places, at the higher peaks, the granite has weathered through the aureole and forms a bare pinnacle. Some of the areas of scientific interest listed in this report are of significance as examples of the volcanic process and the earlier stratigraphy.

Wicklow is more widely known as an area of Pleistocene interest. The ice age had a considerable effect on the earlier morphology and extensive glacial remains make the county a classical area for such studies. Examples of moraines, outwash gravels, dry valleys, corries and U-shaped valleys

will be listed as worthy of preservation.

## VEGETATION AND FAUNA

Pethybridge & Praeger, 1905 (The Vegetation of the district lying south of Dublin, Proc. R. Ir. Acad. 25 (B) : 124-180) divided the vegetation of the North Leinster mountains into the following types: (1) The Littoral, (2) Agrarian, Hill pasture and (3) Moorland zones (Highlands). Moore, 1966 (A Resurvey of the vegetation of the district lying South of Dublin (1905-1956) Proc. R. Ir. Acad. 61 (B): 1-36) noted some changes in the distribution of vegetation from the situation described in the earlier report but the main divisions remain. In terms of conservation all three areas contain sites of natural scientific interest which remain as unaltered scrub or wetland but area 3 retains most of its interest intact, its greatest modifying forces being coniferous afforestation, sheep grazing and, increasingly, recreational forces.

### (1) The Littoral Zone

In this category the lowland, drift covered western areas of the county and the eastern, alluvial marshes are included.

Apart from the murrroughs of Kilcoole and Broad Lough a relatively small area of lowland of County Wicklow is wetland. The range of wetland types in the areas that remain undrained is large however. To the north, close to Lemonstown, is a small marsh, much of its area being open water. Near Dunlavin and shared with County Kildare is a drier, Phragmites marsh and, to the south of Baltinglass there is a small raised bog. There are other areas also and it is likely that the majority were not thoroughly inspected; a further more detailed account of these would be desirable. Every effort should be made to preserve the small sites described in this report as some of the best examples of extensive wetlands.

The sand dune system on the east coast is a valuable ecotype. It is a good example of a stable dune system and in addition, contains several rare plant species. Parts of the system are in danger of disintegration as a result of intense recreational pressures and wind erosion. Some of the more stable of the dunes north of Arklow are being used as construction sites and others are being grazed by cattle and parts of one dune slack contain sileage. A management policy for the system is necessary in order to conserve their value to amenity and in implementing this, consideration should also be given to preserving a part of the system as a scientific reserve. A good management policy for the whole dune system would, of course, make additional preservation measures unnecessary.

(2) Agarian and Hill Pasture Zones

The most characteristic vegetation of these areas are the following species:

<u>Nardus stricta</u>	Mat grass
<u>Agrostis</u> spp.	bent grasses
<u>Cynosurus cristatus</u>	crested dog's tail grass

Plus some of the moorland plant species. (See below).

The most widespread use of these zones is coniferous afforestation. In County Wicklow afforestation started at an earlier date than elsewhere in Ireland and there are some interesting stands of mixed forest which include mature conifers and hardwoods. Three mixed woodland areas are singled out in this report as deserving of special recognition for conservation purposes:

	Woodlands in the vicinity of Glenealy, Glenmalur and Rathdrum
	" " " " " Woodenbridge
and	" " " " " Laragh and Glendalough

In all of these areas the ground flora is well developed because the conifers are sufficiently high to allow light penetration to ground level. In addition to these Wicklow contains some scientifically valuable stands of native hardwoods, as both mature trees and scrublands.

It would not be possible in a report of this length to list every patch of woodland and it is hoped the trees fringing roadsides and forming small copses will be given protection, if only for their considerable amenity values. A desirable and practical way of approaching this problem would be to enforce a blanket control on the felling of trees over six feet in height and to try to obtain replanting concessions when planning permission is granted.

The oakwoods of County Wicklow are of value for amenity and scientific purposes. In almost all, however, there is little natural regeneration of oak, the dominant tree. So far, no work has been carried out on this problem in Ireland although An Foras has plans to do so in the future. At present, the cause of lack of regeneration is not known but several possibilities are offered:

- (1) Climatic changes in recent years have reduced successful fruiting.
- (2) The reduction of predatory birds has led to a rise in rodents and insectivores, leading to greater consumption of acorns (See Pearsall, W.H., Mountains and Moorlands. Collins, New Naturalist, London 1965).
- (3) Oak have been confined to the less productive soils on which they have been planted by man but are unable to regenerate naturally. The woods at Shelton Abbey, where the trees are approximately 130 years old and most within the same size range support this theory. Certainly the Shelton Abbey wood, like the majority of woodlands listed in this report, occupies, for the greater parts, a slope of more than 40° on which it has probably survived because of the cost of harvesting the trees.

Whichever of the above explanations applies the majority of the artificial woodlands require management and periodic replanting.



Fig.1 The Distribution of Bogs in Ireland.  
From J. K. Charlesworth (1966). The Geology of Ireland,  
London. Oliver and Boyd.



Most of the areas on this map are relatively inaccessible for building which is their greatest threat. Grazing by sheep, however, should be controlled where the areas are to be managed as game breeding.

There are indications of a fauna and flora that is peculiar to the high Wicklows: Halbert, 1896, (Insects collected on Lugnaquilla and in Glenmalur Valley, County Wicklow. Ir. Nat. 5: 210-212) reports finding sub-arctic Hemiptera on high mountains in the county. The flora of the county is also unusual and the higher plants have received detailed attention (J. P. Brunner, 1950, Flora of County Wicklow, Dundalk. Dundalgan Press).

Detailed surveys have identified a number of high altitude communities and some of these are listed as worthy of preservation in this report.

The lichens of the county are also noteworthy as are perhaps a number of invertebrate and plant taxa which have hitherto been investigated. Knowles, 1929 (The Lichens of Ireland, Proc. R. Ir. Acad. 38 (B) (12): 179-434) lists seven species which appear to be confined to the acidic mountain regions of County Wicklow. Three of these: Alectoria jubata Act., Lecidea brujeriana Nyl. and Biatorella flava A. L. Sm. are rare in Ireland.

Some mention is made of inland waters of scientific value. At the outset it should be said that any water-body is of scientific interest and all in Ireland have great economic value and recreational potential. In this report the sites fall into two categories, both of which are of primarily scientific value. The first of these contain char, a rare salmonid fish of great interest in the British Isles. Two Wicklow lake systems contain populations of the species Salvelinus obtusus. The second type of site is a typical or representative waterbody which is a good example of its type in the region.

At this point attention should be drawn to the running waters of the high mountains which contain a unique fauna dominated (in terms of a predator at the top of a food chain) by a stonefly, Diura bicaudata.

<u>Name of Area</u>	LOUGH BRAY CORRIES
<u>Acreage</u>	226
<u>Grid Reference</u>	O. 130, 160
<u>Scientific Interest</u>	Geological
<u>Rating</u>	International Importance
<u>Priority</u>	B

Description of Area      See Map 4

The site consists of a corrie and a number of moraines .

Evaluation

These corries are the most spectacular in the east of Ireland. There is a series of moraine stages from a large outer one to a number of small but clear inner moraines .

Threats to the Area

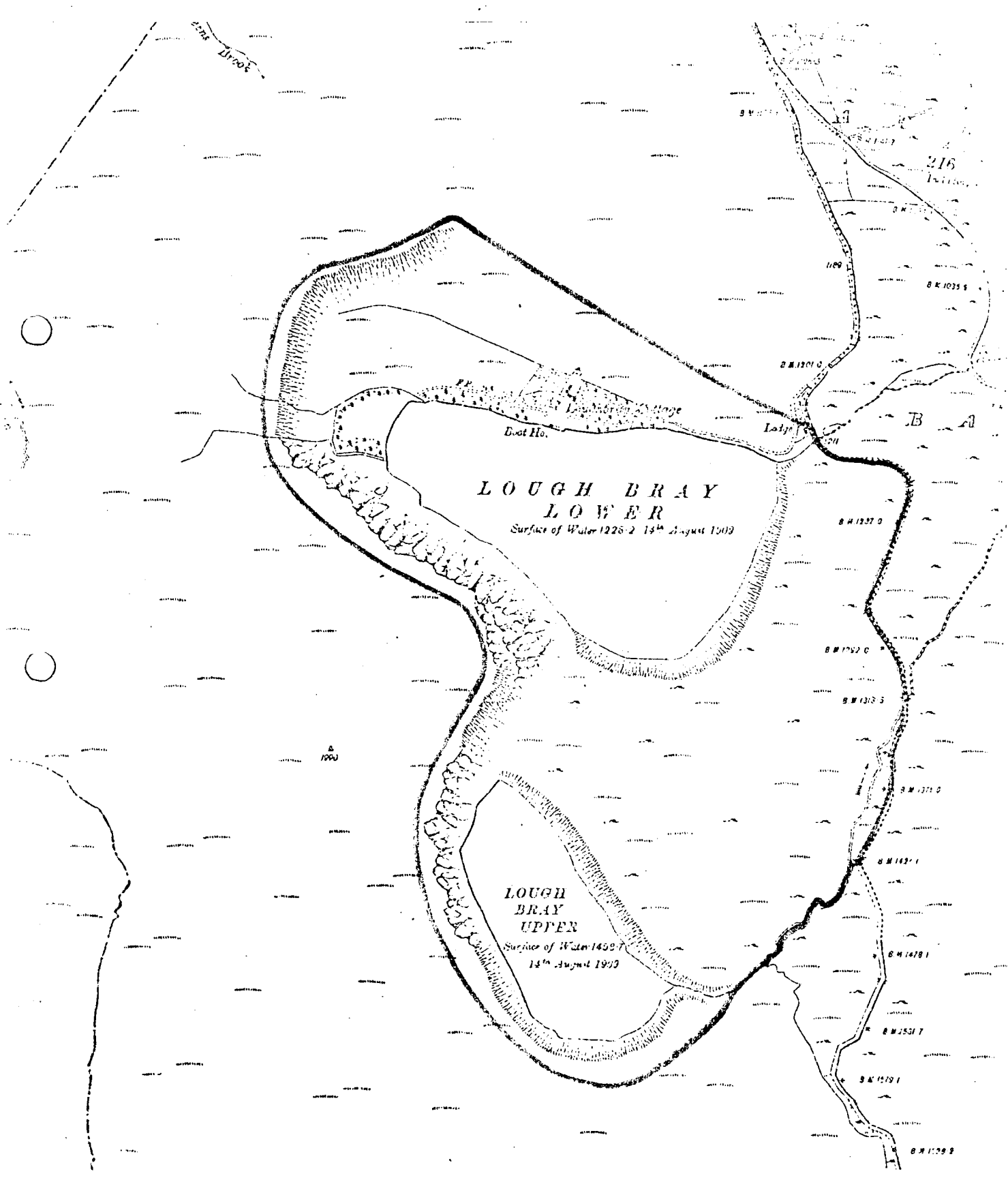
Forestry planting would obscure the geological features , particularly the moraines .

Recommendations

Forestry planting in the vicinity of the interesting features should be prevented and any further development of this valuable site should be in accordance with its scientific value .

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 4

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	ATHDOWN MORaine
<u>Acreage</u>	Requires Precise Measurement
<u>Grid Reference</u>	O. 070, 140
<u>Scientific Interest</u>	Geological
<u>Rating</u>	International Importance
<u>Priority</u>	B

Description of Area      See Map 5

The site is a moraine across the Liffey valley.

Evaluation

The meltwater gravels associated with the moraine descend below the level of glacial lake Blessington which was impounded during the last midland ice advance. Thus the maximum of the mountain glaciers followed the maximum of the main ice sheet.

Threats to the Area

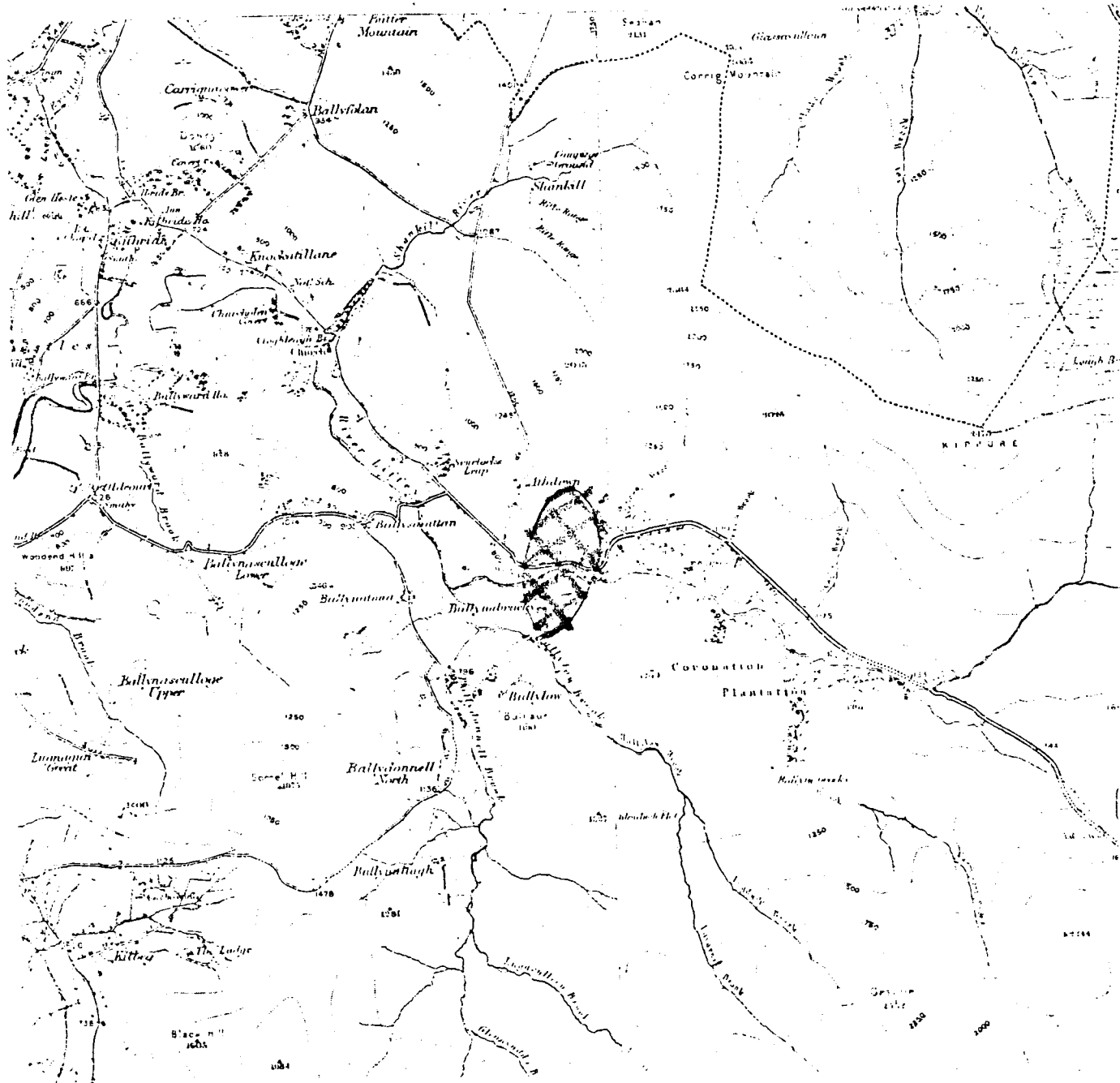
A small sand-pit nearby could expand and destroy the site.

Recommendations

Sand quarrying should not proceed to a point at which the site is endangered and general planning controls should be exercised to preserve the site.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 5

Scale: 1 Inch to 1 Mile



<u>Name of Area</u>	LOUGHS DAN AND LUGGULA
<u>Acreage</u>	Not calculated
<u>Grid Reference</u>	O. 155, 035
<u>Scientific interest</u>	Zoological
<u>Rating</u>	National
<u>Priority</u>	B

Description of Area

The site consists of two acid glacial lakes.

Evaluation

A population of Char occurs in the lake. The species is Salvelinus obtusus which occurs only in Counties Wicklow and Kerry. Lough Dan also contains the very rare alga Nitella gracilis and a rare Angiosperm species. Some rare plant species also grow alongside the lake.

Publication Jenkins, J.T. The Fishes of the British Isles, Warne 1958

Threats to the Area

None at present, but care should be taken with the siting of houses and industry to prevent eutrophication or discharge of toxic waste.

Recommendations

Any development in the vicinity of the lake should take it's scientific value into account.

<u>Name of Area</u>	BROADLOUGH
<u>Acreage</u>	730
<u>Grid Reference</u>	T. 305, 970
<u>Scientific Interest</u>	Ornithological, ecological, botanical and zoological
<u>Rating</u>	National importance
<u>Priority</u>	A

Description of the Area            See Map 6

Going from east to west the site begins with waste ground of the type described in the Wicklow coast site (Map 37). The majority of the vegetational species encountered at that site occur also in the fields in the eastern side of the open water. Some of these fields, at the southern end of the site are dominated by a profuse growth of gorse. Further north there is good pasture. The grasses, Dactylis glomerata (cock's foot grass) and Lolium sp., (a rye grass) are dominant and the plants, Verbascum sp., Juncus articulatus, (jointed rush) and Rumex crispus, (curled dock) occur.

At the water's edge, there is a fringing salt marsh dominated by the species Limonium vulgare (sea lavender).

On the western side of the tidal area are large beds of Phragmites communis (common reed).

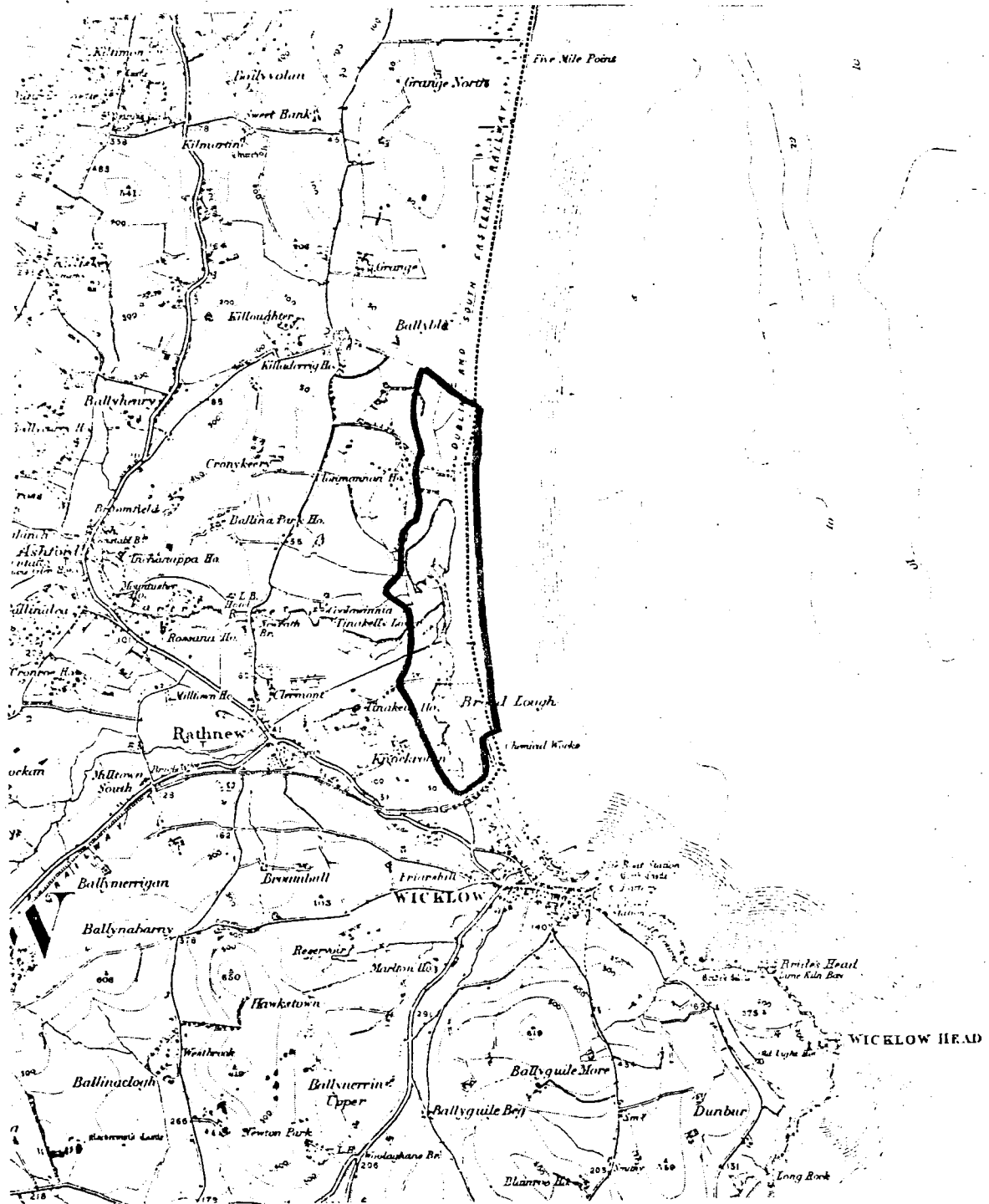
At the northern end of the site are mature deciduous trees.

#### Evaluation

Because of the varied vegetation and habitats, the site is of ecological, botanical and zoological interest. It is particularly valuable however as an ornithological site.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 6

Scale: 1 inch to 1 mile



A six-inch map of the area will be retained by An Foras and will be available on request .



The breeding bird species are as follows:

Confirmed

Fulmar  
Cormorant  
Heron  
Mallard  
Shelduck  
Mute swan  
Pheasant  
Redshank  
Kittiwake  
Little Tern  
Razorbill  
Black Guillemot  
Wood Pigeon  
Collared Dove  
Swift  
Skylark  
Swallow  
House Martin  
Raven  
Rook  
Jackdaw  
Great Tit  
Blue Tit  
Wren  
Blackbird  
Stonechat  
Robin  
Whitethroat

Possible & Probable

Shag  
Tufted duck  
Red breasted Merganser  
Sparrow hawk  
Kestrel  
Corncrake  
Great black backed Gull  
Common Tern  
Stock Dove  
Cuckoo  
Kingfisher  
Hooded Crow  
Magpie  
Jay  
Coal Tit  
Long tailed Tit  
Treecreeper  
Mistle Thrush  
Song Thrush  
Wheathear  
Grass Warbler  
Sedge Warbler  
Blackcap  
Willow Warbler  
Chiff Chaff  
Goldcrest  
Spotted Flycatcher  
Dunnock

Meadow Pipit  
Rock Pipit  
Pied Wagtail  
Starling  
Linnet  
Chaffinch  
House Sparrow  
Tree Sparrow  
Grey Wagtail

Greenfinch  
Goldfinch  
Redpoll  
Bullfinch  
Yellow Hammer  
Reed Bunting

Recent winter migratory wildfowl counts recorded the following:

Mallard	8 - 47
Teal	31 - 62
Widgeon	35 - 380
Pintail Duck	1
Shoveler	2
Golden Eye	4
Merganser	1
Shelduck	27
Mute Swan	29 - 32
Whooper Swan	13
Coot	11 - 15
Grey-lag goose	1

#### Threats to the Area

Building is a possibility but, in view of the recognised importance of the area, an unlikely one. A more serious threat is the dumping of rubbish or noxious effluent into the tidal area or the transport of effluent to the site by streams entering it - the River Vartry being an example.

Recommendations

Special care should be taken with effluent disposal in the vicinity of Broadlough and rubbish tips at the southern end of the site should be confined. A periodic clean up of the shorlines of the waterbody would be desirable because polythene containers and other rubbish which has blown off tip heaps collects there.

Any future development of the area around the site should be in accordance with the scientific value of the site.

1

<u>Name of Area</u>	UPPER LOCKSTOWN DELTA
<u>Acreage</u>	not calculated
<u>Grid Reference</u>	N.980,020
<u>Scientific Interest</u>	Geological
<u>Rating</u>	National Importance
<u>Priority</u>	A

Description of Area      See Map 7

The site is a glacial delta consisting of a valley moraine which crosses the King's River.

Evaluation

The phenomenon is the last surviving glacial meltwater delta near Dublin.

Threats to the Area

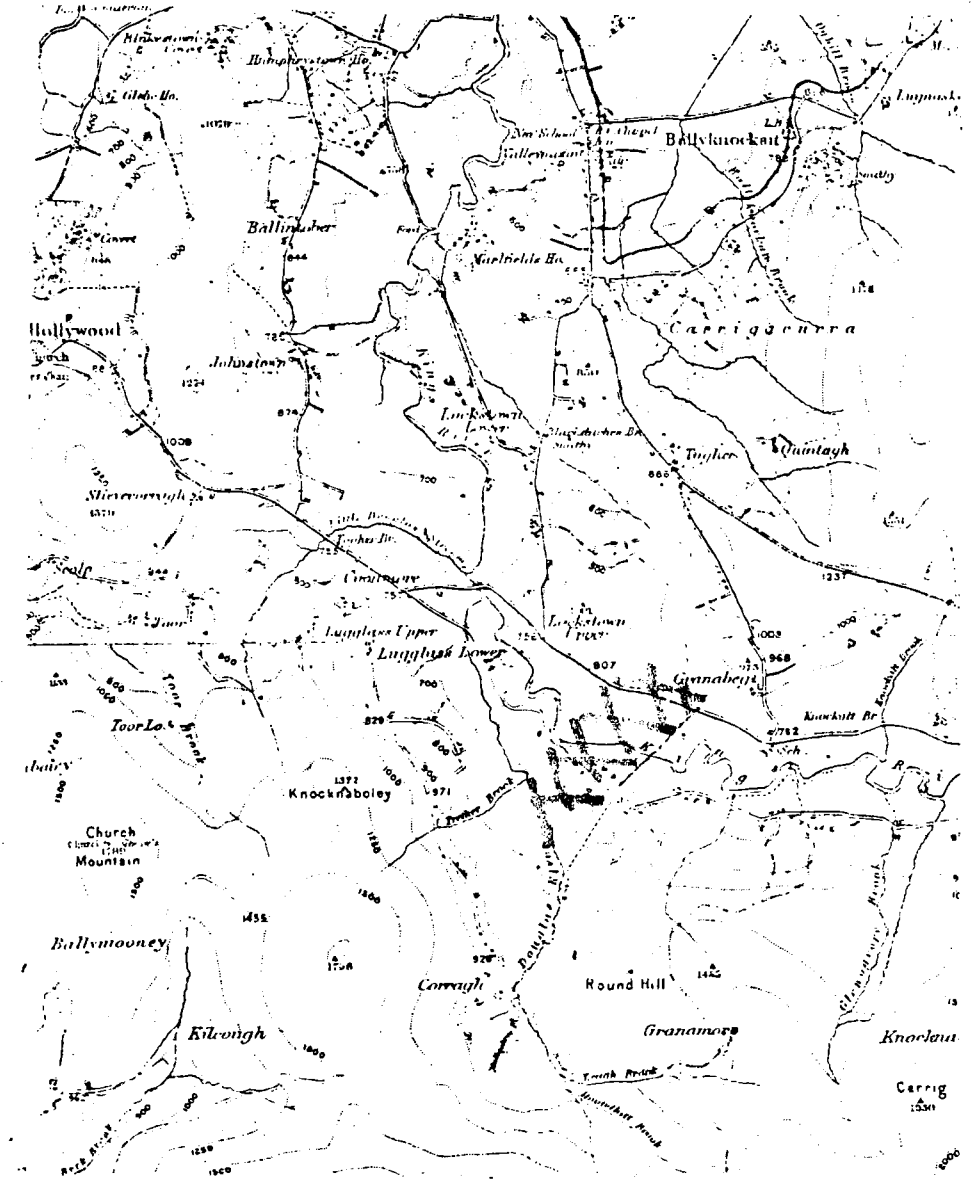
Quarrying of sands and gravels which is taking place nearby is likely to be a serious threat in the future.

Recommendations

Quarrying should be discouraged and efforts should be made to protect the area in the future.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 7

Scale: 1 Inch to 1 Mile



<u>Name of Area</u>	BUCKRONEY SAND DUNES
<u>Acreage</u>	395
<u>Grid Reference</u>	T. 290, 795
<u>Scientific Interest</u>	Ecological, botanical and zoological
<u>Rating</u>	National Importance
<u>Priority</u>	B-A

Description of Area See Map 8

The site is a mature, stabilised sand dune system.

The following plant assemblage occurs:

Ubiquitous species

<u>Juncus acutus</u>	Sharp sea rush
<u>Pteridium aquilinum</u>	bracken, dominant on the tops of the stabilised dunes
<u>Senecio jacobea</u>	ragwort
<u>Arum maculatum</u>	arum lily.
<u>Dicranum sp.</u>	moss
<u>Carlina vulgaris</u>	carline thistle
<u>Bryum capillare</u>	moss
<u>Pseudoscleropodium</u> <u>                                purum</u>	moss
<u>Rubus fruticosus</u> agg.	bramble
<u>Taraxacum</u> spp.	
<u>Viola riviniana</u>	common violet
<u>Dactylis glomerata</u>	cock's foot grass
<u>Rhytidiadelphus</u> <u>                                triquetrus</u>	moss
<u>Camptothecium</u> sp.	"
<u>Trifolium repens</u>	clover

The more typical sand dune species were:

<u>Ammophila arenaria</u>	Marram grass
<u>Euphorbia portlandica</u>	portland spurge
<u>E. paralias</u>	sea spurge

<u>Ononis repens</u>	rest harrow
<u>Festuca rubra</u>	red fesque
<u>Thymus drucei</u>	common wild thyme
<u>Potentilla anserina</u>	silverweed
<u>Luzula campestris</u>	field wood-rush
<u>Lotus corniculatus</u>	bird's foot trefoil
<u>Cladonia pixidata</u> )	
<u>C. impexa</u> )	lichens
<u>Galium verum</u>	lady's bedstraw
<u>Phleum arenarium</u>	sand cat's-tail
<u>Tortula ruraliformis</u>	moss

In the dune slacks the willow Salix aurita is common.

#### Evaluation

The site is the only place in Co. Wicklow at which occur three rare plant species.

The site is a good example of a sand dune habitat containing representative plant and probably animal species.

#### Threats to the Area

Recreational pressures are probably the greatest threat to the site.

The status of the rare plant species is unknown. Cattle grazing and storing of silage are also occurring but their effects are not obvious.

#### Recommendations

Intense recreational pressures should be prevented in order to safeguard the dune system. This could be achieved by:

1. making pathways through the dunes to the beach in order to minimise public pressures on the sandhills
2. additionally, railing off parts of the dune system from public access.

These recommendations are in keeping with proposals for the Brittas Bay dunes to the north (see Mawhinney, K. A., Development in the Brittas Bay Area, Co. Wicklow, An Foras Forbartha, Jan. 1971, pts. 1 and 2). Specific plans as to location of pathways etc. require further investigation. The impact of cattle on the vegetation also requires assessment.



<u>Name of Area</u>	GLEN OF THE DOWNS
<u>Acreage</u>	235
<u>Grid Reference</u>	T. 260, 110
<u>Scientific Interest</u>	Ecological, botanical, zoological and geological
<u>Rating</u>	National Importance
<u>Priority</u>	B

Description of Area See Map 9.

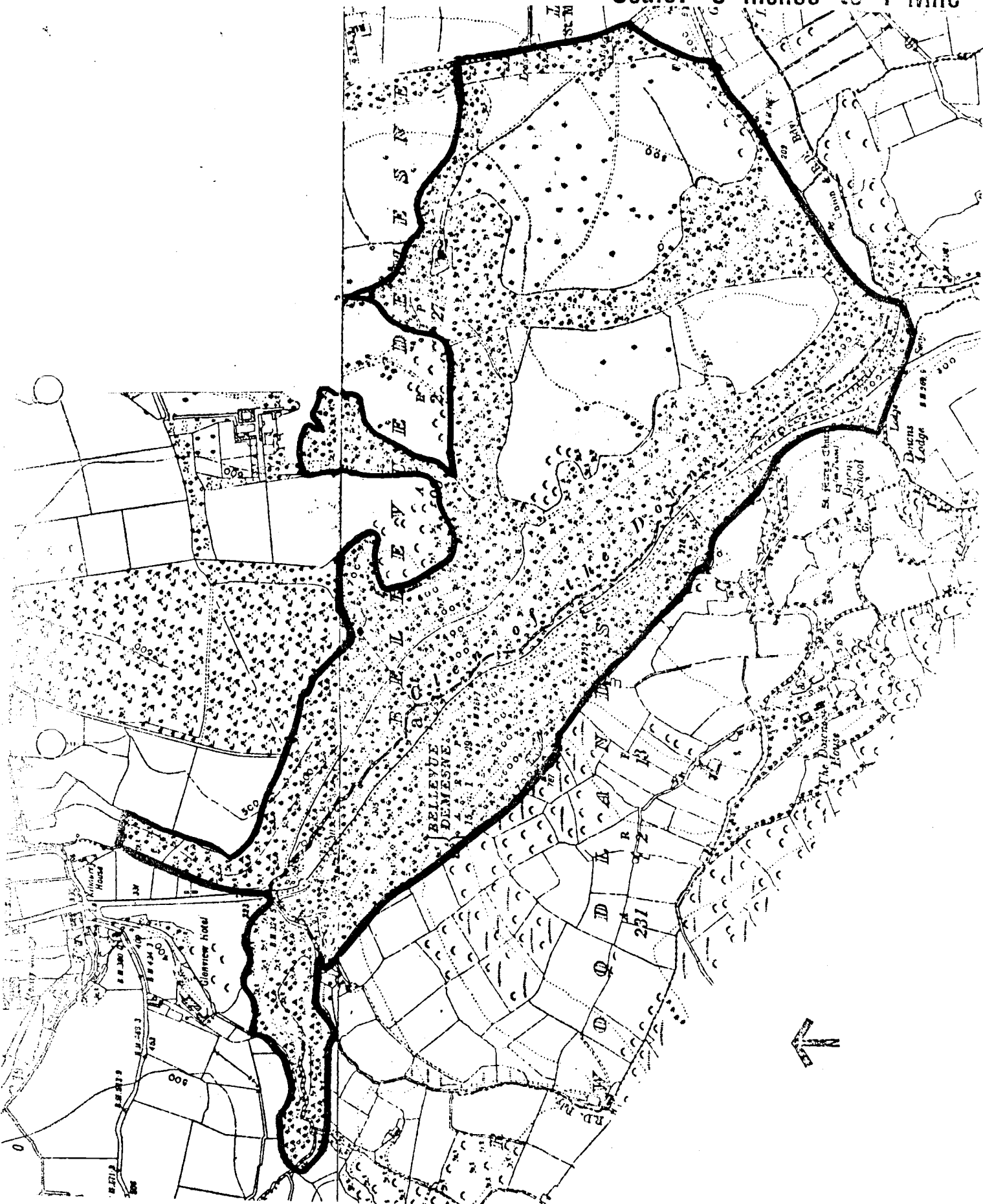
The area is a woodland consisting mainly of oak and having a lower canopy of holly and rhododendron. There is some ash (Fraxinus excelsior), mountain ash (Sorbus aucuparia), beech (Fagus sylvatica), hazel (Corylus avellana), Spindle tree (Euonymus sp.) and various conifers, mainly Pinus sylvestris.

The ground flora is rich in species and includes the following:

<u>Arum maculatum</u>	Arum lily
<u>Luzula sylvatica</u>	wood rush
<u>Allium ursinum</u>	wild garlic
<u>Sanicula europaea</u>	wood sanicle
<u>Conopodium majus</u>	pignut
<u>Dryopteris dilatata</u>	fern
<u>Heracleum sphondylium</u>	hogweed
<u>Stellaria holostea</u>	stichwort
<u>Teucrium scorodonium</u>	wood sage
<u>Festuca rubra</u>	red fescue grass
<u>Hypericum pulchrum</u>	beautiful St. John's wort
<u>Viola riviniana</u>	common violet
<u>Ranunculus ficaria</u>	lesser celandine
<u>Oxalis acetosella</u>	wood sorrel
<u>Veronica chamaedrys</u>	Germander speedwell
<u>Galium odoratum</u>	sweet woodruff
<u>Lonicera periclymenum</u>	honeysuckle
<u>Vaccinium myrtillus</u>	bilberry

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 9

Scale: 6 Inches to 1 Mile



<u>Hedera helix</u>	ivy
<u>Melica uniflora</u>	wood melick
<u>Endymion non-scriptus</u>	bluebell
<u>Ranunculus auricomus</u>	goldilocks
<u>Veronica montana</u>	wood speedwell
<u>Anemone nemorosa</u>	wood anemone

### Evaluation

The oak wood has a rich ground flora. As a refuge for animals, it is of interest and the ornithology of the site includes a number of species like the jay and blackcap which are uncommon on a national scale. Some work has been carried out on the insects, (Fahy, E. 1970 The Distribution of the Irish Psocoptera Proc. R. Ir. Acad. (B) 71: 139-163) and this suggests the fauna does not contain the introduced species which occur in oakwoods in southern Ireland. The invertebrates are therefore representative of a 'native' rather than 'artificial' fauna.

The occurrence of a coniferous plantation close to the oak-wood provides a useful contrast for educational purposes.

The site is of additional value as an example of a glacial overflow channel.

### Threats to the Area

Being on steep slopes the woodland is likely to be safe from most kinds of destructive influence. Educational interest in the area is also seen as a form of protection. A certain amount of the forest has however been lost to road widening.

### Recommendations

The woodland has been well planned as a nature trail, the existence of which will ensure its conservation. Some thought might be given to the removal of alien trees from the site and returning the area to a more natural state.

<u>Name of Area</u>	GLENDALOUGH UPPER LAKE
<u>Acreage</u>	119
<u>Grid Reference</u>	T. 100,960
<u>Scientific Interest</u>	Zoological
<u>Rating</u>	National
<u>Priority</u>	B

Description of Area      See Map 10.

The site is an acid mountain lake.

Evaluation

The lake contains Char.

Threats to the Area

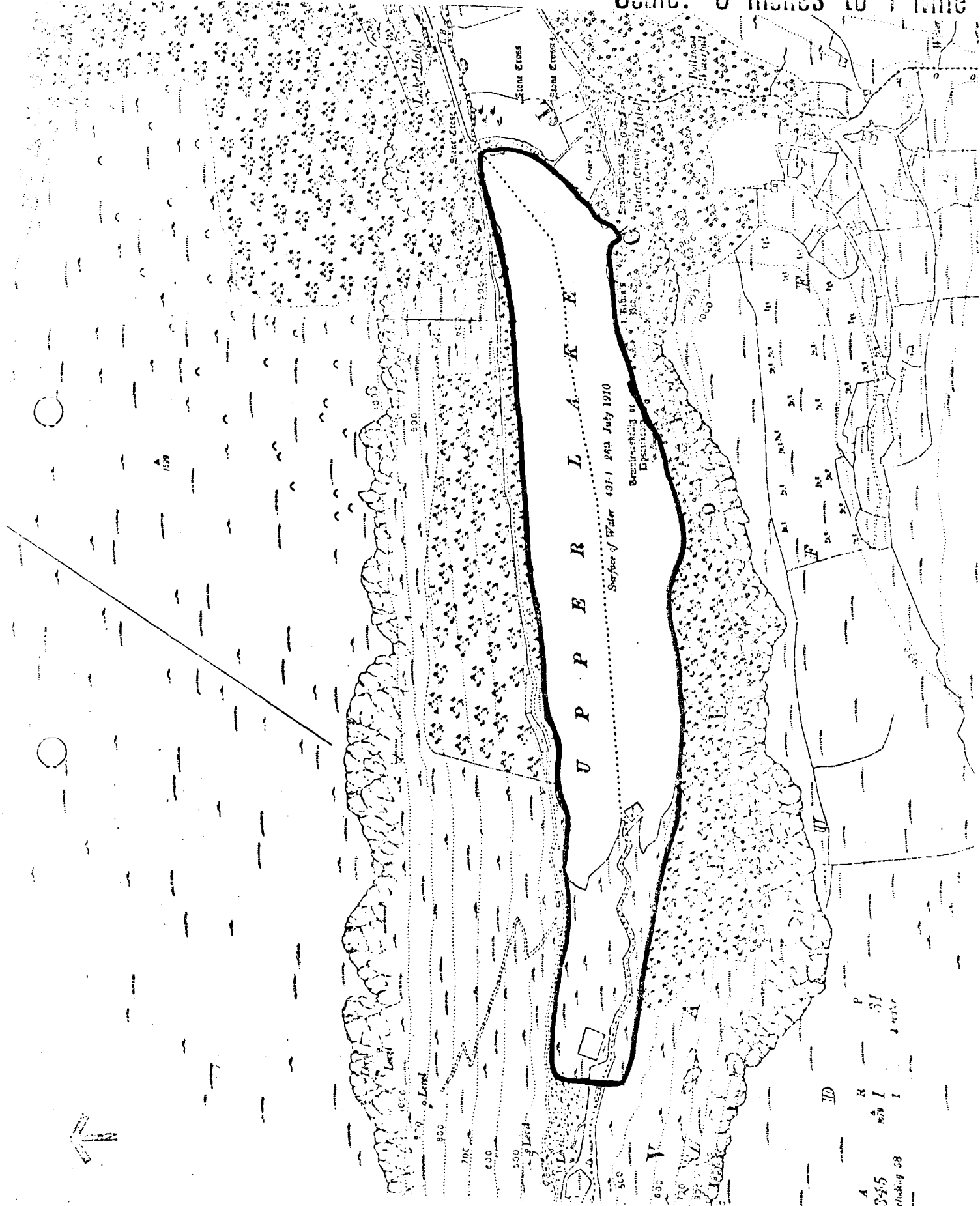
Potential threats are the siting of houses and industry close to the lake or in places from which eutrophication or toxic substances could enter the water.

Recommendations

Particular care should be taken with the siting of buildings and control of effluent entering the area.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 10

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	WICKLOW TOWN GLEBE LAND
<u>Acreage</u>	2
<u>Grid Reference</u>	T. 315, 945
<u>Rating</u>	National importance
<u>Priority</u>	B

Description of the Area    See Map 11.

The sites are waste ground on which grow the following plant species:

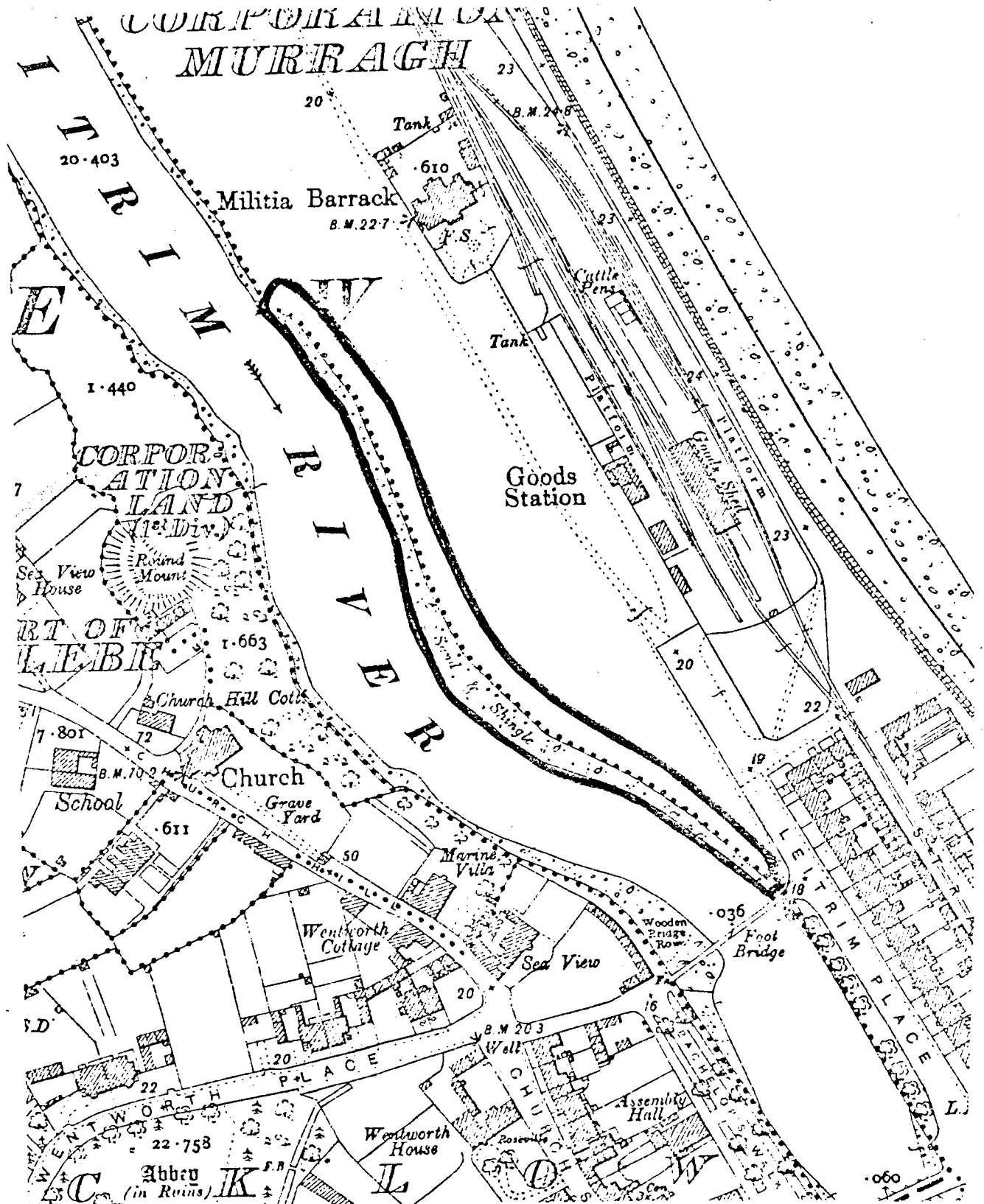
<u>Euphorbia peplus</u>	petty spurge
<u>Galium aparine</u>	goose grass
<u>Poa pratensis</u>	meadow grass
<u>P. annua</u>	annual meadow grass
<u>Urtica dioica</u>	stinging nettle
<u>Senecio vulgaris</u>	groundsel
<u>Medicago lupulina</u>	black medick
<u>Trifolium pratense</u>	red clover
<u>Plantago maritima</u>	sea plantain
<u>Lamium amplexicaule</u>	henbit
<u>L. purpureum</u>	purple dead nettle
<u>Plantago coronopus</u>	buck's horn plantain
<u>Heracleum sphondylium</u>	hogweed
<u>Clematis vitalba</u>	traveller's joy
<u>Cochlearia danica</u>	stalked scurvy grass

Evaluation

Two rare plant species occur at this area.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 11

Scale: 25 Inches to 1 Mile



Threats to the Area

Dumping of rubbish is occurring at the present time. Intense recreational pressures may become significant in the future.

Recommendations

Continual observation should be kept on these areas to ensure the plants are surviving. Dumping, which is at present of garden refuse, should be prohibited. In the future it might be desirable to consider other conservation measures.



Name of Area SHORE LINE OF LOWER LAKE AT GLENDALOUGH  
Acreage 11  
Grid Reference T. 117, 965  
Scientific interest Botanical, ecological and zoological  
Rating National importance  
Priority B

Description of the Site See Map 12.

The lake shore is a marshy area containing:

<u>Potentilla erecta</u>	tormentil
<u>Molinia caerulea</u>	purple moor grass
<u>Sphagnum</u> sp.	moss
<u>Juncus articulatus</u>	articulated rush
<u>Equisetum fluviatile</u>	horsetail
<u>Viola palustris</u>	marsh violet

The lake contains:

<u>Potamogeton</u> sp.	pondweed
------------------------	----------

Behind the marsh fringe is a strip of deciduous trees with a typical ground flora and this gradually merges into deciduous woodland.

#### Evaluation

The site has a rare plant species.

#### Threats to the Area

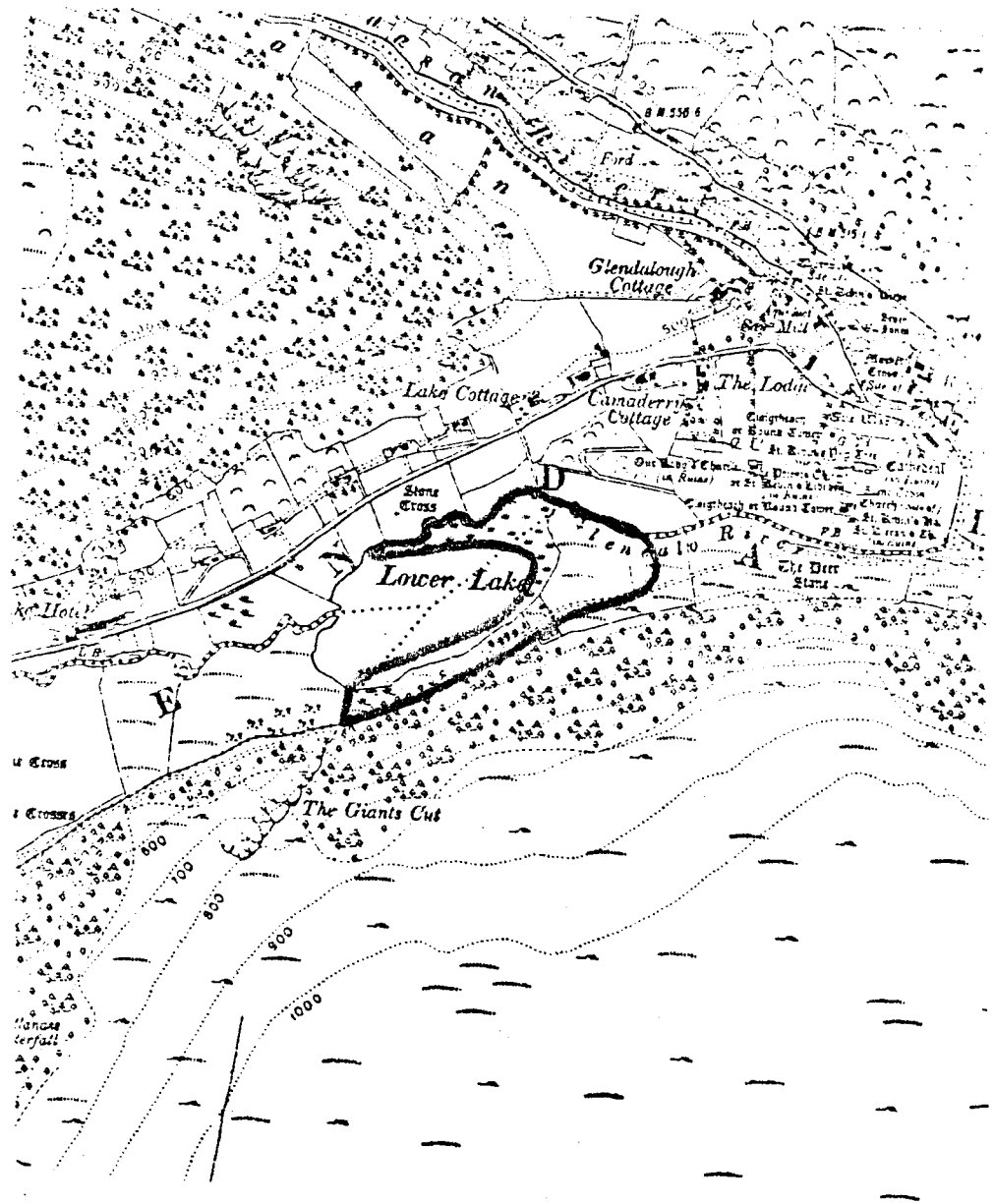
Recreational pressures and casual rubbish dumping.

#### Recommendations

Any future development at this site should be in accordance with its scientific value.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 12

Scale: 6 Inches to 1 Mile



Name of Area SAND DUNES AT MAHERABEG  
Acreage 131  
Grid Reference T. 323, 875  
Scientific Interest Ecological, Botanical and Zoological  
Rating National Importance  
Priority B

Description of Area See Map 13.

The site is a sand dune system. The flora is typical of the dune systems in the area (C. F. Buckronev - Map 27).

Evaluation

A very rare hybrid sedge occurs at the site in addition to typical sand dune flora and fauna.

Threats to the Area

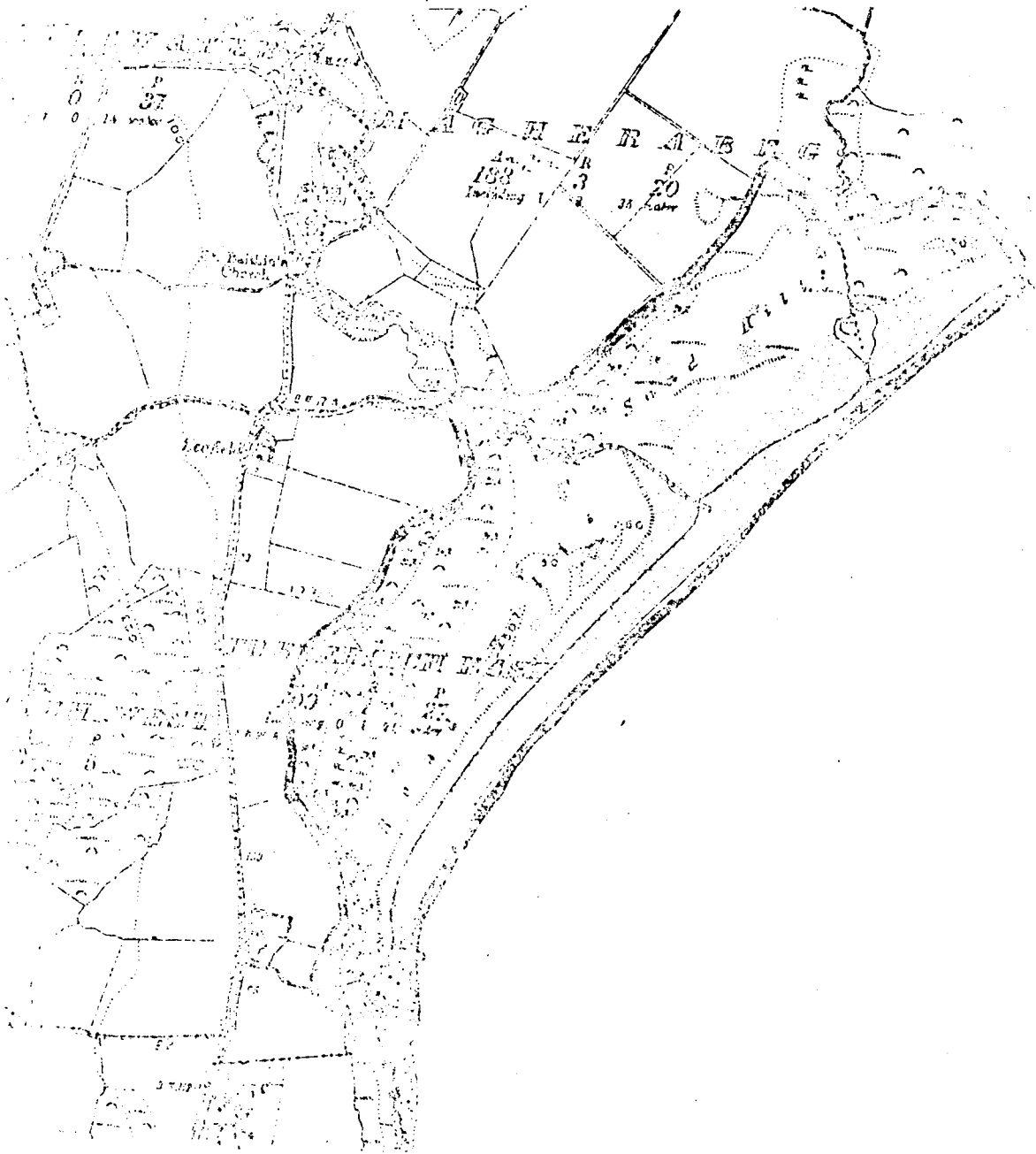
These are as for the other dune systems occurring along the coast. The most likely danger is sand erosion as a result of recreational pressures. A second possibility is sand inundation of the dune slack as a result of sand erosion.

Recommendations

A management policy for the dune system, such as that suggested for Brittas Bay and Buckronev should serve to protect the scientific values of the site.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 13

Scale: 1 Inch to 1 Mile



<u>Name of Area</u>	LOUGH OULER
<u>Acreage</u>	94
<u>Grid Reference</u>	O. 090,022
<u>Scientific Interest</u>	Botanical and Geological
<u>Rating</u>	National Importance
<u>Priority</u>	B

Description of Area      See Map 14.

Lough Ouler is a corrie with a steep west wall of approximately 300 feet (100 m) at its highest point. The vegetation surrounding the corrie consists of the following species:

<u>Vaccinium myrtillus</u>	bilberry
<u>Erica cinerea</u> )	heaths
<u>E. tetralix</u> )	cross leaved heath
<u>Calluna vulgaris</u>	ling
<u>Carex binervis</u>	green ribbed sedge
<u>Potentilla erecta</u>	common tormentil
<u>Sphagnum</u> spp.	moss
<u>Juncus effusus</u>	soft rush
<u>Luzula sylvatica</u>	wood-rush
<u>Polytrichum commune</u>	moss
<u>Juncus squarrosus</u>	heath rush
<u>Eriophorum</u> sp.	cotton-grass

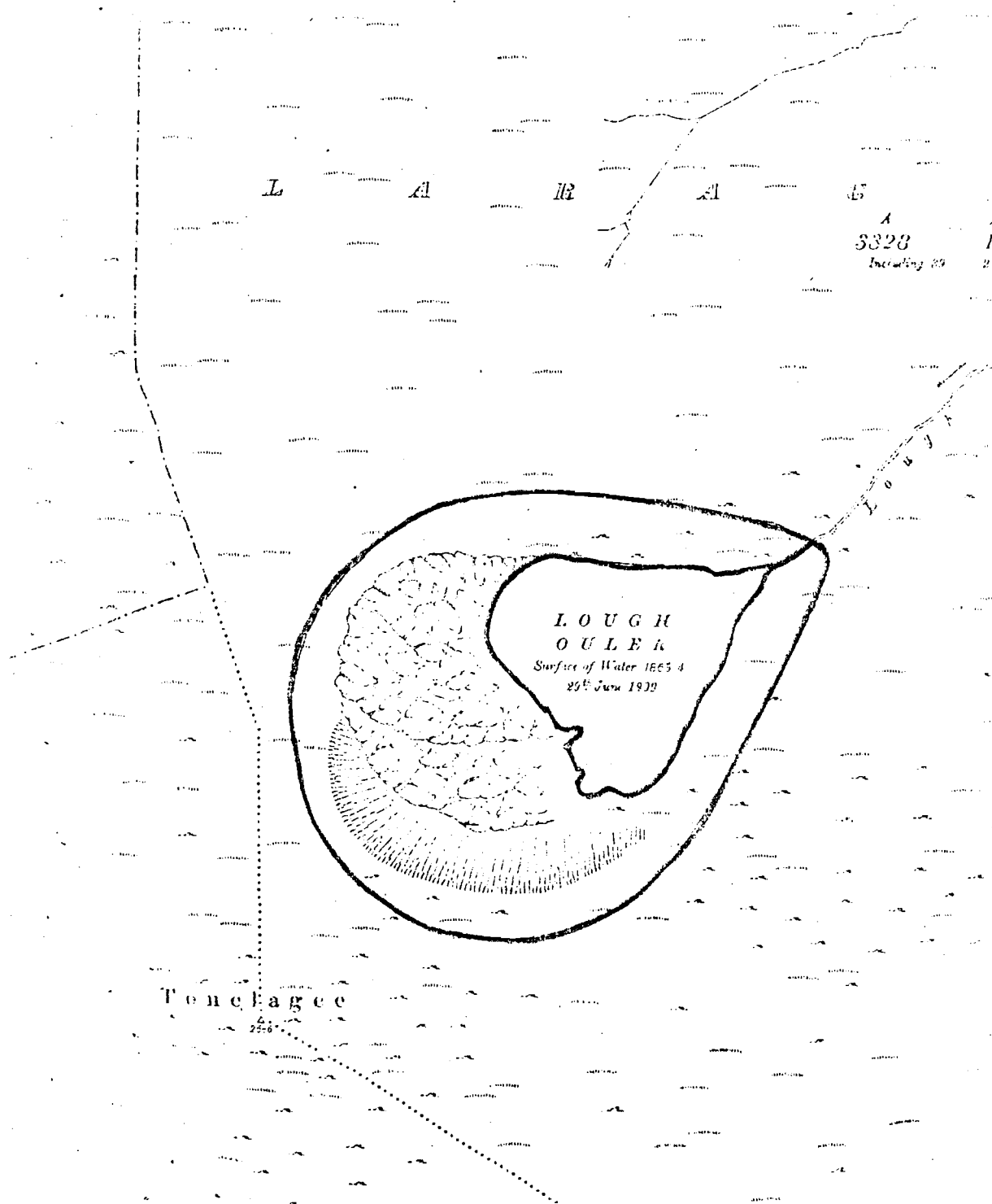
In addition there are nine rare plant species occurring at the site.

#### Evaluation

The area is of importance because of the alpine vegetation occurring there. The site is a good example of a high corrie showing a succession of young to old moraines and an unusual rock structure on the high back wall.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST -- 14

Scale: 6 Inches to 1 Mile



Threats to the Area

At present there are few except possible encroachment on the cliff-site by forestry planting. Late vegetation burning is however taking place.

The cirque might be used as a pumping storage tank.

Recommendations

The site should be maintained for its scientific value and vegetation burning should be restricted to the permissible season.

<u>Name of Area</u>	RATHDANGAN END MORaine
<u>Acreage</u>	Not calculated
<u>Grid Reference</u>	S. 970, 860
<u>Scientific interest</u>	Geological
<u>Rating</u>	National importance
<u>Priority</u>	B

Description of the Area See Map 15.

The site is a glacial moraine consisting of a sandy outwash fan with a clear ice contact on the west side. This site is pitted with kettle-holes. The moraine contains no granular limestone but a feature of it is calcium carbonate dissolved by acid ground water.

Evaluation

The site is a clear indication of the eastern limit of the last midland ice sheet.

Threats to the Area

The structure might be quarried for sand or gravel.

Recommendations

The site should be afforded protection by use of basic planning controls to maintain its scientific values.





1

<u>Name of Area</u>	THE MOTTE STONE
<u>Acreage</u>	1
<u>Grid Reference</u>	T. 200, 830
<u>Scientific Interest</u>	Geological
<u>Rating</u>	National Importance
<u>Priority</u>	C

Description of Area      See Map 16.

The area is a rocky piece of ground.

Evaluation

The phenomenon is a large perched block or erratic which was carried by ice of the Brittas glaciation from Glenmalur. The erratic stands in a rocky area.

Threats to the Area

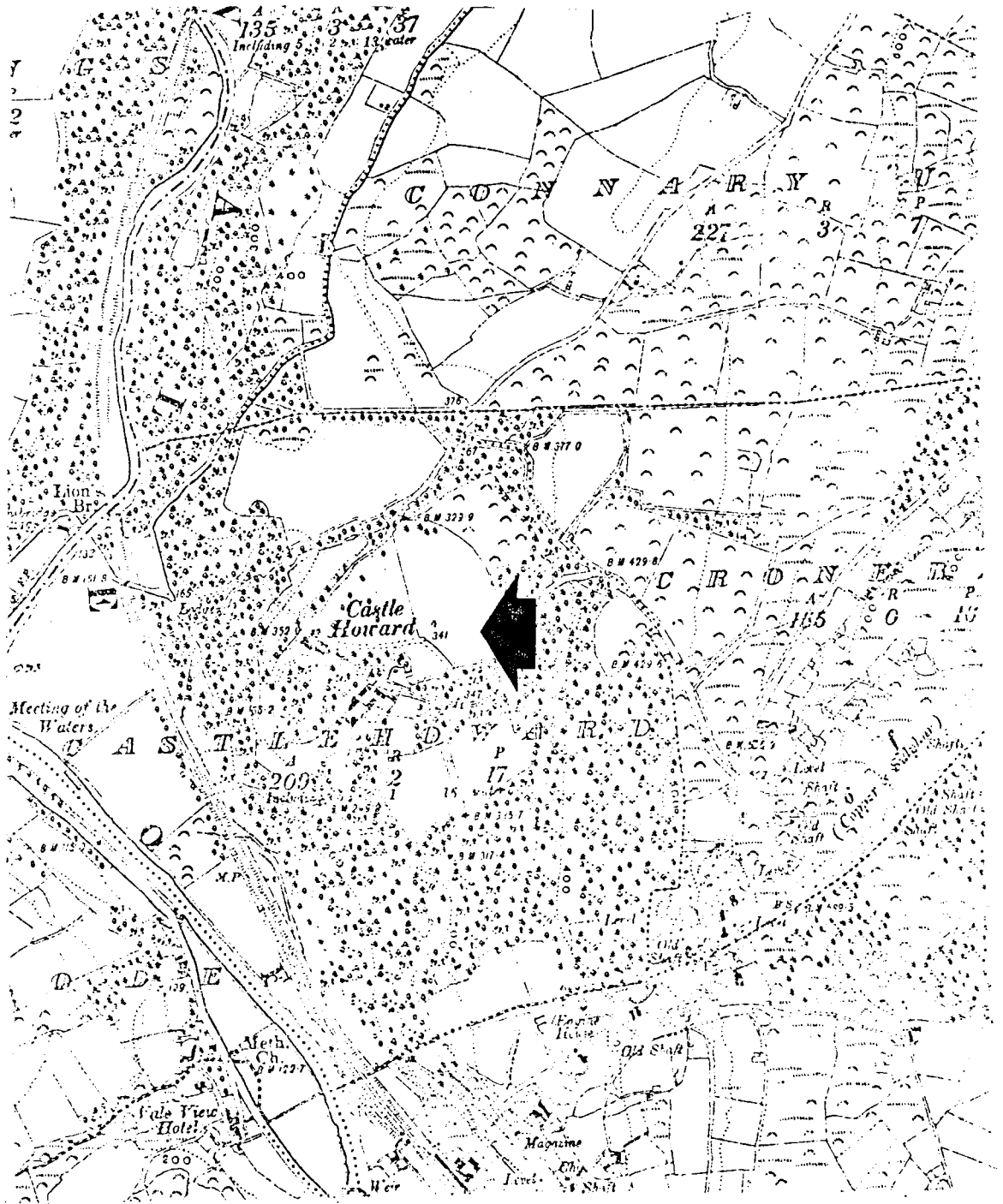
Mining would be the most dangerous but is not considered likely.

Recommendations

Every effort should be made to preserve this site at present, basic planning control measures should be adequate to secure this.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 16

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	UPPER GLENMALUR VALLEY
<u>Acreage</u>	7,520
<u>Grid Reference</u>	T. 070, 930
<u>Scientific interest</u>	Geological
<u>Rating</u>	National importance
<u>Priority</u>	C

Description of the Area See Map 17.

The site is a valley area and includes hanging valleys.

Evaluation

The site is the most striking example of a glaciated valley in Co. Wicklow. It has the appearance of having had a large glacier.

Threats to the Area

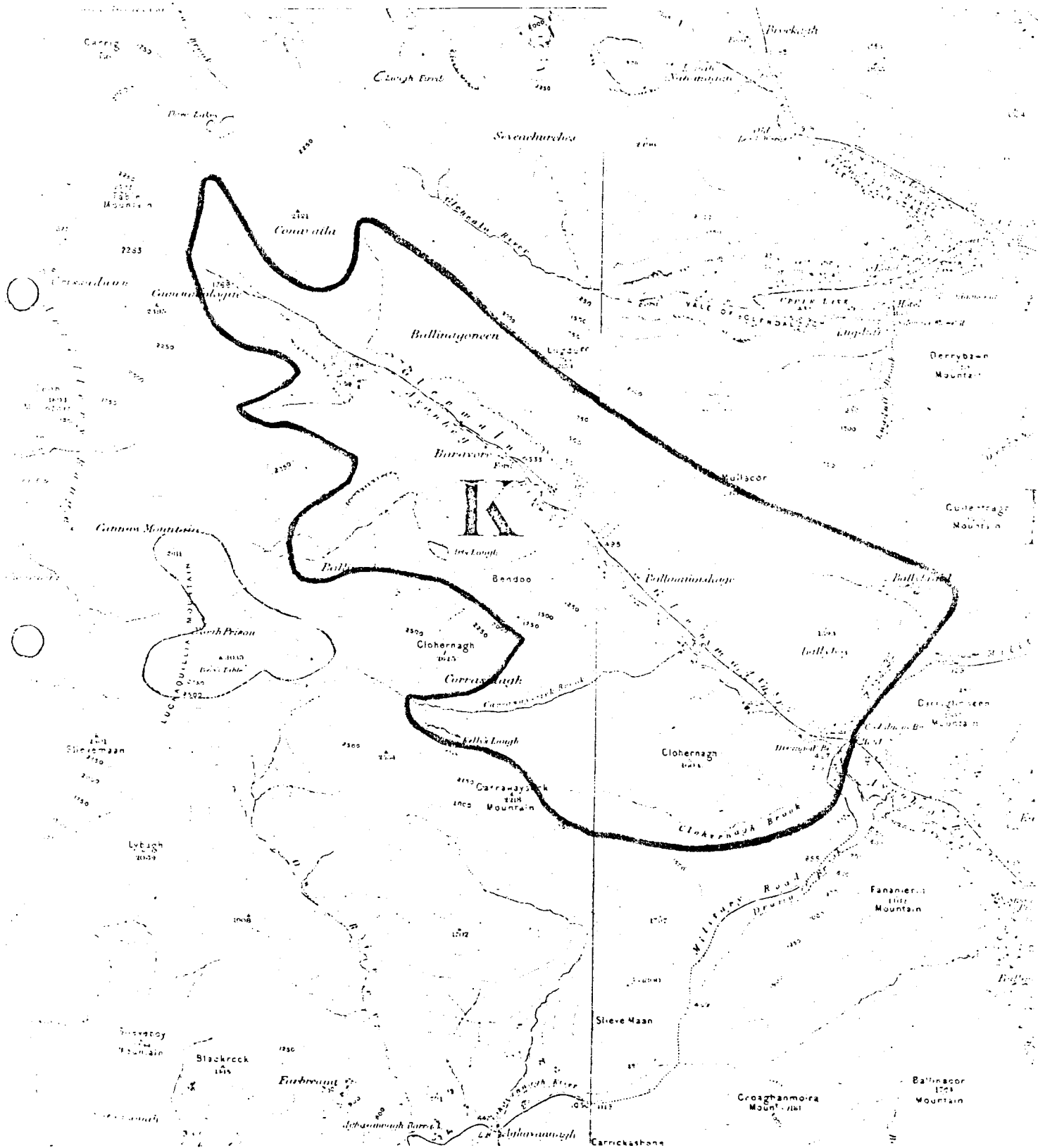
Alteration of the basic structures of interest is unlikely. They might however be obscured by forestry development.

Recommendations

Care should be taken with the planting of <sup>Coni</sup> cariferous trees in the vicinity.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 17

Scale: 1 Inch to 1 Mile



<u>Name of Area</u>	TOOR CHANNEL (Jackdaw's Glen)
<u>Acreage</u>	51
<u>Grid Reference</u>	N. 950, 030
<u>Scientific interest</u>	Geological
<u>Rating</u>	National importance
<u>Priority</u>	C

Description of the Area See Map 18.

The site is a dry valley.

Evaluation

At 900 ft. O.D. the valley is the highest outlet of the lake dammed between the margin of the midland ice sheet and the hills.

Threats to the Area

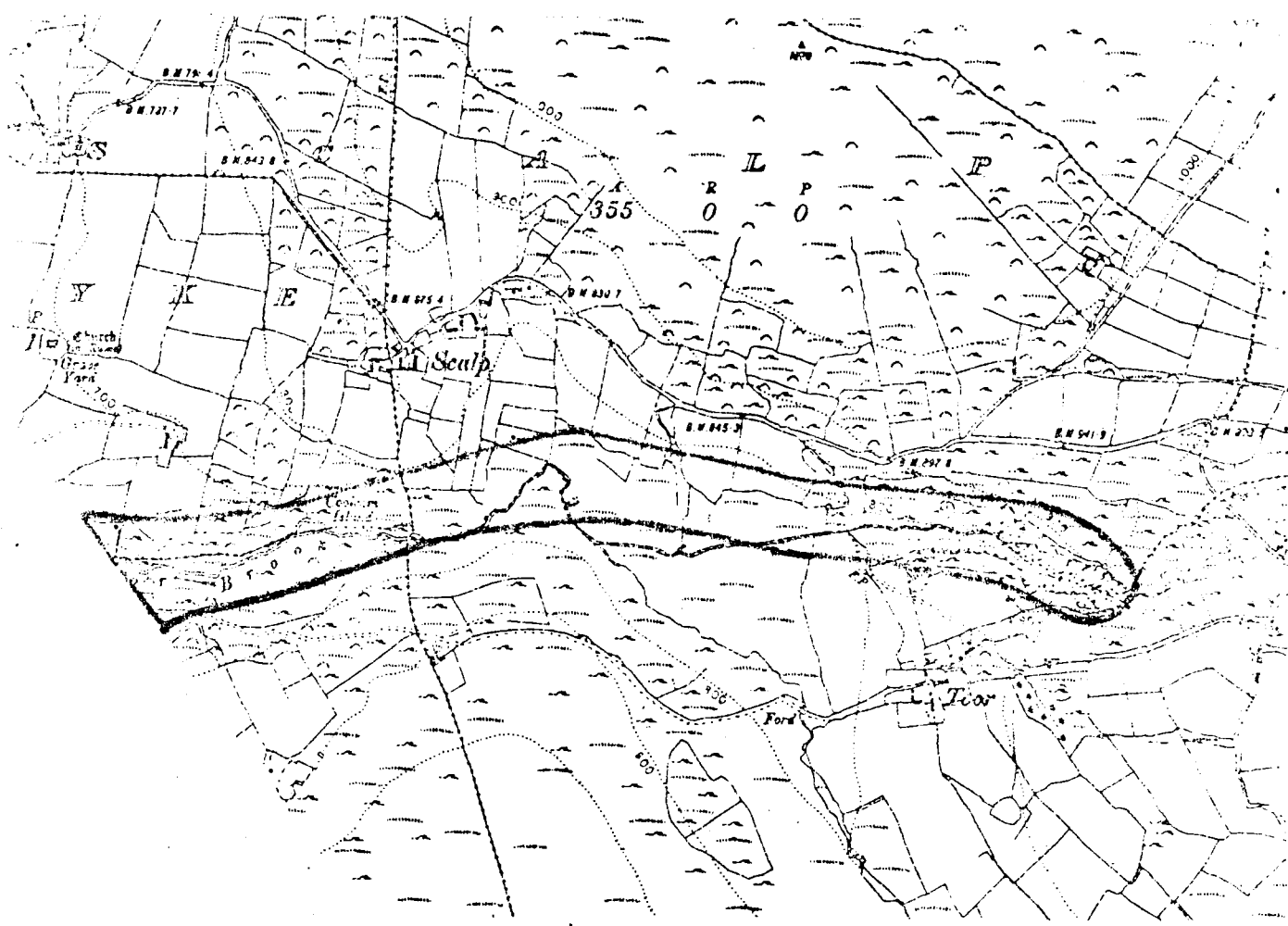
None obvious.

Recommendations

Any future development should allow for the scientific values of the area.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 18

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	TEMLERANY END MORaine AND PINGOES
<u>Acreage</u>	Not calculated
<u>Grid Reference</u>	T. 250, 770
<u>Scientific interest</u>	Geological
<u>Rating</u>	National importance
<u>Priority</u>	C

Description of the Area                      See Map 19.

The site consists of an area of drift lying on both sides of the Arklow - Redcross Road, within the triangle containing Lewisville.

Evaluation

The site marks within narrow limits the margin of the last glacial advance from the Irish Sea. Well formed pingoes lie on an older drift outside this limit.

Threats to the Area

None obvious.

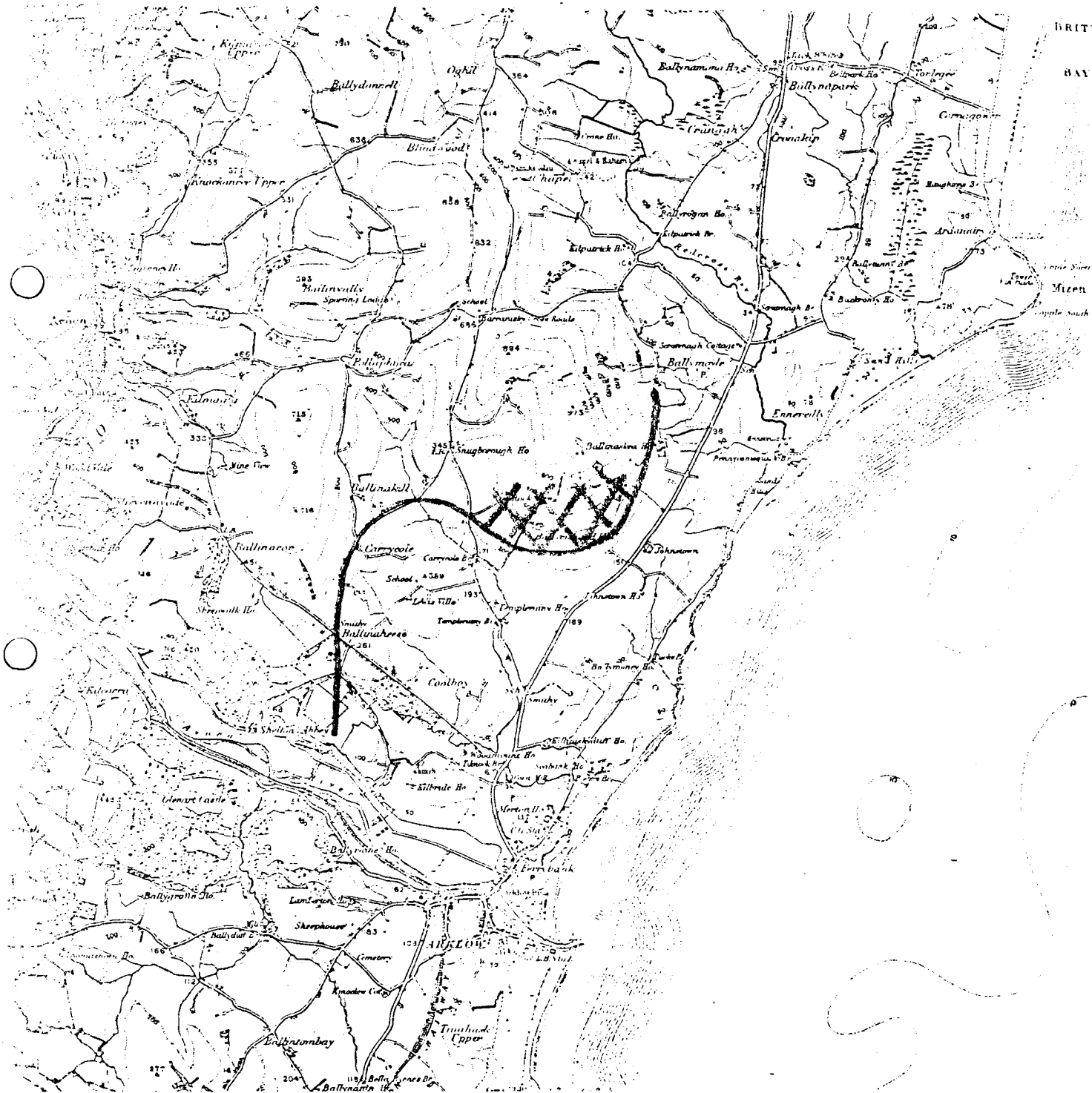
Recommendations

Any future development should maintain the scientific values of this area.



# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 19

Scale: 1 Inch to 1 Mile



<u>Name of Area</u>	GREAT SUGARLOAF
<u>Acreage</u>	233,600
<u>Grid Reference</u>	0. 240, 130
<u>Scientific interest</u>	Geological
<u>Rating</u>	National importance
<u>Priority</u>	C

Description of the Area See Map 20.

The site is a steep mountain modified by ice erosion.

Evaluation

The Great Sugar Loaf was considerably modified by ice erosion. It stood as a Nunatak which was scoured by the Ivernian, midland and mountain ice sheets. Its profile contrasts with those of Bray head and Howth - flat on top. The sides of the Nunatak are marked by glacial action. There are also bench marks and the Quill valley is a marginal drainage channel.

Threats to the Area

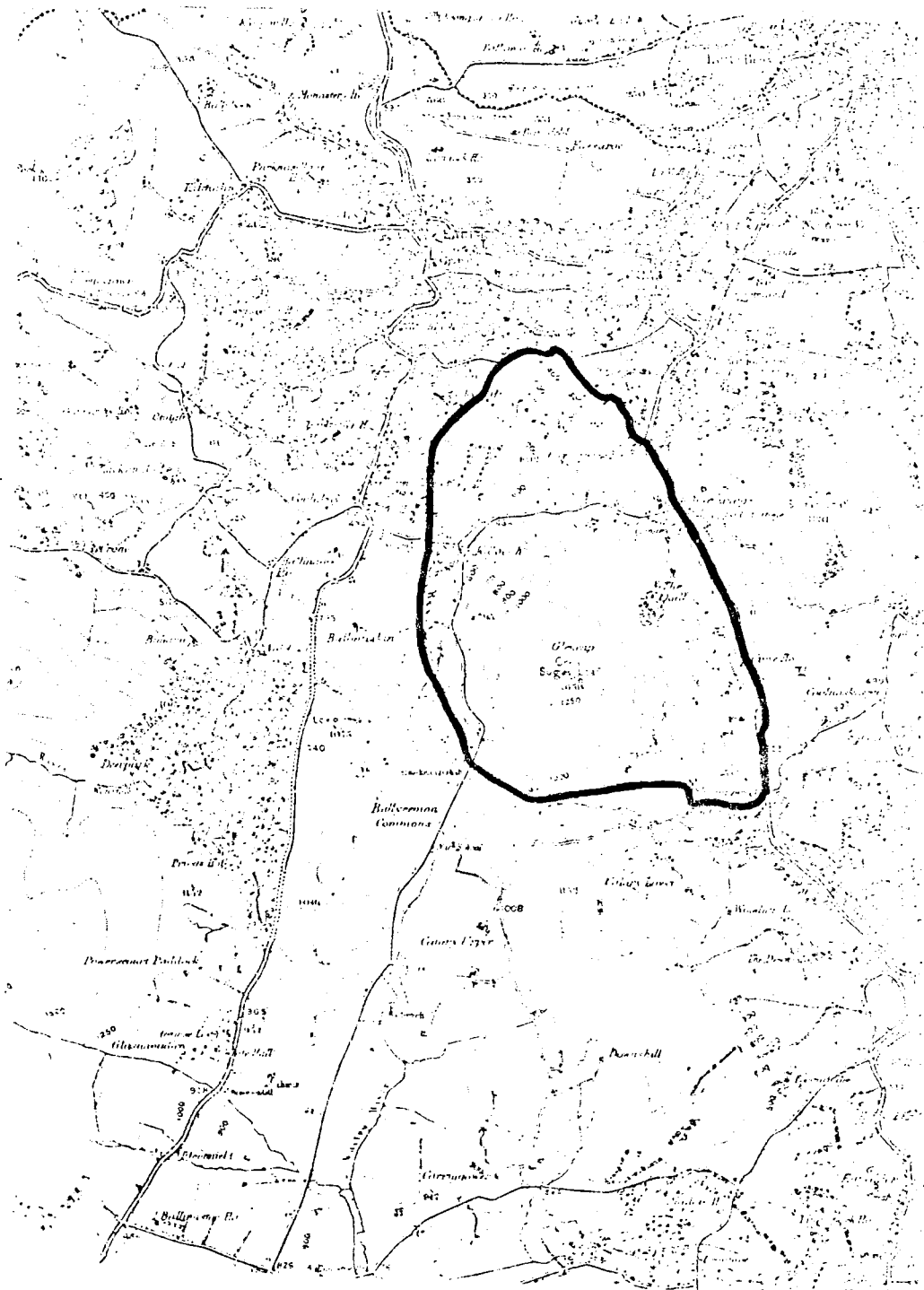
The site might be obscured by forestry planting or unsightly tourist developments.

Recommendations

Basic planning controls should be exercised to maintain the scientific value of this site.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 20

Scale: 1 Inch to 1 Mile



<u>Name of Area</u>	GLENMACNASS
<u>Acresage</u>	262
<u>Grid Reference</u>	0.110, 020
<u>Scientific interest</u>	Geological
<u>Rating</u>	National importance
<u>Priority</u>	C

Description of the Area      See Map 21.

The site is a waterfall at the head of a valley at the junction of the intrusive granite and metamorphosed schist. Below the waterfall there are moraines.

Evaluation

The site shows the junction between intrusive and metamorphosed rocks. The moraines were deposited by ice moving eastwards and this was the last glacial episode at the site.

Threats to the Area

None obvious.

Recommendations

Future development of this area should allow for the scientific values of the site.



<u>Name of area</u>	POWERSCOURT WATERFALL
<u>Acreage</u>	12
<u>Grid reference</u>	0. 195, 118
<u>Scientific interest</u>	Geological
<u>Rating</u>	National importance
<u>Priority</u>	C

Description of Area                      See Map 22.

The site is a steep waterfall of approximately 100 m. height with a steady fall. The surrounding bedrock is included in the site.

Publications

Farrington, A. 1934      The Glaciation of the Wicklow Mountains  
    Proc. R. Ir. Acad. 42 (B): 173 - 209

Bruck, P.M. 1968      The Geology of the Leinster granite in the  
    Enniskerry-Lough Dan area, Co. Wicklow Proc. R. Ir. Acad.  
    66 B : 53 - 70

Evaluation

The ordovonian schists, next to the Leinster granite, are exposed at the gorge. Geomorphologically, this waterfall is one of the most spectacular in Ireland. At its base there is a partial corrie.

Threats to the area

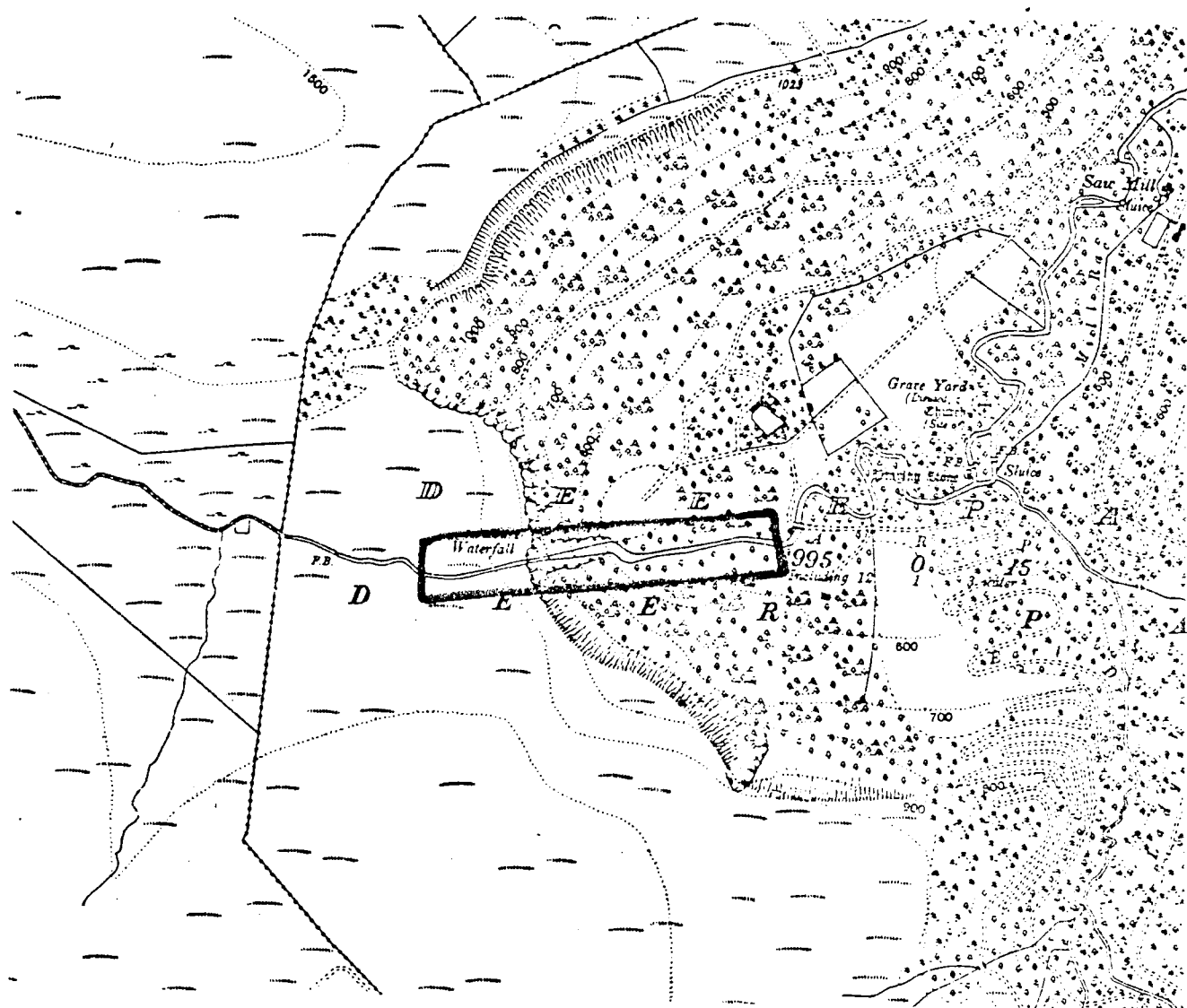
None obvious

Recommendations

Basic planning controls should protect the site adequately in the future

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 22

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	AVONDALE FORESTRY SCHOOL
<u>Acreage</u>	Not calculated
<u>Grid Reference</u>	T. 195,855
<u>Scientific Interest</u>	Ecological and Botanical
<u>Rating</u>	National Importance
<u>Priority</u>	C

Description of Area

The sites of interest are experimental plots containing various tree species.

Evaluation

Some of the plots are of considerable age. They provide examples of coniferous tree growth since the early 1900s.

Threats to the Area

None obvious.

Recommendations

Future development of the areas and their surroundings should be in accordance with the scientific values of the site.



<u>Name of Area</u>	BRAY HEAD (A)
<u>Acreage</u>	67
<u>Grid Reference</u>	O. 286,174
<u>Scientific Interest</u>	Geological and Ornithological
<u>Rating</u>	National Importance
<u>Priority</u>	C

Description of Area      See Map 23.

Evaluation

The cliffs display a number of important geological features including fossil localities. The stratigraphic features are of especial significance to the Cambrian era. The rock outcrops and cliffs also provide nesting areas for seabirds.

Threats to the Area

Minimal at present but likely to increase with recreational pressures.

Recommendations

The ideal would be the inclusion of these cliff areas in an amenity area order referred to in Bray Head (B) - Map 31, but failing this, specific pressures on the bird populations (e.g. shooting or egg collections) should be countered by use of a conservation order.

In the channels containing stagnant water the following occurred:

<u>Phragmites communis</u>	common reed
<u>Apium nodiflorum</u>	fool's watercress
<u>Callitriche platycarpa</u>	stonewort
<u>Ranunculus flammula</u>	lesser spearwort

#### Evaluation

The above flora is typical of a marsh. Calcicole marsh areas are uncommon in County Wicklow and Buckroneys probably exists as a result of sand underlying the waterlogged areas. The marsh is notable as the site of the largest stand of Thelypteris palustris (marsh fern) in Ireland.

#### Threats to the Area

A contraction in the area has occurred since drainage was carried out and this has adversely affected the flora, notably the fern mentioned above.

Building on the surrounding land could present a problem of sewage and domestic rubbish disposal.

#### Recommendations

The marsh at present retains much of its former value (prior to drainage).

It would be desirable that further drainage should not occur; in this way, much of the value of the area will be retained. Some land on the western side of the area is for sale and will almost certainly be used for building purposes. It would be desirable that special care should be taken to direct domestic effluent away from the marsh. In the future, consideration might be given to protection of the area by use of a conservation order.

<u>Name of Area</u>	MARSHES NEAR LEMONSTOWN
<u>Acreage</u>	*2
<u>Grid Reference</u>	N. 923, 051
<u>Scientific Interest</u>	Ecological, Botanical and Zoological
<u>Rating</u>	Regional Importance
<u>Priority</u>	A

Description of Area See Map 28.

The area of scientific interest is a chain of calcicole eskers containing open water in the hollows between the hillocks. In these wet areas a profuse flora has developed consisting, in the best examples of the following:

<u>Potentilla palustris</u>	marsh cinquefoil
<u>Cardamine pratensis</u>	lady's smock
<u>Riccia fluitans</u>	a liverwort
<u>Epilobium palustra</u>	bog willow herb
<u>Menyanthes trifoliata</u>	bog bean
<u>Carex rostrata</u>	bottle sedge
<u>Juncus effusus</u>	soft rush
<u>Agrostis stolonifera</u>	common bent grass
<u>Lemna minor</u>	duckweed
<u>Galium palustre</u>	marsh bedstraw
<u>Ranunculus flammula</u>	lesser spearwort
and <u>Callitriche stagnalis</u>	stonewort

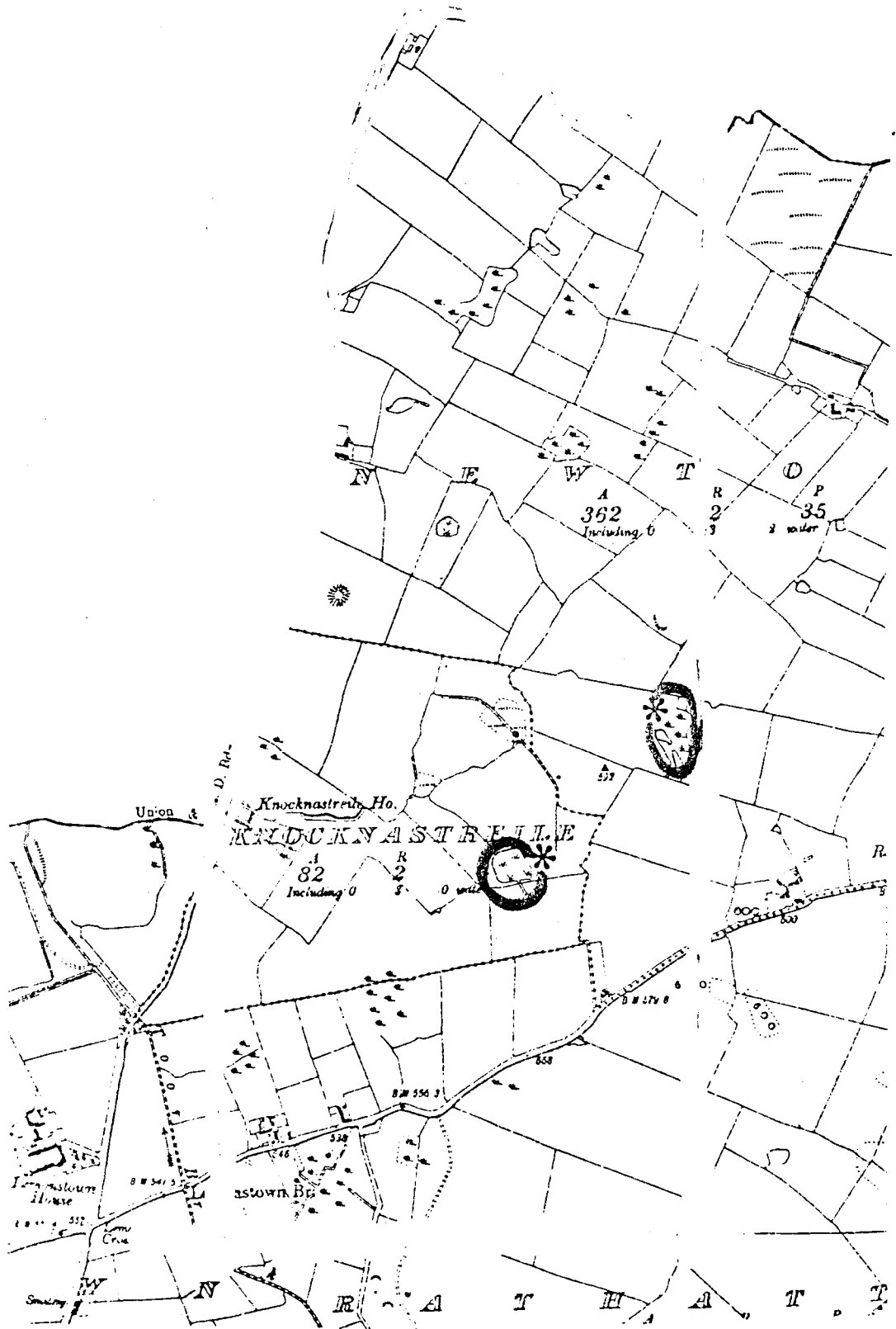
In the best examples (marked with an asterisks) there is much open water.

The bird life of two marshes was profuse on the day they were visited and the following counts were made at the best area (marked with an asterisk):

Tufted duck	4
Mallard	2
Coot	5

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 28

Scale: 6 Inches to 1 Mile



Waterhen	3
Black headed gulls	<u>c.</u> 200

Cursory examination of the fauna confirmed that most common species of invertebrate found in such places were present.

#### Evaluation

The site is a good example of a calcicole marsh, the presence of Riccia fluitans indicating a eutrophic condition. While there are some marshes in County Wicklow, a eutrophic area is rare, hence the regional rating.

#### Threats to the Area

The most widespread and imminent is drainage which has destroyed a number of previously wet areas. Alteration of the chemical constitution of the water might result from the siting of sewage outflows (e.g. from septic tanks) or artificial fertilization or insecticide treatment of the grassland and there is some evidence of dumping. The wildfowl populations in winter are also being shot.

#### Recommendations

At least the best of the marshes should be protected, possibly by use of a conservation order. It is the most difficult to drain, which accounts for its survival, and it is very small.

<u>Name of Area</u>	ARKLOW HEAD
<u>Acreage</u>	36
<u>Grid Reference</u>	T.240, 700
<u>Scientific interest</u>	Geological
<u>Rating</u>	Regional importance
<u>Priority</u>	A

Description of the Area

See Map 29. The site is a quarry.

Evaluation

At the site there is a good exposure of volcanic crater pipes in pale Acidic (rhyolitic) Ordovician rocks. The pipes are filled with volcanic material.

Threats to the area

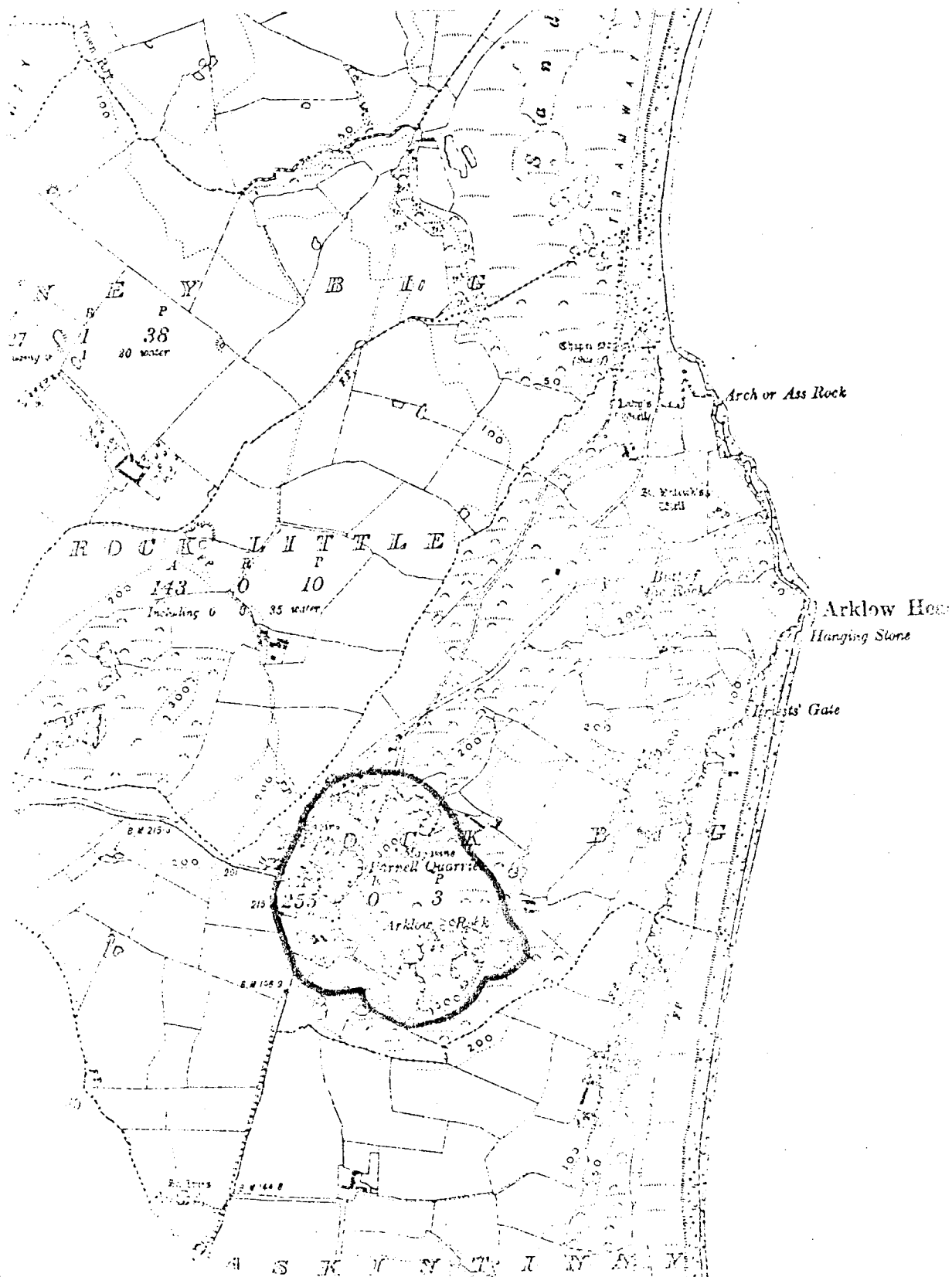
A quarry to the north of the exposure is being worked through the rocks of interest.

Recommendations

Some effort should be made to preserve what is left of the exposure, on a part of it, or to prevent filling in the exposure after workings have ceased.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST—29

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	WOODLANDS IN THE VALE OF CLARA NEAR LARA AND GLENDALOUGH
<u>Acreage</u>	660
<u>Grid Reference</u>	T. 135,960
<u>Scientific Interest</u>	Ecological, Botanical and Zoological
<u>Rating</u>	Regional Importance
<u>Priority</u>	B

Description of Area See Map 30.

There are three blocks of mixed deciduous and coniferous trees in this area; their boundaries on Map 30 are approximate.

Subsite 1 is mainly deciduous scrubland with a ground flora similar to that at the Lough Dan site (Map 30).

Subsite 2 consists of mature oak and coniferous trees where the ground flora is dominated in places by Vaccinium myrtillus (bilberry).

Parts of this area are scrubland and these are being planted with coniferous trees.

Subsite 3 contains well grown hardwoods with some conifers. The ground flora is varied, containing most of the species found in the Glen of the Downs. There is a well developed holly (Ilex aquifolium) layer in the woods.

#### Evaluation

All sub-areas contain good examples of mature woodland, much of it deciduous, and the ground flora is diverse and profuse.

#### Threats to the Area

The most prevalent is replanting of deciduous trees with conifers.

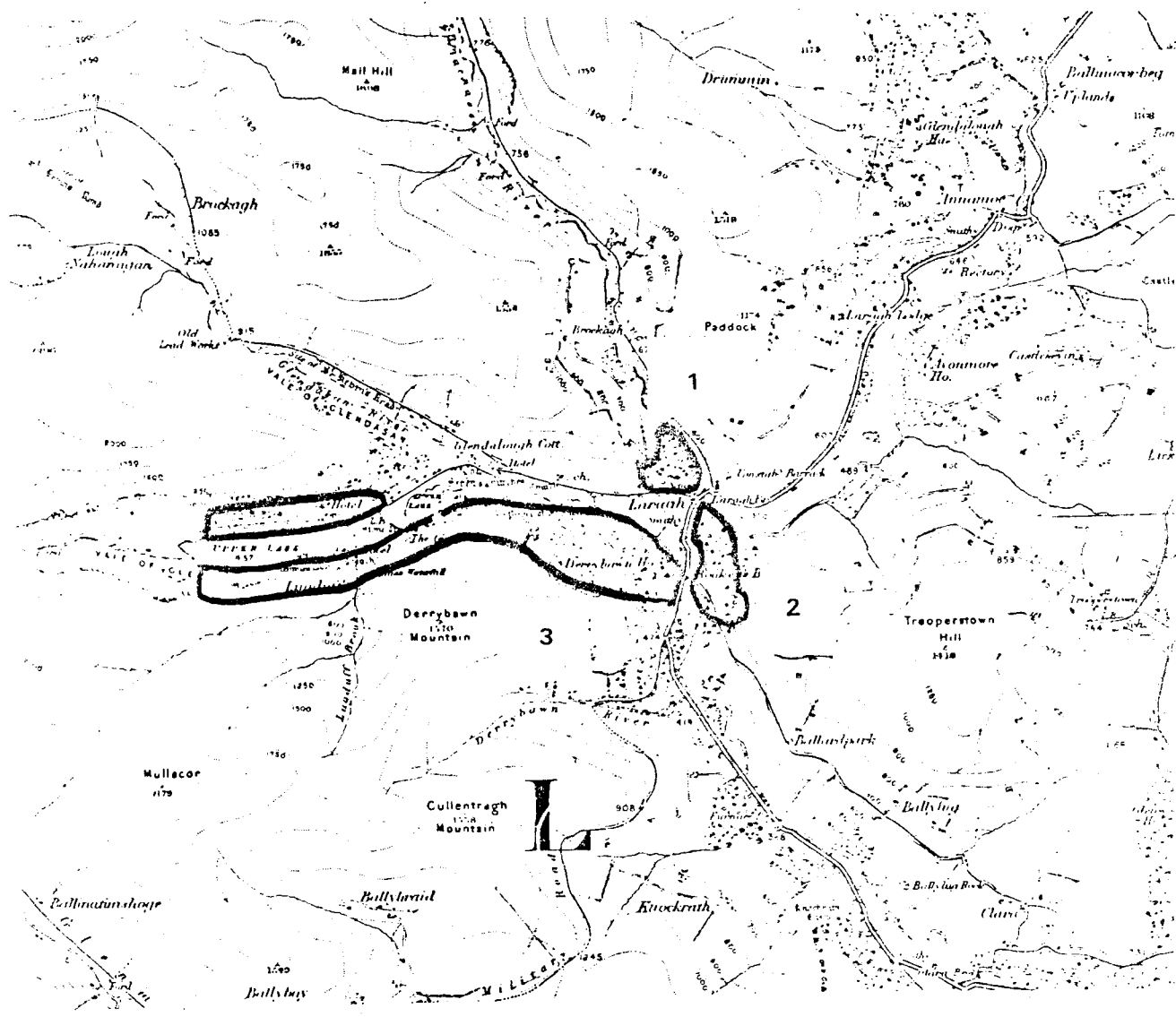
#### Recommendations

At least some of the native hardwood should be maintained as untouched stands and the selective removal of some conifers should be considered.



# MAP SHOWING AREA OF SCIENTIFIC INTEREST—30

Scale: 1 Inch to 1 Mile



<u>Name of Area</u>	BRAY HEAD (B)
<u>Acreage</u>	100 & 6
<u>Grid Reference</u>	O. 286, 174
<u>Scientific Interest</u>	Botanical, Zoological and Ecological
<u>Rating</u>	Regional Importance
<u>Priority</u>	B

Description of Area      See Map 31.

The site is a steep-sided, rocky headland. There are two sites of interest on the headland, the higher of importance as an example of a heath vegetation dominated by

<u>Ulex galii</u>	summer gorse
and <u>Erica cinerea</u>	fine-leaved heath

The second site is the southern side of the headland, overlooking the Cable Rock. At the northern end of this site the vegetation is dominated by

<u>Sedum anglicum</u>	English stonecrop
-----------------------	-------------------

but further south the following all become dominants:-

<u>Pteridium aquilinum</u>	bracken
<u>Rubus fruticosus</u> agg.	bramble
<u>Vicia sylvatica</u>	wood vetch
and <u>Equisetum telmateia</u>	horsetail

#### Publications

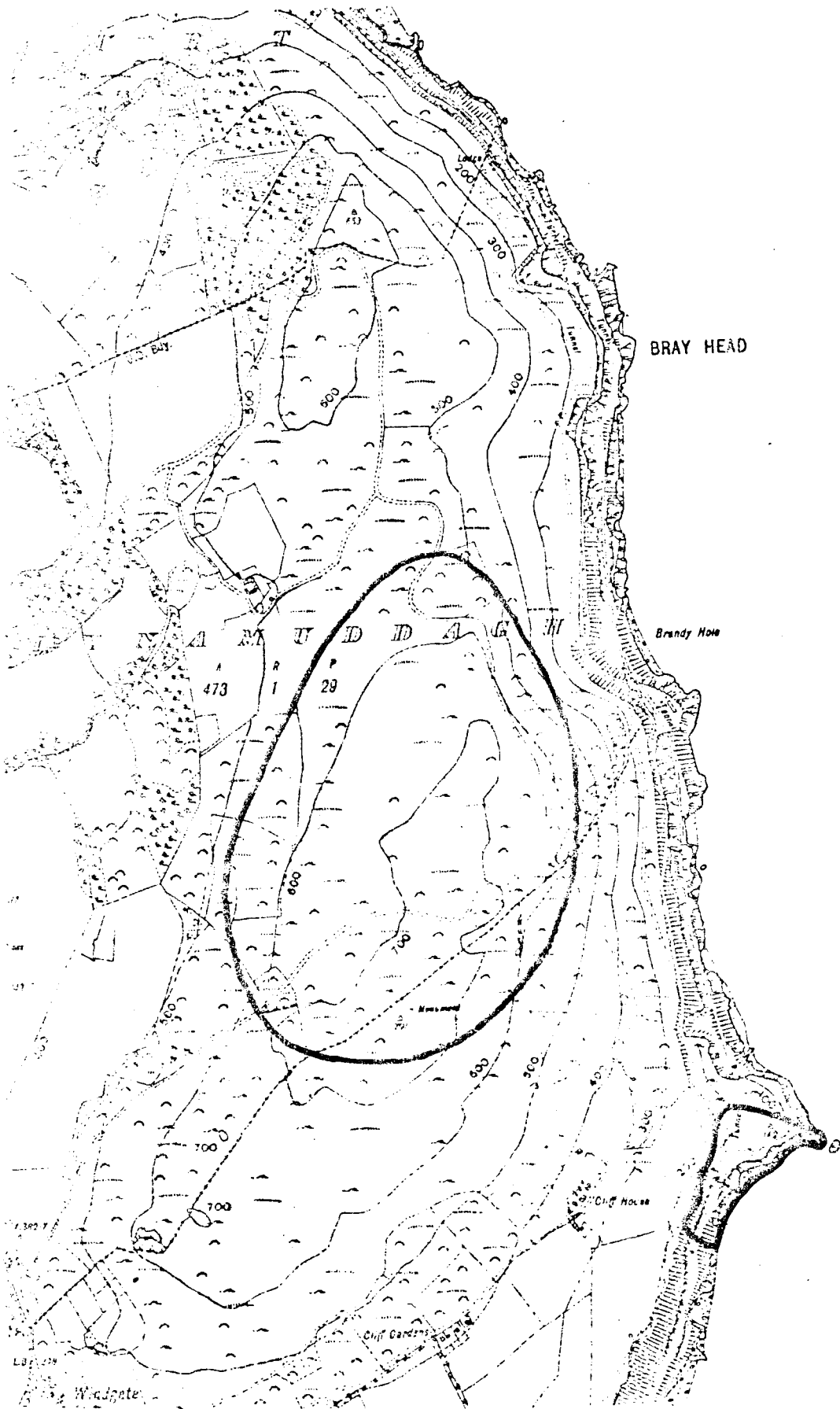
Clark, S. C. 1966. The structure of some Ulex galii heaths in Eastern Ireland. Proc. R. Ir. Acad. 66 (4).

#### Evaluation

Both sites have unusual plant associations. The Cable Rock area has, in addition, six rare plant species. The invertebrates of the area are profuse and varied.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 31

Scale: 6 Inches to 1 Mile



Threats to the Area

Building could well destroy parts of these areas in the near future and is the only likely threat. Recreational pressures are also possible and the development of a road system at the upper part of the areas described is a potential danger.

Recommendations

The areas described above are the most noteworthy parts of an interesting cliff system.

In view of the use of Bray Head for recreational purposes it might be advisable to consider putting an amenity area order on the headland. (See also Bray Head (A) - Map 23).

<u>Name of Area</u>	HOLDENSTOWN BOG
<u>Acreage</u>	7
<u>Grid reference</u>	S. 883, 850
<u>Scientific Interest</u>	Ecological, botanical and
<u>Rating</u>	Regional importance
<u>Priority</u>	B

Description of the area

See Map 32. The site is a small raised bog whose margins are open water in places. Plants occurring at the bog margins include

<u>Caltha palustris</u>	marsh marigold
<u>Menyanthes trifoliata</u>	bog bean
<u>Equisetum fluviatile</u>	horsetail
<u>Sparagnum</u> sp.	
and <u>Mentha aquatica</u>	water mint

The bog has a very well developed hummock - hollow system and is wet and soft underfoot. There are tufts of Polytrichum sp. (moss) in addition to Sphagnum and there is some Aulacomnium palustre. The tops of some hummocks have a profuse growth of Calluna vulgaris (ling) and Vaccinium oxycoccus (cranberry) forms a close cover over most of the moss hummocks. There is also a good growth of Scirpus caespitosus (deer grass).

Evaluation

Raised bogs are unusual in eastern Ireland and this site is the only example of the phenomenon in Co. Wicklow. The site is of ecological value as a wetland containing a typical raised-bog flora. The presence of Vaccinium oxycoccus is noteworthy. The area is likely to be a rich source of invertebrates.

Threats to the Area

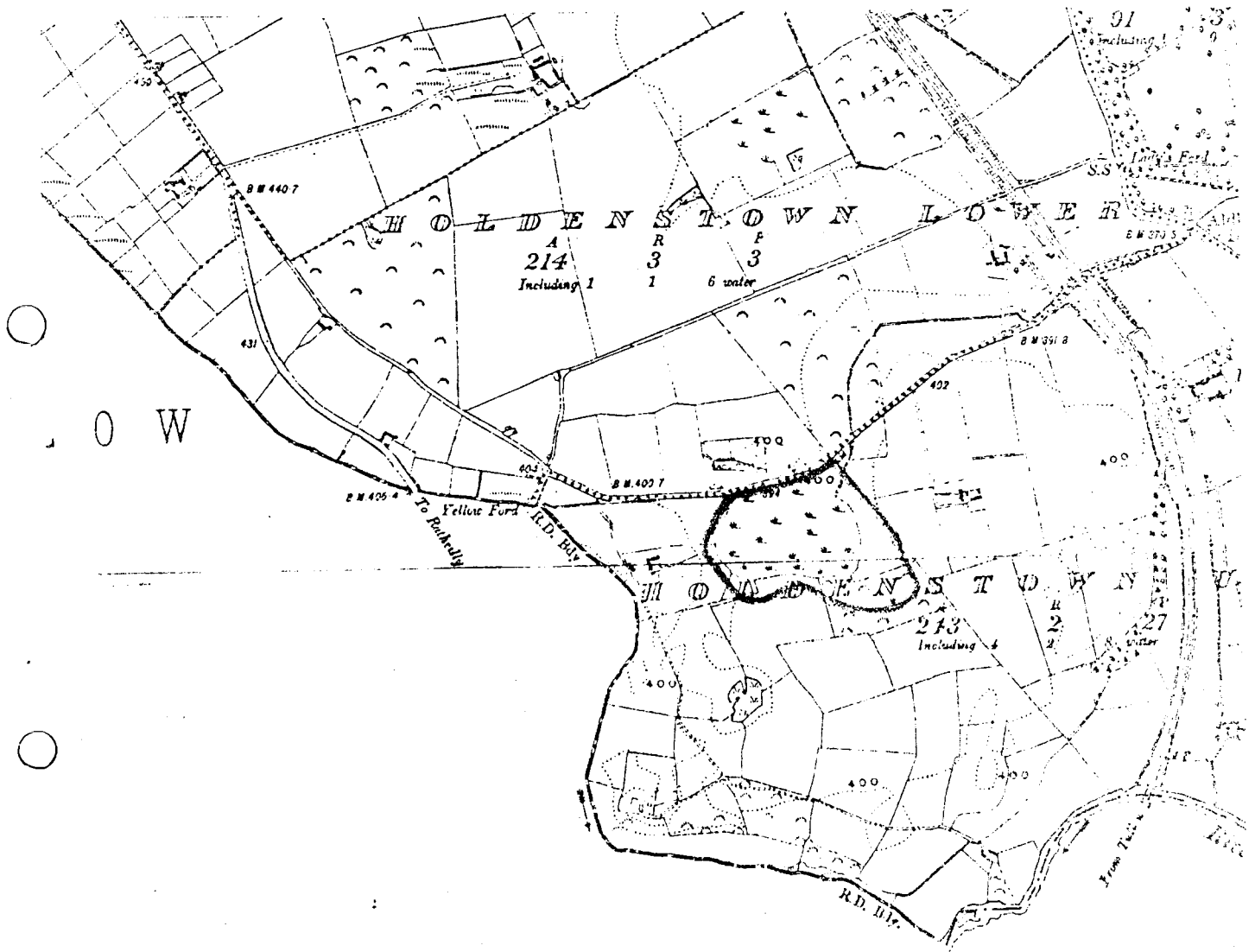
Drainage, associated with turf cutting or land reclamation, would destroy the site. There are some other possibilities like rubbish tipping.

Recommendations

This site should be preserved in its present form and any land use in the vicinity should be considered for its likely effects on the area of scientific interest.

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 32

Scale: 6 inches to 1 Mile



<u>Name of Area</u>	WOODLANDS IN THE AVOCA RIVER VALLEY
<u>Acreage</u>	1,300
<u>Grid Reference</u>	T. 215, 755
<u>Scientific Interest</u>	Ecological, botanical and zoological
<u>Rating</u>	Regional Importance
<u>Priority</u>	C

Description of Area      See Map 33.

This is a woodland containing coniferous and deciduous trees, the density of the latter being sparse. In places the deciduous woodland is over-run with rhododendron which requires to be controlled. The ground flora is typical of oakwoods elsewhere in County Wicklow except where close planting of conifers excludes light penetration.

Evaluation

The woodlands could be reconverted to deciduous woodland which should, anyway, be more prevalent than it is. The area marked with an asterisk contains a rare plant species.

Threats to the Area

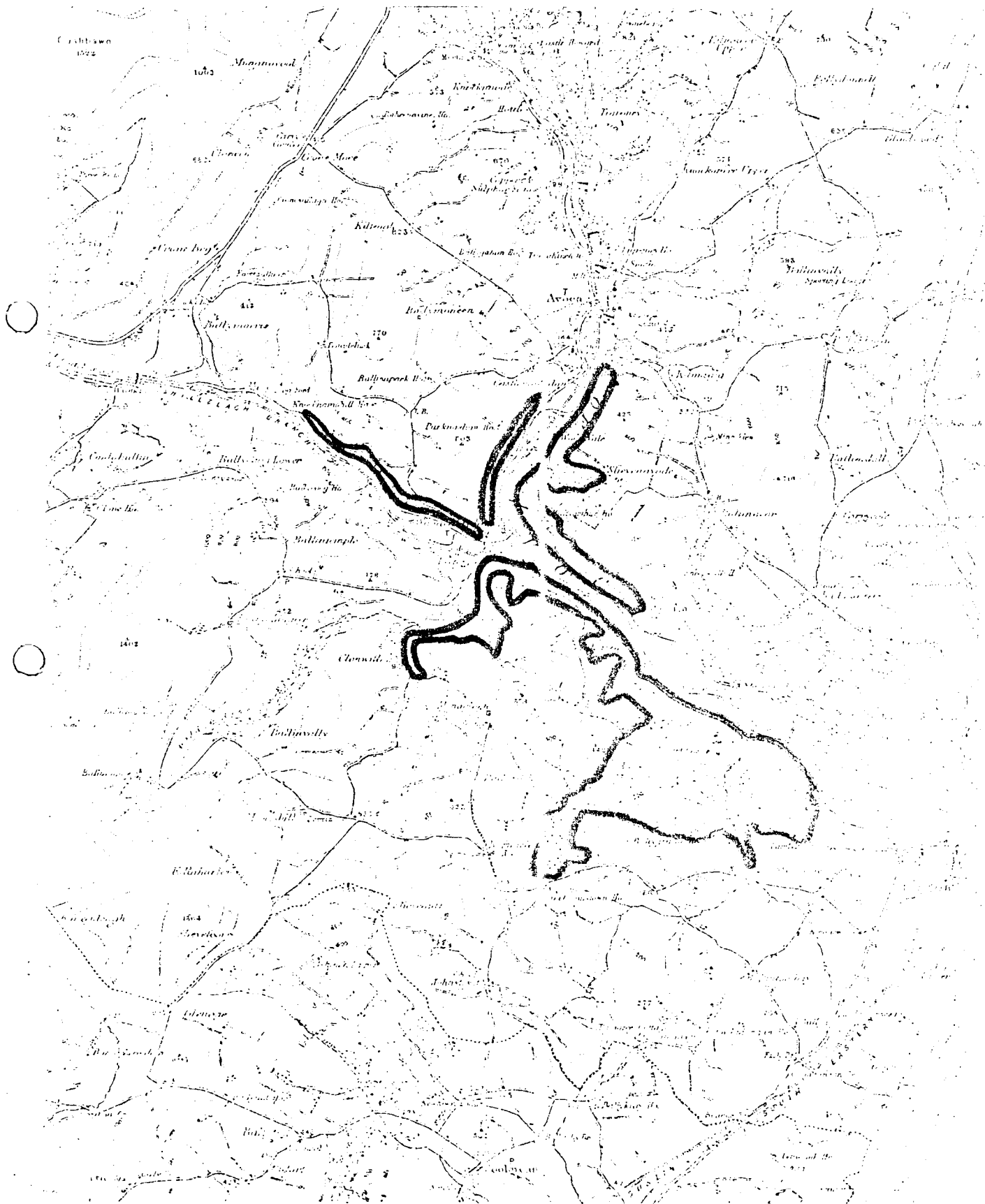
The most obvious is further underplanting with conifers which should not take place.

Recommendations

Any development on further use of this site should be in accordance with its scientific value.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 33

Scale: 1 inch to 1 mile





Name of Area DARGLE RIVER VALLEY  
Acreage Less than 4  
Grid Reference O. 241,169  
Scientific Interest Geological  
Rating Regional Importance  
Priority C

Description of Area See Map 34.

The site is a river section with steep banks.

Evaluation

The site is an exposure of Ordovician volcanic rocks which are faulted against well exposed Bray group strata. This exposure is unique in County Wicklow.

Threats to the Area

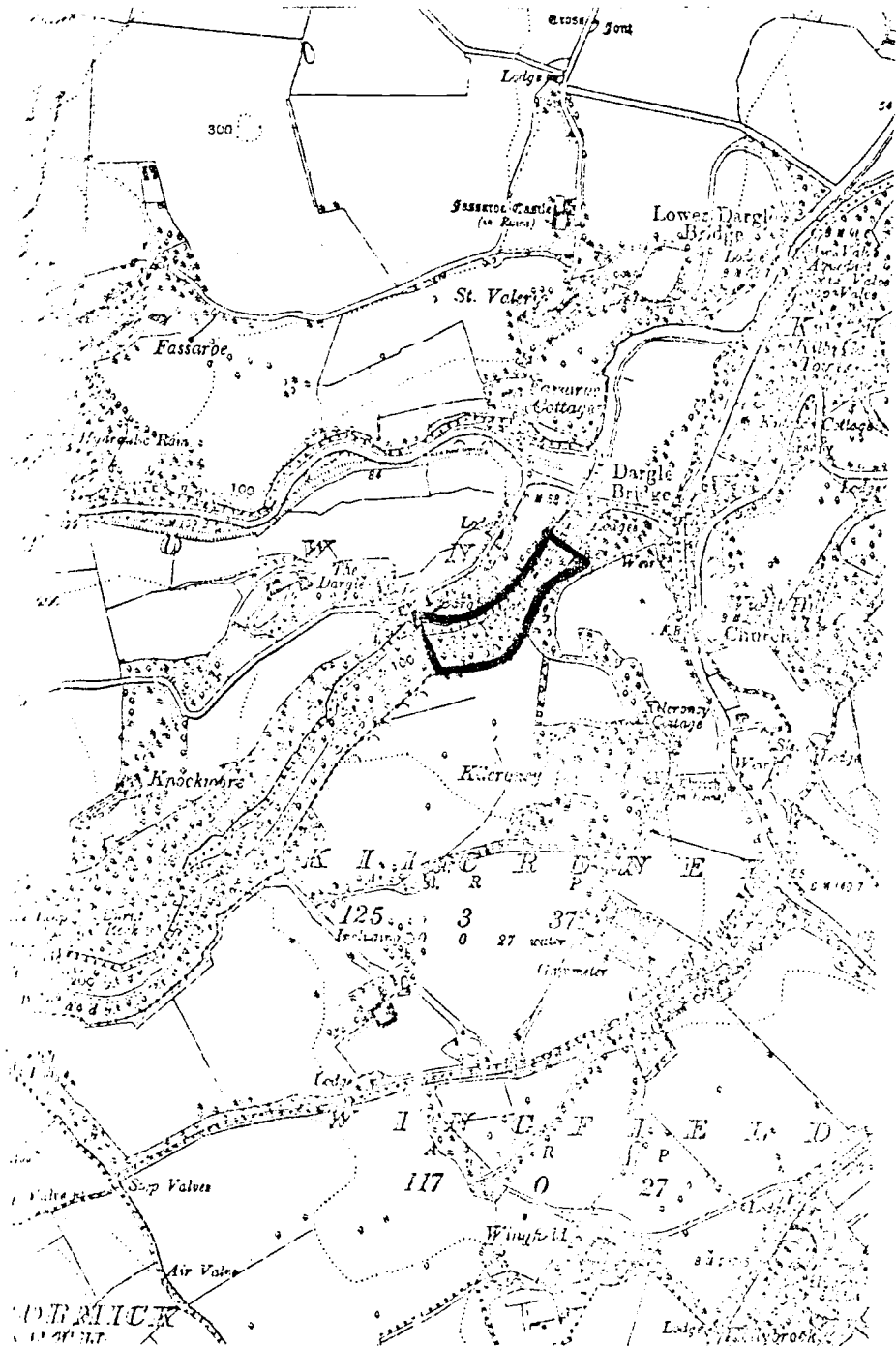
None obvious.

Recommendations

Further development of the area should be in accordance with its scientific value.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST—34

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	WEST BANK OF VARTRY RESERVOIR
<u>Acreage</u>	Less than 46
<u>Grid Reference</u>	0.100.062
<u>Scientific Interest</u>	Botanical, ecological
<u>Rating</u>	Regional Importance
<u>Priority</u>	C

Description of Area      See Map 35.

One site is on the margin of the Vartry reservoir. The terrain is marsh with occasional hillocks of drier ground. The following species occur in the wet areas:

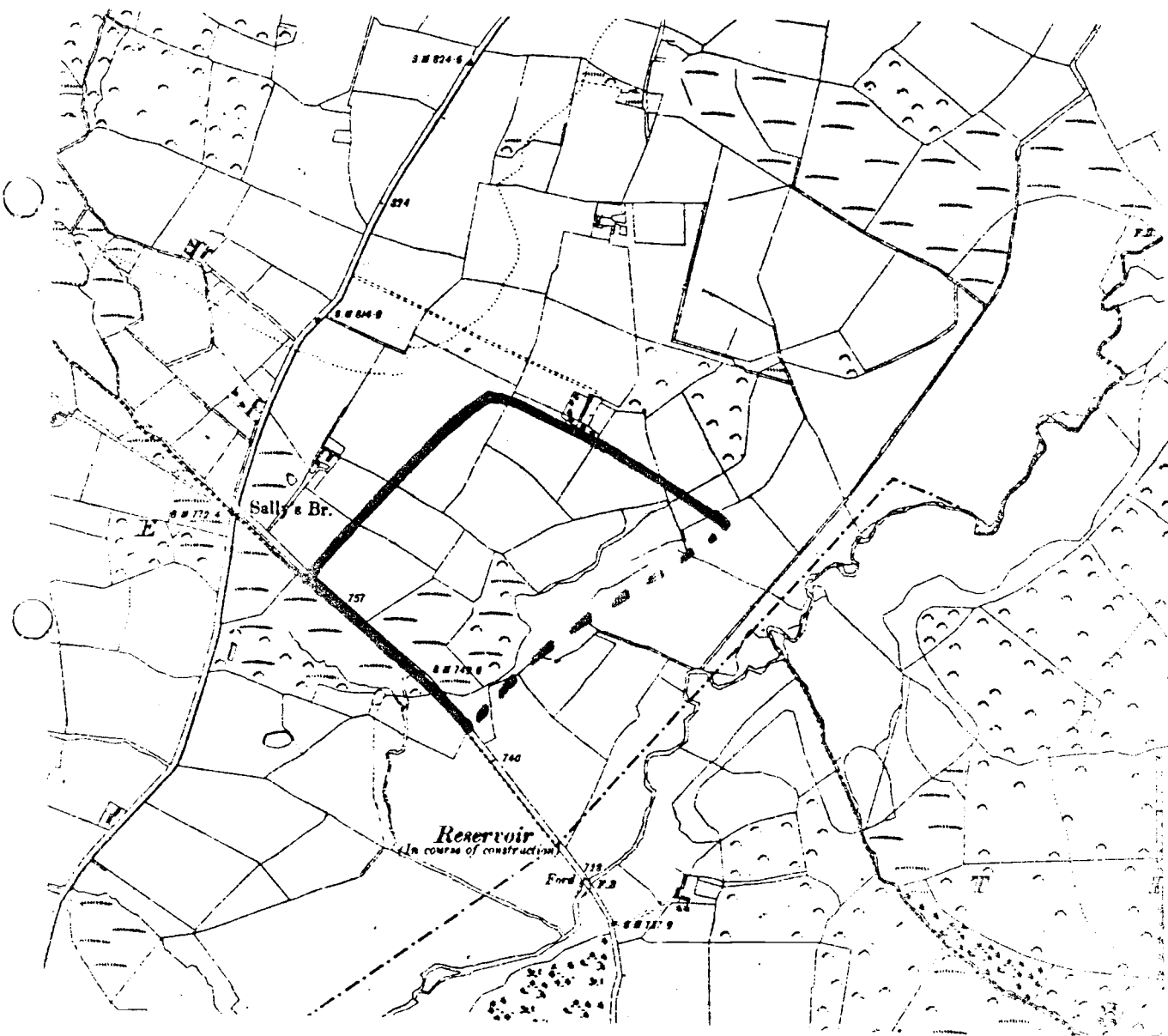
<u>Juncus inflexus</u> )	
<u>J. conglomeratus</u> )	rushes
<u>Caltha palustris</u>	marsh marigold
<u>Equisetum fluviatile</u>	horsetail
<u>Montia fontana</u>	water chickweed
<u>Valeriana officinalis</u>	wild valerian
<u>Ranunculus flammula</u>	lesser spearwort
<u>R. hederaceous</u>	ivy leaved crowfoot
<u>Veronica scutellata</u>	
<u>Sphagnum sp</u>	moss

On the drier hummocks occurred:

<u>Salix aurea</u>	willow
<u>Agrostis stolonifera</u>	common bent grass
<u>Galium palustre</u>	marsh bedstraw
<u>Senecio jacobea</u>	ragwort
<u>Polytrichum commune</u>	moss
<u>Rhytidiadelphus</u> <u>squarrosus</u>	moss
<u>Festuca rubra</u>	red fescue grass
<u>Angelica sylvestris</u>	wild angelica
<u>Succisa pratensis</u>	devil's bit scabious
<u>Ranunculus acris</u>	common buttercup

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 35

Scale: 6 Inches to 1 Mile



Evaluation

This marsh area contains a rare plant species.

Threats to the Area

None obvious; drainage of the area in question would not be feasible. Possible alteration of the habitat might result from an encroachment by coniferous afforestation which could cut down incident light.

Recommendations

Care in the planting of trees should be taken to avoid adverse effects on the habitat.

Name of Area RATHDRUM RAILWAY CUTTING  
Acreage Extent requires investigation  
Grid Reference T. 205, 894  
Scientific Interest Geological  
Rating Regional Importance  
Priority C

Description of Area See Map 36.

The site is a railway cutting.

Publications

Egan, F. W. & A. Harvy 1899, Report of the Geological Survey  
for 1898, p. 58

Evaluation

The bedrock contains Graptolites of considerable taxonomic value.

Threats to the Area

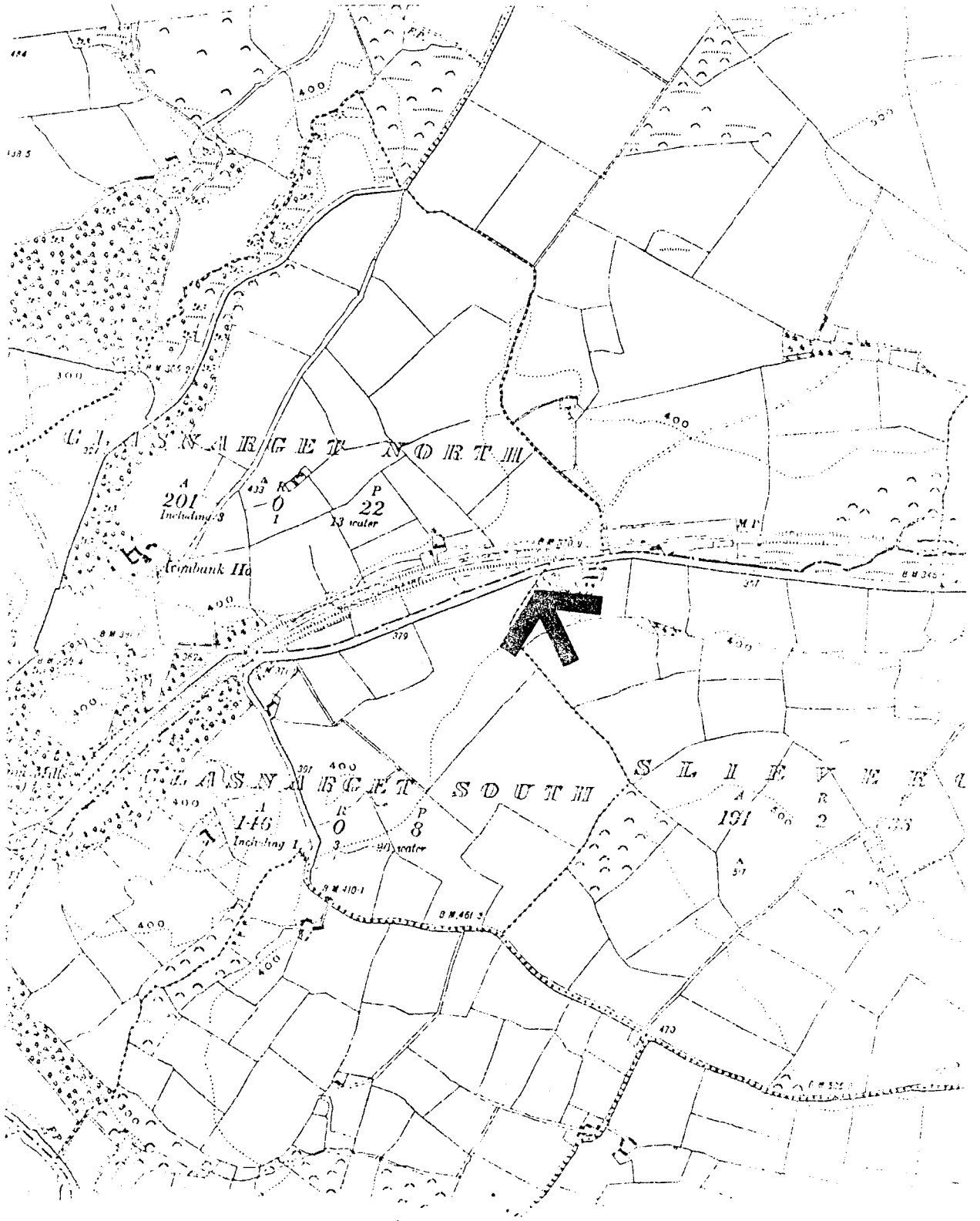
None known.

Recommendations

Further development of this area should be in keeping with its scientific value.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 36

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	WICKLOW COAST SITE
<u>Acreage</u>	9
<u>Grid Reference</u>	T. 309, 955
<u>Scientific interest</u>	Botanical
<u>Rating</u>	Regional importance
<u>Priority</u>	C

Description of the Area See Map 37.

The site is a piece of waste ground close to the Wicklow-Dublin railway line and on the eastern side of it. The ground has been subjected to burning, possibly accidentally, for a long time.

The plants occurring there include:

<u>Rumex acetosella</u>	sheep's sorrel
<u>Cochlearia officinalis</u>	common scurvy grass
<u>Pilosella officinarum</u>	mouse ear - hawkweed
<u>Prunus spinosa</u>	blackthorn
<u>Vicia sepium</u>	bush vetch
<u>Achillea millefolium</u>	yarrow
<u>Pimpinella saxifraga</u>	burnet saxifrage
<u>Rosa spinosissima</u>	burnet rose
<u>Funaria hygrometrica</u>	moss

Gorse (Ulex sp.) is the dominant species.

#### Evaluation

A rare plant species is known to occur at the site.

#### Threats to the Area

None is obvious. The species in question grows in disturbed situations. Building is the only possible hazard and it would seem unlikely at the site.

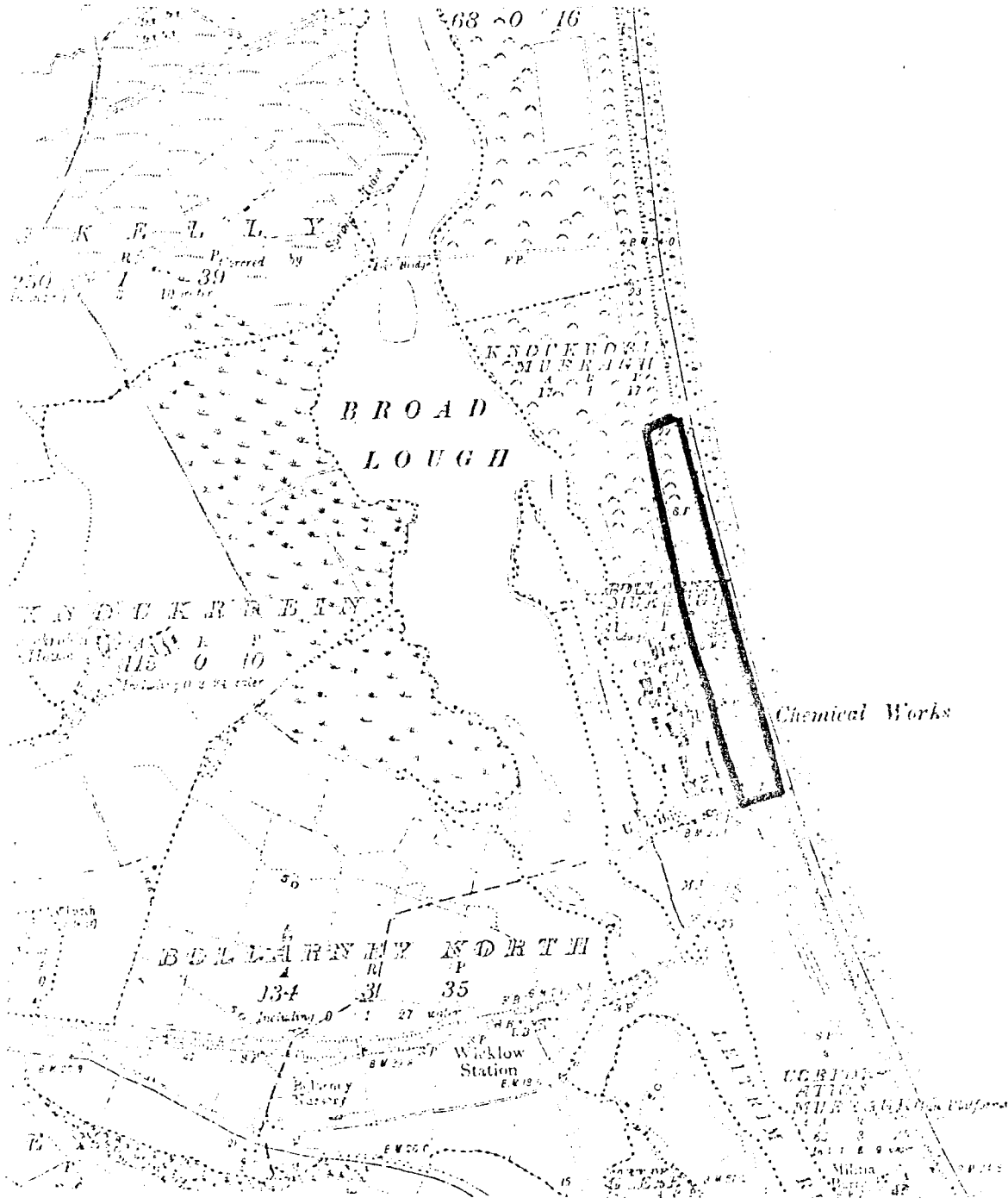
#### Recommendations

Any development at this site should take cognisance of its scientific values.



# MAP SHOWING AREA OF SCIENTIFIC INTEREST - 37

Scale: 6 inches to 1 Mile



Name of Area HOLLYWOOD GLEN  
Acreage 90  
Grid Reference N. 930,015  
Scientific Interest Geological  
Rating Regional Importance  
Priority C

Description of Area See Map 38

The site is a complex of dry, steep-sided valleys which are orientated in a north-south direction. The valley which is cut in rock was formed by melt water flowing submarginally beneath the ice from glacial Lake Blessington.

Evaluation

Farrington, A. (1957) Glacial Lake Blessington Irish Geography, 3: 216-222.

Threats to the Area

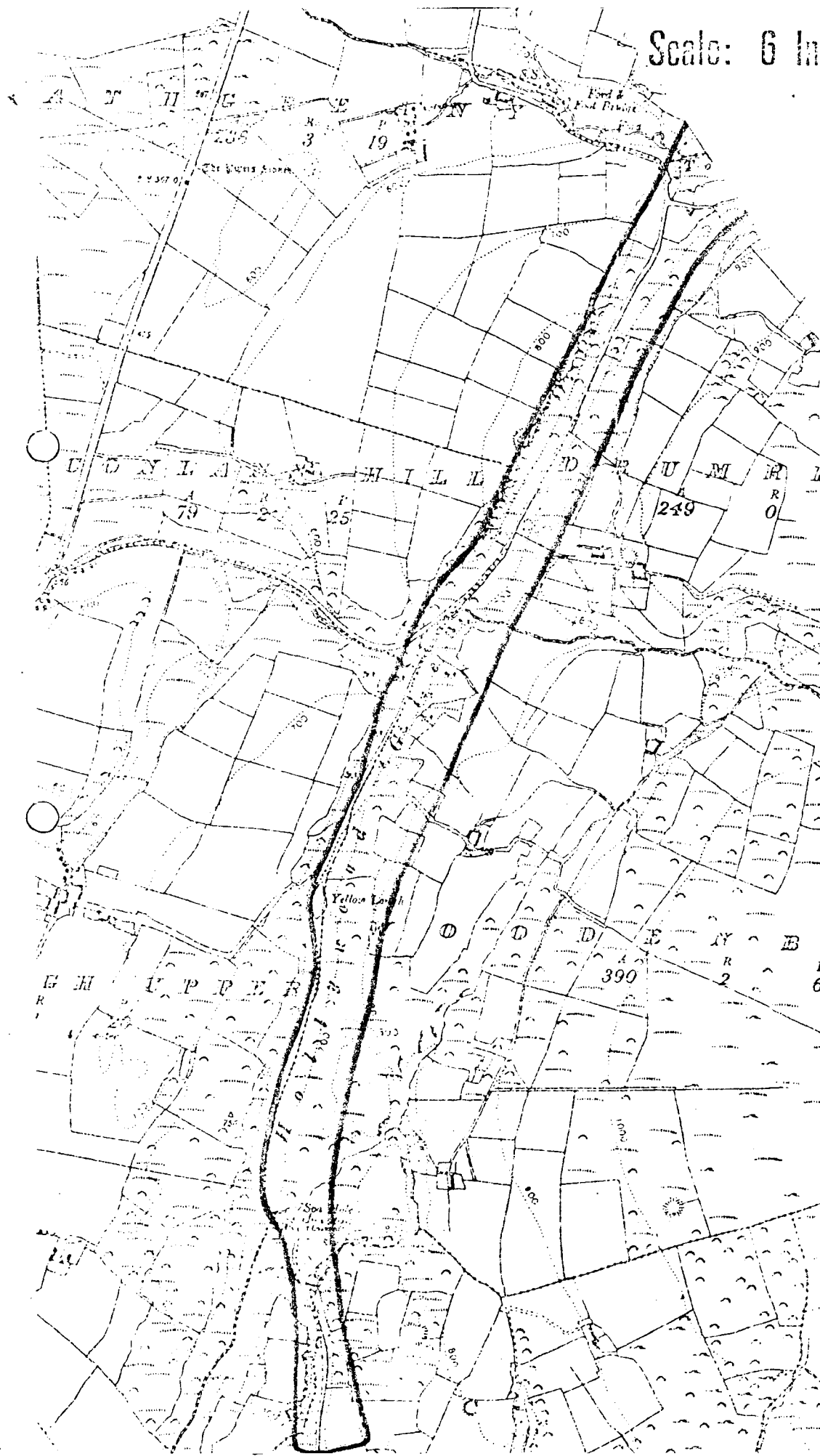
Rubbish tipping is the most likely

Recommendations

Any development of this area should be in accordance with its scientific value.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST—38

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	SITE ALONG THE KING'S RIVER
<u>Acreage</u>	18
<u>Grid Reference</u>	N. 980, 032
<u>Scientific Interest</u>	Botanical
<u>Rating</u>	Regional
<u>Priority</u>	C

Description of Area      See Map 39.

The site is a sandy area of river bank. Surrounding it are pasture and lands dominated by Ulex sp. (gorse). The plant species occurring at the site are:

<u>Agrostis stolonifera</u>	common bent grass
<u>Cynosurus cristatus</u>	crested dog's tail grass
and <u>Sarothamnus scoparius</u>	broom

Wetter areas along the bank have a marsh flora:

<u>Angelica sylvestris</u>	wild angelica
<u>Viola palustris</u>	marsh violet
<u>Mnium</u> sp.	a moss
<u>Filipendula ulmaria</u>	meadowsweet
<u>Achillea millefolium</u>	yarrow
<u>Succisa pratensis</u>	devil's bit scabious
<u>Ranunculus bulbosus</u>	bulbus buttercup
<u>Galium palustre</u>	marsh bedstraw
and <u>Anemone nemerosa</u>	wood anemone

Evaluation

The site has a rare plant species.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 39

Scale: 1 inch to 1 Mile



Threats to the Area

None obvious as long as the present land use policy continues.

Recommendations

Any development of this area should take account of its scientific value.

<u>Name of Area</u>	POULAPHOUCA RESERVOIR
<u>Acreage</u>	8,400
<u>Grid Reference</u>	O. 00, 10
<u>Scientific interest</u>	Ecological, Ornithological, Botanical and Zoological
<u>Rating</u>	Regional Importance
<u>Priority</u>	C

Description of Area See Map 40.

The site is a large reservoir.

Publication

Moriarty, C.J. 1963 Food of Perch and Trout in an Irish Reservoir,  
Proc. R. Ir. Acad. 63 B (1)

Evaluation

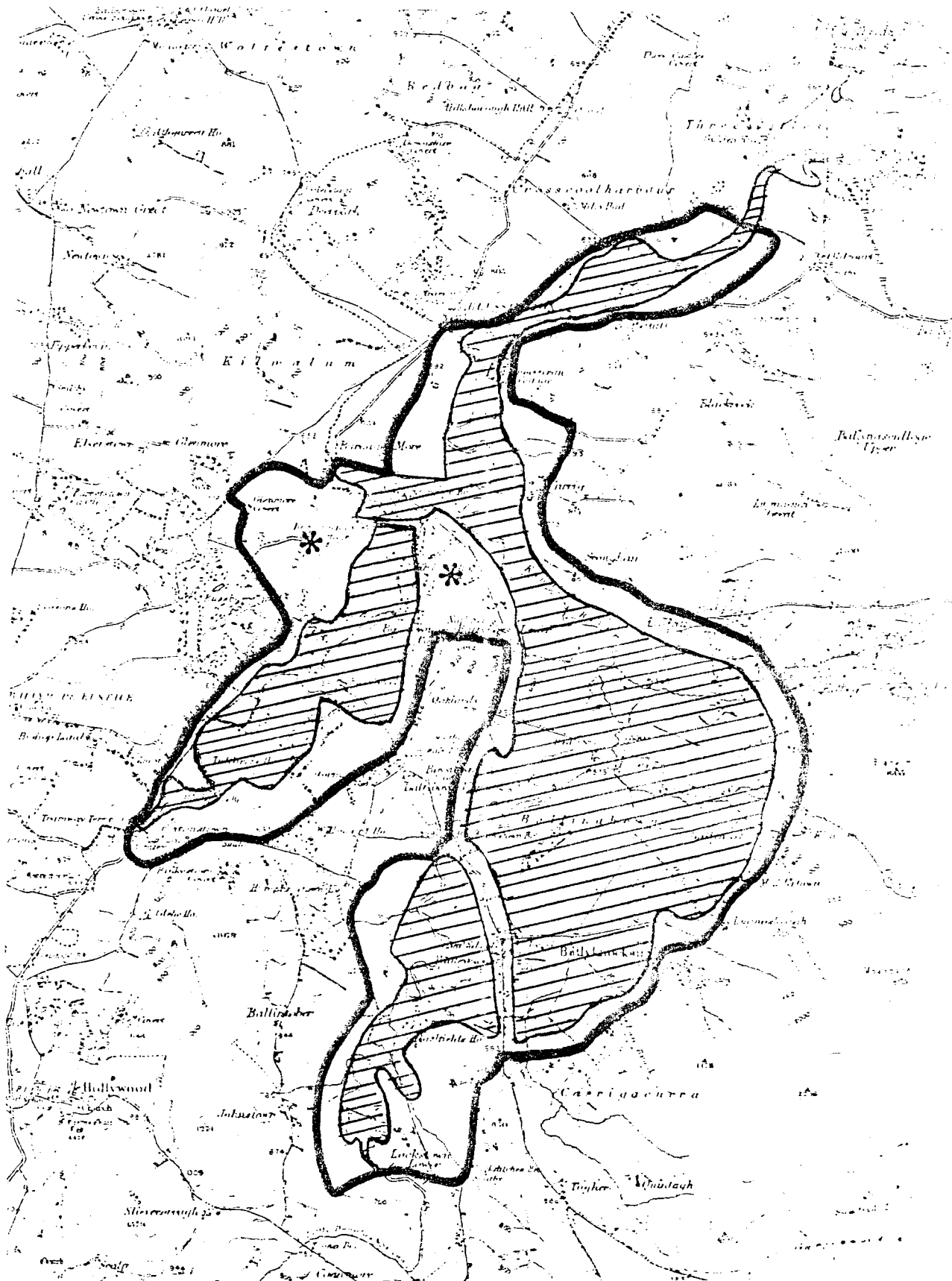
This is the only large area of open water in the region and is relatively near Dublin. The wildfowl of the area is noteworthy; the lake contains the largest inland stocks of water fowl in Co. Wicklow during the winter months. Counts carried out between 1967 and 1969 revealed the following maxima:-

Mallard	300	Greylag Goose	200
Teal	250	White fronted Goose	1
Wigeon	250	Pink footed Goose	1
Pochard	40	Mute Swan	7
Tufted Duck	200	Whooper Swan	22
Goldeneye	7		

The area marked with an asterisk is a feeding ground for approximately one third of the Country's Greylag Goose population.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST - 40

Scale: 1 inch to 1 mile





Breeding records for birds occurring close to or on the lakes are as follows:-

Confirmed

Moorhen

Coot

Possible & Probable

Heron

Teal

Tufted Duck

Mute Swan

Sparrow Hawk

Kestrel

Lapwing

Snipe

Curlew

Black headed Gull

Threats to the Area

The E.S.B. own the water body and access to the shore is controlled. The most likely threat is building on the area marked with asterisks.

Recommendations

Any development in the region should be in keeping with the scientific value of the area. In particular disturbance to the foreshoreline and building close to the margin of the lake should be prohibited. The planting of coniferous trees too close to the lake margin would interfere with wildfowl feeding and should not be allowed. Consideration should be given to the use of a conservation order for the area, known to support the Greylag geese.

<u>Name of Area</u>	WALPOLE'S GARDEN, MOUNT USHER
<u>Acreage</u>	Not calculated
<u>Grid Reference</u>	T. 270, 972
<u>Scientific interest</u>	Botanical and ecological
<u>Rating</u>	Regional importance
<u>Priority</u>	C

Description of the Area

The site is a sheltered exotic garden composed of tropical Mediterranean and temperate plants growing under naturalised conditions. The gardens are on either side of the River Dargle.

Evaluation

The area is of value because tropical and other exotic plant species grow naturally out of doors. The area is also likely to be of interest as a invertebrate habitat because similar areas in Southern Ireland have been found to contain unusual imported insect assemblages.

Threats to the Area

None known.

Recommendations

Any development of this area should take into account its scientific value.

<u>Name of Area</u>	POWERSCOURT DEMESNE
<u>Acreage</u>	Not calculated
<u>Grid Reference</u>	O. 215, 165
<u>Scientific interest</u>	Ecological
<u>Rating</u>	Regional importance
<u>Priority</u>	C

Description of the Area

The site is a demesne consisting of cultivated areas, woods and parkland.

Evaluation

Demesnes like Powerscourt were at one time common in Ireland. Powerscourt contains a representative selection of birds and a deer park. It is a valuable example of a form of land management which has widely disappeared and it serves to show the impact of man on his environment, by an earlier form of land management.

Threats to the Area.

None obvious.

Recommendations

As far as possible the estates should be kept together in the future. A desirable step would be the continued practice of traditional farming methods in order to preserve breeding populations of native fauna.

<u>Name of Area</u>	LUGNAQUILLIA - NORTH AND SOUTH
<u>Acreage</u>	550
<u>Grid Reference</u>	T. 030, 920
<u>Scientific interest</u>	Botanical, ecological and zoological
<u>Rating</u>	Regional importance
<u>Priority</u>	C

Description of the Area                      See Map 41.

The site is an area of high altitude moorland containing a number of unusual plants.

Evaluation

The vegetational composition of the Lugnaquilla community is similar to, but of less importance, than at Lough Ouler.

Threats to the Area

Forestry planting is the most likely, but out of season burning is also possibly a disturbing influence on the vegetation.

Recommendations

General planning control should be exercised to prevent harmful development in this area.



<u>Name of Area</u>	GLENDALOUGH MINES
<u>Acreage</u>	Not calculated
<u>Grid Reference</u>	T. 090,960
<u>Scientific Interest</u>	Geological
<u>Rating</u>	Regional Importance
<u>Priority</u>	C

Description of Area

The mines are situated at the head of Glendalough Valley - just above the upper lake. The mine shafts occur to the north of the river along the granite/schist contact.

Evaluation

The mines, buildings and tipheads are typical of the Wicklow lead mines. The tip heaps contain small quantities of galena, sphalerite, chalcopyrite, malachite and other minerals. The mine area is a suitable demonstration area for educational purposes.

Threats to the Area

None obvious.

Recommendations

One of the mines might be re-opened as a demonstration model for the area.

<u>Name of area</u>	BALLINACOR WOOD
<u>Acreage</u>	400
<u>Grid Reference</u>	T. 130, 885
<u>Scientific interest</u>	Ecological, botanical and zoological
<u>Rating</u>	Local importance
<u>Priority</u>	A

Description of the area See Map 42.

These woodlands are composed of very old oak trees with some Betula sp. (birch) and Fagus sylvatica (beech) close to the Rathdrum Road. The forest was visited on one occasion and the slope examined at one point. The following flora was found close to the foot of the slope:

<u>Sphagnum</u> sp.	moss
<u>Polytrichum</u> sp.	"
<u>Juncus effusus</u>	soft rush

and some Rubus fruticosus agg.

Higher up the hillside the flora becomes more similar to that of a deciduous woodland with

Endymnion non-scriptus Bluebell

and

Oxalis acetosella wood sorrel

forming the greater part of the ground cover. In addition the species

Lonicera periclymenum honeysuckle

Pteridium aquilinum bracken

Blechnum spicant hard fern

and Rhytidiadelphus triquetrus moss

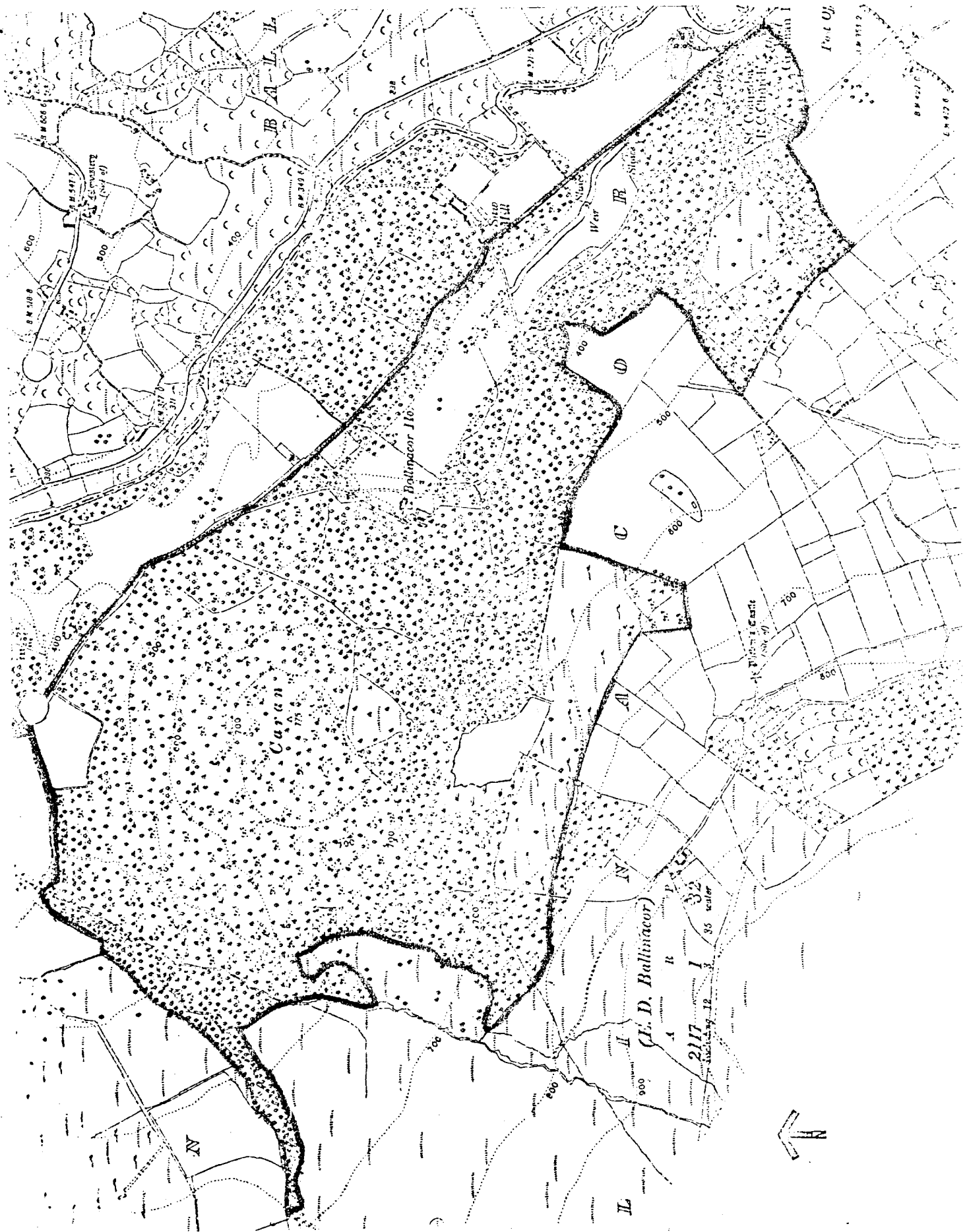
occur and Rhododendron is dominant over large areas.

#### Evaluation

The area is a good example of an oakwood having, in places, a typical

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 42

Scale: 6 Inches to 1 Mile





ground flora. It is likely to be a good invertebrate habitat.

Threats to the Area

Some of the woods are being cut down at present. Clearance for any purpose (underplanting, reclamation of land for tillage, building, etc.) is the chief danger.

Recommendations

The woodlands on the slope should be protected, if necessary, by use of a tree preservation order. The woods at this point require a management policy especially for the control of rhododendron which is well established and regenerating profusely.

<u>Name of Area</u>	THE QUILL WOODLAND
<u>Acreage</u>	25
<u>Grid Reference</u>	O. 240, 135
<u>Scientific Interest</u>	Ecological, botanical and zoological
<u>Rating</u>	Local Importance
<u>Priority</u>	A

Description of Area See Map 43.

The area is a small and apparently secondary woodland, dominated by oak, birch and holly. The site is divisible into two areas, an eastern part which is on a hill. The ground flora here is an impoverished collection of plants found in other deciduous woods in the county; with some heath plants:

<u>Blechnum spicant</u>	hard fern
<u>Pteridium aquilinum</u>	bracken
<u>Vaccinium myrtillus</u>	bilberry
<u>Calluna vulgaris</u>	ling

and the mosses,

<u>Hylocomium splendens</u>
<u>Pleurozium schreberi</u>

and Dicranum majus

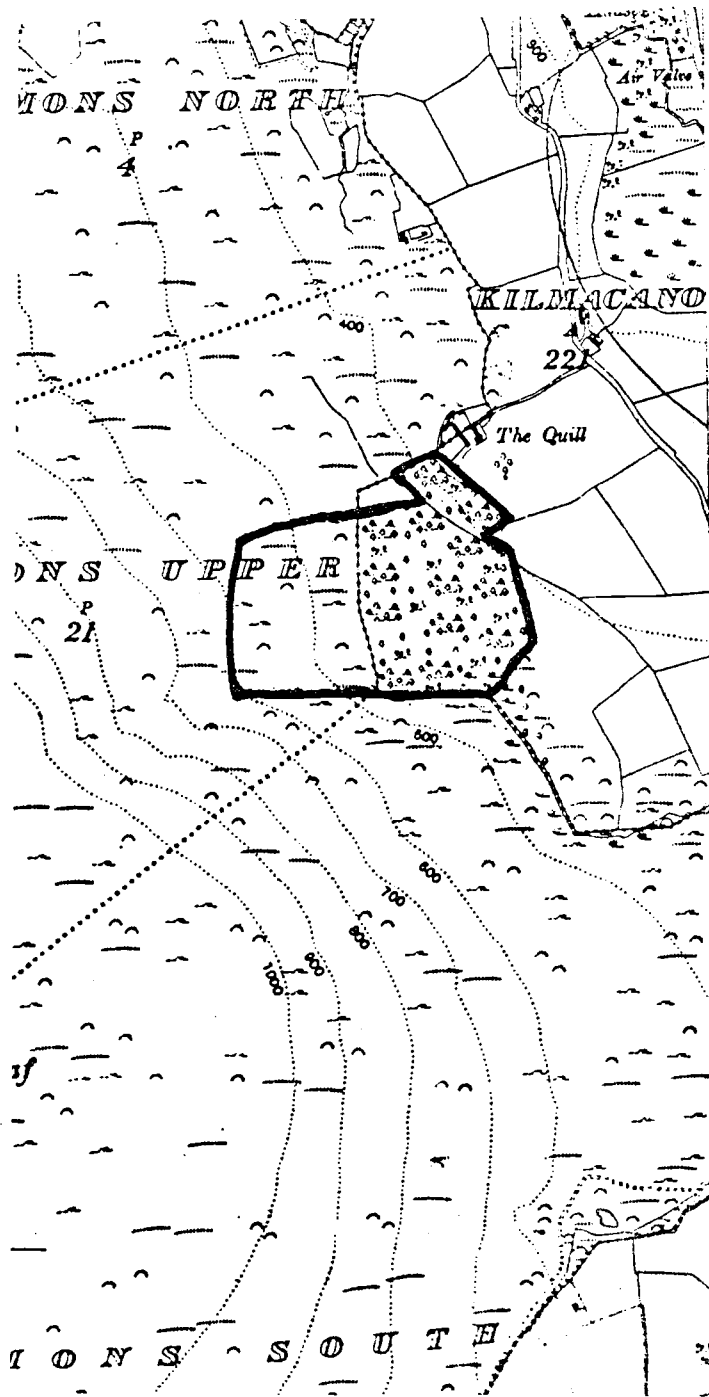
The western end of the site is a damp gully containing a bog flora:

<u>Molinia caerulea</u>	purple moor grass
<u>Sphagnum spp.</u>	
<u>Juncus effusus</u>	soft rush
<u>Calluna vulgaris</u>	ling
<u>Vaccinium myrtillus</u>	bilberry
<u>Blechnum spicant</u>	hard fern

The moss Polytrichum commune forms large tufts. Birch (Betula sp.) is more common in this part of the site than the other.

MAP SHOWING AREA OF SCIENTIFIC INTEREST—43

Scale: 6 Inches to 1 Mile



Evaluation

This woodland is noteworthy as a collecting site for invertebrates and has been visited by various collectors including Belrne who gives a number of references to it in his published work .

Threats to the Area

Some clearance is taking place, possibly for building purposes .

Recommendations

Care should be taken to leave the greater part of this site intact for scientific purposes .

<u>Name of Area</u>	LOWTOWN MARSH
<u>Acreage</u>	32
<u>Grid Reference</u>	S. 845, 923
<u>Scientific Interest</u>	Ecological
<u>Rating</u>	Local Importance
<u>Priority</u>	A

Description of Area See Map 44.

The site is a wetland which has been partially drained. The plants occurring there include large areas of

Phragmites communis common reed

Iris pseud-acorus yellow flag

and

Holcus lanatus yorkshire fog grass

Additional species are:

Ranunculus flammula lesser spearwort

Apium nodiflorum fool's water

Rumex acetosa common sorrel

Succisa pratensis devil's bit scabious

Festuca rubra red fescue

Lathyrus pratensis yellow meadow vetchling

Prunella vulgaris selfheal

Cirsium palustre marsh thistle

Clemacium dendroides a moss

Hylocomium splendens " "

Aulocomnium sp " "

Acrocladium sp " "

Filipendula ulmaria meadowsweet

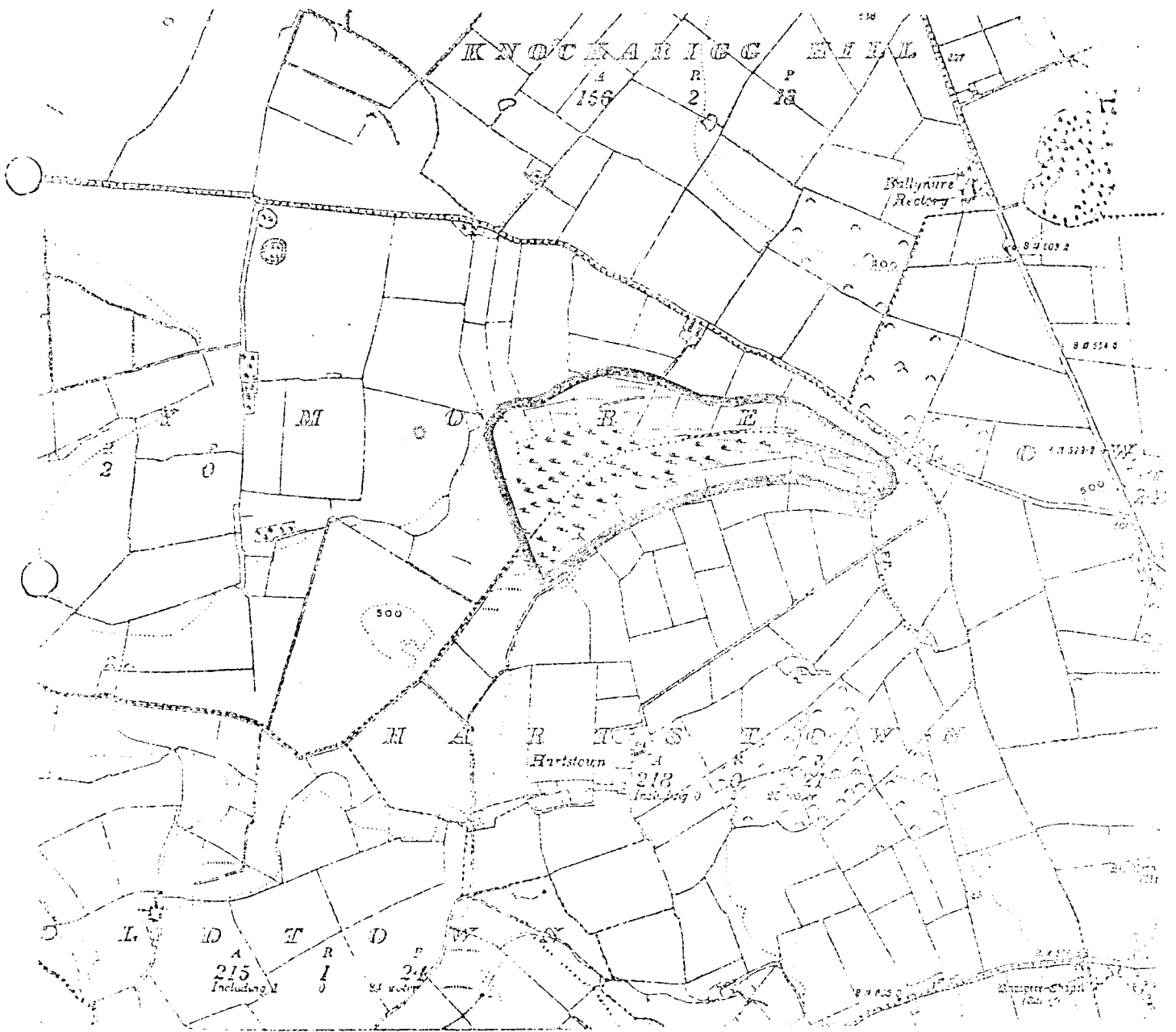
Mentha aquatica watermint

Ranunculus bulbosus bulbous buttercup

Luzula campestris field wood-rush

MAP SHOWING AREA OF SCIENTIFIC PIONEERS - 1844

Scale: 6 inches to 1 mile



<u>Juncus effusus</u>	soft rush
<u>Vicia (sepium?)</u>	bush vetch
<u>Pedicularis sylvatica</u>	lousewort
<u>Cardamine edulis</u>	lady's smock
<u>Senecio aquatica</u>	marsh fleawort
<u>Eriophorum angustifolium</u>	common cotton grass

The trees in the marsh area are the willow Salix aureta and S. cinerea.

#### Evaluation

In spite of partial drainage, and resultant shrinkage, the marsh is still a representative ecotype with a typical fauna and flora.

#### Threats to the Area

The most serious is further drainage. Dumping and effluent disposal are also likely to alter the area.

#### Recommendations

Efforts should be made to protect this area, possibly by reversing the effects of drainage. Consideration should be given to the use of a conservation order. Care with the siting of sewage pipes from septic tanks should be taken.

<u>Name of Area</u>	LOUGH NAHANAGAN
<u>Acreage</u>	65
<u>Grid Reference</u>	T. 080,991
<u>Scientific Interest</u>	Botanical
<u>Rating</u>	Local Importance
<u>Priority</u>	B

Description of Area      See Map 45.

The site is a steep corrie wall like that at Lough Ouler.

The common heath flora is the same as at Lough Ouler with the addition of *Epilobium angustifolium* (rose bay willow herb) but there are fewer rarities, although some of these occurring at Ouler are also found here.

Evaluation

The site has a good example of a mountain flora.

Threats to the Area

These are as for Ouler. Forestry encroachment could spoil the ground flora but late season burning is possibly a danger at the present time.

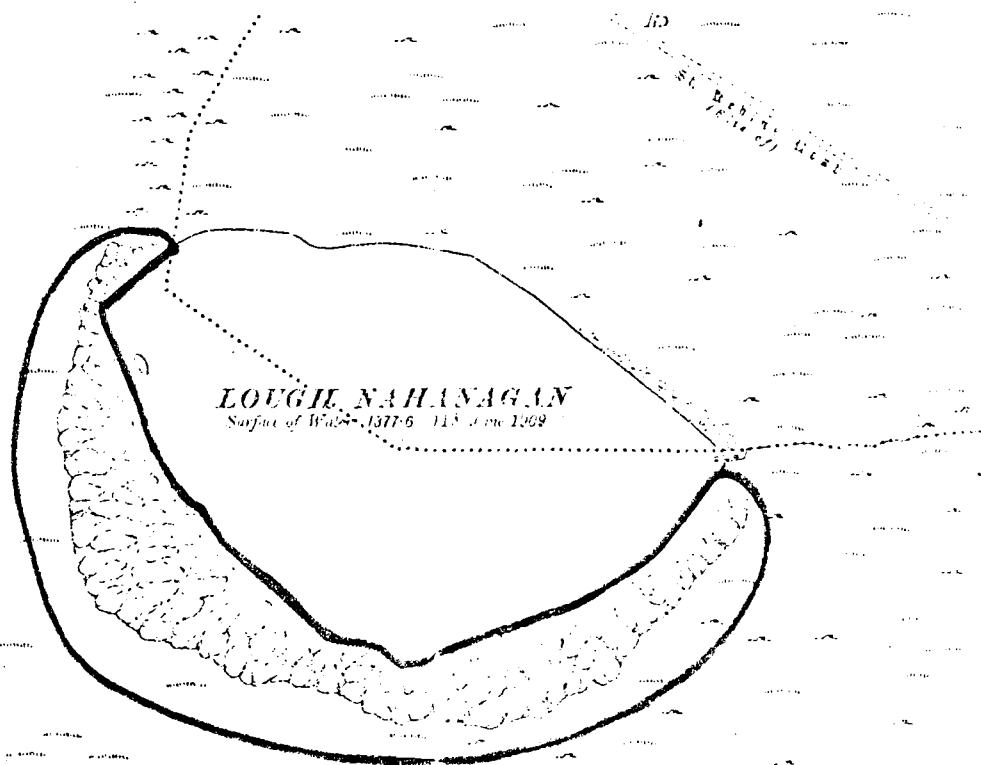
Recommendations

General planning should be exercised to maintain this site as at present.



MAP SHOWING AREA OF SCIENTIFIC INTEREST --45

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	ANNAMOE FENS
<u>Acreage</u>	102
<u>Grid Reference</u>	T. 187,997
<u>Scientific Interest</u>	Ecological, Botanical and Zoological
<u>Rating</u>	Local Importance
<u>Priority</u>	B

Description of Area      See Map 46.

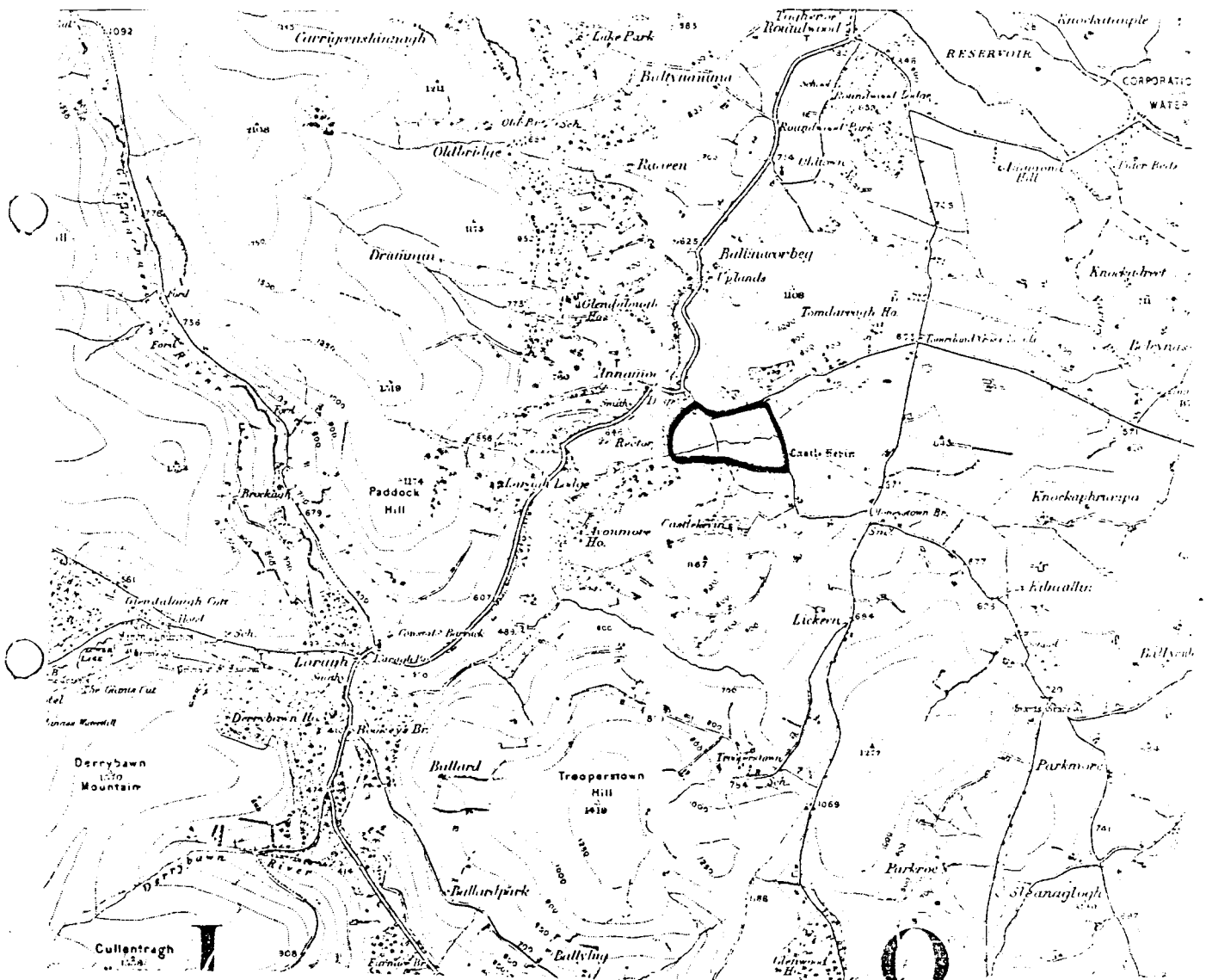
The site is a wet area of rough grazing land (dominated by Juncus spp.) going into marsh in places. The areas of interest are surrounded by a solid line in Map 46 and the subsidiary, supporting areas are outlined with a dashed line.

A vegetational list for the marsh areas is as follows:

<u>Ranunculus repens</u>	creeping buttercup
<u>Narthecium ossifragum</u>	bog asphodel
<u>Succisa pratensis</u>	devil's bit scabious
<u>Erica tetralix</u>	cross leaved heath
<u>Molinia caerulea</u>	purple moor grass (dominant in places)
<u>Juncus articulatus</u> )	These rushes are dominant
<u>J. acutiflorus</u> )	in the damp areas surrounding
<u>J. effusus</u> )	the fens, some occur in the
<u>J. inflexus</u> )	fen region also.
<u>Carex rostrata</u>	hottle sedge
<u>Veronica scutellata</u>	marsh speedwell
<u>Galium palustre</u>	marsh bedstraw
<u>Agrostis tenuis</u>	creeping bent grass
<u>Polytrichum commune</u>	moss
<u>Eriophorum vaginatum</u>	hare's tail grass
<u>Angelica sylvestris</u>	wild angelica

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 46

Scale: 1 Inch to 1 Mile



<u>Ranunculus hederaceus</u>	ivy leaved crowfoot
<u>Cardamine pratensis</u>	lady's smock
<u>Ranunculus flammula</u>	lesser spearwort
<u>Calluna vulgaris</u>	ling
<u>Mnium hornum</u>	moss
<u>Viola palustris</u>	marsh violet
<u>Aulacomium</u> sp.	moss
<u>Carex echinata</u>	stir sedge
<u>Agrostis stolonifera</u>	common bent grass
<u>Acrocladium cuspidatum</u>	moss

The drier areas are dominated by

Pteridium aquilinum bracken

and channels containing stagnant water have the following species:

Glyceria maxima (?) reed sweet grass

Potamogeton polygonifolius bog pondweed

Sphagnum sp. (palustre?) moss

Callitriche intermedia (?)

In places the fen supports a scrub of

Salix aurêta willow

and Betula pubescens birch

and some

Pteridium aquilinum bracken occurs

### Evaluation

In County Wicklow fens are infrequent. The sites described above contain a representative selection of plant species and are probably a good invertebrate habitat.

### Threats to the Area

Drainage, which has occurred in places.

Recommendations

If further drainage is to occur in these areas thought should be given to the protection of the sites by devising a suitable drainage pattern, i.e. one which would remove surplus waters from all but the fens proper. Research on the pattern is required. Failing preservation by use of basic planning controls a conservation order for the best of the areas might be considered. Further recommendations to this end would be devised by An Foras.

<u>Name of area</u>	GLENCREE WOODLANDS
<u>Acreage</u>	1,200
<u>Grid Reference</u>	0. 165, 160
<u>Scientific interest</u>	Botanical, ecological
<u>Rating</u>	Local importance
<u>Priority</u>	B

Description of Area                      See Map 47.

The woodland is located on the floor of a glacial valley. At the western end of the site the trees are most concentrated but further east they become scattered. Open ground is therefore included in Map 47. The majority of the trees are oak but birch or hazel also occur. Holly is occasional.

Among the trees the ground vegetation cover is composed mainly of Bryophytes. The following were recorded:

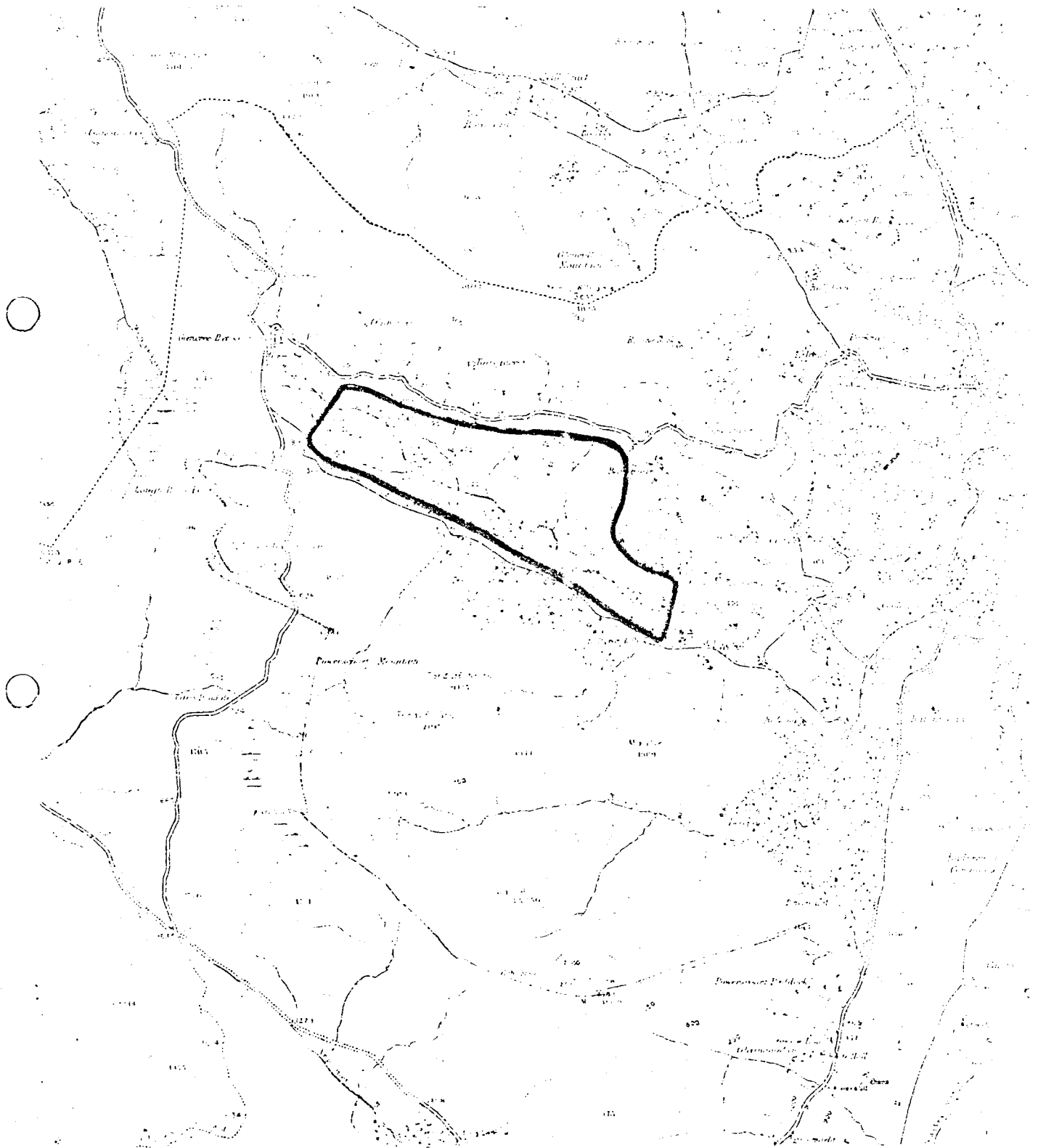
Acrocladium cuspidatum  
Plagiothecium undulatum  
Hypnum cupressiforme  
Thuidium tamariscinum  
Polytricum commune  
Mnium hornum  
Pleurozium schreberi

Additional species occurring there included:

<u>Vaccinium myrtillus</u>	bilberry
<u>Luzula sylvatica</u>	woodrush
<u>Blechnum spicant</u>	hard fern
<u>Chrysosplenium oppositifolium</u>	golden saxifrage
<u>Oxalis acetosella</u>	wood sorrel

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 47

Scale: 1 inch to 1 mile



The open ground is colonised by the following:

<u>Erica tetralix</u>	heather
<u>Calluna vulgaris</u>	ling
<u>Molinia caerulea</u>	purple moor grass
<u>Scirpus caespitosus</u>	deer grass

Smaller species occurring among these are:

<u>Potentilla erecta</u>	tormentil
<u>Narthecium ossifragum</u>	bog asphodel
<u>Succisa pratensis</u>	devil's bit scabious
<u>Sphagnum</u> spp.	moss
<u>Cladonia</u> spp.	lichens
<u>Cirsium Palustre</u>	marsh thistle
<u>Nardus stricta</u>	mat grass
<u>Festuca</u> sp.	grass
<u>Vaccinium oxycoccis</u>	cranberry
<u>Dryopteris</u> sp.	fern
<u>Juncus acutifloris</u>	rush

#### Evaluation

The site is a good example of deciduous woodland and is likely to contain several invertebrate habitat types.

#### Threats to the area

Recreational pressures are likely to increase in the future bringing the attendant risk of fire. Building is a possibility in parts of the area. Forestry planting is occurring on the site.

#### Recommendations

The long term objective should be to preserve the wet grazing and woodland nature of the area. Tree felling should be prevented and building around the area controlled. Building in the area delimited should be discouraged. In time it may be necessary to devise a management policy for the area. The removal of forestry plantings from the deciduous woodlands would be desirable.



<u>Name of Area</u>	BALLYNAMONA MARSH
<u>Acreage</u>	92
<u>Grid Reference</u>	T. 270, 823
<u>Scientific Interest</u>	Ecological, botanical and zoological
<u>Rating</u>	Local Importance
<u>Priority</u>	B

Description of Area See Map 48.

The marshlands are diffuse within the site limits on Map 48. The wetlands proper contain the following plant species:

<u>Myostis secunda</u>	marsh forget-me-not
<u>Equisetum telmatea</u>	horsetail
<u>Valeriana officinalis</u>	valerian
<u>Iris pseudacorus</u>	yellow flag
<u>Cirsium palustre</u>	marsh thistle
<u>Filipendula ulmaria</u>	meadowsweet
<u>Alnus glutinosa</u>	alder
<u>Juncus articulatus</u>	articulated rush
<u>J. effusus</u>	soft rush
<u>Galium palustre</u>	marsh bedstraw
<u>Mentha aquatica</u>	water mint
<u>Succisa pratensis</u>	devil's bit scabious
<u>Callitriche stagnalis</u>	mud water starwort
<u>Carex paniculata</u>	greater tussock sedge
<u>Sparganium ramosum</u>	bur reed
<u>Brachythecium sp.</u>	moss

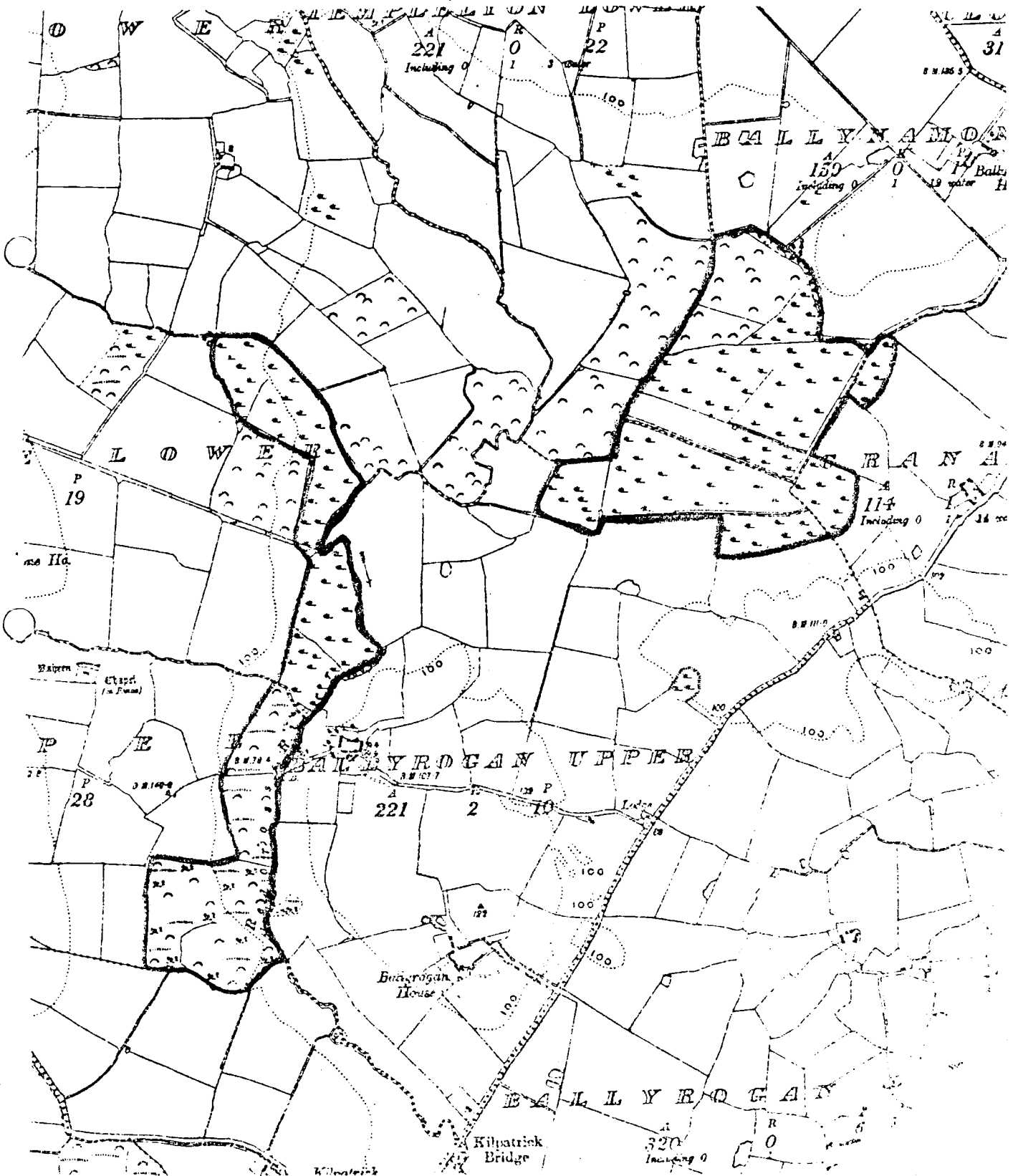
The largest vegetational species in the wet areas is Salix cinerea, Willow.

Within the marsh area as indicated on Map 48 there occur dry hills which have the following plant species:

<u>Ranunculus acris</u>	buttercup
<u>Vicia sepium</u>	bush vetch

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 48

Scale: 6 Inches to 1 Mile



<u>Lythrum salicaria</u>	purple loosestrife
<u>Senecio jacobea</u>	ragwort
<u>Lonicera periclymenum</u>	honeysuckle
<u>Hypericum tetrapterum</u>	square stemmed St. John's wort
<u>Centaurea nigra</u>	knapweed
<u>Sieglingia decumbens</u>	heath-grass
<u>Cynosurus cristatus</u>	crested odg's tail grass
<u>Agrostis stolonifera</u>	common bent grass
and <u>Ulex europaeus</u>	gorse, which is the largest
species occurring in the dry areas .	

#### Evaluation

The site contains a representative range of plant species and is probably a good invertebrate area .

#### Threats to the Area

Drainage is the most obvious; has occurred in parts of the area .

#### Recommendations

It would be desirable to preserve at least a part of the site. In the event of further drainage, this could be done by draining around the deepest area; a similar recommendation to that made for Site 36 (Annamoe Fens) might be made.

<u>Name of Area</u>	DUNLAVIN MARSHES
<u>Acreage</u>	60 (in Co. Wicklow).
<u>Grid Reference</u>	N. 853, 025
<u>Scientific Interest</u>	Ecological, Botanical and Zoological
<u>Rating</u>	Local importance
<u>Priority</u>	B

Description of the Area See Map 49

The site is an area of waterlogged ground, without open water, as at the Lemmstown Marsh (Site 18). A stream runs through the area and contains the following plant species.

<u>Rorippa sp.</u>	water cress
<u>Apium nodiflorum</u>	fool's water cress
<u>Mentha aquatica</u>	water mint
<u>Caltha palustris</u>	marsh marigold
<u>Lythrum salicaria</u>	purple loosestrife is profuse at the stream margins

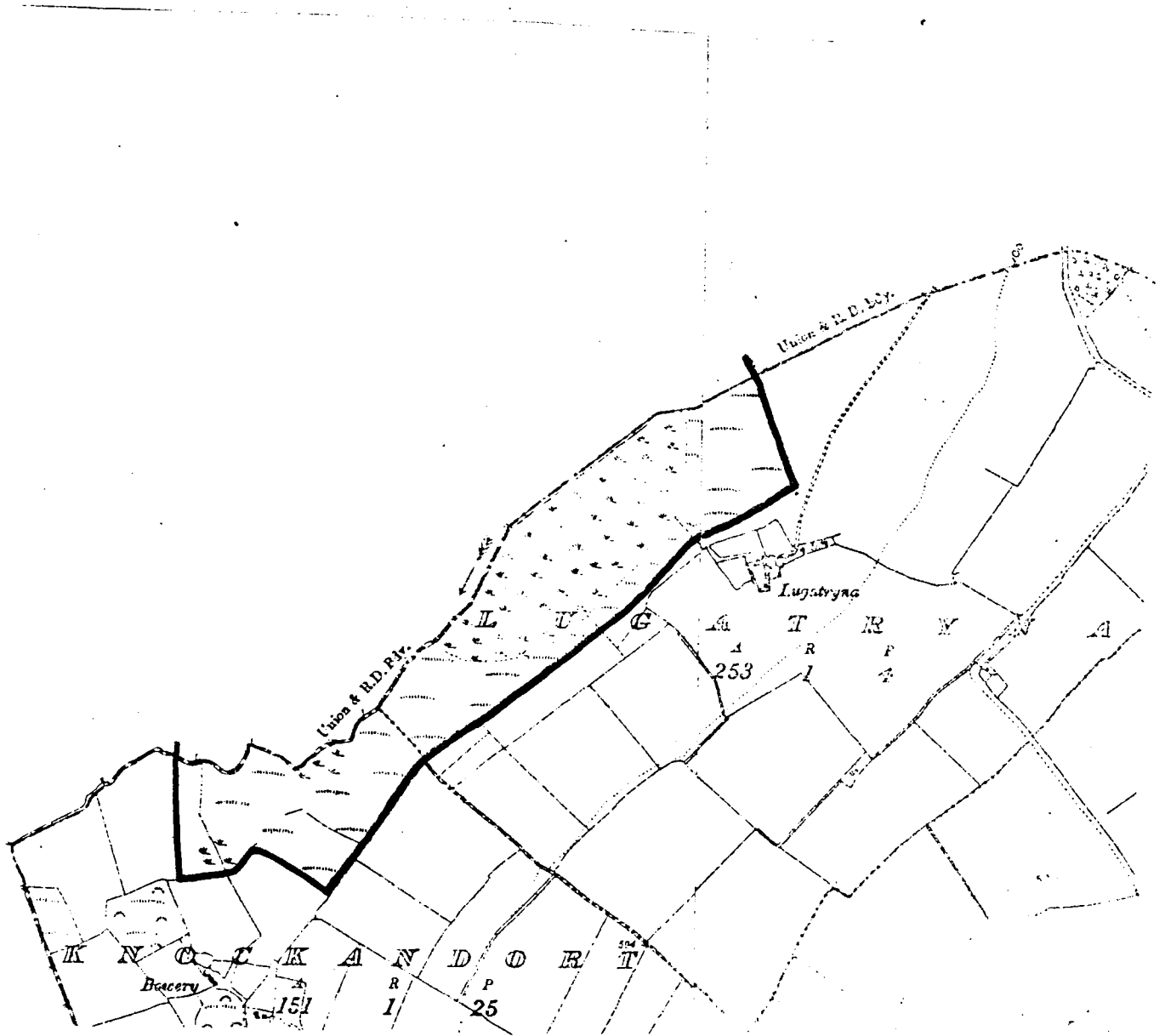
The vegetation surrounding the stream is dominated by Phragmites communis (common reed) and Carex paniculata.

There are some large swards of Holcus lanatus (Yorkshire foggrass). Additional species include:

<u>Cardamine pratensis</u>	lady's smock
<u>Galium palustra</u>	marsh bedstraw
<u>Filipendula ulmaria</u>	meadowsweet
<u>Angelica sylvestris</u>	common angelica
<u>Equisetum fluviatile</u>	horsetail
<u>Succisa pratensis</u>	devil's bit scabious

MAP SHOWING AREA OF SCIENTIFIC INTEREST — 49

Scale: 6 Inches to 1 Mile



The site has some scrub cover of Salix spp. (willows) and Betula sp. (birch) in addition to some conifers.

#### Evaluation

This site, which extends into Co. Kildare is one of the most extensive marshes in Co. Wicklow. Its floral composition is varied and suggests it might be a good invertebrate habitat.

#### Threats to the Area

Drainage is a possibility, especially as this has been the fate of most of the marshes in this area. Rubbish dumping might also occur.

#### Recommendations

In view of the scarcity of wetlands of this type in Co. Wicklow, efforts should be made to preserve this site without alteration or contamination by domestic or farm effluent.

<u>Name of Area</u>	OAK WOODS BESIDE LOUGH DAN
<u>Acreage</u>	920
<u>Grid Reference</u>	O. 158, 048
<u>Scientific Interest</u>	Ecological, botanical
<u>Rating</u>	Local importance
<u>Priority</u>	B

Description of the area      See Map 50

The site is an area of oak woodland or moorland and there is some open ground. The trees making up the woodland area include birch and hazel. Some areas of the wood contain conifers.

Ground layer vegetation comprises the following:

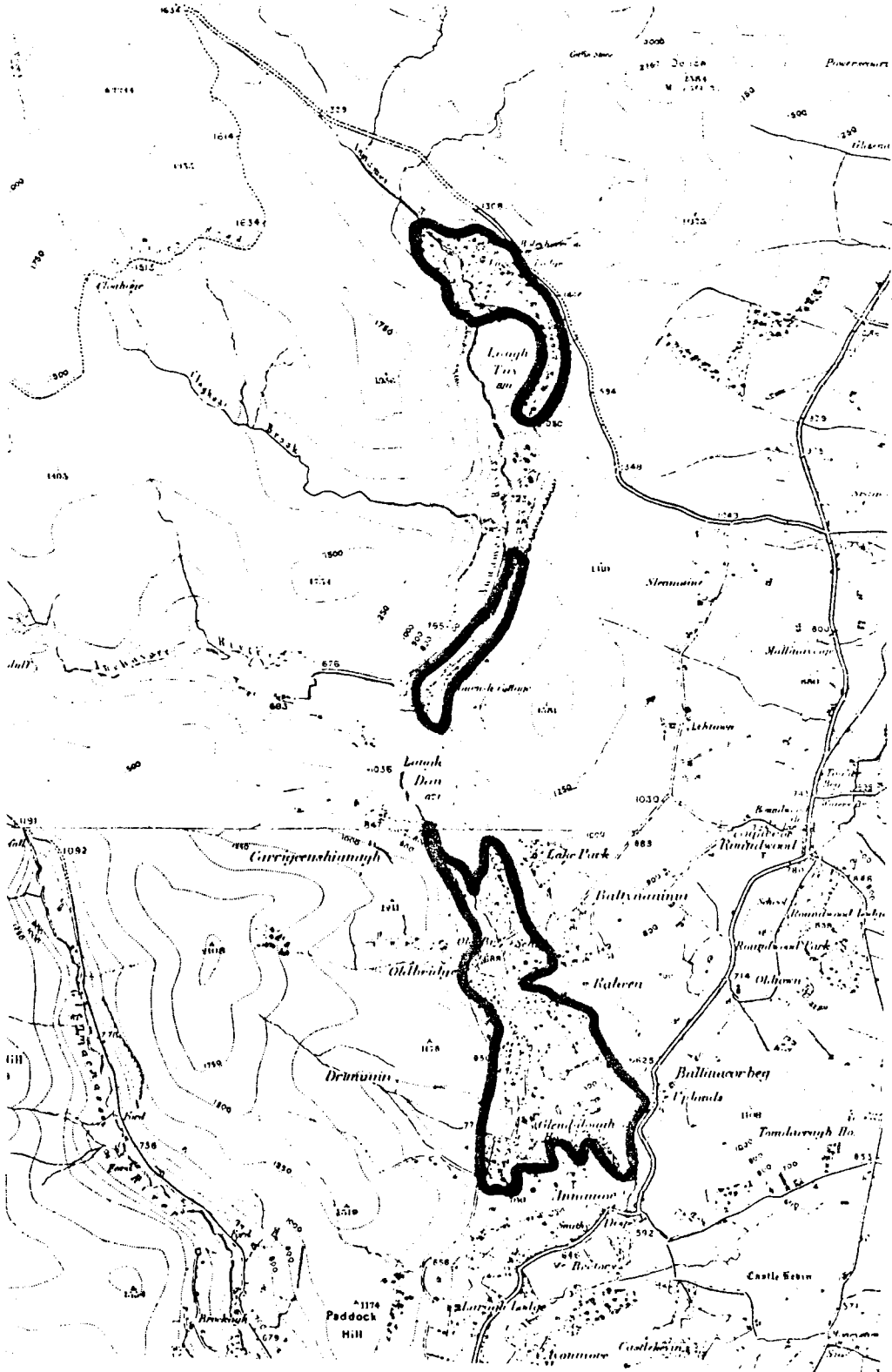
<u>Erica cinerea</u>	heather
<u>E. tetralix</u>	heather
<u>Blechnum spicant</u>	hard fern
<u>Luzula sylvatica</u>	wood rush
<u>Molinia caerulea</u>	purple moor grass
<u>Juncus articulatus</u>	rush
<u>J. effusus</u>	common rush
<u>Dryopteris dilatata</u>	fern
<u>Vaccinium myrtillus</u>	bilberry
<u>Lonicera periclymenum</u>	honeysuckle
<u>Teucrium scorodinia</u>	woodsage
<u>Narthecium ossifragum</u>	bog asphodel
<u>Dactylorhiza fuchsii</u>	orchid
<u>Galium saxatile</u>	bedstraw
<u>Agrostis stolonifera</u>	common bent grass

Bryophytes occurring on the wet mountainside include:

Thuidium sp.  
Dicranum scoparium  
Pleurozium schreberi

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 50

Scale: 1 Inch to 1 Mile





Polytrichum commune

Hylocomium splendens

Sphagnum spp. (occasionally)

Evaluation

The area is a good example of an oak wood.

Threats to the area

Recreational pressures and possibly building

Recommendations

The site is visited by casual holidayers and thought should be given to a management policy in the future as recreational pressure is likely to increase. The provision of fire fighting equipment and warning notices would be useful as fire has been known at the site in recent years.

The long term object should be the conservation of the site; the protection of its character and possibly increased utilization as a place of recreation. Building should be prevented.

Name of Area BRITTAS BAY SAND DUNES  
Acreage 350  
Grid Reference T. 310, 840.  
Scientific interest Ecological, botanical and zoological.  
Rating Local importance

Description of the Area See Map 51.

The site is a stable sand dune system (c.f. Buckronev - See Map 2).

Evaluation

The site has a typical flora and fauna.

Threats to the Area

The most urgent is intense recreational use.

Recommendations

The Brittas Bay system has been the subject of an intense study by An Foras Forbartha (Mawhinney, K. Development in the Brittas Bay Area. January 1971 Pts. 1 & 2). Management of this dune system should be undertaken as a matter of urgency.

<u>Name of Area</u>	DEVIL'S GLEN
<u>Acreage</u>	880
<u>Grid Reference</u>	T. 250,985
<u>Scientific Interest</u>	Ecological, botanical, zoological and orinthological
<u>Rating</u>	Local importance
<u>Priority</u>	B

Description of the Area See Map 52

A deciduous oak woodland underplanted with conifers.

Evaluation

In parts of the woodland there is a well developed ground flora. The area is also important because of its luxuriant cryptogamic flora which indicates that the climate of the area is mild (oceanic) and suggests the invertebrate fauna may also be distinctive.

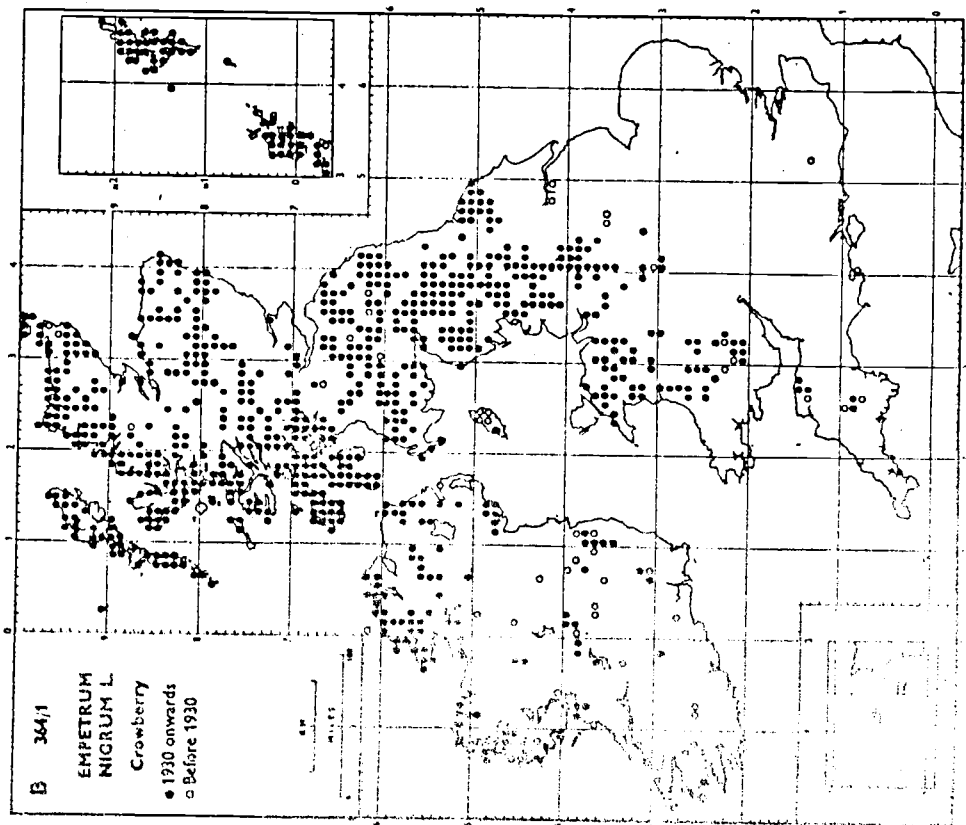
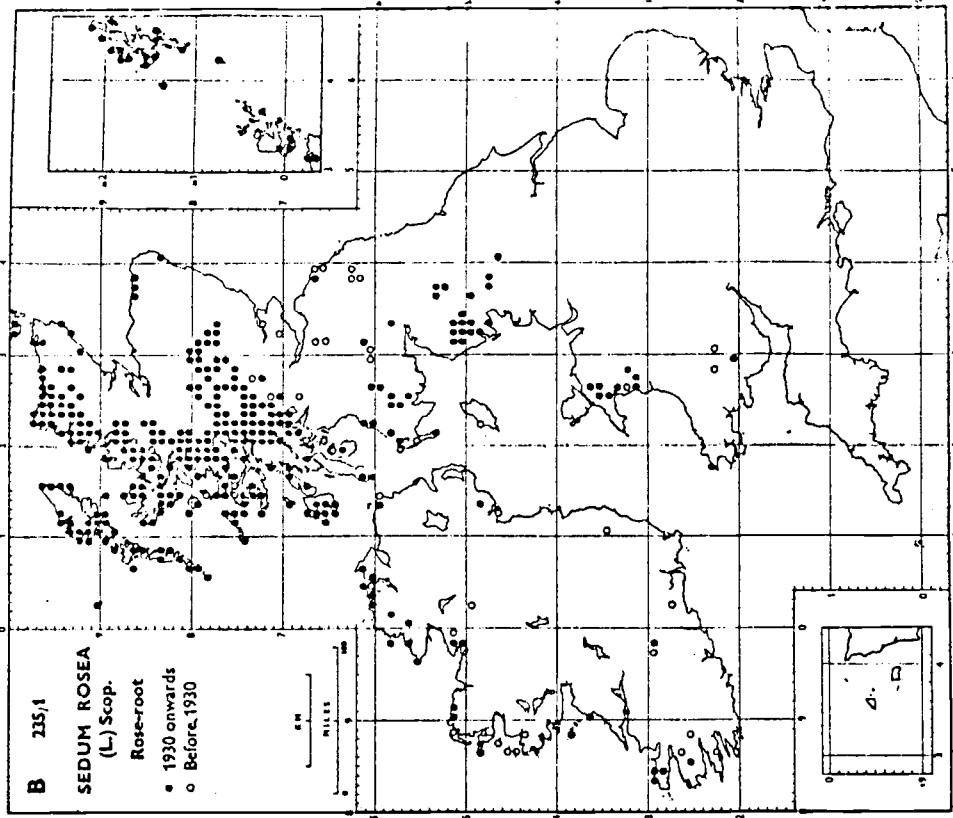
A pond in the area of interest provides food and resting places for a small number of wildfowl (teal, mallard and mute swans).

Threats to the Area

Further planting of the area with conifers is the most likely threat.

Recommendations

As far as possible the native hardwoods should be maintained at this site. A management and improvement policy for the millpond would enhance its scientific values and amenity.



<u>Name of Area</u>	MARSH CLOSE TO THE GLEN OF THE DOWNS
<u>Acreage</u>	24
<u>Grid Reference</u>	O. 253, 134
<u>Scientific Interest</u>	Ecological
<u>Rating</u>	Local importance
<u>Priority</u>	B

Description of the Area See Map 53

The site is a small marsh, beside the main Delgany Road containing a typical marsh flora (Cf. Buckronev and other marshes). There is a succession to trees.

Evaluation

The mill is likely to be a representative site for plants and invertebrates.

Threats to the Area

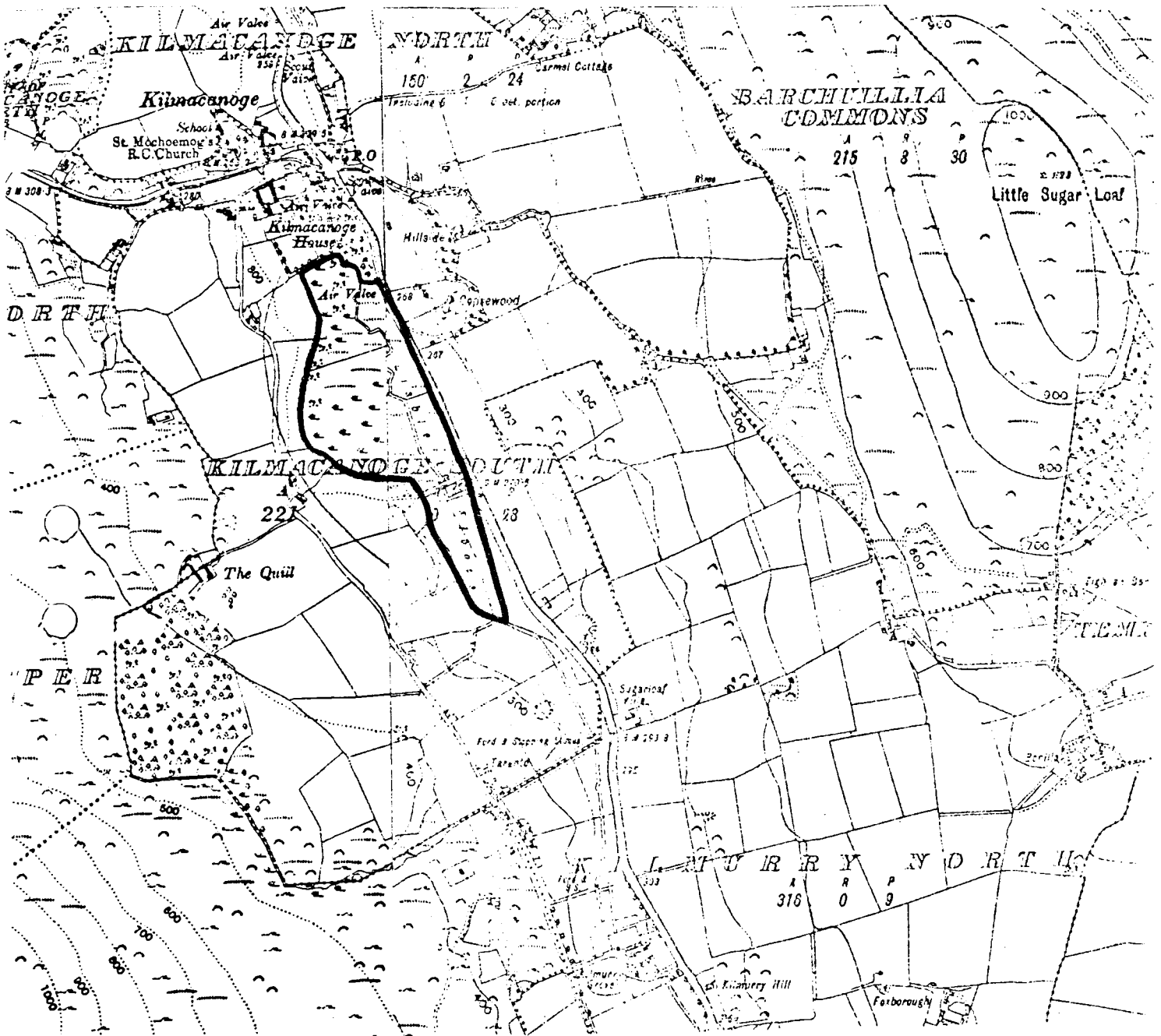
Some form of reclamation is possible and casual dumping is probable.

Recommmendations

It would be desirable to retain this site in its present condition in the future.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 53

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	ARKLOW BIRD RESERVE
<u>Acreage</u>	10
<u>Scientific Interest</u>	Ornithological
<u>Rating</u>	Local importance
<u>Priority</u>	C

Description of Area See Map 54

A shallow pond containing Phragmites communis

Evaluation

Species visiting or inhabiting the pool in the national wildfowl census of 1970 were:

Pochard  
Mallard  
Swans (mute and whooper)  
and Coot

Threats to the Area

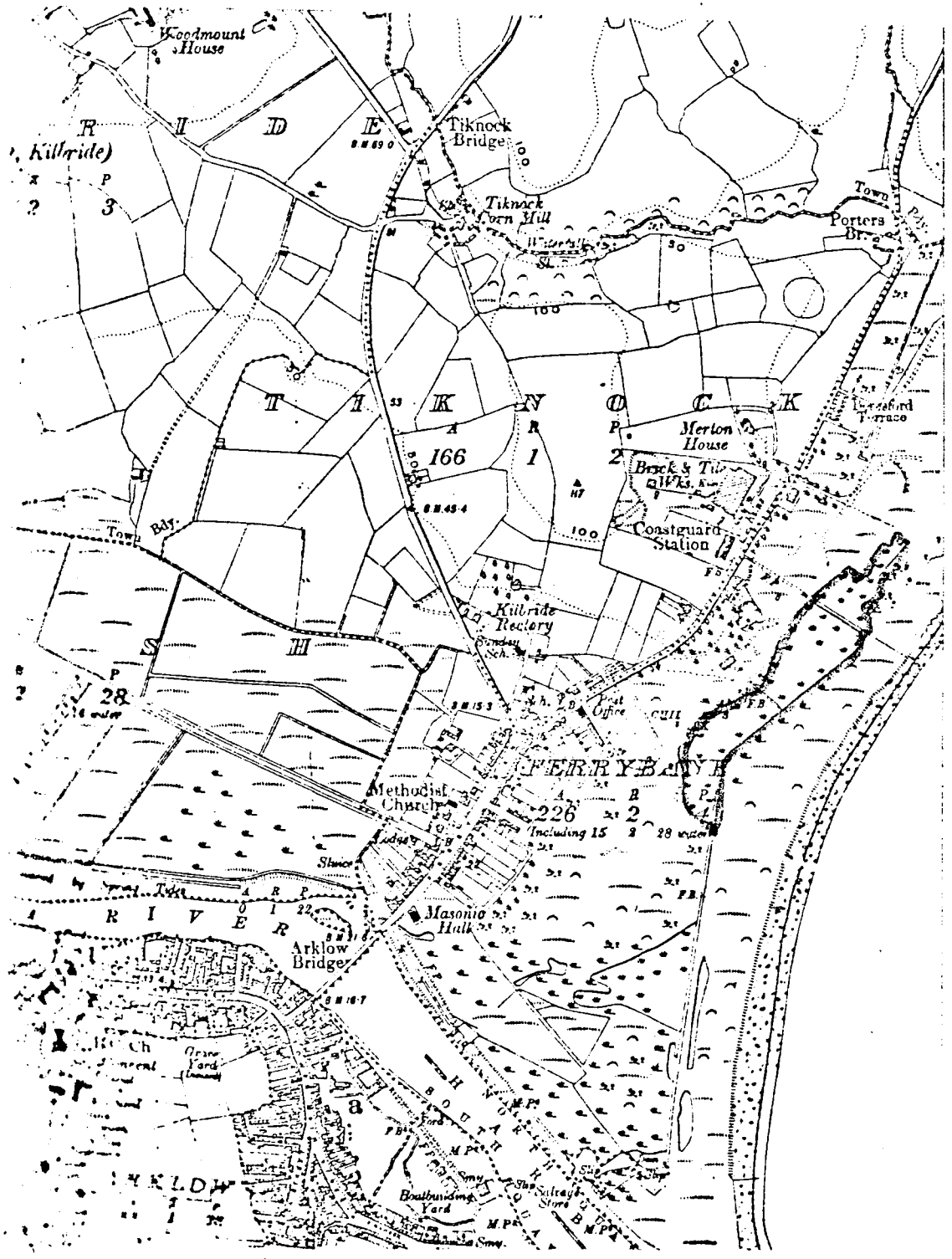
Because the pool has the approval of the Local Authority it is unlikely to be in danger as a result of development.

Recommendations

As a wildfowl refuge, the pond could be much improved by the provision of screening, depth alternatives and the creation of islands and possibly nesting boxes. An identification board would also be useful. An Foras would give advice on these developments after a more detailed survey.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 54

Scale: 6 Inches to 1 Mile





<u>Name of area</u>	CONIFEROUS WOODLANDS IN GLENMALUR VALLEY AND ENVIRONS INCLUDING BALLYTEIGE WOOD
<u>Acreage</u>	Map boundaries give indication of stands only.
<u>Grid Reference</u>	T. 100, 910
<u>Scientific interest</u>	Ecological
<u>Rating</u>	Local importance
<u>Priority</u>	C

Description of the area                      See Map 55

Boundaries approximately drawn. The coniferous plantations of Glenmalur and Glenealy (Map 56) are among the most mature in the country. Those in Glenmalur consist of:

	<u>Larix sp.</u>	larch
	<u>Pinus sitchensis</u>	sitka spruce
	<u>Pseudotsuga menziesii</u>	douglas fir
and	<u>Taxus baccata</u>	yew

The ground flora at most stands consists of

<u>Agrostis stolonifera</u>	common bent grass
<u>Pteridium aquilinum</u>	bracken
<u>Vaccinium myrtillus</u>	bilberry

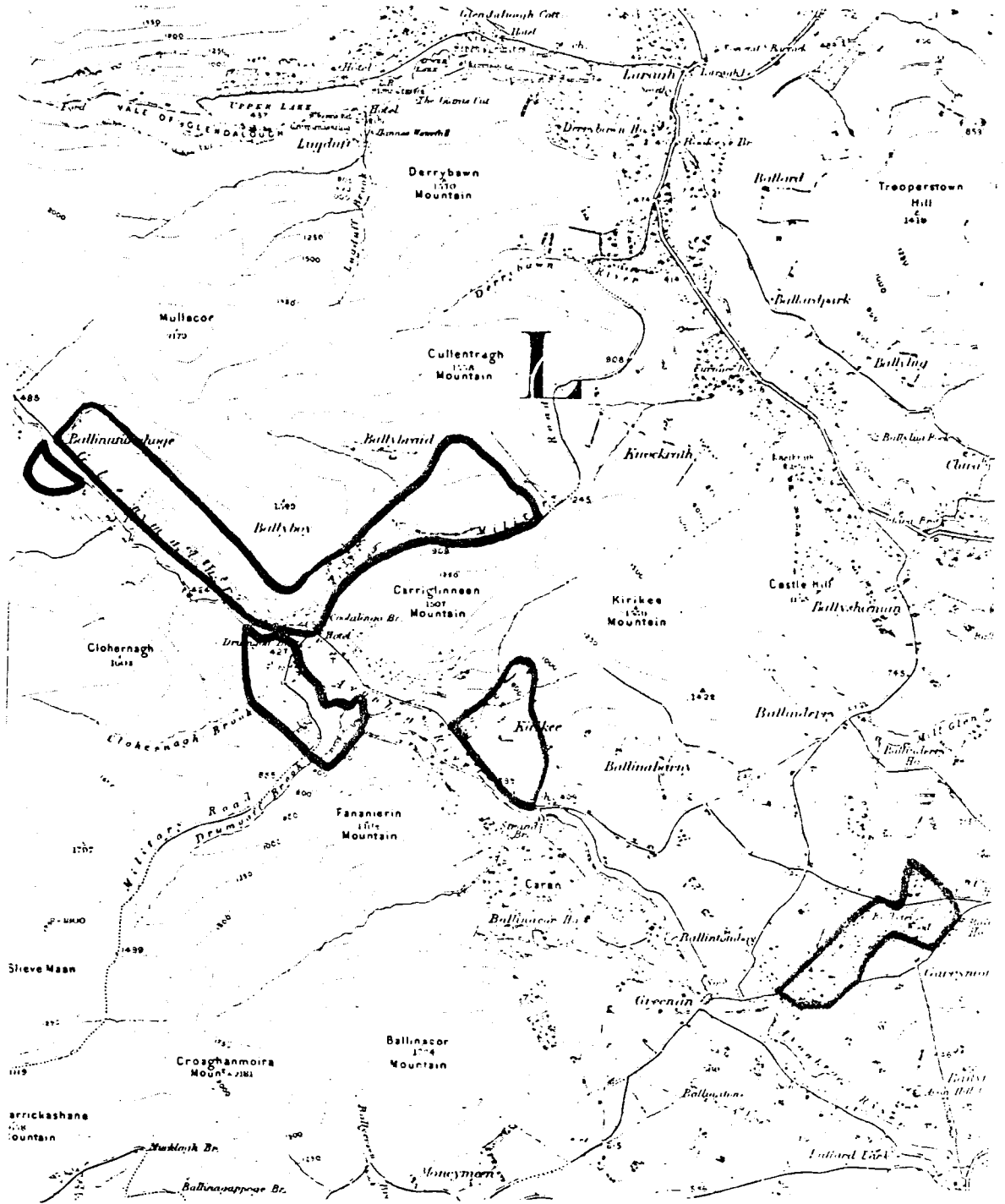
When the coniferous tree is larch a reasonable ground floral development would be expected because the tree is deciduous and so permits a certain amount of light penetration during the winter months.

However, the best developed ground flora in Ballyteige Wood occurred under a stand of douglas fir and consists of the species:

<u>Teucrium scorodonia</u>	wood sage
<u>Vaccinium myrtillus</u>	bilberry
<u>Blechnum spicant</u>	hard fern
<u>Digitalis purpurea</u>	foxglove

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 55

Scale: 1 inch to 1 mile



<u>Agrostis stolonifera</u>	common bent grass
<u>Lonicera periclymenum</u>	honeysuckle
<u>Dryopteris dilatata</u>	fern
<u>Stellaria graminea</u>	lesser stitchwort
<u>Luzula pilosa</u>	hairy wood rush
<u>Ilex aquifolium</u>	holly

and Rubus fruticosus agg. (bramble) which is dominant in places. Ballyteige Wood includes some mature oak with a good ground flora.

#### Evaluation

The occurrence of a varied ground flora suggests that the sites are good invertebrate habitats.

#### Threats to the area

Replanting with small trees which would obscure the ground flora

#### Recommendations

Replanting of the sites should be carried out after blocks of existing timber were felled. This would permit a reservoir of ground cover species to persist and be available to invade the newly planted areas once conditions favoured their doing so. The deciduous areas should be maintained without further conifers.

<u>Name of Area</u>	RATHDRUM AND GLENEALY FORESTS
<u>Acreage</u>	2,290
<u>Grid Reference</u>	T. 245,990
<u>Scientific Interest</u>	Ecological, botanical and zoological
<u>Rating</u>	Local importance
<u>Priority</u>	C

Description of the Areas            See Map 56

Boundaries approximately drawn. These are two large areas of mixed forest. The area marked with an asterisk contains a high proportion of deciduous wood. Because these trees are high there is much light penetration and a consequently good ground flora. Most of the species occurring at the Glen of the Downs are present and the flora is, in many cases, as profuse as in Ballyteige forest.

#### Evaluation

These areas are of local interest by virtue of the representative ground flora; all are likely invertebrate habitats.

#### Threats to the Areas

Clearfelling any of the areas would remove their scientific interest especially after replanting when the ground flora would be killed off.

#### Recommendations

These are as for site 1, the previous site.

The mature trees should be felled in small blocks and the underplantings given time to reach a height at which the ground flora could immigrate, before felling continued.



<u>Name of Area</u>	BALLYCORE RATH
<u>Acreage</u>	24
<u>Grid Reference</u>	S. 815, 942
<u>Scientific Interest</u>	Botanical, Ecological
<u>Rating</u>	Local Importance
<u>Priority</u>	C

Description of Area      See Map 57

The site is a large drift deposit on top of which a rath has been built.

The vegetation of the area includes the following species:

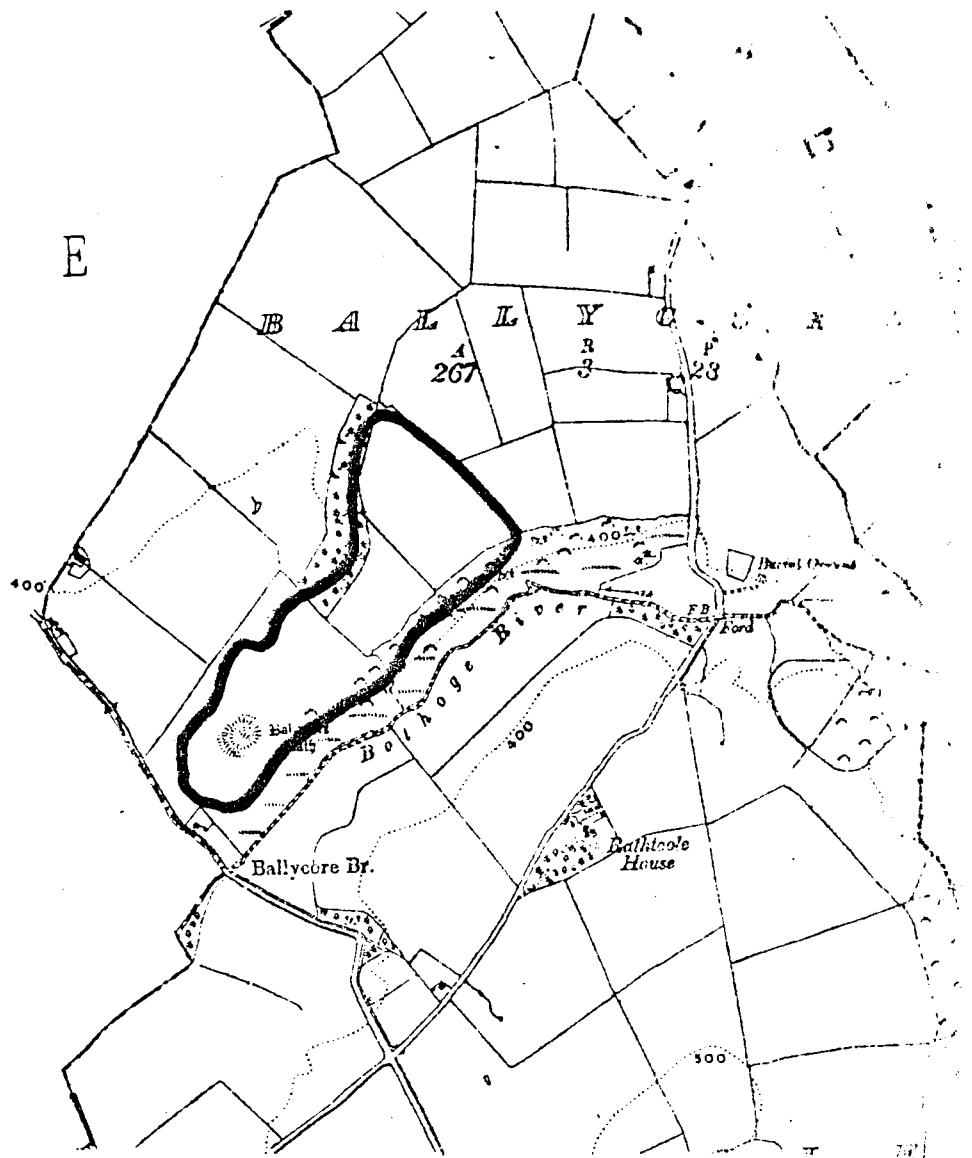
<u>Senecio jacobea</u>	Ragwort
<u>Cynosurus cristatus</u>	crested dog's tail grass
<u>Primula vulgaris</u>	primrose
<u>Ranunculus repens</u>	creeping buttercup
<u>Plantago lanceolata</u>	ribwort plantain
<u>Cirsium arvense</u>	creeping thistle
<u>Viola riviniana</u>	common violet
<u>Teucrium scorodonia</u>	wood sage
<u>Bellis perennis</u>	common daisy
<u>Agrostis stolonifera</u>	common bent grass
<u>Luzula campestris</u>	field wood rush
<u>Centaurea nigra</u>	hardhead
<u>Taraxacum officinale</u> agg.	dandelion
<u>Anthoxanthum odoratum</u>	sweet vernal grass
<u>Prunella vulgaris</u>	selfheal
<u>Pedicularis sylvatica</u>	lousewort
<u>Carex flacca</u>	glaucous sedge
<u>Leucanthemum vulgare</u>	dog daisy
<u>Galium verum</u>	lady's bedstraw
<u>Carex caryophylla</u>	spring sedge
<u>Ranunculus officinarum</u>	bulbous buttercup
<u>Pilosella bulbosus</u>	mouse-ear hawkweed

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 57

Scale: 6 Inches to 1 Mile



A R E



<u>Cerastium vulgare</u>	common chickweed
<u>Heracleum</u> sp.	
<u>Rumex acetosa</u>	common sorrel
<u>Hypochaeris</u> sp.	
<u>Achillea millefolium</u>	yarrow
<u>Stellaria media</u>	chickweed
<u>Agrimonia</u> sp.	agrimony
<u>Cerastium vulgare</u>	mouse ear chickweed
<u>Lotus corniculatus</u>	bird's foot trefoil
<u>Conopodium</u> sp.?	
<u>Rhytidiadelphus squarrosus</u>	moss
<u>Pseudoscleropodium purum</u>	"

#### Evaluation

This site is a good example of a calcicole grassland. Three additional species occurring there:

<u>Blackstonia perfoliata</u>	yellow-wort
<u>Gentianella amarella</u>	autumn felwort
and <u>Poterium sanguisorba</u>	salad burnet

are typical of calcicole conditions. On the accompanying distribution maps for the species (Section G) they are clearly concentrated in the ~~neutral~~ limestone areas of Ireland.

#### Threats to the Area

None obvious.

#### Recommendations

Future development in this area should take account of its scientific values.



<u>Name of Area</u>	WICKLOW HEAD
<u>Acreage</u>	8
<u>Grid Reference</u>	T. 345, 924
<u>Scientific Interest</u>	Botanical, Zoological, Ornithological and Ecological
<u>Rating</u>	Local Importance
<u>Priority</u>	C

Description of Area      See Map 58

The site is a rocky headland, similar to Bray Head.

Evaluation

The plant communities at the site are similar to those at Bray Head but with fewer rarities. There are seabird nesting colonies within the area of scientific interest.

Threats to the Area

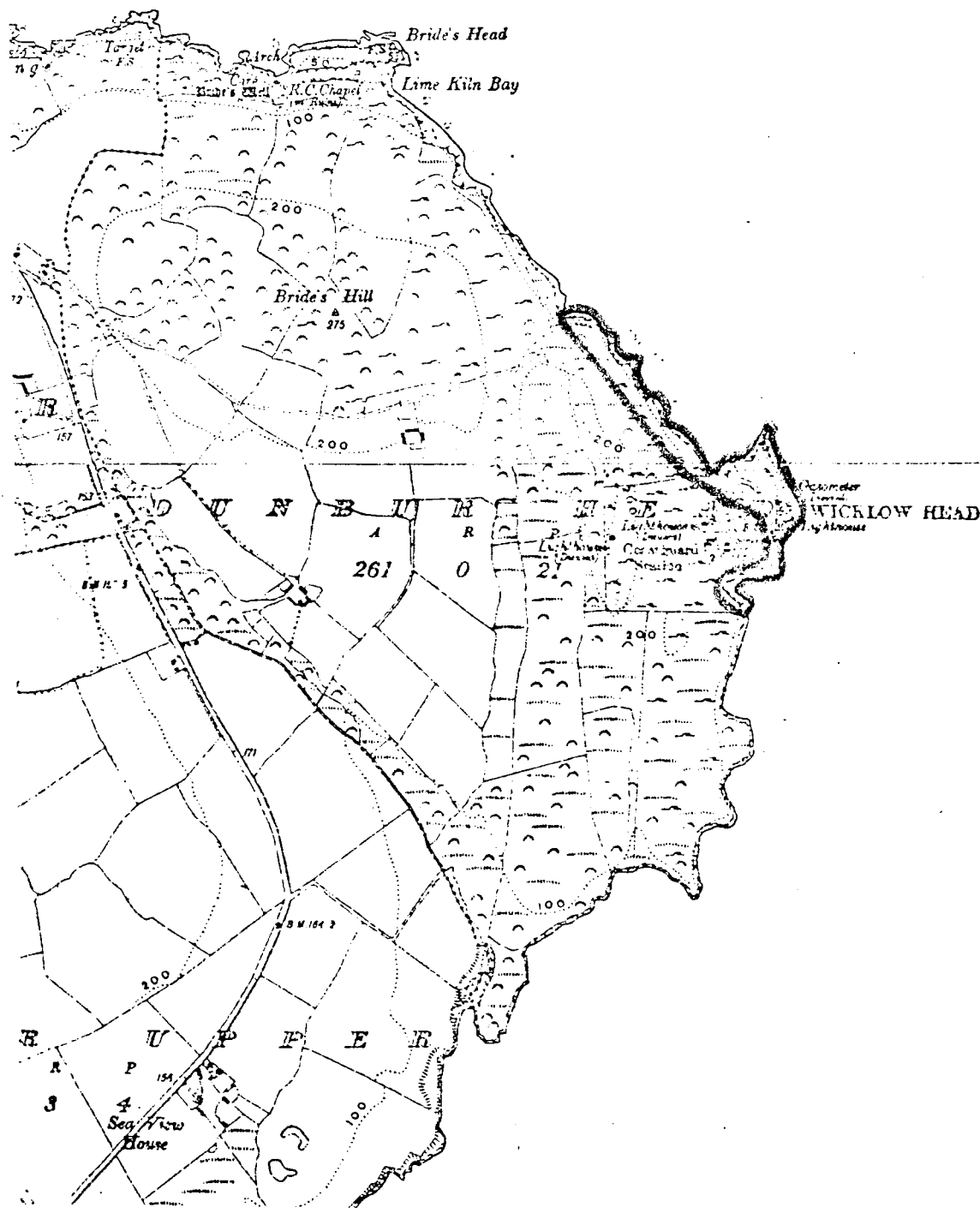
None obvious.

Recommendations

Any future development of this site should be in accordance with its scientific interest.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST - 58

Scale: 6 Inches to 1 Mile



Name of Area GORGE AT POULAPHOUCA  
Acreage 3 (in Co. Wicklow).  
Grid Reference N.947, 085  
Scientific interest Botanical and ecological  
Rating Local importance  
Priority C

Description of Area

See Map 59. The site is a steep gorge on the River Liffey.

The slopes have large beech trees (Fagus sylvatica) on the upper sides and laurel (Prunus laurocerasus) lower down. There is some Acer pseudoplatanus (sycamore). The ground flora is well developed and dominated by Luzula sylvatica (wood rush) and Oxalis acetosella (wood sorrel). Other species occurring in the ground flora include:

<u>Polystichum aculeatum</u>	shield fern
<u>Sanicula europaea</u>	wood sanicle
<u>Umbilicus rupestris</u>	pennywort
<u>Conopodium majus</u>	pignut
<u>Silene dioica</u>	red campion
<u>Primula vulgaris</u>	primrose
<u>Viola riviniana</u>	common violet
<u>Vicia sepium</u>	bush vetch
<u>Geum rivale</u>	water aven

Evaluation

This site has a number of uncommon plant species.

Threats to the Area

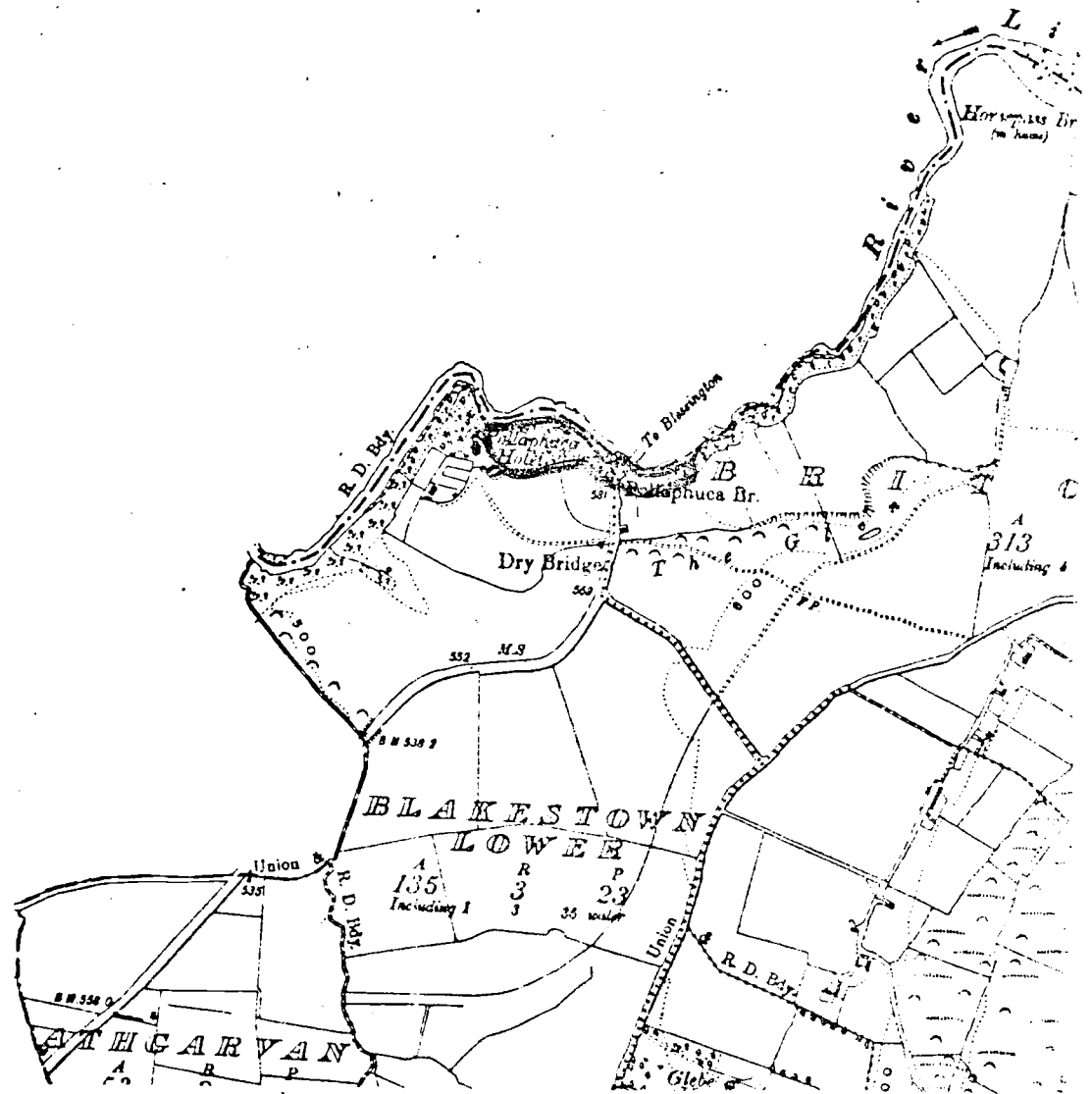
None obvious.

Recommendations

Any development of this site should allow for its scientific value.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 59

Scale: 6 Inches to 1 Mile



<u>Name of Area</u>	GLEN DING
<u>Acreage</u>	27 (in Co. Wicklow).
<u>Grid Reference</u>	N 163 155
<u>Scientific Interest</u>	Geological
<u>Rating</u>	Local importance
<u>Priority</u>	C

Description of Area      See Map 60

The site is a dry glacial valley with steep sides on the boundary with County Kildare. Its orientation is approximately north-south.

Evaluation

The valley was an ice overflow channel into Lake Blessington during the last general glaciation.

Publication

Farrington, A. (1957) Glacial Lake Blessington Irish Geography, 3: 216 - 222.

Threats to the Area

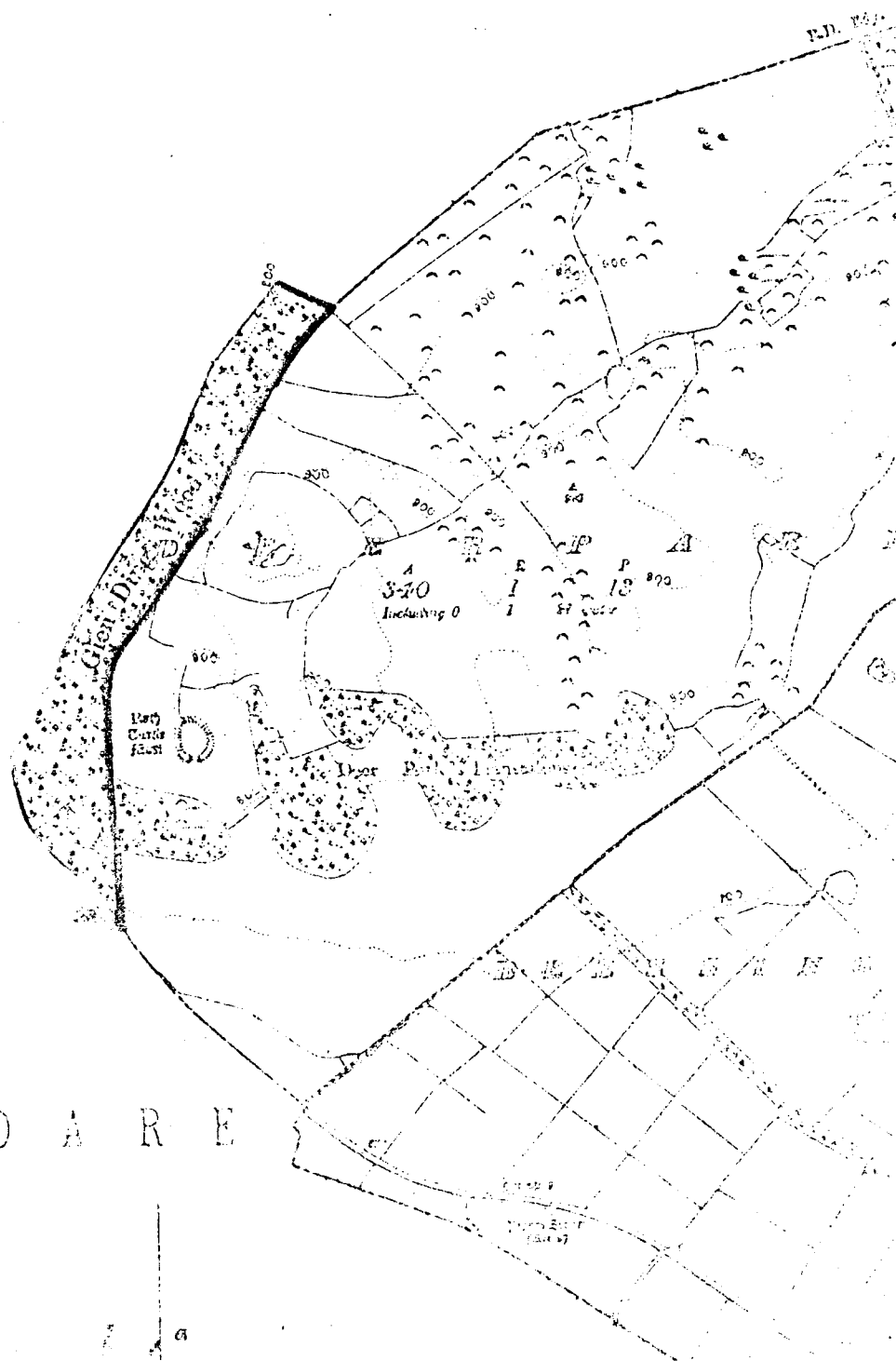
Rubbish tipping is a possibility.

Recommendations

Any development in this area should take account of its scientific values.

# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 60

Scale: 6 Inches to 1 Mile



C O K I L D A R E

A TABLE SHOWING THE ACTION REQUIRED TO MAINTAIN  
THE SCIENTIFIC INTEREST OF AREAS LISTED IN THIS REPORT

	No Protection Required	General Planning Control, possibly with management	Special Amenity Area Order	Conservation Order	Tree Preservation Order
Kilcoole Marshlands				*	
Buckronev sand dunes		*			
Slieve roe		*			
Kippure and Sally Gap Blanket bogs		*			
Lough Bray Corries		*			
Athdown moraine		*			
Broad Lough		*	or	*	
Upper Lockstown delta		*			
Glen of the Downs		*			
Glendalough, Upper Lake		*			
Wicklow town glebe land		*			
Bray Head			*		

SECTION F

NOTE: Areas marked \* require immediate attention.

	No Protection Required	General Planning Control, possibly with management	Special Amenity Area Order	Conservation Order	Tree Preservation Order
Shore line of Lower Lake at Glendalough		*			
Sand dunes at Maherabeg		*			
Lough Ouler		*			
Rathdangan end moraine		*			
The Motte Stone	*				
Upper Glenmalur Valley	*				
Toor Channel	*				
Templerany end moraine and pingoes	*				
Great Sugarloaf		*			
Glenmacnass	*				
Powerscourt Waterfall	*				
Avondale forestry school		*			



	No Protection Required	General Planning Control, possibly with management	Special Amenity Area Order	Conservation Order	Tree Preservation Order
Askininny		*			
Shelton Abbey Wood and Garden		*			
Arklow dune system		*			
Buckronev Marsh		*	or	*	
Marshes near Lemonstown		*	or	*	
Arklow Head		at present under review			
† Woodlands in the Vale of Clara near Lara		*	or		*
Holdenstown Bog		*			
Woodlands in the Avoca River Valley		*			
Dargle River Valley	*				
West Bank of Vartry Reservoir	*				
Rathdrum railway cutting	*				

	No Protection Required	General Planning Control, possibly with management	Special Amenity Area Order	Conservation Order	Tree Preservation Order
Wicklow coast		*			
Hollywood Glen		*			
Site along the King's River		*			
Poulaphouca Reservoir		*			
Walpole's Garden, Mount Usher	*				
Powerscourt Demesne	*				
Lugnaquilla		*			
Glendalough Mines	*				
Ballinacor Wood		*	or		*
The Quill woodland		*			*
Lowtown Bog		*			
Lough Nahanagan	*		or		
Annamoe Fens		*			
Glencree Woodland		*			

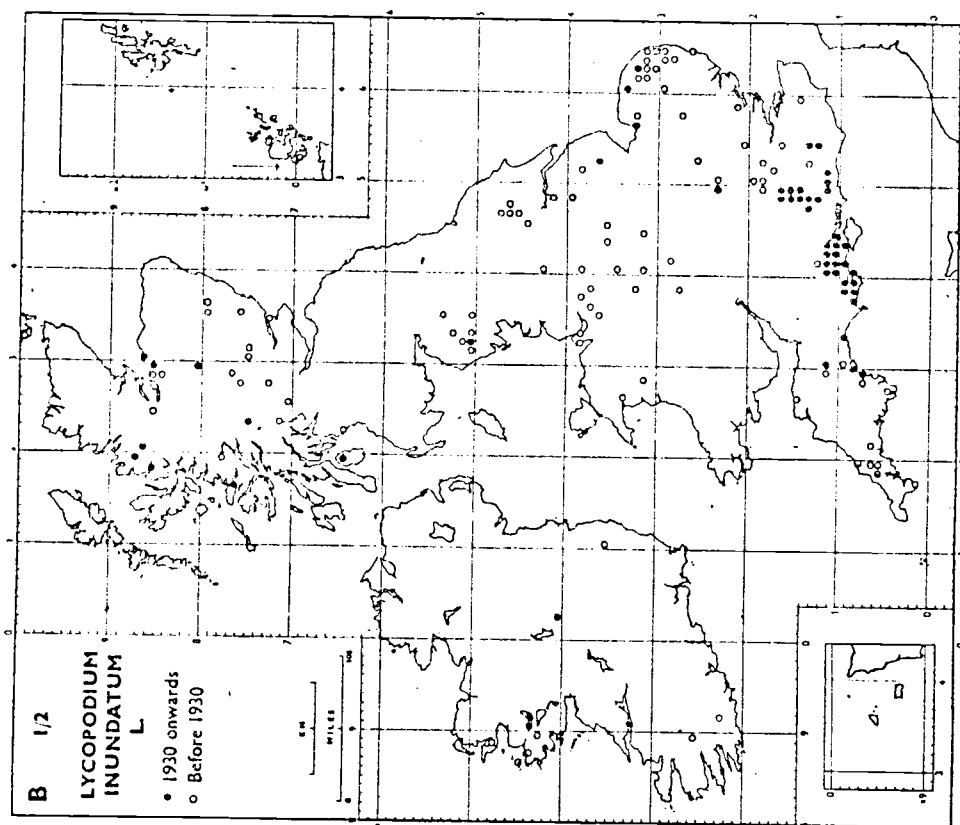
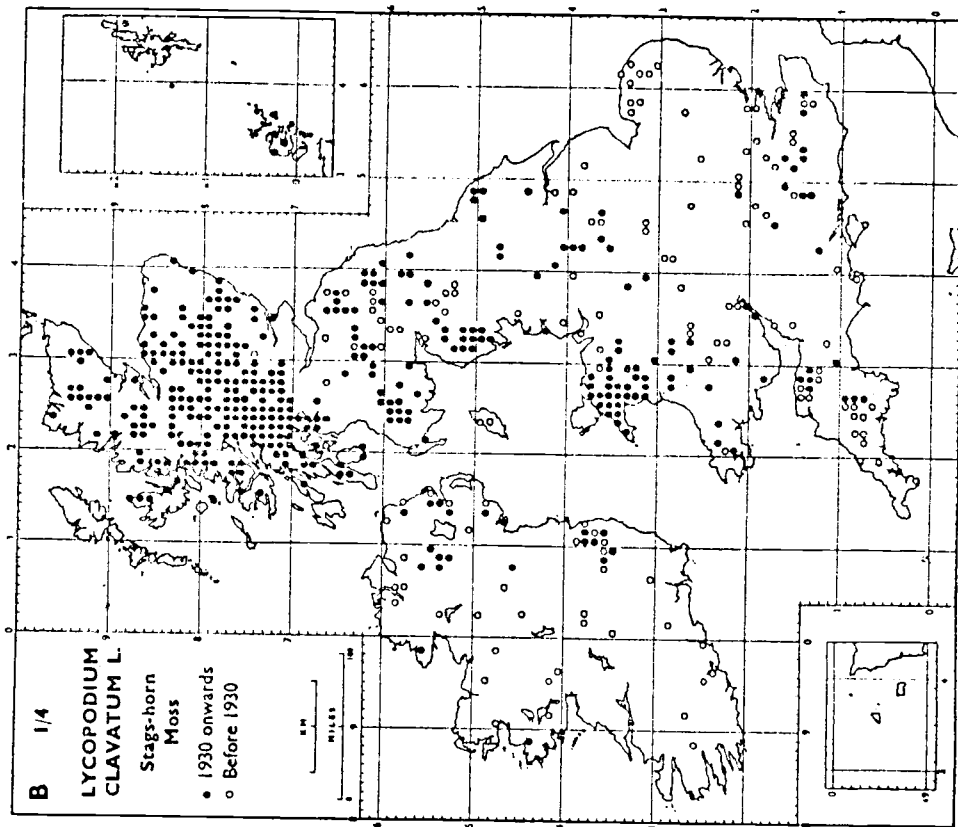
	No Protection Required	General Planning Control, possibly with management	Special Amenity Area Order	Conservation Order	Tree Preservation Order
Ballynamona Marsh		*			
Dunlavin Marshes		*			
Oak Woods by Lough Dan		*	or		*
Brittas Bay sand dunes		*			
Devil's Glen		*	or		*
Marsh close to the Glen of the Downs		*			
Arklow bird reserve		*			
Coniferous woodlands in Glenmalur Valley and environs including Ballyteige Wood		*			
Rathdrum and Glenealy forests		*			
Bellycore Rath	*				
Wicklow Head	*				
Carya at Pookinboice	*				
Glen Drog		*			

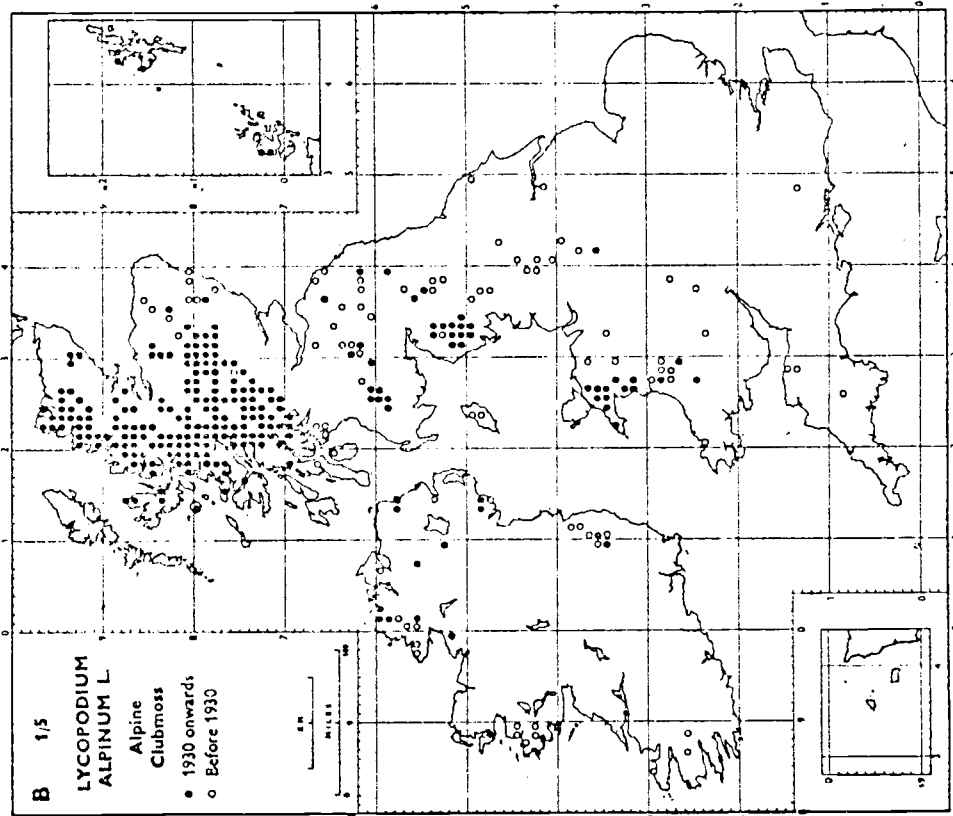
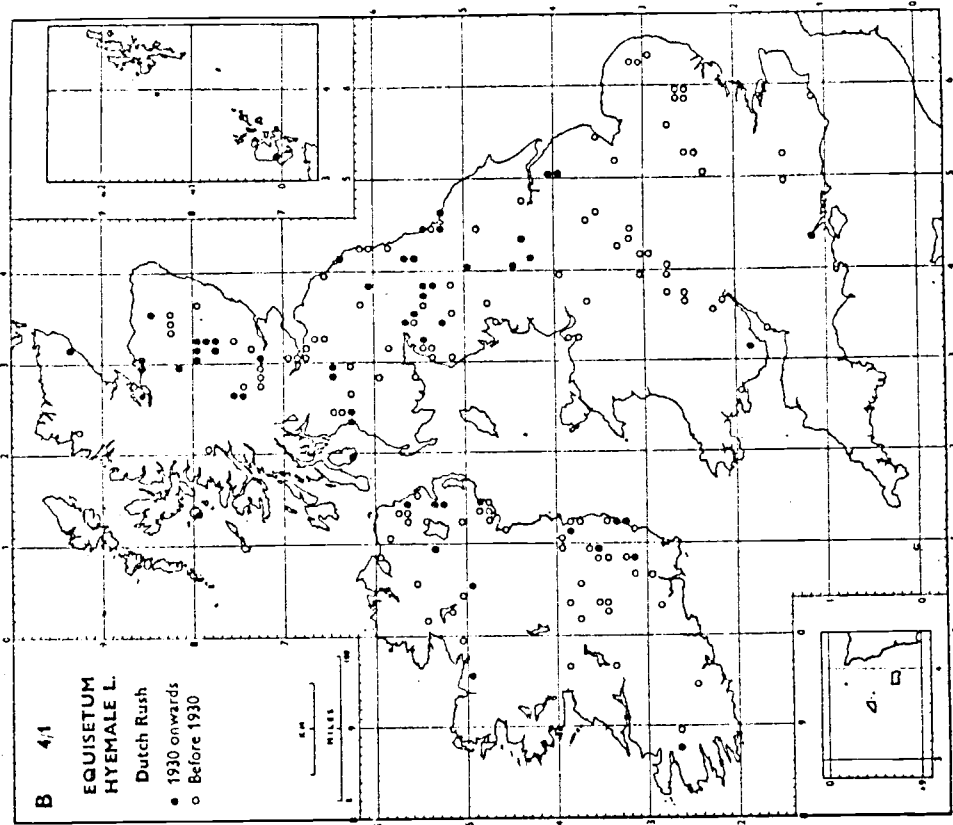
Section G

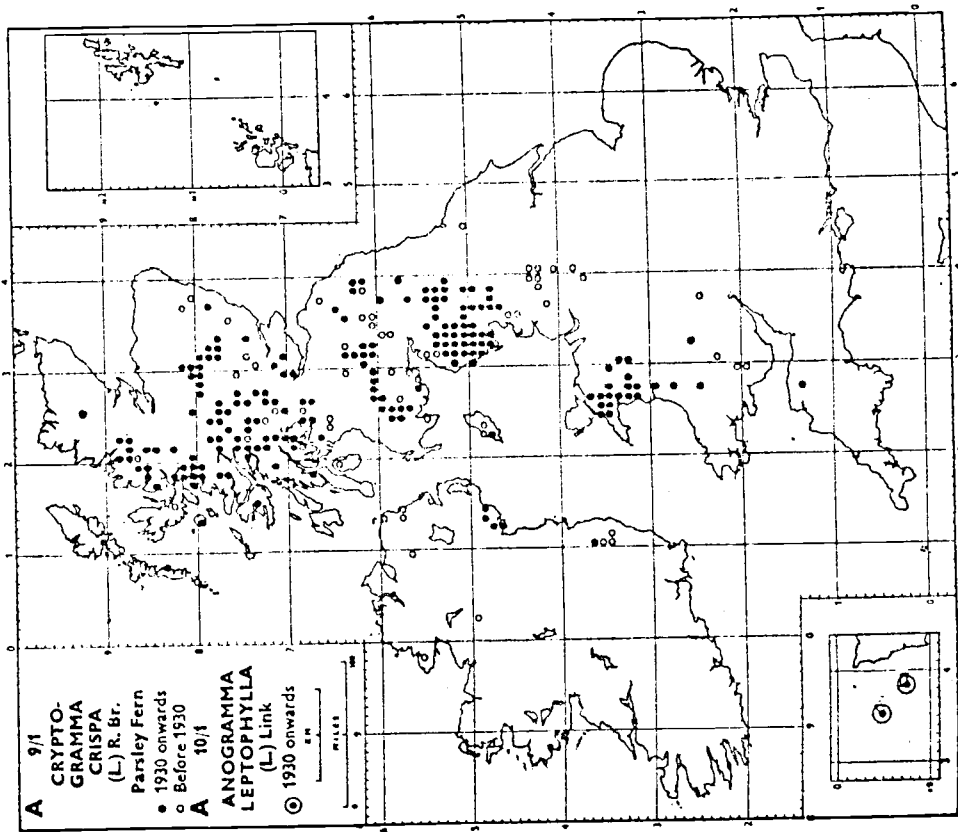
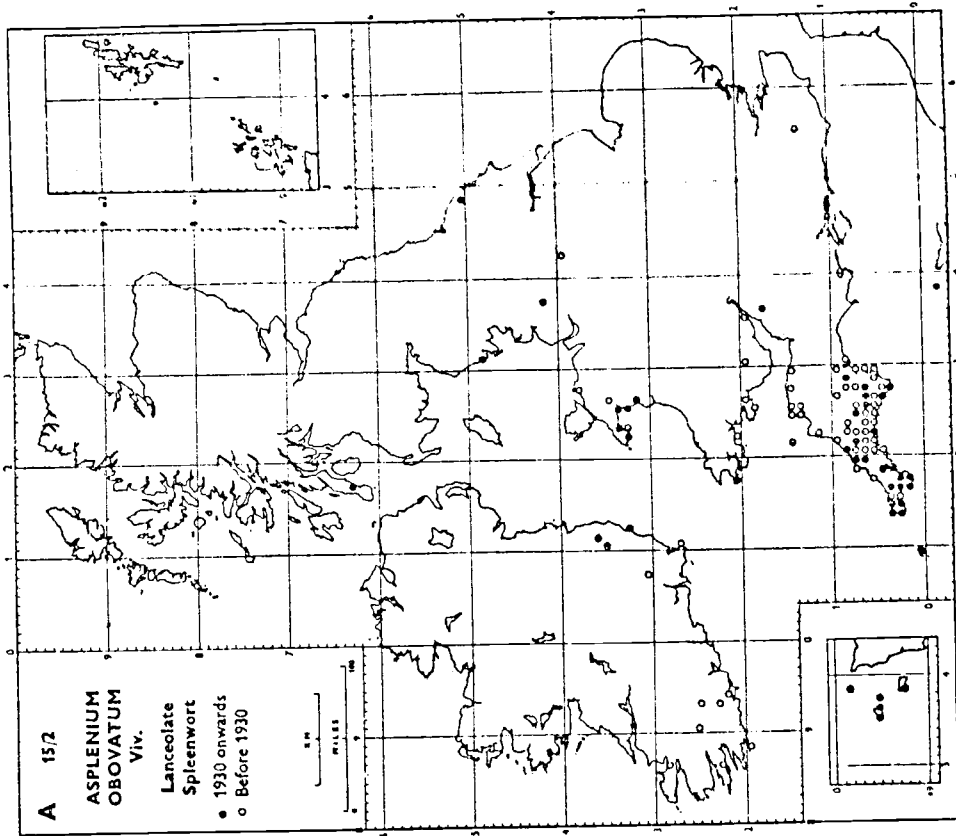
Appendix 1

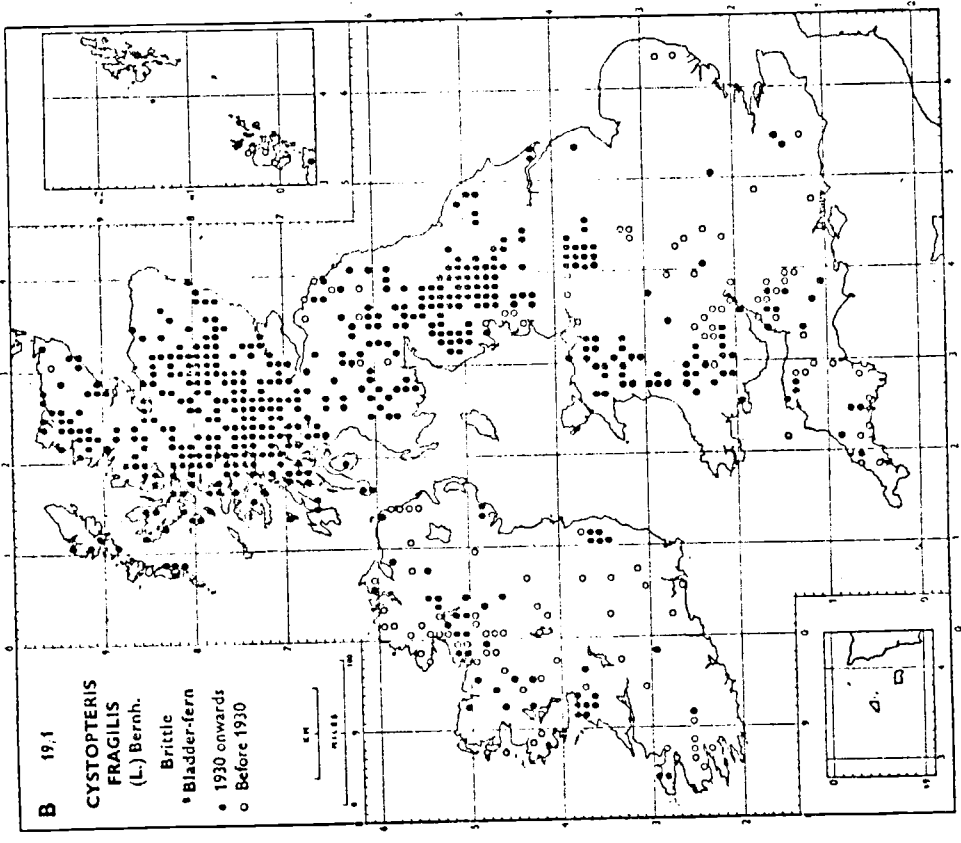
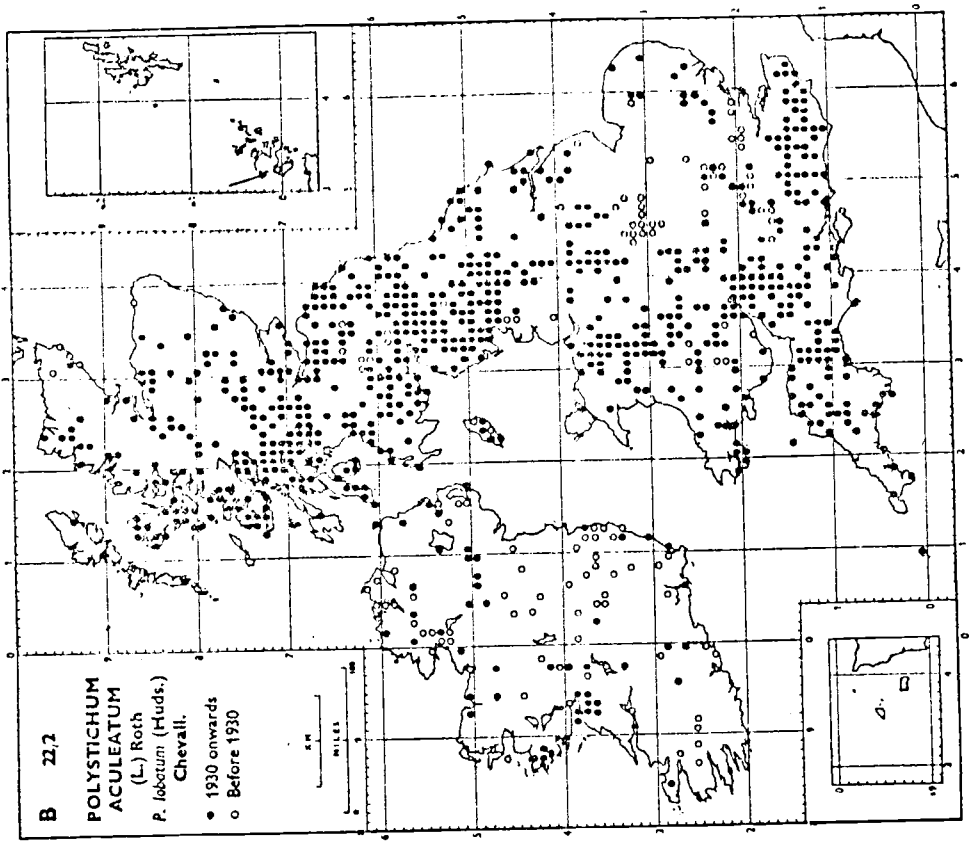
There follow maps showing the distribution of some plant species for which conservation measures have been proposed in Section F. The maps indicate the importance of sites in Co. Wicklow to the survival of the species in the geographical unit of Britain and Ireland.

The maps are reproduced from the Atlas of the British Flora by F.H. Perring and S.M. Walters published by Thos. Nelson and Sons Ltd., 1962. Each dot represents the occurrence of a species within a 10 km<sup>2</sup> grid square.

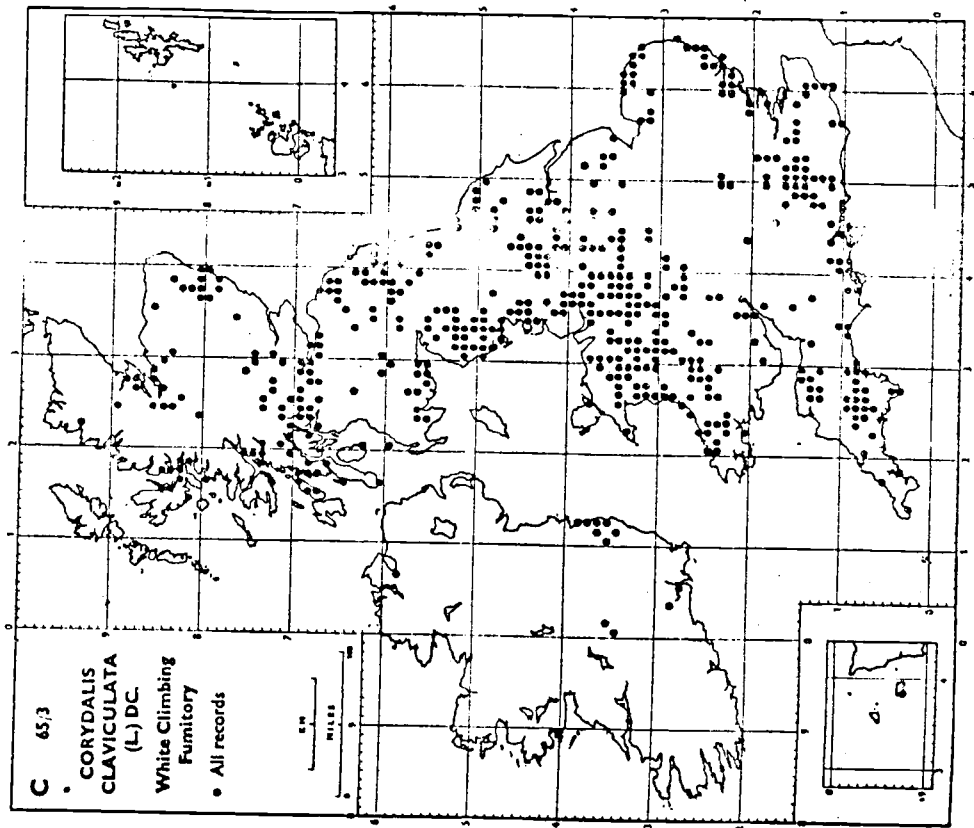
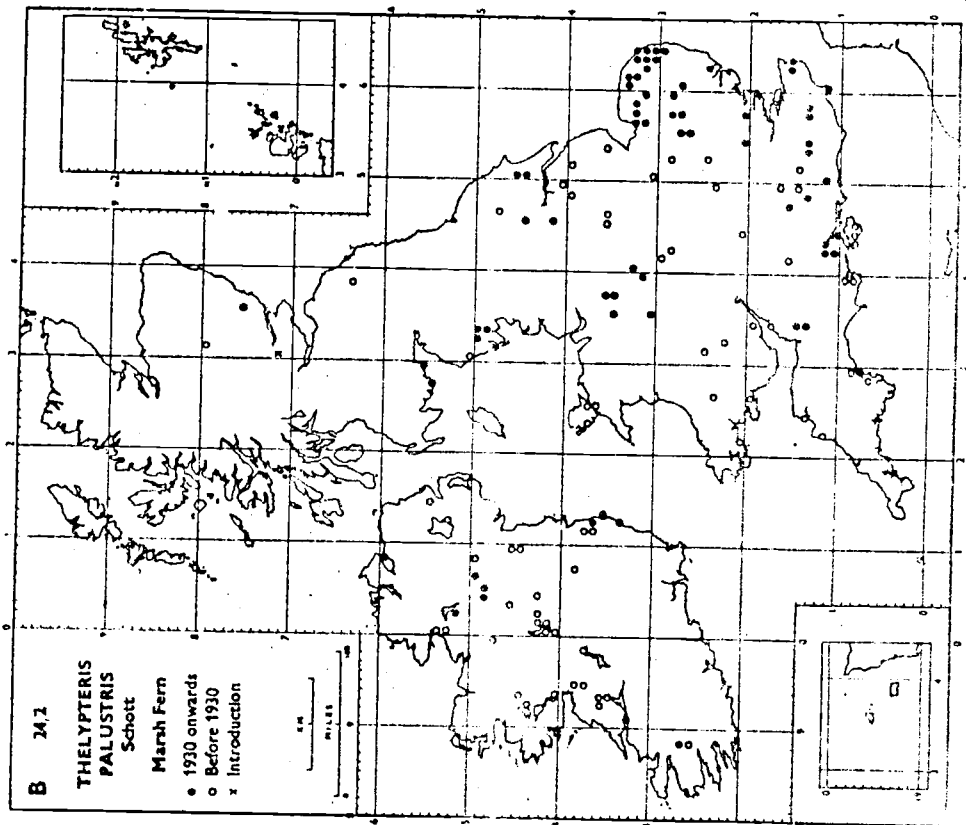


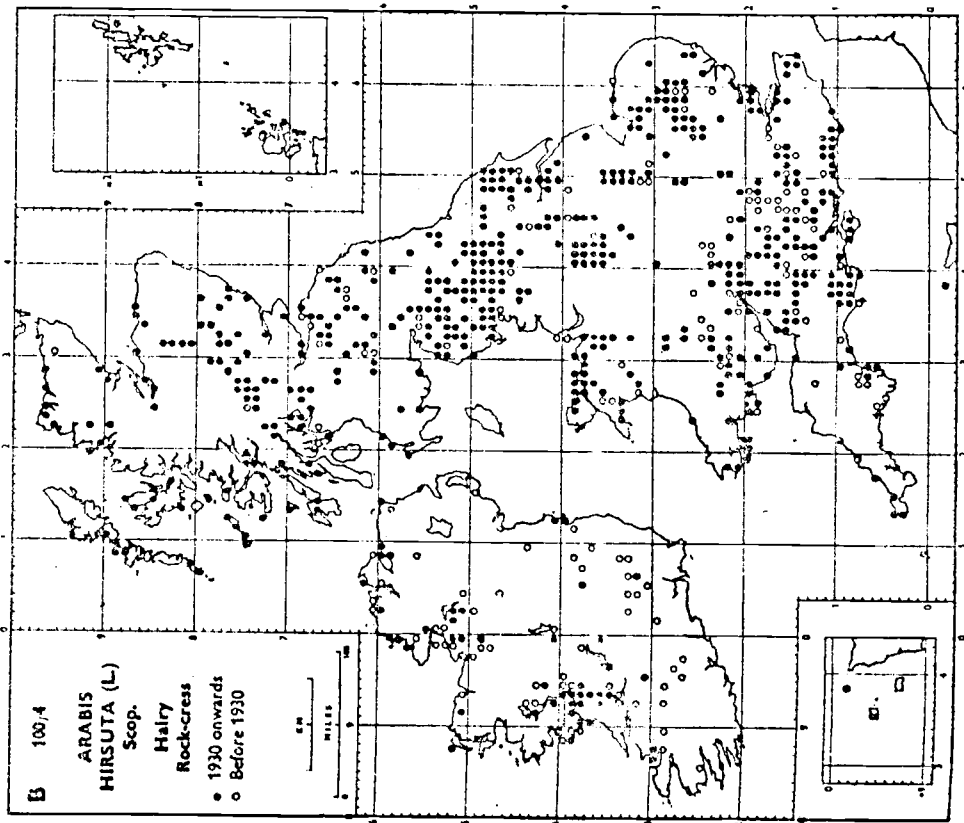
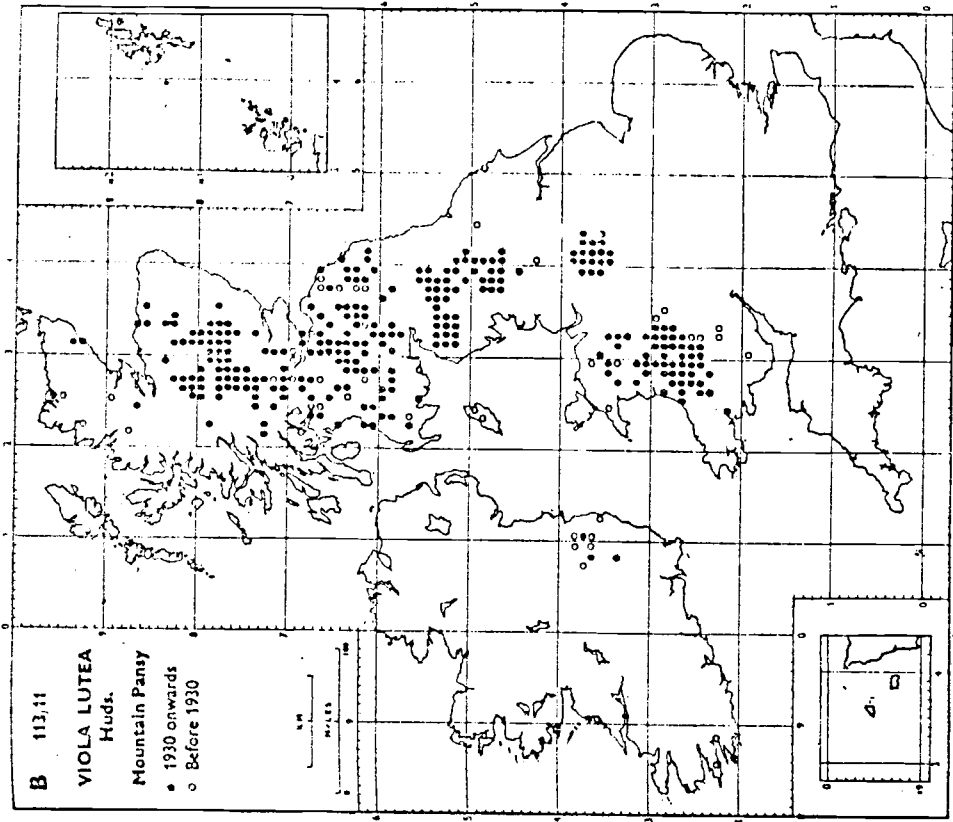


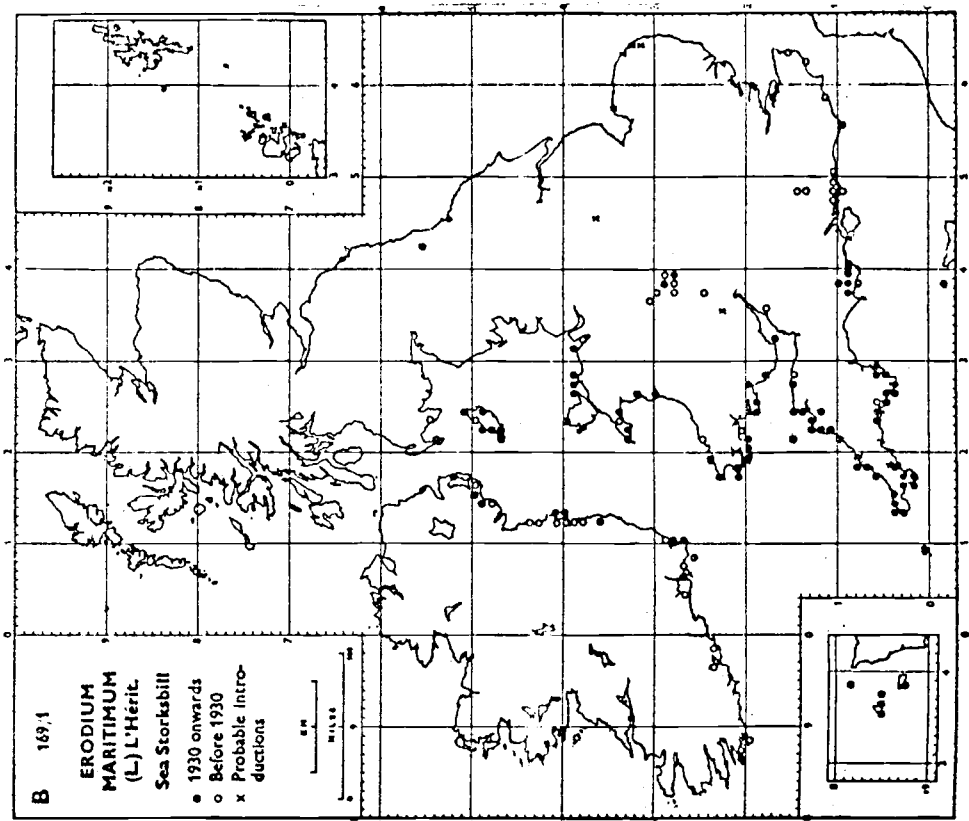
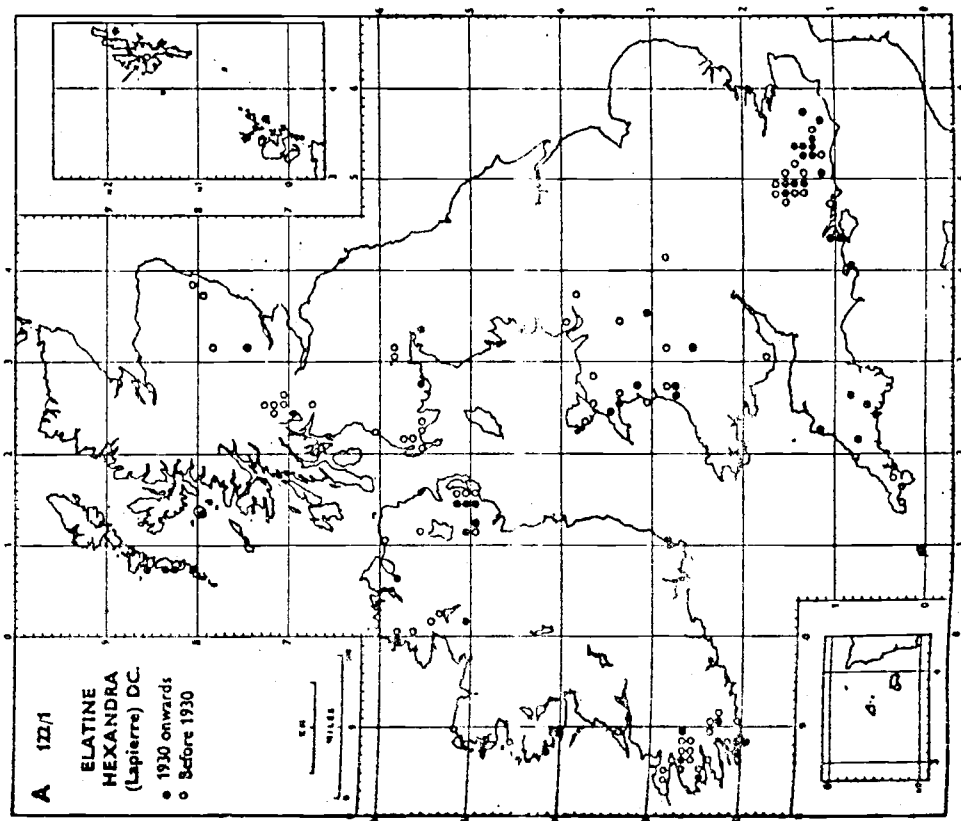


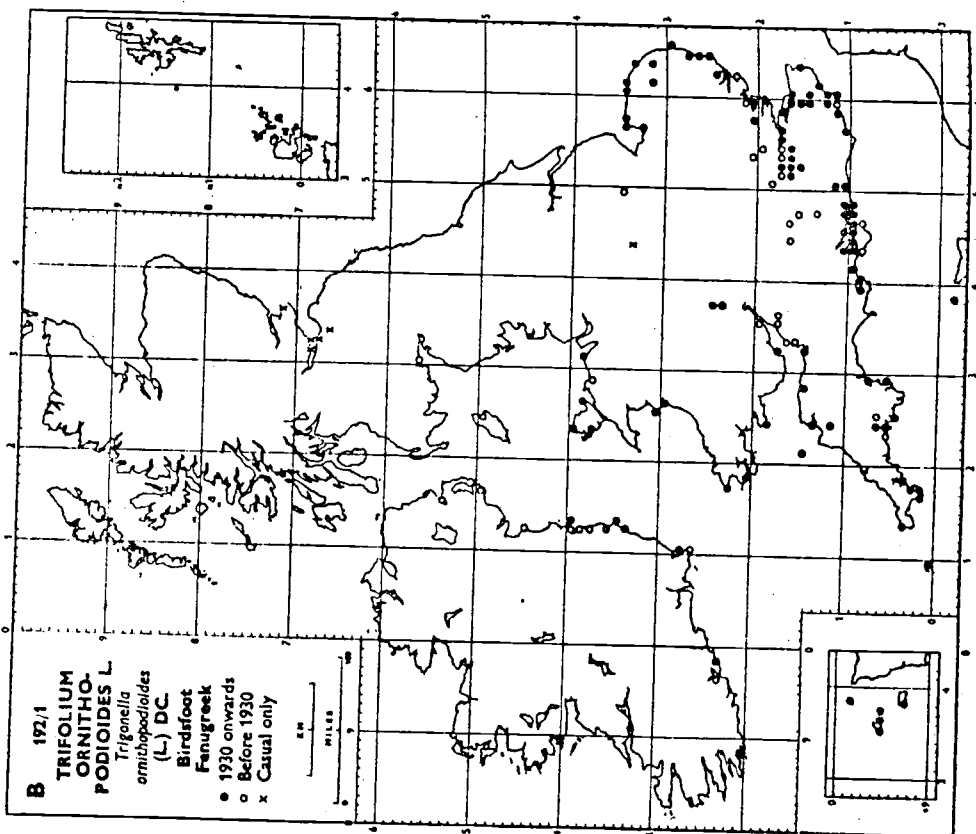
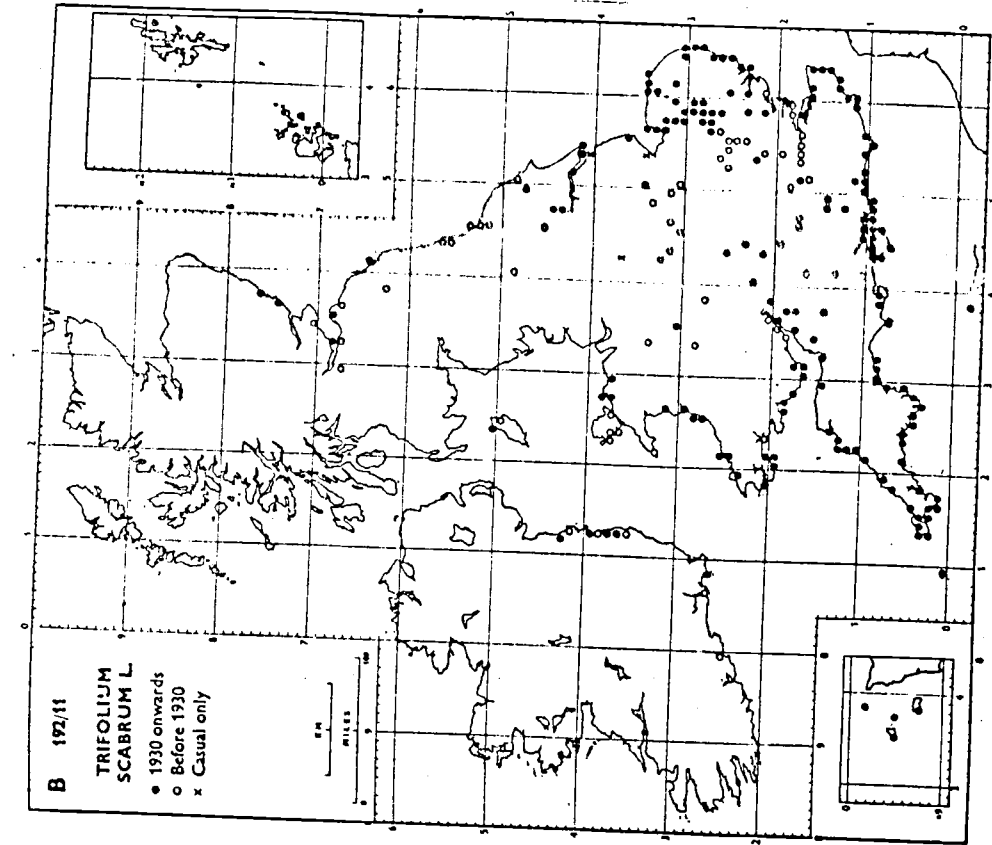


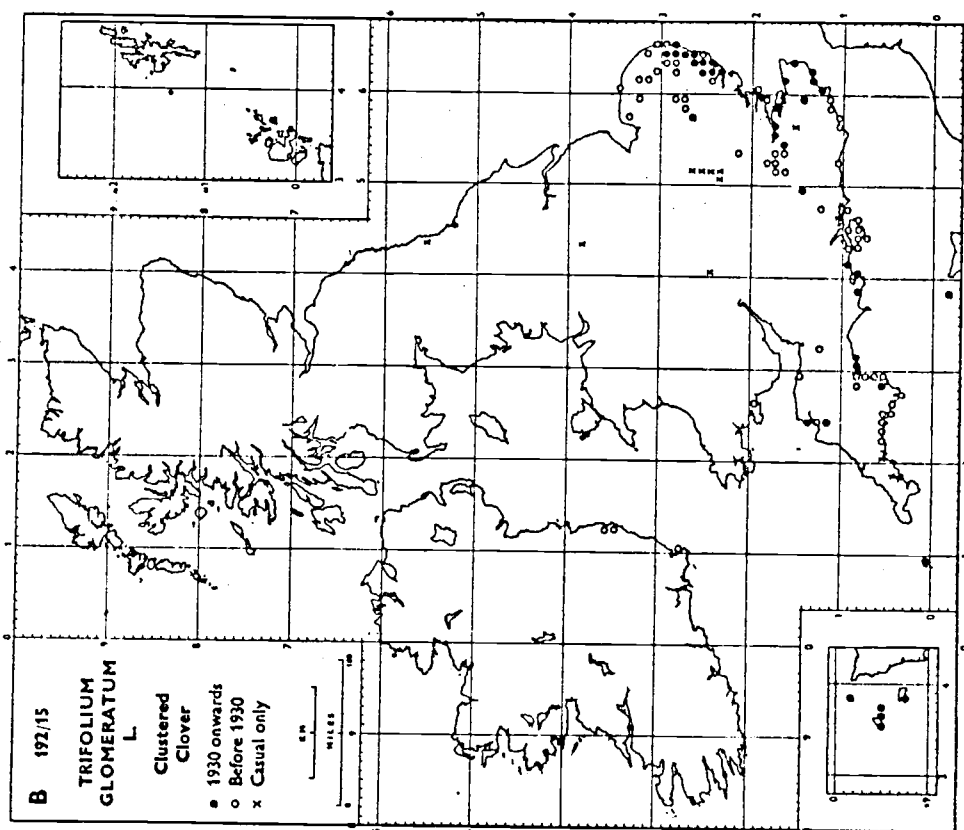
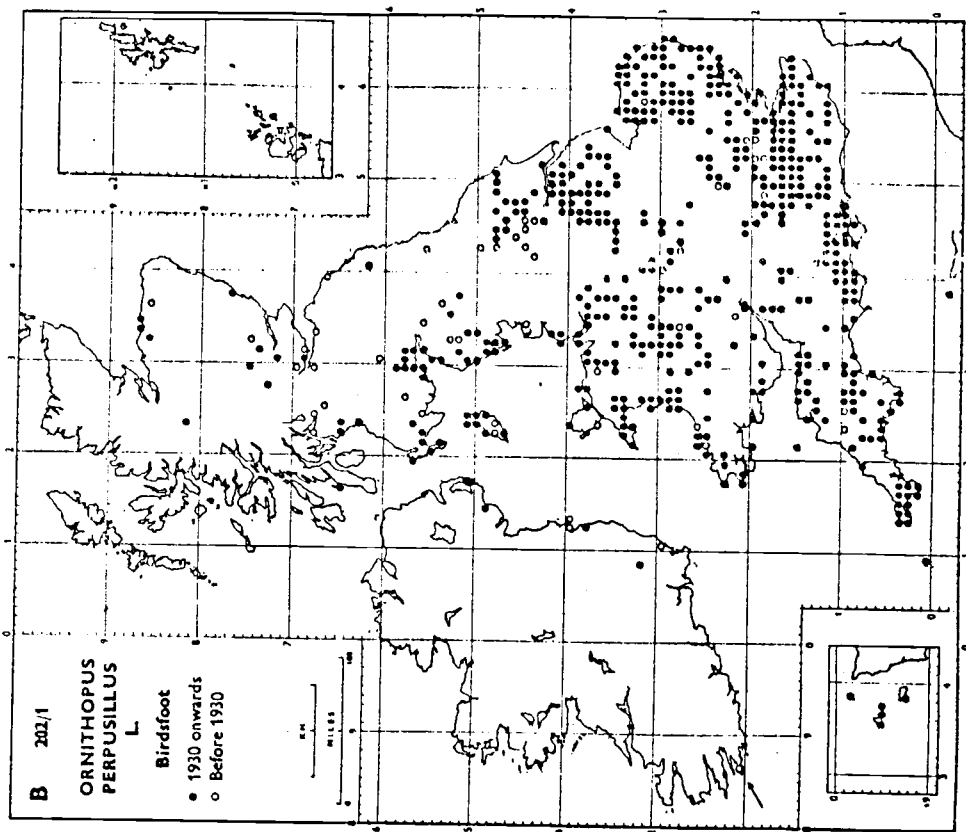


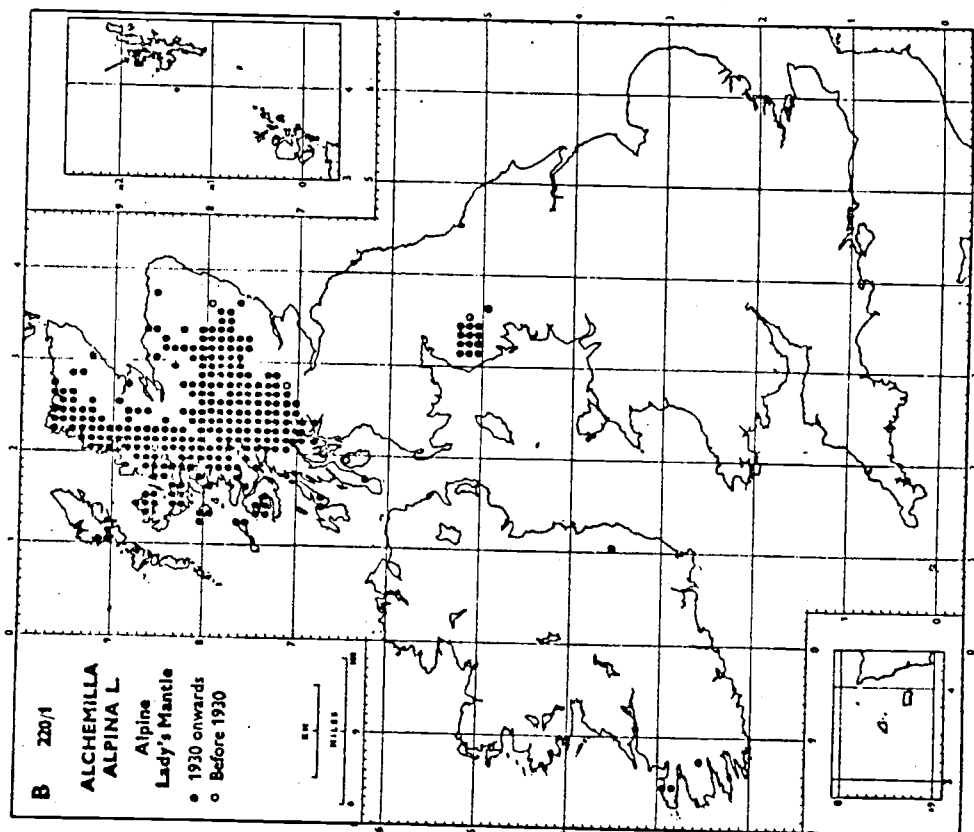
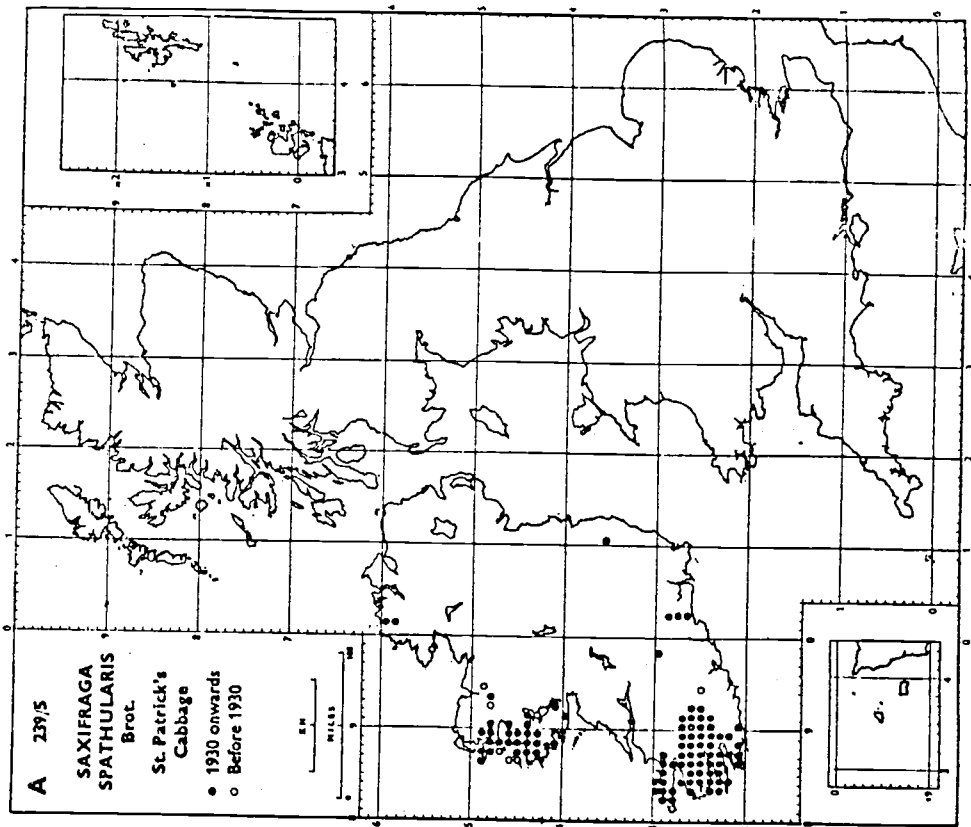


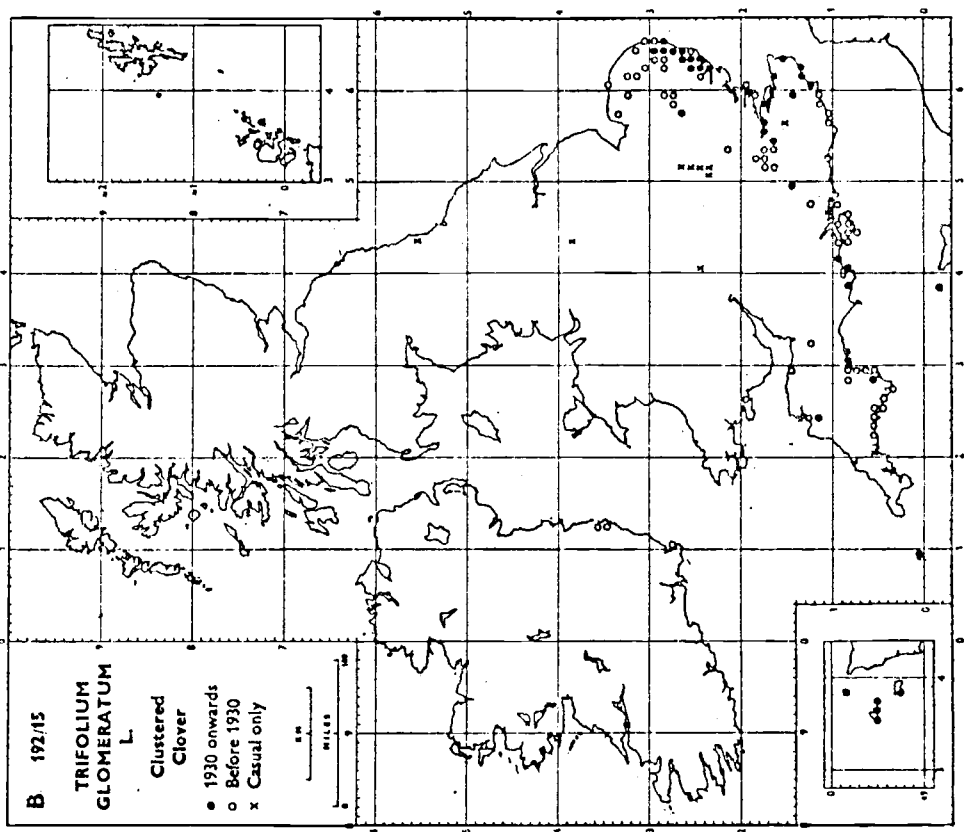
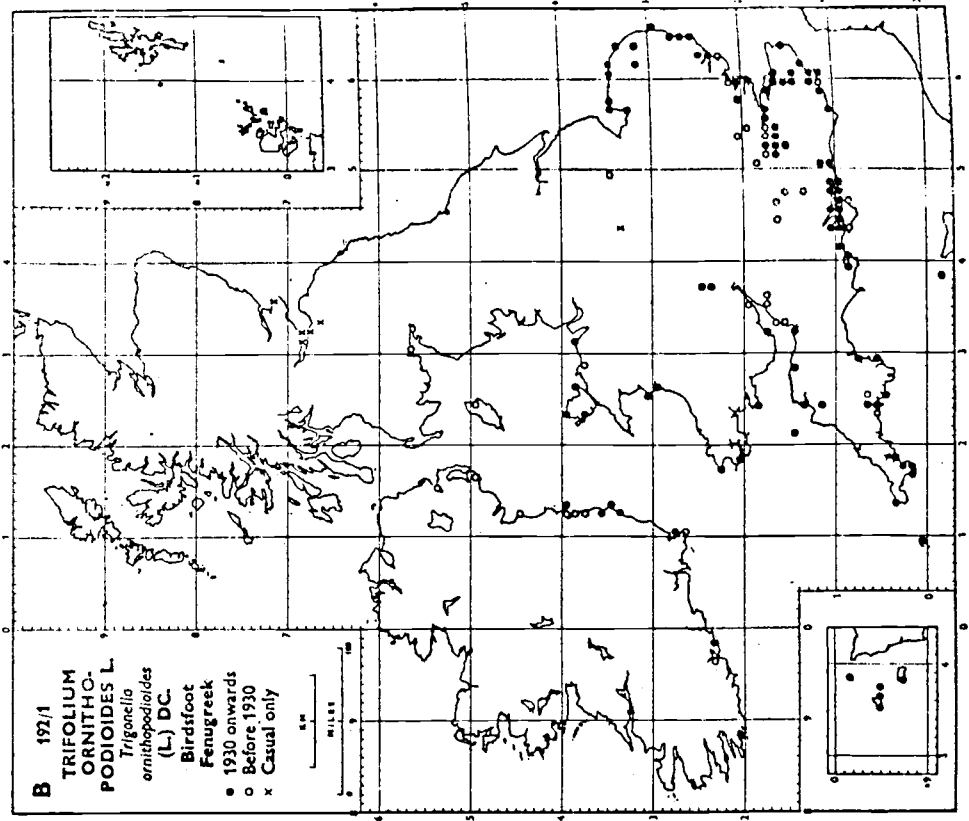


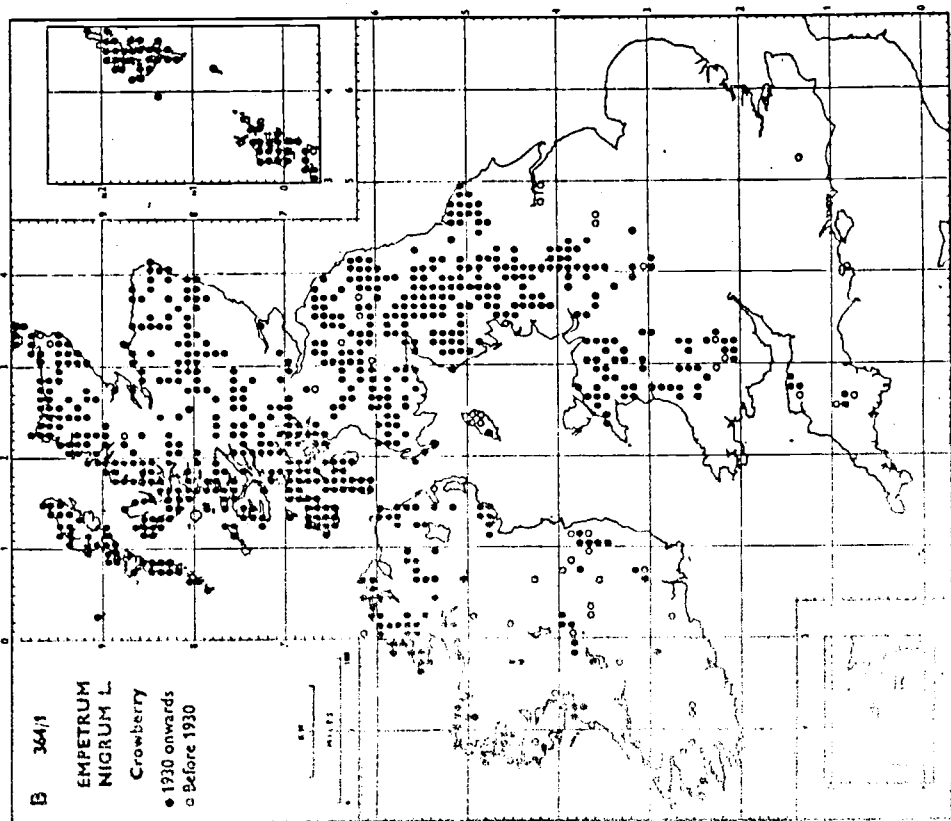
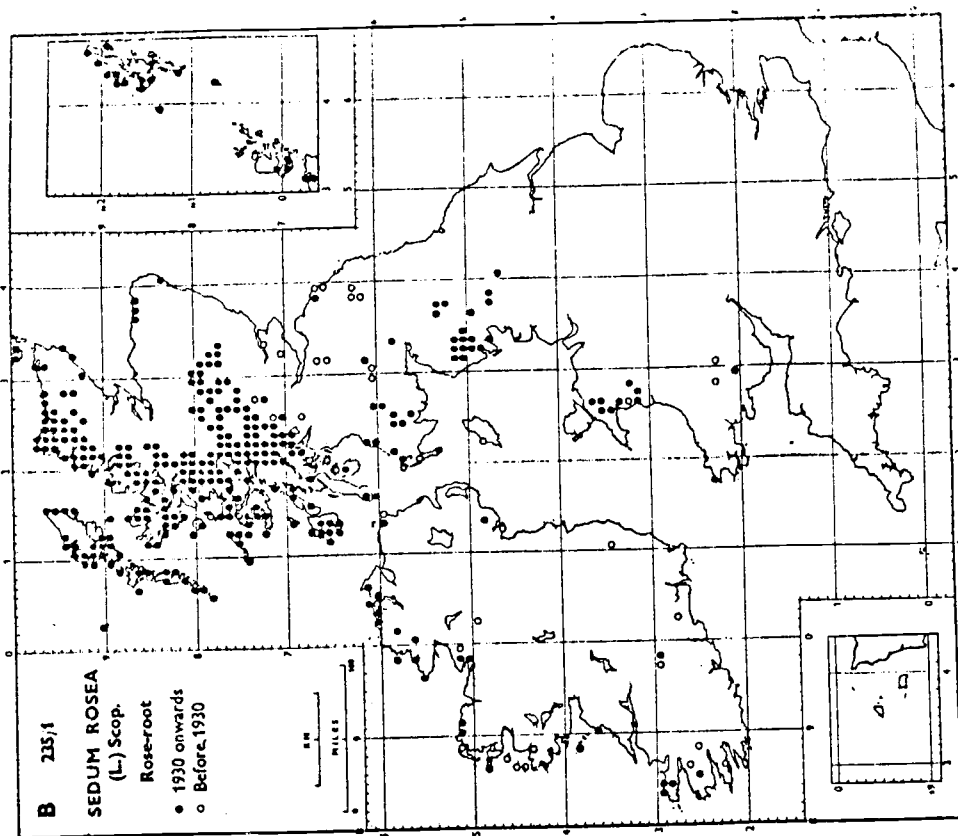








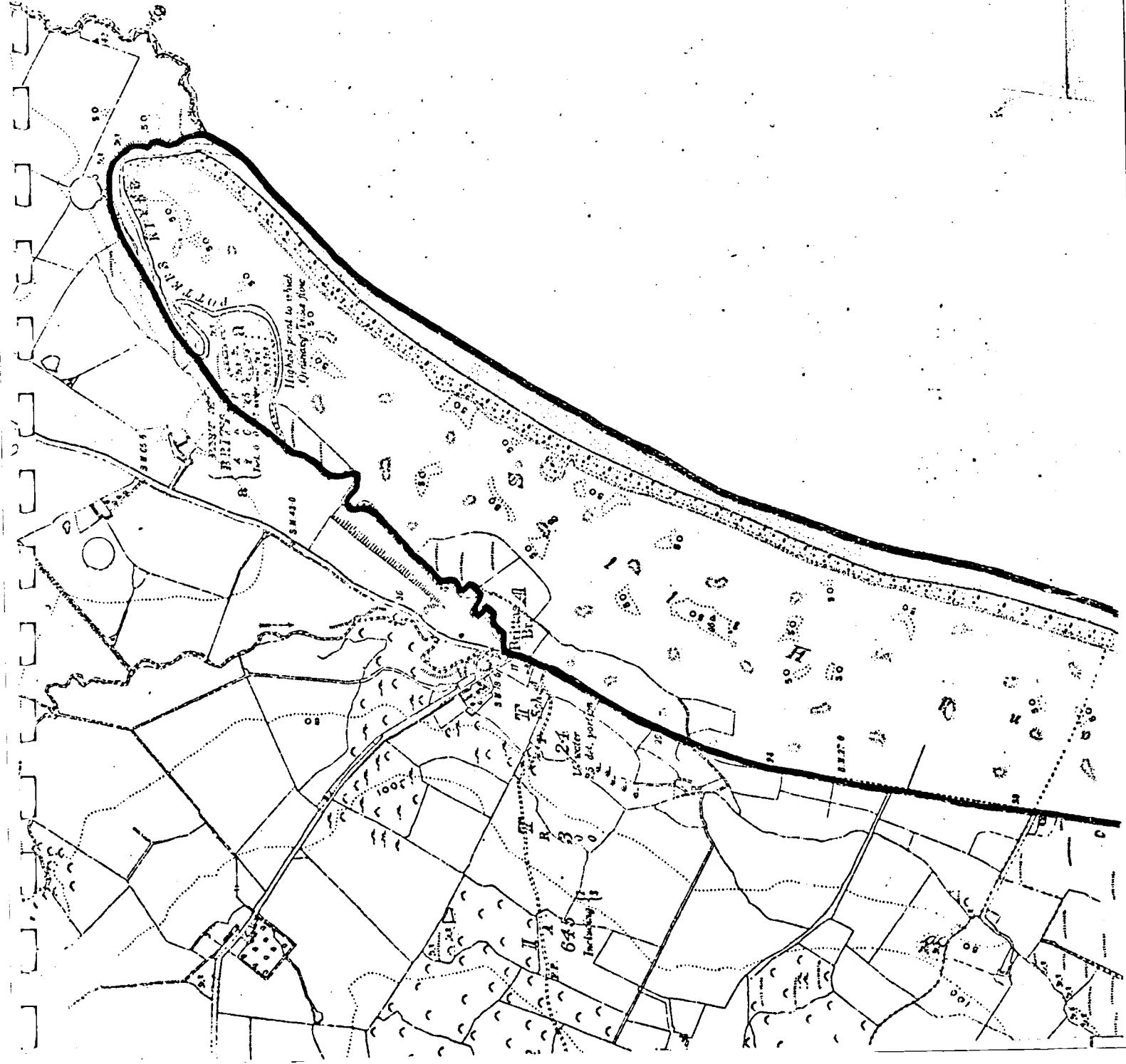




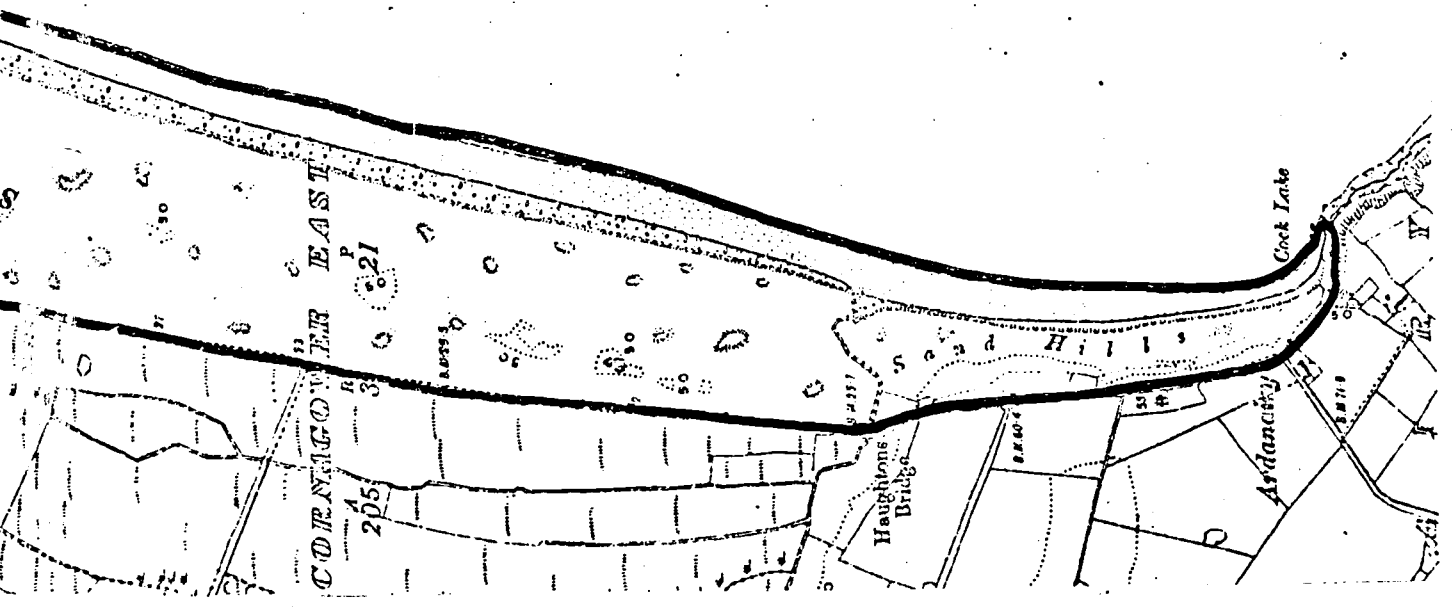


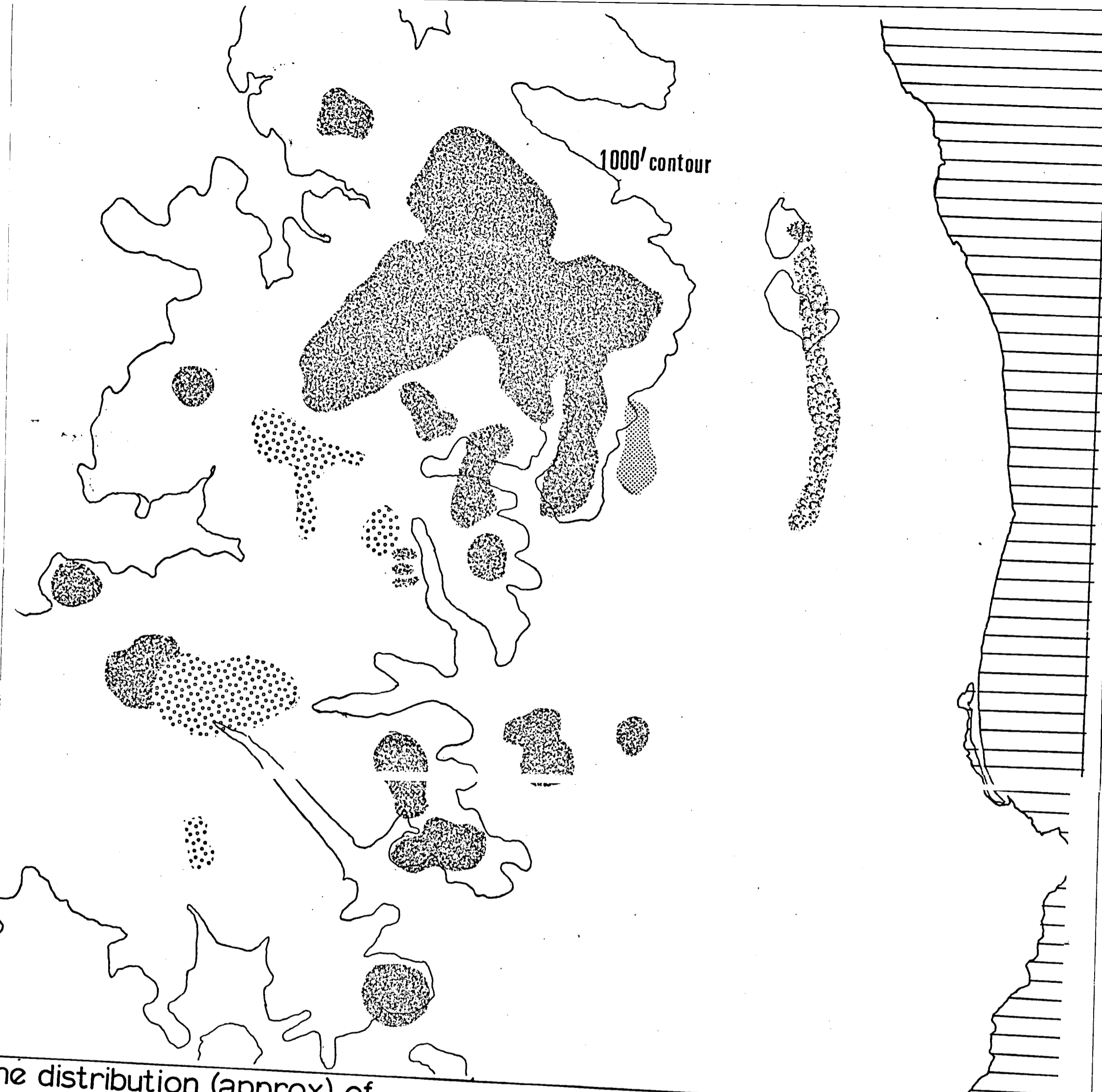
# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 51

Scale: 6 Inches to 1 Mile



B R I T I S H  
B A Y

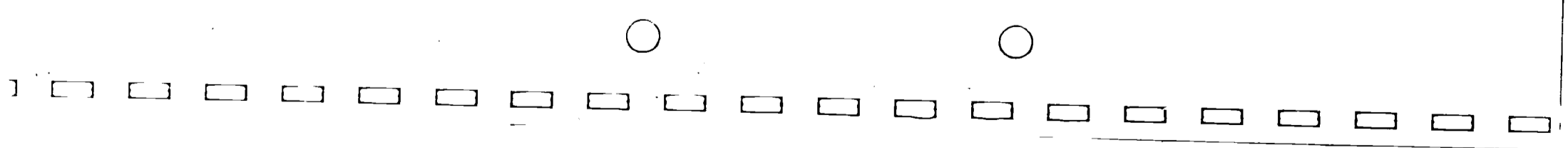




the distribution (approx) of  
 ghland vegetational ecotypes  
 the Wicklow Mountains

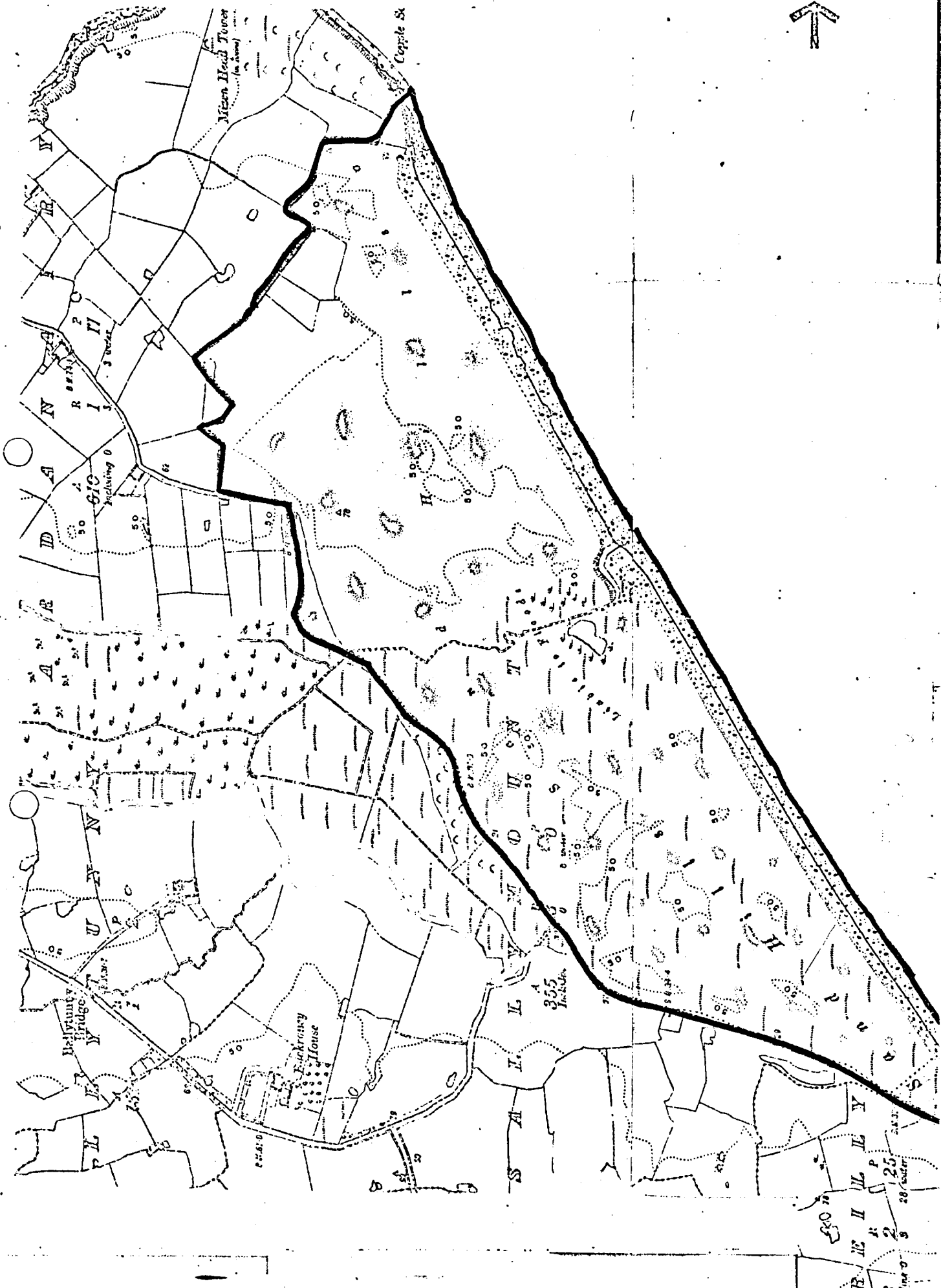
**FIG. 2**

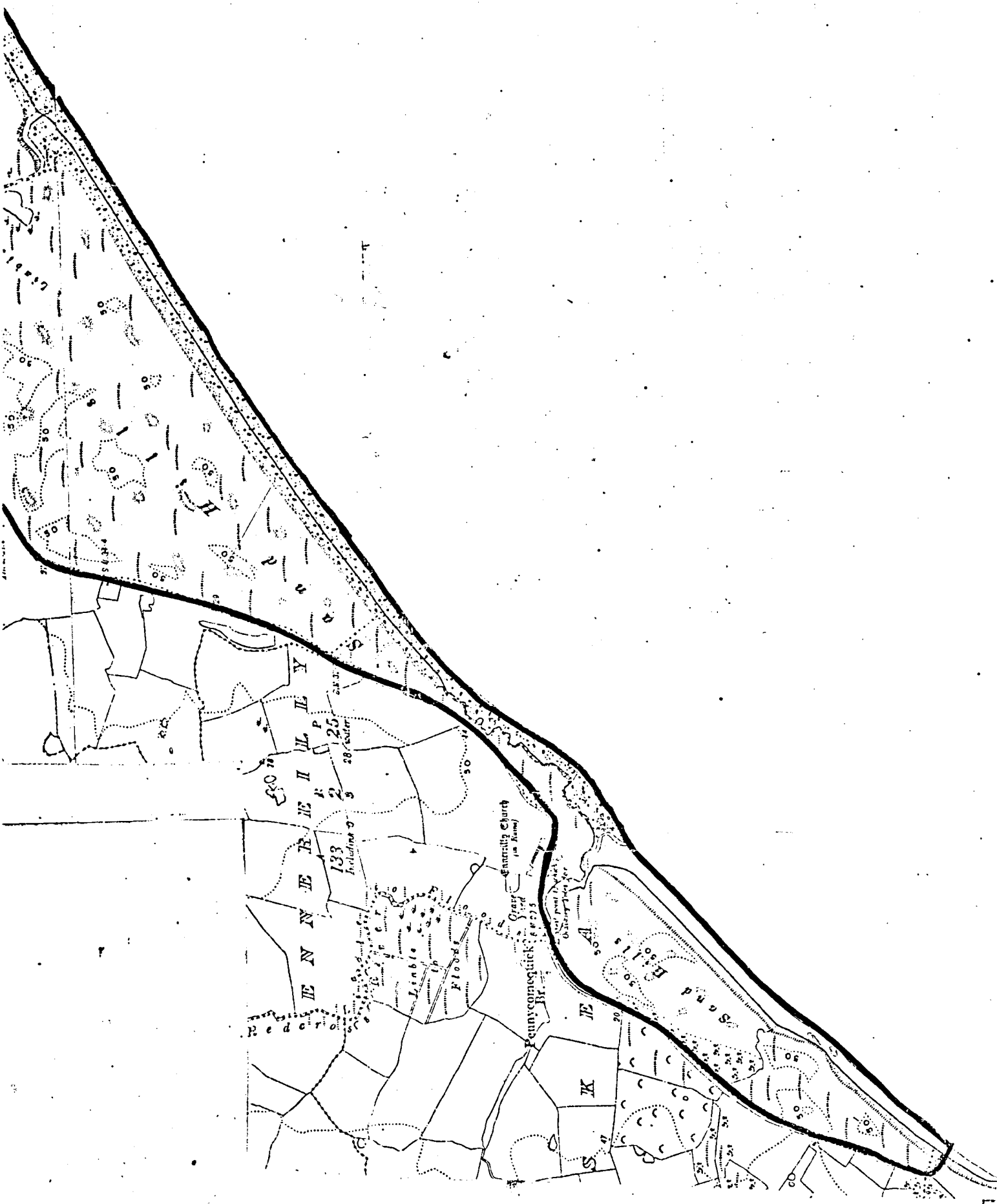
- Calluna dominated moor
- Eriophorum dominated bog
- Rhacomitrium bog
- Ulex spp dominant



# MAP SHOWING AREA OF SCIENTIFIC INTEREST — 8

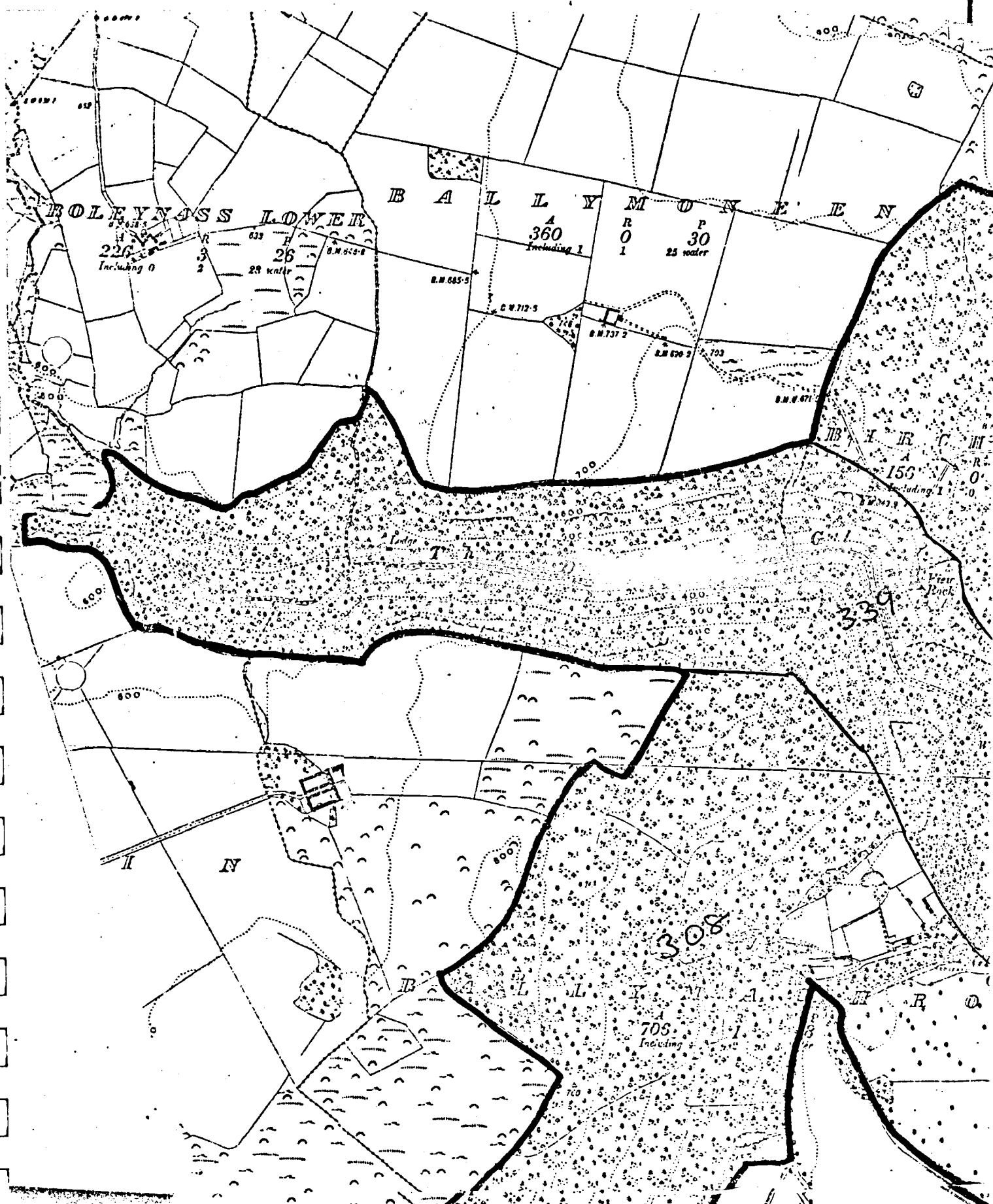
Scale: 6 Inches to 1 Mile

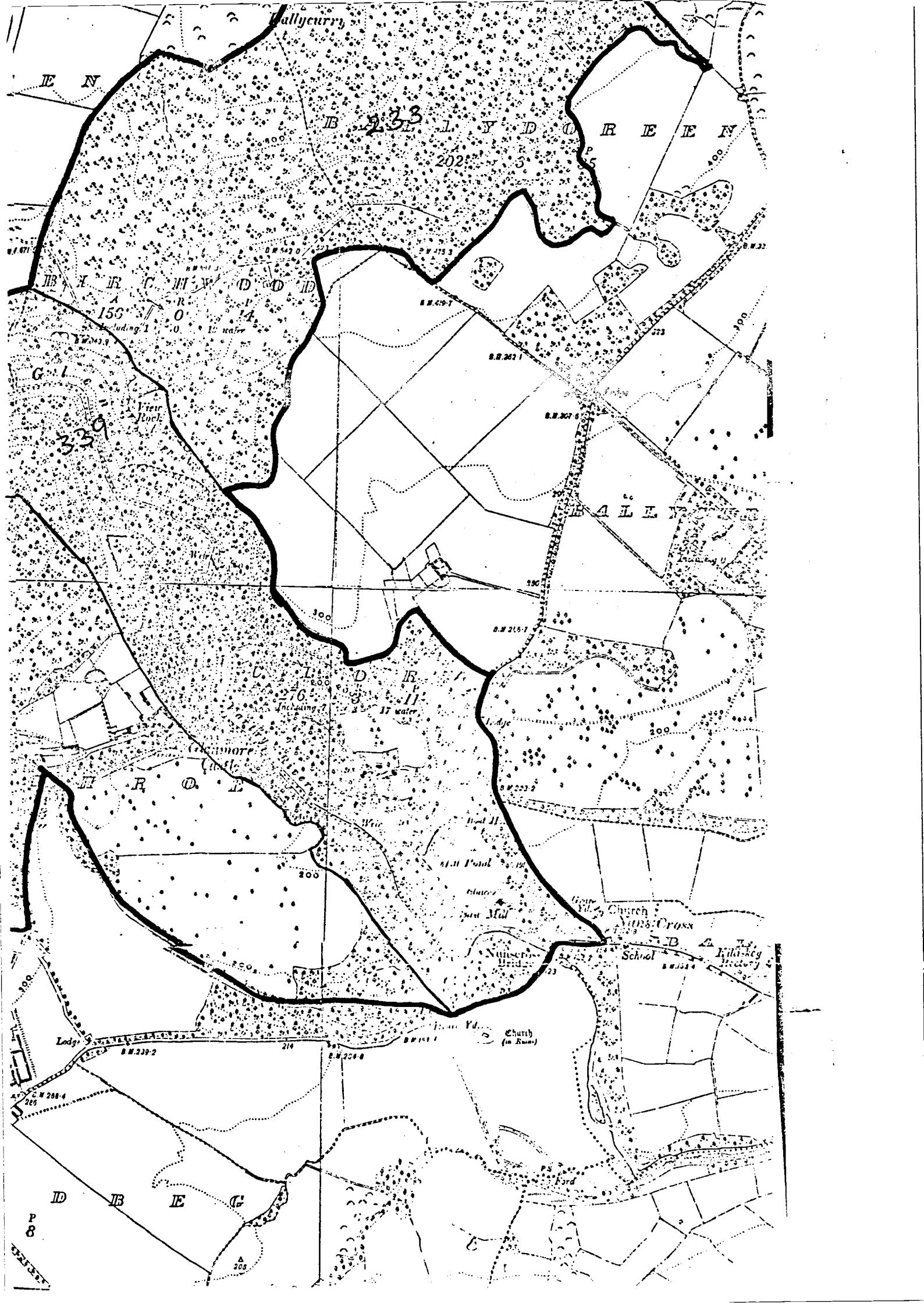




# MAP SHOWING AREA OF SCIENTIFIC INTEREST - 52

Scale: 6 Inches to 1 Mile





Killycurry

E N

B.M. 233 L. Y. D. O. R. E. E. N.

202

H. R. C. H. W. O. O. I. D.

150  
Including 1  
0  
17 water

B.M. 232-1

B.M. 232-1

B.M. 232-6

339

View  
Rock

H. A. L. E. Y.

C. L. O. R. I.

176  
Including 7  
17 water

B.M. 232-7

B.M. 232-2

H. R. O. D. I.

Castle  
Cannmore

Wells

Wear

Church  
of the Cross

Nunser's  
Bridge

School

Killycurry  
Bridges

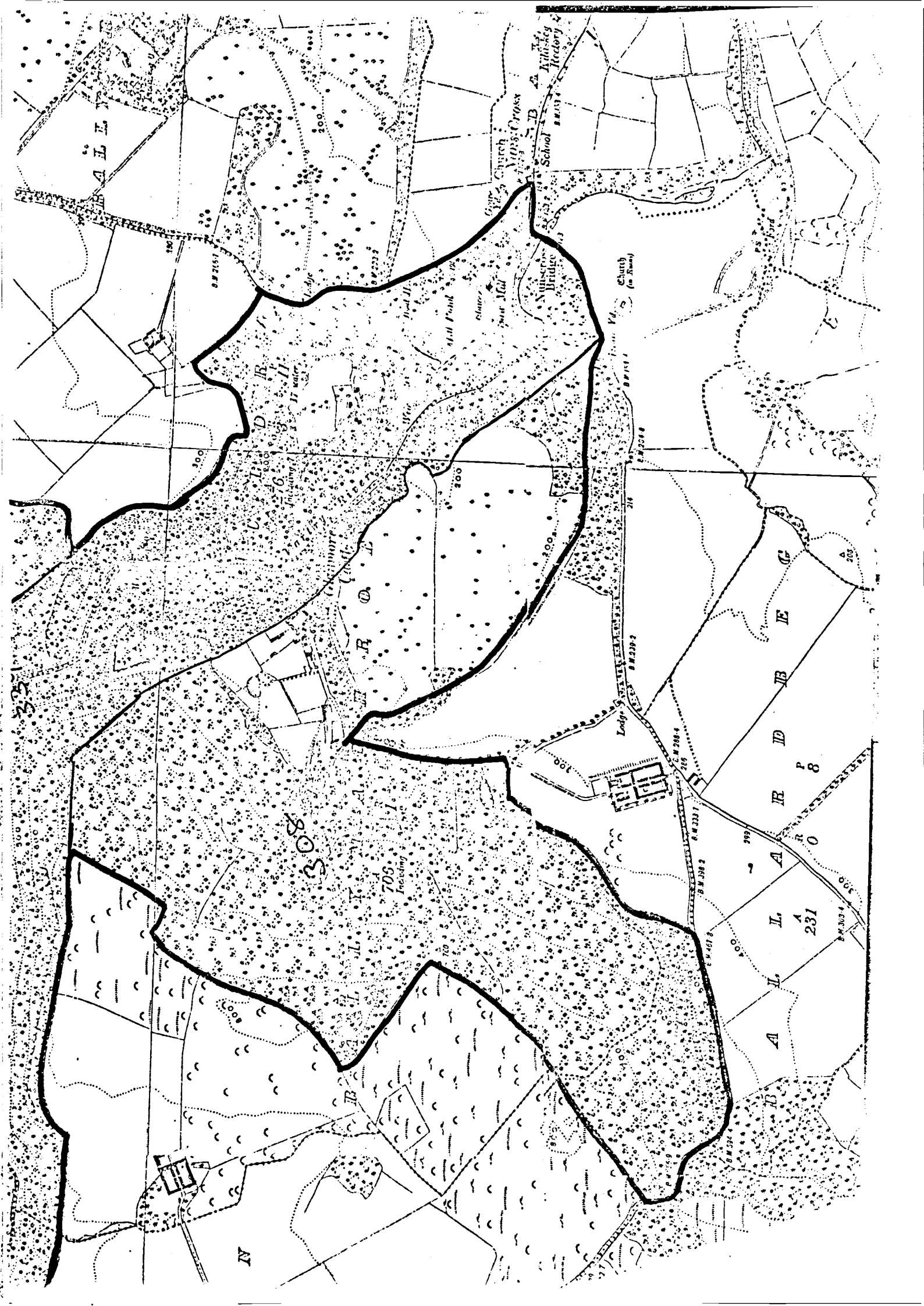
Lodge

Church  
(in Ruins)

H. B. E. G.

P 8

Sheet



WATER

WATER

WATER

WATER

WATER

WATER

Church  
Village Cross  
School  
Nursery  
Bridge

Church  
(in Run)

Lodge

N

351

231

8

703

100

100

100

100

100

100

100

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100

100

100

100

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