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CONSERVATION AND AMENITY ADVISORY SERVICE

A PRELIMINARY REPORT ON AREAS OF ECOLOGICAL AND GEOLOGICAL INTEREST IN COUNTY KERRY

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This Report is based on data abstracted from the files of the Conservation and Amenity Advisory Section, Planning Division, An Foras Forbartha, from the published literature and from two periods of field observations in May-June 1972. It is a provisional document subject to future research.

Grateful acknowledgement is made to the herbarium staff of the National Museum, to the County Council officers and to several local correspondents for helpful information.

The Report consists of the following parts:-

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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 grounds, either scientific, educational or amenity. The Conservation and Amenity Advisory Service is attempting to identify a representative range of natural and 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 particular examples it will allow more people to obtain meaningful recreation from the countryside.

However, conflicts will arise in scenically attractive areas where some or all of the elements of water, hills, woodland and rock are combined to make a desirable landscape, sought after by housing or recreational interests. At the same time such places 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 the opposing forces but occasionally development will have to be curtailed to preserve the scientific interest in an 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 who walk or drive through it. Diversity is the key quality of the environment that attracts people to an area or that makes them fit 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 reserved 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 effectivness 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? Or how can the great productivity of marshes and seasonally flooded land be harnessed, other than by rice growing, if no natural swamps are left? Finally, 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 clerest 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, 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, metal health and happiness of the community, especially the generation of town-dwellers that now form most of our nation.

SECTION B

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, or they can suffer insidiously through pollution, fertilization, grazing or overuse in recreation.

Of these various factors 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 to a developer, cooperation to maintain the county's deciduous woodlands must be actively sought at all levels of landowner, forester and the general public. It will seldom be sufficient to put a prevention order on an area which would lose its value immediately the trees are felled. The voluntary organisations have a role to play in this, acting as observers throughout the county.

Short of tree clearance, underplanting with conifers is the most damaging influence that can overtake a wood. It destroys the intricate communities of the forest floor and tree-trunks which are usually of greater interest than the trees themselves and it also prevents regeneration of the native species.

Turf-cutting on a small scale is occurring at two of the peatland sites listed and it is important to find alternative areas to furnish fuel needs. The bogs are threatened more by the associated practices of burning and drainage than by actual turf removal. Fire causes modifications to the plant cover and restricts diversity for a number of years but the effects of drainage are permanent and undesirable. Both should be discouraged as they affect large areas for the sake of very small gains.

Drainage schemes ofall sorts have serious consequences for the importance of aquatic sites but seem unlikely to occur at any of the lake sites mentioned with the exception of Akeragh Lough. Here even lowering the level a few

inches would have disastercus results as the lake is very shallow and the mud surface even now is exposed in dry summers. This restricts the food supply as well as making it more difficult to obtain.

As is well known, pollution of water bodies changes their character to begin with, and if it continued has bad effects on water quality and fish life. Aquatic communities are much more vulnerable than terrestrial ones since the incoming matter cannot be localised. Also they require less nutrients than the land. For these reasons, development upstream of important areas must be carefully controlled, and alternative sites for domestic or agricultural developments - or drainage routes from them - must always be considered if such an area is involved.

Several agricultural influences may adversely affect areas apart from straight-forward pollution by silage effluent or intensive livestock units. Fertilization of a natural community, in the attempt to improve its grazing value, will cause great changes in species composition and may in fact make it more susceptible to degredation. If a blanket bog or dune system is fertilized, grasses and weed species will become dominant and the natural species that are important stabilizers may be destroyed. If this treatment then lapses, the demanding species will not persist and erosion is possible before the native species return. The Council should be mindful of such processes even though they will seldom have power to prevent changes in land use.

Where areas of scientific interest are involved however, fertilization must be avoided. The natural bogland areas are the most vulnerable since they are at the moment adapted to very low nutrient levels. Likewise the mountain grazing of the red deer at Mangerton should not be altered until it is proven that it will not damage the herd. In cases like these the council is on the strongest ground if it has passed a Conservation Order on the area concerned before such treatment is suggested.

Grazing has its most noticeable effect in woodland where it impairs tree

regeneration and may completely prevent it. The woods around Killarney are the most heavily grazed in the county due mainly to the presence of sika deer. These have recently increased without check and pose a serious problem. In former years they were systematically culled. Grazing of grassland also changes the species composition and carried to extremes may not allow a complete cover to persist. This would be especially damaging on sand dunes and the Council in its capacity to preserve open spaces must show its concern where overgrazing is occurring.

The last influence to be mentioned is that of public pressure on land which deserves a place for its destructive aspects of plant or animal collecting and overuse of fragile systems, especially sand dunes. Though dune erosion and movement are natural processes, equally natural is the repairing action of plant growth and the migration of foredunes to fill gaps. These latter processes are those prevented by public overuse which therefore aggrevates erosion.

INTRODUCTION SCIENTIFIC INTEREST AND AMENITY IN CO. KERRY

In biological terms, County Kerry is probably the most interesting county in Ireland. This stems from its extremely warm and moist climate which gives rise to the best development of oceanic communities in Europe. These are mostly thought of as woodlands, blanket bogs and mountain ledge communities though there are several artificial woodlands with regenerating sub-tropical species. The oceanic influence does, however, penetrate all communities. Added to these, there is a series of precipitous marine islands housing the greatest density of breeding seabirds in Ireland, and also several large estuaries of vital importance to wildfowl populations.

To many specialists biological interest is centred in the Killarney valley which has attracted scientists for almost as long as it has tourists. In the study of insects, bryophytes and lichens, Killarney probably has a longer list than any other locality in the country, but it is the quality of the species rather than their quantity that is important. Many species have been found nowhere in Ireland or Britain, and for a few this is their only station in Europe; these are mostly sub-tropical American types. The southern component of mediterranean and Pyrenean species is mixed with northern forms especially in the aquatic communities and Kerry forms the southern limit to many arctic and sub-arctic species. There is great ecological interest in this mixture of two biomes.

Once a locality is named for a few rare species, interest in it is stimulated and the increase in knowledge is self-maintaining. This occurs to the detriment of the surrounding area. Killarney is a case in point and the valley is treated separately in the following report for this reason.

It is also a unit in planning terms. Practically all of the valley is visible from the higher points and this makes amenity planning essential. People are attracted to the area by its scenery and freedom from development, among other things, but services follow them in direct proportion to numbers. Most of the scientific sites in the valley are secure from this development pressure

being in the Bourne-Vincent Park or nearby but the lake system is an exception. This would be badly affected, as Lough Leane is today, by any increase in pollution. Apart from this, it is mainly with regard to amenity that development should be viewed. Clearly such an important region should not be subject to piecemeal planning and some broad policies must be evolved and implemented. To make the valley an Area of Special Amenity would show that the council was firmly committed to preserving its essential atmosphere. The important specifications might include no further development of any kind above Cromaglan Mountain and none west of Killarney-Kenmare road above Muckross. Development in full view of Lough Leane must also be constrained to reduce its impact on the landscape. As the council is aware the building of one prominent scenically-damaging complex should not appear as a licence for further development.

The Special Amenity Area order should be made before it is forced upon the council by pressure from planning applications. Most Irish people think of a holiday house as being beside the sea but in Europe the definition is much wider. Thus, it is likely that in E.E.C. conditions there will be much greater demands for housing in the valley. At the moment there is a disconcerting amount of ribbon development along several of the country roads, e.g. near Mangerton, and though this is not visible from far away, it detracts locally from the appeal of the landscape. Such car-orientated building is the most damaging type of development since it is uncontrolled by existing development - or services - and can quickly eat up former open spaces. It should not be allowed to spread unduly and it is much more preferable to have community developments off the main thoroughfares with one or two access points only.

Several of the areas of scientific interest around Killarney have become so widely known that there is a real danger of overcollecting: indeed local extinction of some of the rarest species has already occurred. Thus it is essential to give such places as much protection as possible. For some of them, Conservation Orders have been suggested, and this measure would have some deterrent value on the collector. This effect is most damaging

on some insect species and on lichens since these grow very slowly. With the presence of National Park personnel in the valley there would be some possiblity of enforcement since they are often in contact with visiting botanists. To pass a Conservation Order on these areas would not add to the problem by publicity as the localities for each species have usually been published already. As well as this the areas are relatively large.

Outside of Killarney there are two other valleys to be mentioned in the context of amenity - that containing Lough Inchiquin and the Cloonee Lakes and that of Glanmore Lake. The former is a most valuable site with interesting aquatic and woodland communities in close proximity, while Glanmore Lake which is nearby, is much less important scientifically. It would seem that in this case the decision should be taken to preserve the Inchiquin Valley in its present unspoilt condition and to allow some development of Glanmore. Variety is the chief attraction of landscape and there is much less value in two sites, each of which is thinly developed, than there is from the contrast of one site developed and one not. An improvement in access to a scenic region must not always be followed by new development.

Another region that is being overtaken by the building of holiday homes is the shore of Lough Currane. Here, however, the landscape is of a more domesticated type and buildings impinge less on it. But such development must not be allowed to consume the whole lakeshore. In particular, it should be prevented from leapfrogging into unspoilt areas. It is essential to preserve its compactness at the western end and development should be encouraged on both sides of the road for this reason. Adequate sewage treatment is necessary before effluent discharge into the lake.

The other sites will be found described in the following pages. They include several areas of coastal sand-dunes some of which have eroded and are still eroding badly. Though this is partly a natural situation it is markedly aggravated by over-grazing and over-use in recreation. People prefer to walk on the loose sand of dunes than on the stabilized cover and the former areas then have no chance of attaining an aerodynamically stable shape and

consequently of being revegetated. Some restriction of this tendancy is essential if the dune systems are to survive increased numbers of people and to make them Areas of Special Amenity may make such management easier.

In conclusion, it must be accepted that firm action is necessary to maintain parts of the natural heritage of the county, and this entails more than the refusal of planning permission in selected areas. If these are areas of special amenity already, by statute, the position of the council is much stronger. Biological sites should also be protected by the provisions of the Local Government (Planning & Development) Act, 1963. They have been decreasing in value over the whole process of civilization with forest clearance, grazing, and the introduction of foreign species. The final influence is that of the collector, which it is possible to diminish.

All sites of scientific interest should be listed as such in the Development Plan - areas within which the first priority is to maintain or improve the scientific values. Many of the disagreements that have arisen in the past stemmed basically from a lack of knowledge. The developer did not know that his chosen site had any scientific interest and his imagination and self-confidence did not allow any graceful retreat from his stand. This could be largely avoided if the areas of scientific interest were widely publicised. Such definite action by the council would elicit a response from the public in greater awareness of the environment. A developer would be inclined to work more closely with the planning authorities: rather than against them.

As a first step the landowners should, in almost all instances, be told of the importance of their land. They should be advised that their present form of land use is that most suited to the maintenance of such interest if this is the case. If not, the recommendations about over-grazing etc. should be passed on.

In general, the council should be alert to threats to any of the areas listed. These have been outlined in the previous section. Where development has to be curtailed an alternative course of action should be suggested if appropriate, e.g. the possibility of a co-operative scheme on a different piece

of land and in the case of recreational building, clustered development separated by natural areas, should be favoured.

As developments occur and as scientific knowledge increases, the importance and priority of various areas will change. Continual reassessment is required to monitor such changes. If a particular site loses its value through pollution or physical disturbance, the others of its type will immediately become more important in the regional context. Likewise, if a new and interesting species is found in an unlisted site, one of the existing ones may be deleted after comparison. Priority for a site's protection may also vary as developments in its vicinity are proposed or begun. The description of 'no planning control' in Section G must be taken as meaning none for the present. As the countryside becomes more intensively used by agriculture, housing and industry and for recreation, action will probably be needed to preserve all sites in their present condition.

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 improtance.

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

Area	Map No.	Grid Ref.	Rating	Priority	Interest
KILLARNEY VALLEY			International	B	Ecological: Botanical: Zoological. Oceanic woodland, and heathland, northern and southern types of invertebrate communities. Many very rare species.
including Derrycunnighy Wood	24	V8980	International	A	Botanical: Ecological. Best grown natural oakwood on sandstone. Rich communities of lower plants.
Muckross Wood	28	V9586	International	A	Botanical: Ecological. Woodland on limestone, mainly of yew, some ash and oak. Lake shore with several unusual plants.
Eirk Bog	30	V8679	International	B	Ecological. Well preserved bog intermediate between blanket and raised types.
"Galway's Wood"	33	V9279	International	A	Botanical: Ecological. Hillside natural oakwood - Rhododendron-free.
Lough Crincaum	35	V932823	International	C	Zoological. Type locality and only station of an invertebrate species.
Ross Island	37	V9488	National	A	Botanical: Ecological. Plant communities include many rare species. Goat damage extensive but vegetation now recovering.

Area	Grid Ref.	Rating	Priority	Interest
Tomies Wood	V9188	National	B	Ecological: Botanical. Well-grown, secondary oakwood on drift soil: little Rhododendron. Lower plants and lake shore of interest.
"Newfoundland Bog"	V9282	Regional	C	Ecological: Botanical. Wet blanket bog with rocky outcrops. Much Arbutus.
Upper Lake, Muckross Lake & Lough Leane	V8080,V9080 V9090	National National	B A	Ecological: Zoological: Botanical. Important aquatic communities, including fish, invertebrates and plants. Lough Leane is of importance to wintering wildfowl.
Mangerton Mountain	V9780	National	B	Ecological: Zoological: Botanical. Blanket bog cover, eroding on summit. Unusual lower plants: main red deer grazing area.
Doogary Valley Wood	V9084	National	A	Ecological. High level natural oakwood forming the local tree line.
Torc Waterfall	V9584	National	B	Ecological: Botanical: Zoological. Interesting lower plant communities despite widespread planting. Rare invertebrate species.
Ardagh Bog	V983884	Regional	A	Ecological. Unusual bog-type in basin. Some birchwood occurs.

Area	Grid Ref.	Rating	Priority	Interest
Lake islands (Upper Lake & Lough Leane)		Regional	C	Ecological: Botanical. Natural plant communities removed from grazing. Some species differences from mainland.
Little Skellig	V2762	International	C	Ornithological. Nesting seabird populations. Second largest Gannet colony in North Atlantic.
Tearaght Island	V1894	International	C	Ornithological: Zoological. Very large seabird population: most important for puffin and storm petrel. Interesting invertebrate races.
Inch Island & mudflats	V6396	International	B	Geomorphological: Ornithological. Fine dune belt with large numbers of wintering wildfowl on adjacent mudflats.
Derrymore Island & Tralee Bay (South side)	V7411	International	B	Ornithological: Geomorphological: Ecological. Largest concentration of brent geese in Kerry. Salt marsh community and spit also of interest.
Gweestin Valley (Barry's Glyn)	V9598	International	B	Geological. Very rare rock outcrop of stratigraphical significance.

Area	Page No	Grid Ref.	Rating	Priority	Interest
Akeragh Lough	82	Q7627	International	A	Ornithological: Ecological: Botanical. Rich lagoonal area important for wintering wildfowl. Foremost area in country for rare North American aquatic birds.
Oyster Hall Coastline (Spa-Fenit foreshore)	85	Q7716	International	C	Geological: Botanical. Rare exposure of interglacial peat. Probably a type locality.
Lamb's Head	87	V5357	International	B	Botanical: Ecological. Heath vegetation with a very rare plant species.
Uragh Wood & Cloonee Loughs	90	V8464	International	B	Ecological: Botanical: Zoological. Remnant natural oakwood (regenerating) with unusual species. Fine aquatic communities with rare fish (char).
Inch-Anascaul coastal cliffs	96	Q6200	National	B	Zoological. Rare invertebrate species occurs.
Kilmurry Bay	99	V5599	National	C	Geological. Exposure of rare geological phenomenon.
Brandon Mountain	101	Q4611	National	B	Botanical: Ecological. High level communities with many rare plants, including mosses and lichens.
Lough Doon	104	Q503058	National	B	Geological. Perfect mountain corrie with all features. Easy of access.

Area	Grid Ref.	Rating	Priority	Interest
Lough Gill area	Q5813	National	B	Botanical: Geomorphological: Zoological: Ornithological. Lagoon in tombola feature with interesting sand dune and aquatic vegetation. Rich wildfowl feeding.
Great Skellig	V2561	National	B	Ornithological. Large colonies of seabirds nest, especially storm petrel, puffin.
Puffin Island	V3473	National	C	Ornithological. Largest shearwater colony in country with good numbers of puffin and razorbill.
Bay View	Q762150	National	C	Geological. Finest exposure of a particular fossil limestone reef.
Rossbehy dunes	V6793	National	B	Botanical: Zoological. Rare plant and animal species occur.
Clogher Head and Cove	Q3203	National	C	Geological. Important Silurian rock section with volcanic rocks nearby.
Rossdohan Island	V7264	National	B	Botanical: Zoological. Fine gardens with many subtropical species. Invertebrates also of interest.
Caragh Lough	V7188	Regional	B	Botanical: Ecological: Zoological. Oak woodland diverse with representative insects also. Aquatic communities include rare species.

Area	Page No.	Grid Ref.	Rating	Priority	Interest
Ballaghisheen Bog	125	V6880	Regional	B	Ecological. Intact blanket-bog area
Inisvickillane	126	V2191	Regional	C	Ornithological, zoological. One of the third largest colonies of storm petrel in Ireland. Several rare varieties of insects occur.
Roughty River near Morley's Bridge	129	W0475	Regional	B	Botanical. Several interesting species occur: One race unique to this site.
Lehid Harbour	131	V7863	Regional	B	Botanical, ecological. Birch and oakwood with patches of heath. Extremely sheltered marine habitat.
Slea Head Cliffs	135	V3396	Regional	B	Zoological. A rare insect race occurs.
Lough Nagarriva	137	V969606	Regional	C	Zoological. High acid lake with interesting fauna. Type locality for a species.

Area	page no.	Grid Ref.	Rating	Priority	Interest
Barrow Harbour P. 139.	139	Q7317	Regional	B	Ornithological: Botanical. Important wildfowl haunt in winter: interesting plant species on limestone and sandy soils.
Boughil and Barfinny Lough	142	V8576	Regional	C	Botanical: Ecological. Alpine plants occur. Lake experimentally fertilised to alter fish growth (1956).
Fermoyle tombola and marsh	145	Q5413	Regional	B	Geomorphological: Ecological. Good land form example with marsh recently inundated by sea water.
Puffin Sound - Horse Island cliffs	148	V3568	Regional	B	Ornithological. Largest group of choughs nest.
Lough Currane	150	V5466	Regional	B	Zoological: Botanical: Ornithological. A fish species and some of the marginal and island vegetation is of interest. Nesting terns present.
Beginish Island (near Dunquin)	153	V2898	Regional	C	Ornithological. Largest tern colony in Kerry.
Fahamore Shore	155	Q6019	Regional	C	Ecological: Botanical. Rich algal development including many southern species.
Parkmore Point	157	V3997	Regional	C	Ecological. Exposed marine habitat example.
Dooneen Wood	159	R016125	Regional	B	Ecological. Oakwood on edge of coal measures shales.

Area	Grid Ref.	Rating	Priority	Interest
Cashen River estuary	Q8936	Regional	B	Botanical. Interesting plant communities including a very rare species.
Coomasaharn Lough	V6384	Regional	C	Zoological, botanical. Acid lake with char. Heath and cliff vegetation of interest.
Derrynane	V5256	Regional	B	Botanical, ecological. Important sand dune and saltmarsh areas.
Magharee Islands	Q5822	Regional	B	Ornithological. Large colonies of terns (Reenafaldarrig) and common gulls (Illauntannig)
Carrigawaddra	W0382	Local	B	Ecological. Oakwood spreading naturally on block scree. Ungrazed.

Area	Grid Ref.	Rating	Priority	Interest
Wood near Kilgarvan 170	W0273	Local	B	Ecological : Botanical Woodland on deep drift soil. Rich ground flora.
Mucksna Wood 179	V9099	Local	B	Ecological: Botanical. Wood rich in species of higher and lower plant: also in passerine species. Invertebrates investigated.
Lough Acoose 182	V7785	Local	B	Ecological: Zoological: Botanical. Acid lake with rare plant and fish species.
Spanish Island 185	V7559	Local	C	Ornithological. Large tern colony present.
Graigues Wood 187	V5964	Local	B	Ecological Young regenerating oak woodland
Cromane Point - Rosculien Point (Castlemaine Harbour) 189	V7000	Local	B	Ornithological: Ecological. Rich wildfowl feeding area with saltmarshes/ old fields behind.
Dunbeg (near Fahan) 192	V349972	Local	C	Geological. First locality that an important geological principle was established.
Glanleam Wood (Valencia) 194	V4177	Local	B	Ecological: Botanical. Extreme oceanic conditions. Native and introduced (subtropical) species of interest.
Glanmore Lake 196	V7856	Local	B	Ecological. Remnant woodland on islands

Area	Page No	Grid Ref.	Rating	Priority	Interest
Inishtooskert	197	Q2400	Local	C	Ornithological. Seabird numbers large, especially storm petrel.
Burnham Wood (Caherdaniel)	201	V4399	Local	B	Ecological. Largely planted: in an area where woodland is rare. Rich in bird life: some bryophytes of interest.
Slate Quarry, Doohilla	204	V3977	Local	B	Ornithological. Concentration of nesting choughs.
Beal Point	206	Q9048	Local	B	Ecological: Botanical. Good sand dune communities found.
Limestone Ridge near Church Hill	209	Q7617	Local	A	Botanical. Interesting group of species on rock in farmland.
Inishabro	212	V2193	Local	C	Ornithological. Diverse nesting seabirds.
Illaunabarnagh Island Horse Island Mucklaghmore Island	214	Q6922 V3574 Q6822	Local Local Local	C C C	Ornithological. Sites of particular seabird colonies: terns and cormorant.

Name of area	DERRYCUNNIGHY WOOD
Acreage	165 acres
Grid reference	V. 89 80
Scientific interest	Botanical, Ecological, Zoological
Rating	International
Priority	A

Description of area

This is a natural oakwood, formerly managed for charcoal and timber and still showing signs of this, with a wide and fairly even spacing of the trees (Quercus petraea). There are two distinct layers in much of the wood; the canopy can be solely of oak or this mixed with birch (Betula pubescens) and rowan (Sorbus aucuparia), while the understory is of holly (Ilex aquifolium) or Rhododendron ponticum. The ground is very rocky, the boulders like the tree trunks and branches being densely covered by mosses and the filmy ferns (Hymenophyllum wilsonii and H. tunbridgense In more open places a dwarf shrub layer is present with Calluna vulgaris (heather) and Vaccinium myrtillus (frochan) and some herbs, e.g. bracken (Pteridium aquilinum), Molinia caerulea (purple moor grass), Deschampsia flexuosa (wavy hair grass) and Potentilla erecta (tormentill).

Arbutus unedo occurs in some rocky outcrops, especially close to the lake, while Taxus baccata (yew) is occasional throughout.

Though few higher plants of great interest occur except perhaps, the characteristic Cephalanthera longifolia (white helleborine), and Listera cordata (lesser twayblade), the situation is completely different for mosses, liverworts and lichens. About forty species of mosses and fifty of liverworts (Richards, 1938)* occur, and there are very different associations on the boulders, fallen branches and twigs. Species characteristic of acidic oakwoods are fully represented and additionally there are many rare oceanic and sub-tropical types.

* Ann. Bryol., Hague, 11 , 108.

The lichens too are particularly noticeable including large foliose ones such as Lobaria spp. a good range of Sticta sp. and many others.

The invertebrate fauna is rich in the area : it includes interesting species of microlepidoptera, hemiptera, hymenoptera and other orders. The presence of the wood ant (Formica lugubris) suggests a northern component in the fauna to add to the other groups.

Evaluation

This is possibly the most natural oakwood in the country, certainly it is the most famous, due to several published descriptions (e.g. Turner & Watt, J. Ecol. 21, 202). It is the best example of an oceanic oakwood, and with many rare "Atlantic" and sub-tropical species of lower plants, it is of exceptional ecological value. The presence in it of many unusual invertebrates adds value to the site.

Vulnerability

Little regeneration of anything except Rhododendron occurs in this wood like all those around Killarney. There is little doubt that this is caused by over-grazing, largely by deer, since elsewhere in Kerry oak regeneration is quite adequate. Derrycunnighy is grazed by sika deer throughout the year and by red deer in the winter.

Rhododendron spread is perhaps the most immediate threat to the area. It has invaded a large part of the wood especially close to the road and continues to spread.

Injury to some of the lower plants has been caused by collectors in recent years. Lichens are especially vulnerable as they grow and spread particularly slowly, and some of the species are so rare as to be restricted to one group of trees.

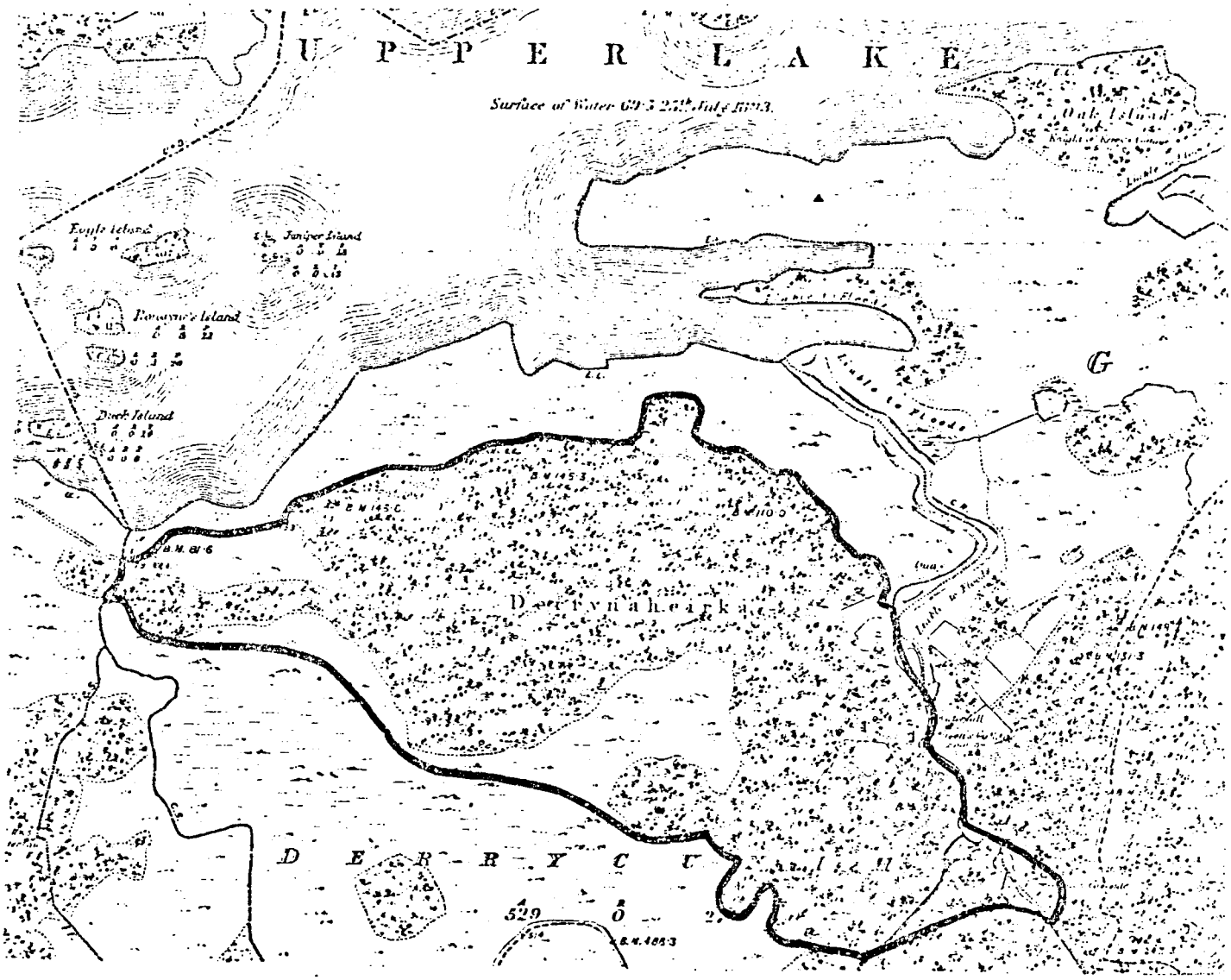
Recommendations

The Forestry Division and the office of Public Works should be encouraged and supported in their plans to control deer grazing and the spread of Rhodcdendron. A solution to these problems must be found in the next few years or the future of the wood in even its present form, will be in serious doubt.

The importance of this wood and its vulnerability to visiting parties of collectors fully justifies the passing of a Conservation Order on it. This could be prepared by An Foras Forbartha under Section 46, Local Government (Planning and Development) Act, 1963. Some powers against the collector would then be available.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	MUCKROSS WOODS
Acreage	358 Acres
Grid reference	V 95 86
Scientific interest	Botanical, ecological
Rating	International
Priority	A

Description of Area

The eastern part of this area is of limestone. Most is covered by woodland in which yew is a dominant species with some Corylus (hazel), Salix (willows), Betula (birch) and Fraxinus (ash). At the edges Arbutus, Sorbus anglica (white bean) and Populus tremula (aspen) come in, in conditions of high light. The yew wood is a dense stand of fairly old trees which are now scarcely regenerating. They grow in cracks and on the rock surface mixed with mosses such as Ctenidium, Eurhynchium cincinatur, Trichostomum spp, Marchesini spp and Neckera crispa but few herbs. A good proportion of the trees are severly de-barked by deer and some have been killed by this. Most deer activity to occur along paths.

There are wet depressions in the limestone which are dominated by ash. The greater amount of light allows an interesting herb flora to develop with Carex sp (sedges), Scutellaria galericulata (skullcap), Lysimachia vulgaris (yellow loose-strife), Thelypteris palustris (marsh fern), Equisetum variegatum (horsetail) etc.

More open deciduous woods and scrub supports Milium effusum (wood millet grass), Pimpinella major (burnet saxifrage), Silene dioica (red campion) and Carex divulsa (a sedge) as well as the more typical plants of limestone woods, while the three saprophytes, Neottia nidus-avis (bird's nest orchid), Monotropa hypopitys (yellow bird's nest) and Orobanche hedera (ivy broomrape) are associated with the woods where more planting has been done, especially of beech.

Camillon Wood is a fine oakwood developed on sandstone. Individual areas are colonised by Rhododendron but there are also good patches of the Quercus - Ilex (oak-holly) community. In these developments of frutriose birches, such as

Lobaria spp, Pannaria and Parmelliella spp is luxuriant and many other such oceanic species occur.

The lake shores of the Muckross penninsula are also of interest with a rich flora including Aquilegia vulgaris (columbine), Thalictrum minus (meadow rue), Galium boreale (northern bedstraw)and Hieracium spp. for example.

These woods are probably richer in bird life than those on the hillsides above Evaluation. This is a very valuable area, internationally known for its yew wood community and lower plants.

Vulnerability

There are two main threats to the area and both are biological, namely the spread of Rhododendron and the grazing by sika deer. Each is peculiar to one type of woodland. Rhododendron does not invade limestone areas to any extent so is mainly restricted to Camillon wood, while the yew is more susceptible to deer damage than other species, meaning that grazing is more of a problem in the yew wood. However, in both regeneration is exceedingly poor.

Recommendations.

The area should be covered by a Conservation Order as soon as possible and steps to control the deer numbers urged on the park authorities.

They are showing the capability for enlightened management of the most important scientific sites in their control and this should be recognised by the passing of conservation orders on such areas. This would also give some measure of control over plant collecting which now occurs.

Name of Area	EIRK BOG
Acreage	200 Acres
Grid Reference	V. 86 79
Scientific Interest	Ecological
Rating	International
Priority	B

Description & Evaluation

This bog occurs in the flat glaciated valley of the Owenreagh River and has a slightly domed form. In two places are pool complexes with characteristic species such as Carex limosa (a sedge), Menyanthes trifoliata (bogbean), Utricularia intermedia (bladderwort) and Potamogeton polygonifolius (pondweed). Elsewhere the vegetation is largely dominated by Calluna (heather), Myrica gale (bog myrtle), Molinia caerulea (purple moorgrass) and Sphagnum species, especially S. papillosum, S. plumulosum and S. subsecundum. Plants characteristic of western bogs occur, e.g. Leucobryum glaucum, and Campylopus atrovirens (mosses), and Pleurazia purpurea (a liverwort) while the large butterwort, Pinguicula grandiflora grows in places.

Regions transitional to more typical blanket bog occur at its edges.

Eirk Bog is a classical example of the type intermediate between a raised bog and a blanket bog. It is probably formed by a lack of drainage in the valley bottom but now its surface layers depend on rainfall rather than the ground water for nutrients.

Ecologically it is thus very valuable in the study of bog processes and origins.

Vulnerability

The area would be damaged by any form of drainage or the expansion of adjacent turf-cuttings into it.

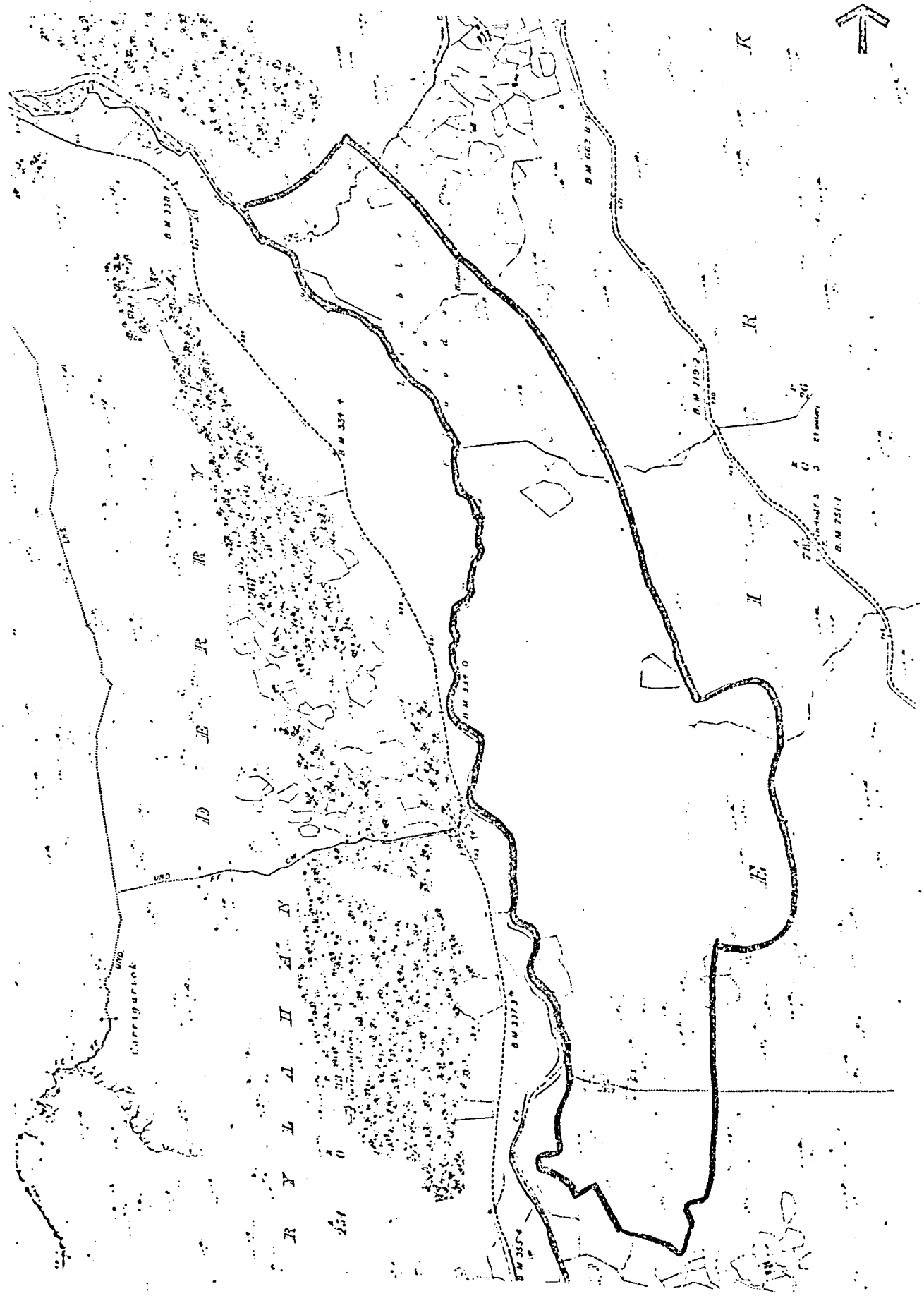
Fire is temporarily damaging to any bog and fertilizer application much more so.

Recommendations

General planning control should be sufficient to preserve this area in its present condition. It is important however to discourage turf-cutting within the boundary shown.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	"GALWAY'S WOOD"
Acreage	142 acres
Grid Reference	V 92 79
Scientific Interest	Botanical; ecological
Rating	International
Priority	A

Description and Evaluation

This wood is in need of further investigation but seems to resemble Derrycunnigly Wood (q.v.) most closely. Its main importance lies in the fact that it is almost completely Rhododendron-free and so factors operating in an oakwood of entirely native species can be investigated.

It has a similar flora and fauna to the other mountain woods nearby but is probably visited and grazed by greater numbers of red deer.

Vulnerability

Rhododendron occurs close to the Ullaun River and will spread into the main body of the wood if it is not checked in time. The wood provides very suitable conditions for it.

The threat of afforestation with coniferous species is probably remote.

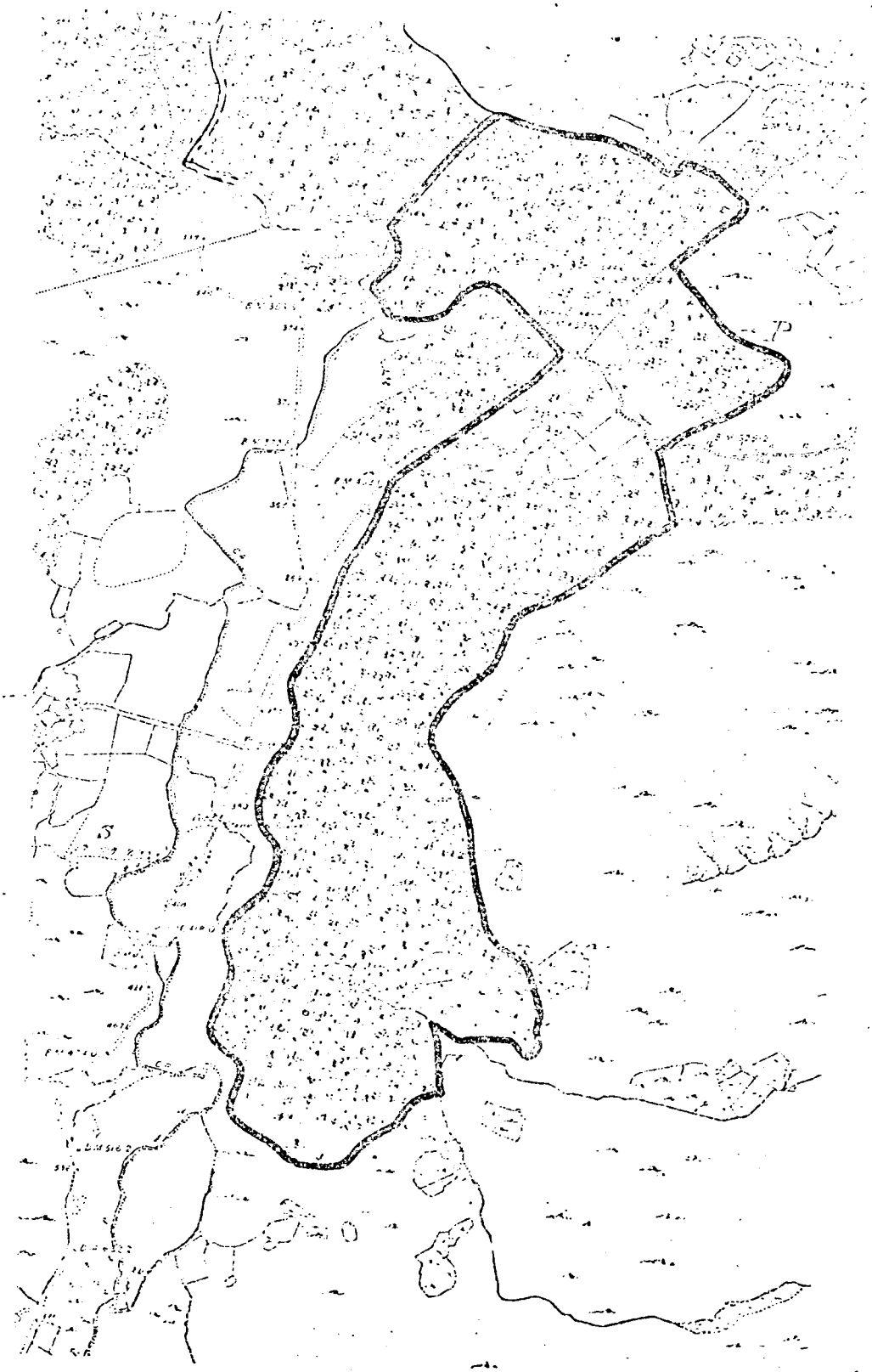
Recommendations

"Galway's Wood" is a site that fully deserves to be covered by a conservation order under Section 46, Local Government (Planning and Development) Act, 1963. Its rare species are lower plants with slow growth rates and unscrupulous collecting of specimens can lead to extinction of some types.

Regular Rhododendron patrols are necessary to keep this aggressive colonizer out of the wood.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	LOUGH CRINCAUM
Acreage	2.6 acres
Grid Reference	V 932 823
Scientific Interest	Zoological
Rating	International
Priority	C

Description and Evaluation

This is a small acid mountain lake interesting as the type locality and so far only station for an invertebrate species. It is an oligotrophic lake with a simplified aquatic community suitable for study.

Vulnerability

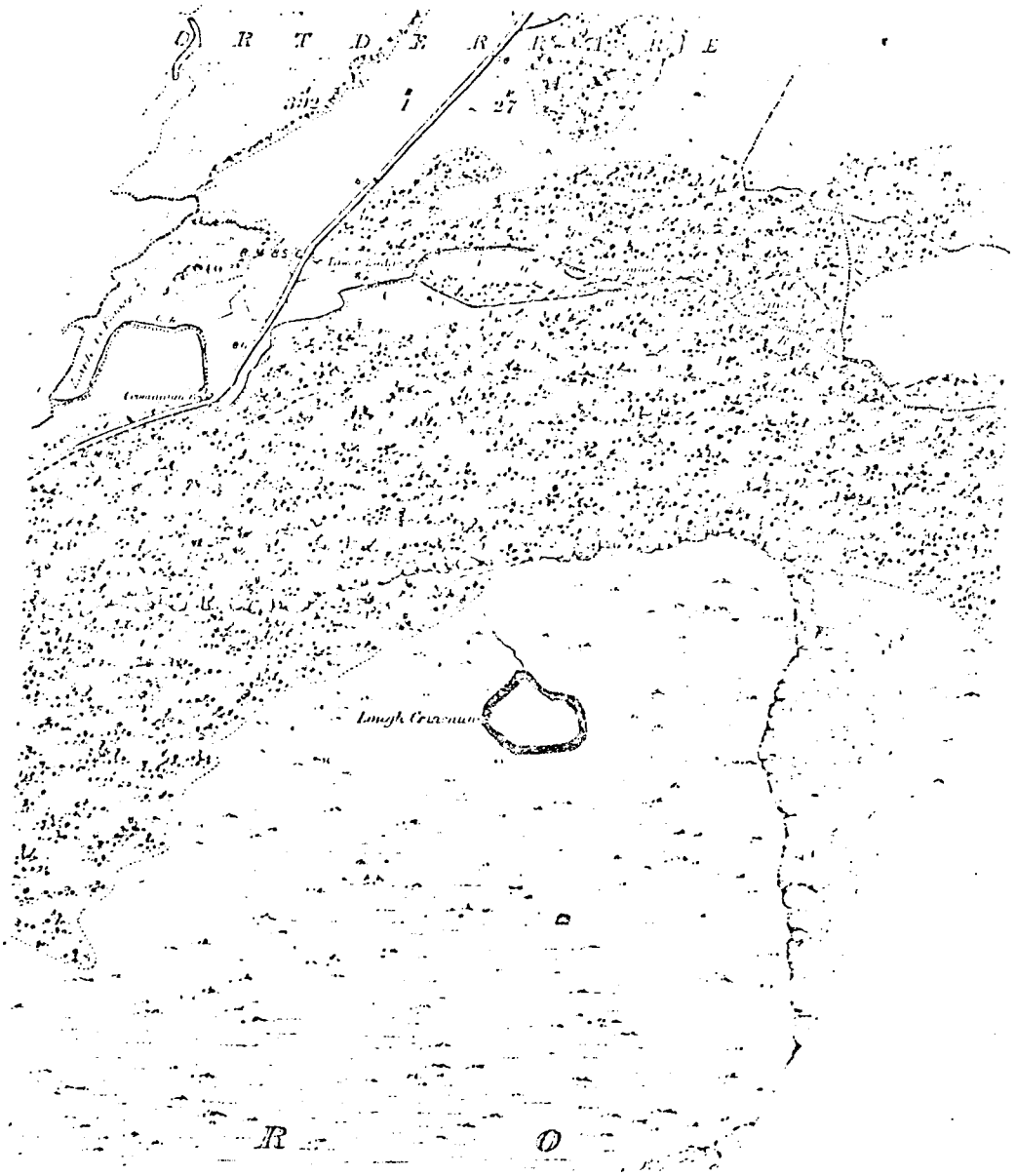
The species are only affected by changes in water quality and collectors.

Recommendations

Fertilization of the immediate catchment area of L. Crincaum should be prevented.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	ROSS ISLAND
Acreage	148 acres
Grid reference	V. 94, 88
Scientific interest	Botanical: ecological: geological
Rating	National
Priority	A

Description of area

Ross Island is based on carboniferous limestone and is covered by calcicole woodland in which ash, yew and arbutus figure prominently. There has also been much planting of individual conifers, beech etc. It is the only woodland in the Killarney valley that could be called herb-rich and the ground vegetation contains many species of interest, e.g.

Ranunculus auricomus	Goldilocks
Moehringia trinervia	three-nerved sandwort
Melica uniflora	melick grass
Epipactis helleborine	broad-leaved helleborine
Lathraea squamaria	tooth wort
Galium odoratum	woodruff
Neottia nidus-avis	bird's nest orchid

On rocks bordering the lake Rubus saxatilis (stone bramble), Aquilegia vulgaris (columbine) and Hieracium spp. (hawkweeds) grow while on the edges of hazel woodland and in other open places Agrimonia odorata (agrimony) and Vicia sylvatica (wood vetch) have been seen.

The yew woods have been severly damaged by feral goats, many trees have been killed by de-barking but these animals have now been removed. Many unusual species of mosses and liverworts have been recorded. Though some may have been removed by grazing they represent an important group of species only found in the limestone woods here and near Muckross.

An interesting part of the flora is formed by the two maritime species, Armeria maritima (sea pink) and Silene maritima (sea campion) which occur on the shores of Ross Island especially near the old mines. Fens and marshes extend into the lake in places and house other interesting species, for example:-

Lysimachia vulgaris	yellow loosestrife
Scutelaria galericulata	skull cap
Frangula alnus	alder buckthorn
Eleocharis acicularis	spike rush
Carex acuta	a sedge
Thelypteris palustris	marsh fern

In deeper water there is also a greater variety of aquatic species than on the sandstone shores of the Killarney lakes.

Associated with the old mines are piles of mining mauls - Bronze Age mining tools especially found on the foreshore. They form an old causeway into the lake at point A on the map.

Evaluation

This is an important area adjacent to much tourist traffic and with many observable species. The herb-rich woodland is the best developed example in Kerry and contains many rare species. The lake shore is also of interest.

Goat damage forms an interesting ecological influence very similar to grazing by sika deer.

Vulnerability

The woodland is susceptible to further grazing by goats or deer. Spread of beech is a particular problem as it restricts the diversity and interest of the ground flora and other introduced species may also colonize the more natural areas.

The mining mauls are very easy to collect by passersby and might be sold as souvenirs.

Recommendations

Grazing animals especially goats must be prevented from entering the area.

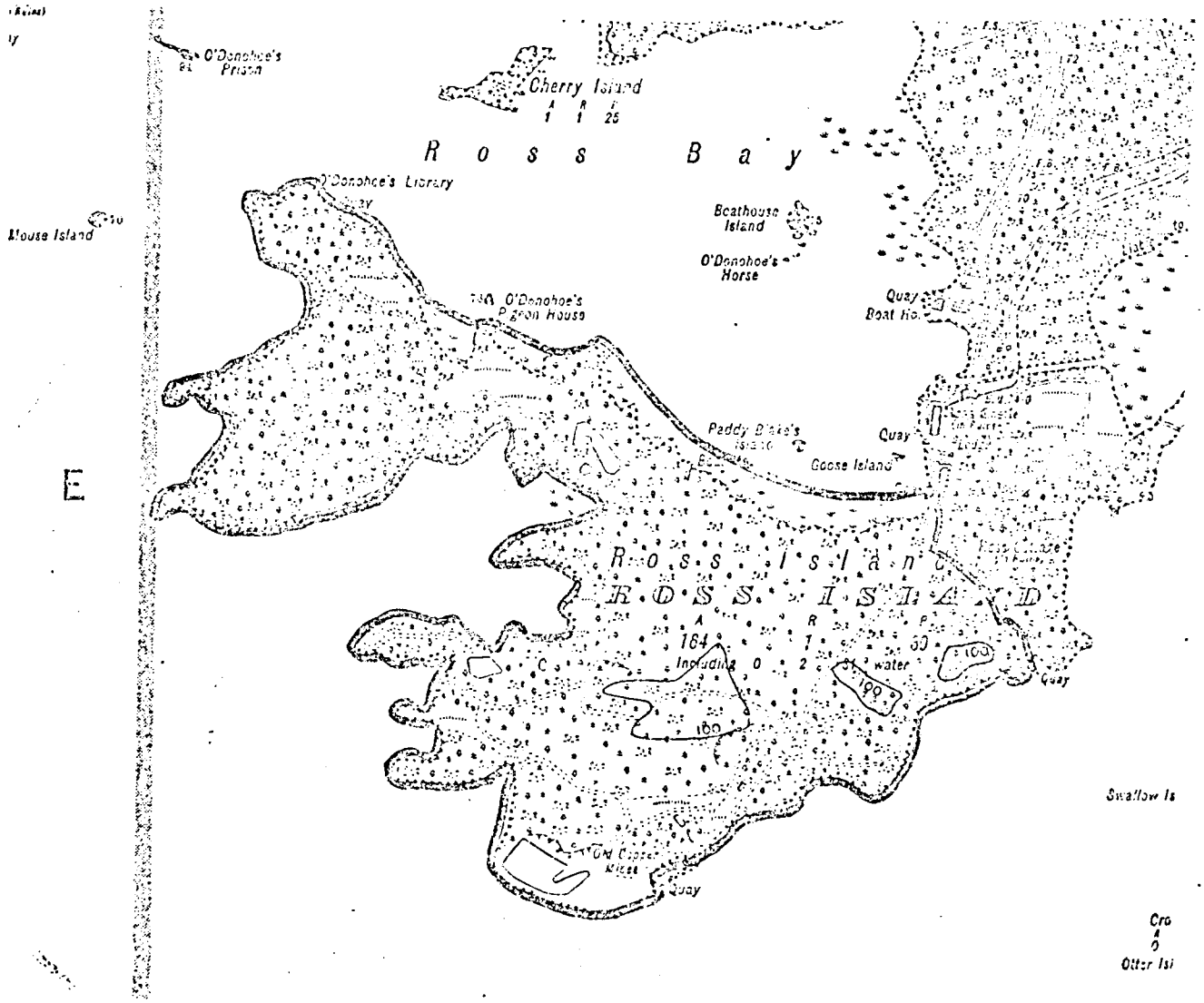
Afforestation should be outlawed and management of the existing woods commenced. Checking the spread of beech (Fagus sylvatica) is especially important.

In view of the easy access by the public into this area a Conservation Order should be made on it to protect many unusual species and to stabilize land use.

A comprehensive collection of the mining mauls should be made before they are subject to casual removal. They would make a valuable exhibit at a local museum. Such a display should be away from the causeway area and preferably not on Ross Island at all.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	TOMIES WOOD
Acreage	264 acres
Grid Reference	V9188
Scientific Interest	Ecological, Botanical
Rating	National
Priority	B

Description of Area

Tomies Wood is comparatively open, formed of large Quercus petraea (oak), with diameters of up to 30 inches. Their height varies from 20ft at the most exposed edges to 60ft in the main wood. Oak is joined in the canopy by large birches, Betula pubescens but other species are rare. A discontinuous understory of holly, Ilex aquifolium, occurs in trees from 6-30ft high.

The following are frequent on the ground surface:-

Hylocomium splendens	a moss	l.a.
H. brevirostre	" "	l.a.
Rhytidiadelphus loreus	" "	l.f.
Dicranum majus	" "	f
Plagiothecium undulatum	" "	f
Sphagnum quinquefolium	" "	f
S. rubellum	" "	o
Pteridium aquilinum	bracken	o
Luzula sylvatica	woodrush	o
Vaccinium myrtillus	frochan	o
Deschampsia flexnosa	wavy hair-grass	o
Blechnum spicant	hard fern	o
Digitalis purpurea	foxglove	r
Oxalis acetosella	wood sorrel	r
Hymenophyllum spp.	filmy ferm	l.f.

About one quarter of the woodland floor is moss-covered; the rest is covered by oak litter while flowering plants are sparsely represented. Along rides

Pteridium (bracken) is dominant with Juncus effusus (soft-rush) present occasionally. Some peat development has occurred introducing such species as Calluna vulgaris, Erica cinerea (heathers) and Molinia caerulea (purple moor grass).

Many of the larger Quercus (oak) trees have ivy (Hedera helix) on them indicating fairly open conditions and Lonicera periclymenum (honeysuckle) also occurs. There has been some natural tree fall but also some localized felling.

Lichens and epiphytic bryophytes are naturally frequent but do not attain the luxuriance of those in Derrycunnighy or Muckross woods due to the drier conditions in Tomies Wood.

The woodland floor is consistently grazed by sika deer (Cervus nippon) which break the vegetation cover in places and apparently prevent all regeneration of oak. The smallest regenerated trees were about 4 inches in diameter. A very few seedlings of Rhododendron ponticum were seen of about 1ft.

Bird life was perhaps more in evidence than in the other woods including redpoll, tree-creeper and long-tailed tit.

Near to the lakeshore more interesting communities of mosses and liverworts as well as higher plants appear. In the wood, Milium effusum, (wood millet-grass) grows as well as unusual species of Radula, Cephalozia, Clasmatocolea, Aneura and Calypogeia (liverworts) while on the lake shore itself Viola canina, (dog violet), Scutellaria galericulata (skull-cap) and Elatine hexandra (water wort) are found. The clearings have a flora including Wahlenbergia hederacea, (ivy-leaved bell flower) and Carex pallescens (a sedge).

Evaluation

This area is important for two reasons - one is the concentration of rare species of bryophytes that is found in one or two places, the other is the freedom from Rhododendron that the oak wood enjoys. This is most unusual in the Killarney area and outweighs the disadvantages of the secondary nature of the wood.

Work is at present being done on the nutrition and ecology of oak seedlings as well as the deer population.

Vulnerability

Tomies Wood is relatively secure in that it is partly owned and managed as an oak-wood by the Forestry Division. However, its quality is now low through overgrazing and is additionally threatened by Rhododendron spread.

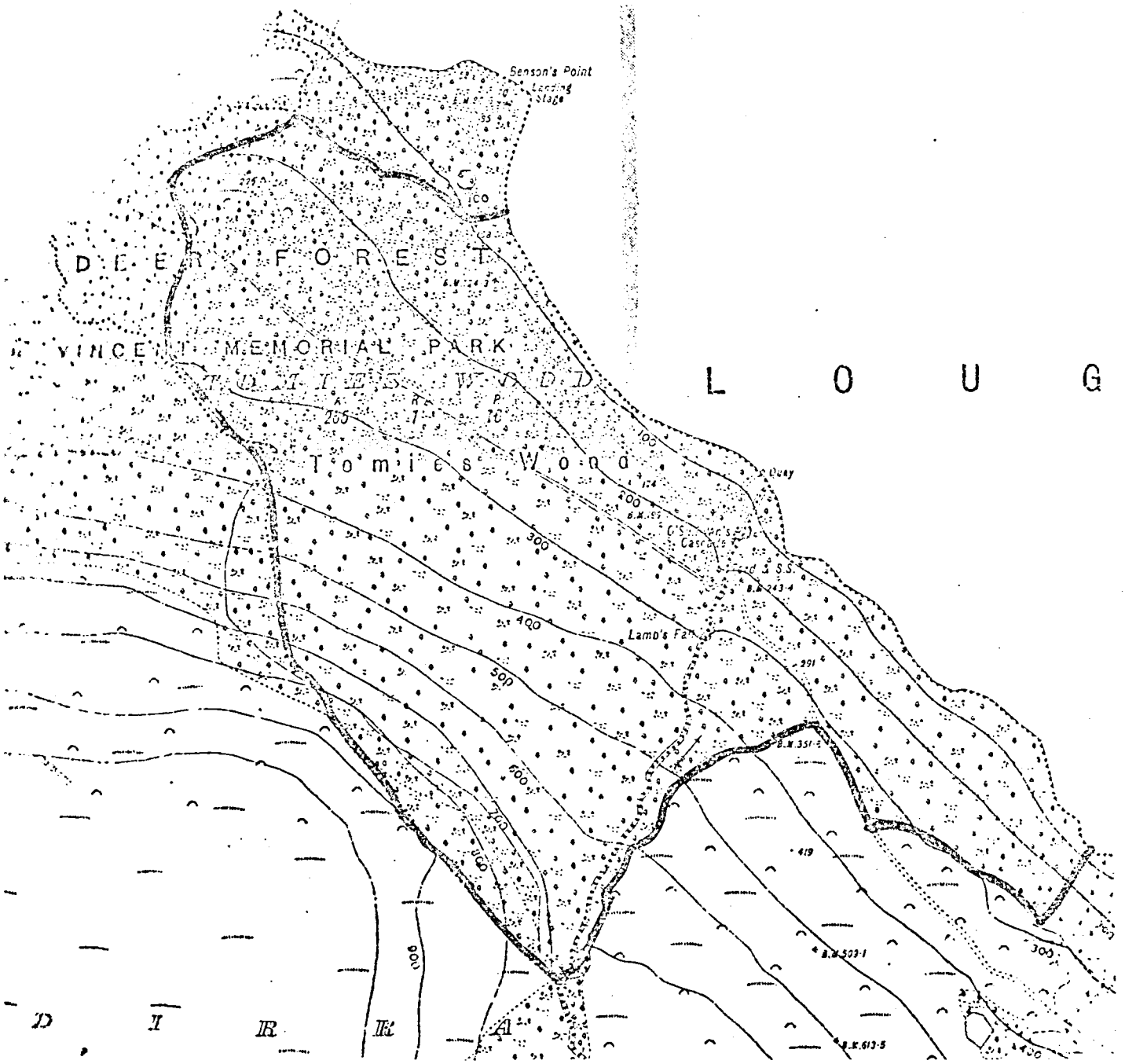
Recommendations

Action by the Commissioners of Public Works to reduce the grazing pressure on this wood by deer should be encouraged and supported. It is essential that control of this expanding population is begun soon.

The wood should be kept free of rhododendron by systematic weeding at intervals of 5 years or so.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 inches to 1 mile



Name of area	NEWFOUNDLAND BOG
Acreage	105 acres
Grid reference	V. 92, 82
Scientific interest	Ecological, botanical
Rating	Regional
Priority	C

Description of area

This blanket bog covers low lying areas between the Upper Lake and the Long Range extending somewhat up the ribs of old red sandstone which run parallel to the river. Rock is exposed and Arbutus is fairly frequent on it, with some juniper.

The bog itself is very wet merging into lakeshore fringes of sedge species, e.g. Carex vesicaria, C. nigra, C. rostrata and C. elata at its edges. It contains characteristic plants of Kerry bogs, for example Pinguicula grandiflora (butter wort) and Carex limosa (a sedge), and along the lake shore Pilularia globulifera (pillwort) occurs in flooded ground.

Evaluation

An interesting example of blanket bog, this area is unusual in being so wet. It contains several rare species as well as a good sample of characteristic ones.

Vulnerability

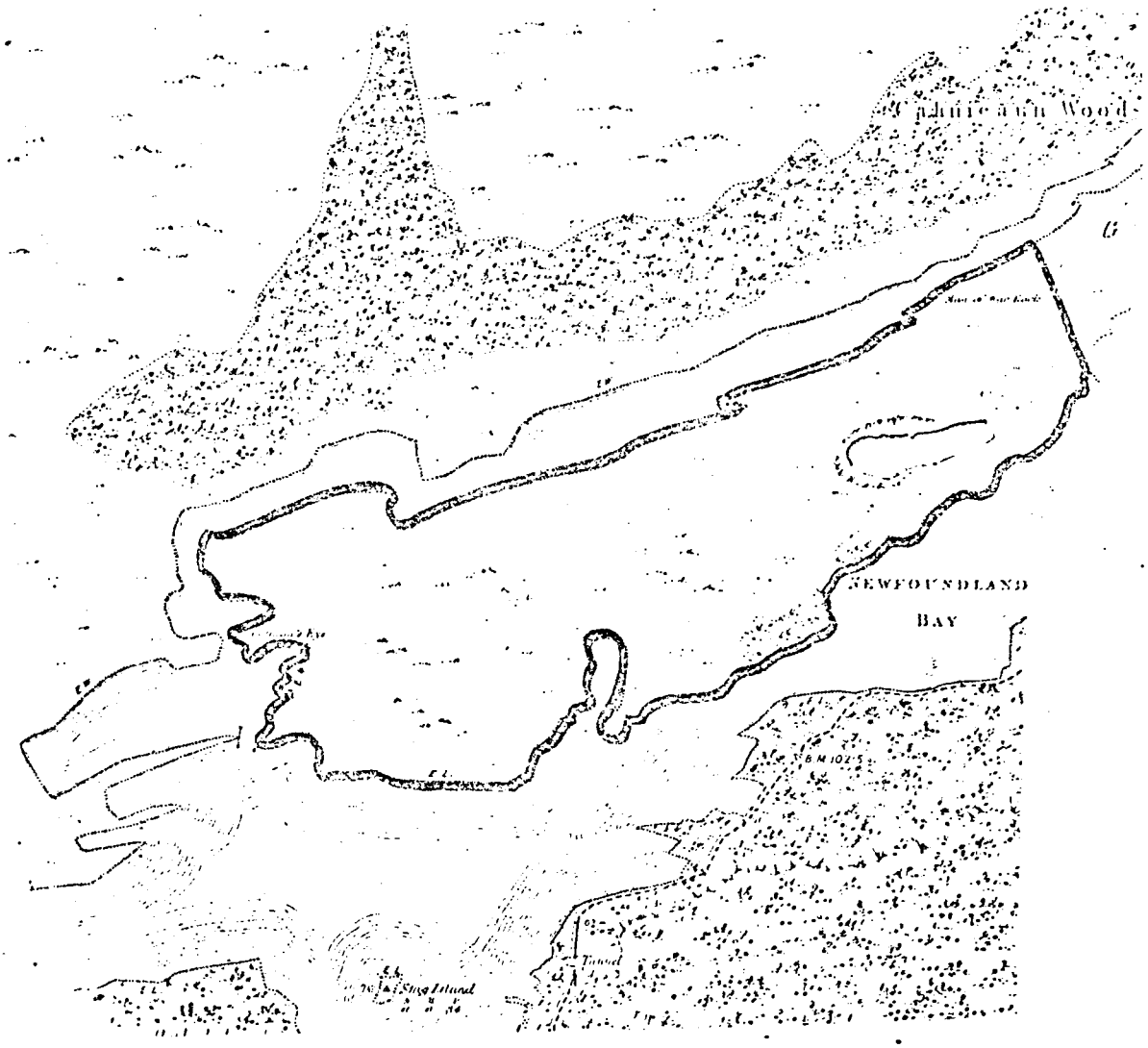
Parts of the area could be drained and forested which would destroy their scientific interest.

Recommendations

Land use should continue in its present form.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	UPPER LAKE, MUCKROSS LAKE and LOUGH LEANE		
Grid Reference	V 80, 80	V 90, 80	V 90, 90
Acreage			
Scientific Interest	Ecological; zoological; botanical; ornithological		
Rating	National		
Priority	B		A

Description & Evaluation

Part of the interest in this area comes from two fish species. Therefore the catchment as a whole should be considered rather than individual lakes. Though the Killarney shad - a land-locked race of the Twaite shad named Alosa fallax killarnensis - has been taken mainly in Lough Leane, the char variety Salveninus obtusus occurs in all the lakes. Otherwise it is known only from Wicklow.

Apart from the char there is evidence that other northern species (invertebrates) occur in the Lough Leane catchment especially dragonflies and work is at present in progress on the aquatic fauna of the lower lake. Certainly several northern types of plant are found, for example Subularia aquatica (awlwort), Najas flexilis (naiad), Isoetes echinospora (quillwort), Callitriche hermaphroditica (water starwort), Potamogeton gramineus (pondweed) and Carex aquatilis (a sedge). These communities appear concentrated in Castlelough and Ross bays and also in the Upper Lake but this may be due to these sites being visited more than elsewhere.

Lough Leane is the most eutrophic lake of the three because it is bounded mainly by limestone shores and also receives effluent from Killarney town. Thus it is the most productive lake and supports a sizeable number of wildfowl in winter. A count made in 1969 follows; it excludes the west shoreline of the lake so is an underestimate.

Mallard	50
Teal	300
Wigeon	20
Tufted duck	600

Pochard	870
Goldeneye	7
Mute swan	16
Whooper swan	9
Coot	1000
Shoveller	present, not counted
Red-breasted merganser	" " "

Some wildfowl nest in the area, e.g. tufted duck, teal and mallard while common sandpipers, redshank, lapwing etc. nest in places at the lake edge.

Altogether the lakes provide an interesting and varied habitat, not least because of the gradual increase in nutrient status from the Upper to the Lower lake. Many unusual species occur and for some it is the only locality recorded in Ireland.

Vulnerability

The natural balance of nutrient supply and turnover in Lough Leane has been aggrevated by sewage effluent from Killarney and the other building along the north shore. This is causing undue eutrophication with which algal bloo and locally oxygen depletion are associated. This would seem the major thre to any of the lakes. Such pollution would do more damage to the communitie in the Upper or Middle lakes being nutrient-poor, but is serious now in parts of Lough Leane.

Recommendations

Pollution by sewage effluent should be treated at source by installing digestic facilities for the town. Effluent from any development near the Upper or Middle lakes should not be discharged into them without treatment.

Name of Area	MANGERTON MOUNTAIN
Acreage	
Grid Reference	V 97 80
Scientific Interest	Ecological; zoological; botanical
Rating	National
Priority	B

Description of Area

Mangerton presents a smooth outline on all but its north-east side which is cut by two corries - the Devils Punch Bowl and the Horses Glen. It is here that botanical interest is concentrated and the north and east-facing cliffs have alpine communities of higher and lower plants. The high level mosses include Andrea spp, Gymnomitria sp, Bartramia etc. and there are also several species of liverworts and lichens of great interest.

The summit blanket-bog has been much eroded over a wide area but where an intact surface is left certain northern lichen species appear.

The western slopes of the mountain seem to be the main grazing area of the Kerry population of red deer which are found here throughout most of the year. The vegetation resembles much of that on the other mountains and the deer are probably restricted by historic factors only.

Evaluation

Mangerton supports more interesting cliff communities than the Reeks and several species are very rare. It may be that early fieldwork concentrated on this mountain rather than on the Reeks as results now coming in show interesting patches of cliff on this latter range.

As the grazing grounds for the only red deer population with a partly Irish origin this mountain is unique.

Vulnerability

The cliff communities would appear secure.

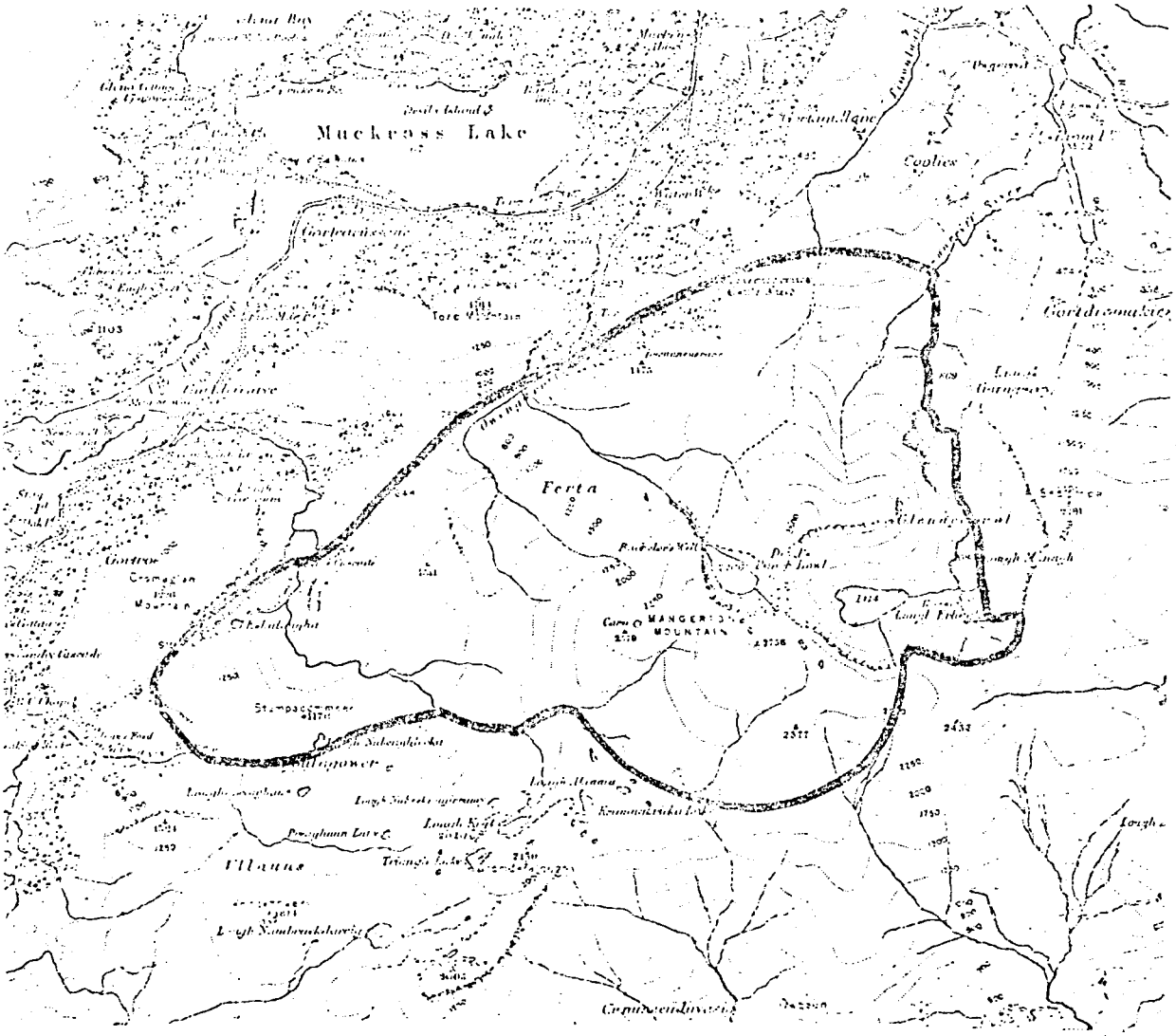
The mode of life of the deer would be greatly affected by changes in land use in this area especially by enclosure and fertilization or by disturbance.

Recommendations

Land use in this area must be continued on its present pattern and general planning control should be used to this end. There are many other areas as suitable for moorland improvement or for forestry and these developments should be restricted to them.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 1 Inch to 1 Mile



Name of Area	DOOGARY WOOD
Grid Reference	V 90, 84
Acreage	47 acres
Scientific Interest	Ecological
Rating	National
Priority	A

Description of Area

The woodland at 800 ft. in the Doogary R. valley is at or near the local tree line (altitudinal limit of growth). It is an open birch-oak wood with a good variety of tree species, e.g.

Ilex aquifolium	holly	c
Sorbus aucuparia	rowan	c
Fraxinus excelsior	ash	f
Corylus avellana	hazel	l.f.
Crataegus monogyna	hawthorn	f
Taxus baccata	yew	r

The ash is partly associated with the stream and it is the tallest tree in the locality (40 ft.).

The wood is on a steep slope, partly of scree and partly of rock and many herb species occur on the scree covering it with vegetation, for example

Oxalis acetosella	wood sorrel	c
Anthoxanthum odoratum	sweet vernal grass	c
Ranunculus ficaria	celandine	f
Carex pulicaris	flea sedge	f
C. pilulifera	a sedge	f
C. pallescens	"	o
C. sylvatica	"	o

Juncus effusus	soft rush	l.f.
Saxifraga hirsuta	hairy saxifrage	o
Chrysosplenium oppositifolium	golden saxifrage	l.f.
Sanicula europaea	wood sanicle	o
Lysimachia nemorum	yellow pimpernel	r
Viola riviniana	violet	o
V. reichenbachiana	"	r
Deschampsia flexuosa	wavy hair grass	r
Primula vulgaris	primrose	r
Epilobium nertericides	creeping willow herb	r

The trees and rocks are densely covered in mosses and ferns. Rhacomitrium lanuginosum (a moss) ascends to 15ft on trees and Hymenophyllum sp higher still, while the species characteristic of mountain oakwoods are also present, e.g. Plagiothecium undulatum and Leucobryum glaucum (mosses). Saxifraga spathularis (St. Patrick's Cabbage) is abundant on the mossy boulders while Digitalis purpurea (foxglove), Dryopteris aemula (crinkled buckler-fern) are also associated with rocks. Euphorbia hyberna (Irish spurge) occurs beside the stream.

The wood is intensively grazed and though many tree seedlings were found they were practically all the present years crop. Only on the highest and most inaccessible rocks or upturned tree roots were one holly seedling of three years and a birch of about ten years discovered. The young seedlings of rowan were especially common and several exist of 2-15 years.

The herbaceous ground flora is also closely cropped and it is this grazing rather than altitude which restricts the flowering stems of Sanicula to 2 ins. in height.

Evaluation

This wood is interesting on account of its altitude and as a prime example of a sheep-grazed wood. Exposure is naturally great and windthrown trees

are much commoner than in the lowland woods. The absence of regeneration in the majority of tree species is clearly related to grazing and there is little evidence that this is the natural limit of tree growth.

A wood occurs at a higher level south of Lough Guitane but until it has been visited or described, Doogary is chosen.

Vulnerability

This wood seems only to be threatened by grazing pressure but this is a substantial threat to its survival, as there are no seedlings available to fill the gaps caused by wind damage.

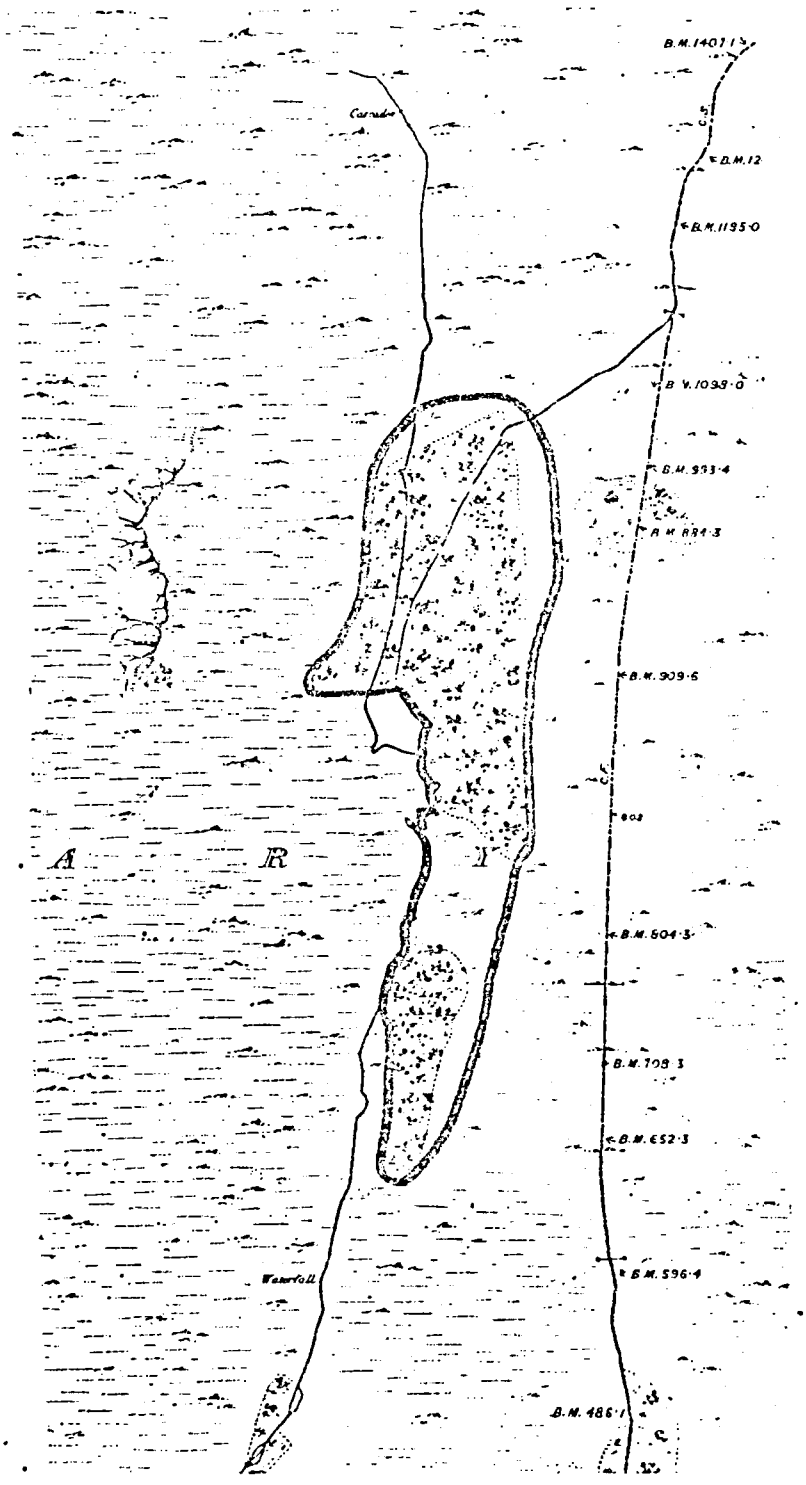
Cutting does not seem to be occurring and, as yet, Rhododendron has not penetrated the valley.

Recommendations

The area is much used for grazing and shelter by sheep and it is clearly in the interest of the hill farmers to maintain it. Regeneration must be encouraged either by fencing individual parts of the wood for about ten years at a time or by planting and protecting tree seedlings.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	TORC WATERFALL
Acreage	7.6 acres
Grid reference	V. 95, 84
Scientific interest	Ecological, botnaical, zoological
Rating	National
Priority	B

Description of area

Torc waterfall lies at the end of a narrow gorge on which native and introduced species of trees are established. These include Ulmus glabra (wych elm), Acer pseudo-platanus (sycamore), Quercus sp. (oak), Fraxinus excelsior (ash) and Ilex aquifolium (holly). Prunus lusitanica (Portugal laurel) is a widespread shrub while above, plantations of conifers include larch and pine.

The moist and shady conditions encourage a luxuriant growth of bryophytes and ferns as well as some woodland herbs. The following species are frequent in the section below the cascade:-

Luzula sylvatica	woodrush
Chrysosplenium oppositifolium	golden saxifrage
Cardamine flexuosa	wood cress
Phyllitis scolopendrium	harts tongue
Dryopteris filix-mas	male fern
Prunella vulgare	heartsease
Geranium robertianum	herb robert
Galium odoratum	woodruff
Sanicula europaea	wood sanicle
Geum urbanum	wood avens
Marchantia polymorpha)	
Pellia epiphylla)	
Thamnium alopecurum)	mosses and liverworts
Isopterygium elegans)	

In addition many unusual species of bryophytes occur in the moist environment, on rocks near the waterfall and river. These include several Lejeunea and Radula species as well as Frullania, Plagiochila and Drepanocladus.

An invertebrate species of great interest occurs in the vicinity.

Evaluation

This locality is of greatest importance for its liverwort communities but in addition has a few lichens and higher plants of interest as well as the invertebrate species.

Vulnerability

The interesting ground at Torc Waterfall is probably secure from all influences except collectors.

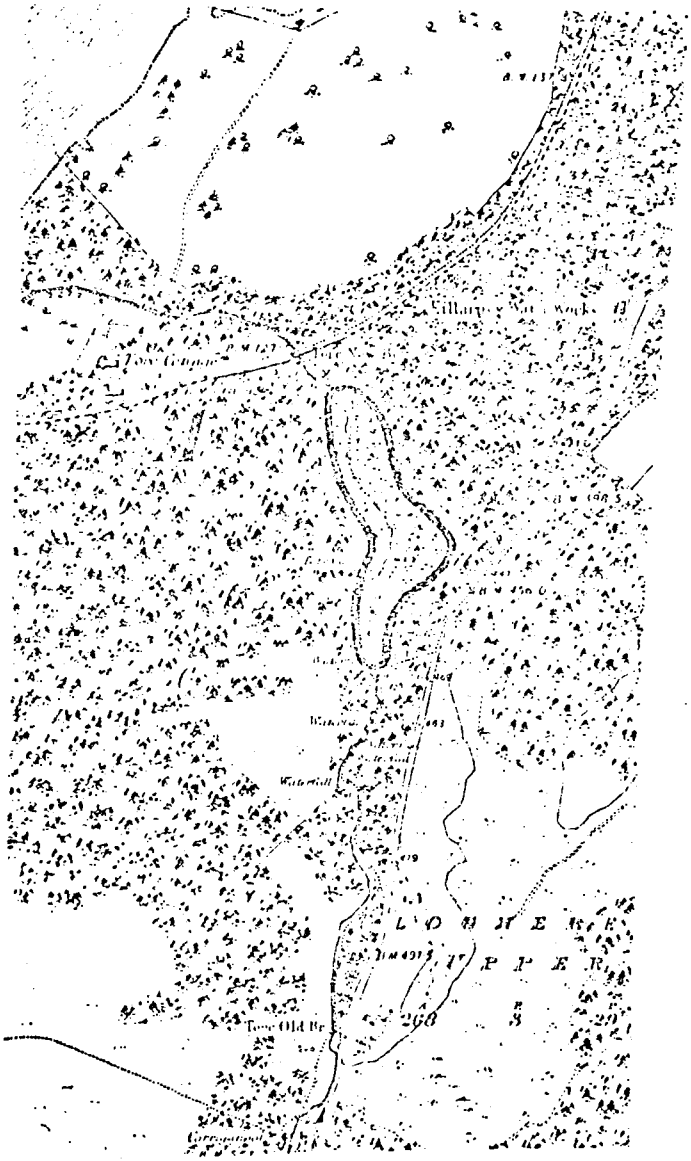
The bryophytes might be adversely affected if water flow was reduced by the Killarney waterworks.

Recommendations

The site should be protected from unscrupulous collectors by a conservation order. This would give some measure of control over an easily-damaged community covering a small area.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	ARDAGH BOG
Acreage	21 acres
Grid reference	V. 983, 884
Scientific interest	Ecological
Rating	Regional
Priority	A

Description of area

Ardagh Bog has developed by succession from a lake similar to Ardagh pond. It is now a wet area with similarities to a raised bog. The chief difference is that it is partially wooded by birch, Betula [illegible]escens, some of which are 15 feet high. They grow from tussocks of [illegible]phorum vaginatum (bog cotton) and Molinia caerulea (purple moor gra[illegible]n the western part of the bog. A few Pinus sylvestris (scot's pine) occu[illegible]lso and somewhat greater numbers of Rhododendron.

Carex rostrata (a sedge) occurs throughout this part penetrating the sheets of Sphagnum, Aulacomnium (mosses) which cover all of the surface except for the tussocks of the above plants. On this Vaccinium oxycoccus (cranberry) is very abundant, much more so than anywhere else in Kerry, and apparently finds optimum conditions for growth.

Osmunda regalis (royal fern) is mixed with the tree growth which includes some Alnus glutinosa (alder).

To the east the bog most resembles a raised bog, Trichophorum cespitosum (deer sedge), Narthecium ossifragum (bog asphodel), Eriophorum spp. and Cladonia impexa (lichen) become common and Calluna vulgaris, Erica tetralix (heathers), Drosera rotundifolia (sundew) also occur. Sphagnum cuspidatum occurs in the wetter places and S. rubellum forms hummocks. Myrica gale (bog myrtle) is found in patches while Ulex gallii (autumn gorse) sometimes grows on the tussocks of other species.

The area is surrounded by a lagg or ditch with a variety of more base-demanding species than the bog itself. These include:-

Menyanthes trifoliata	bogbean	a
Eriophorum angustifolium	bog cotton	a
Potentilla palustris	marsh cinquefoil	c
Equisetum fluviatile	water horsetail	c
Juncus effusus	soft rush	c
Hydrocotyle vulgaris	marsh pennywort	f
Typha latifolia	bulrush	f
Iris pseudacorus	flag iris	o
Hypericum elodes	St. John's wort	l.f.
Myosotis caespitosa	forget-me-not	o
Lotus uliginosus	hairy birdsfoot trefoil	o

In places willows and alder grow in this water and rare invertebrate has been taken.

Evaluation

This is a most valuable basin bog with a classical lagg around the edge and an unusual community over the western part of the surface. Very few other bogs show such good birch growth but this may be related to the frequency of fires on them. The abundance of Vaccinium oxycoccus (cranberry) is exceptional.

Ardagh Bog is important both for its own ecology and its position in the study of plant succession from water to dry land.

Vulnerability

Eutrophication of the ground water would alter the lagg and bog vegetation.

Rhododendron, though it is growing poorly has the capacity to cover most of the surface of the bog. An attempt at afforestation has been tried and

further experiment with drainage or planting would be most damaging.

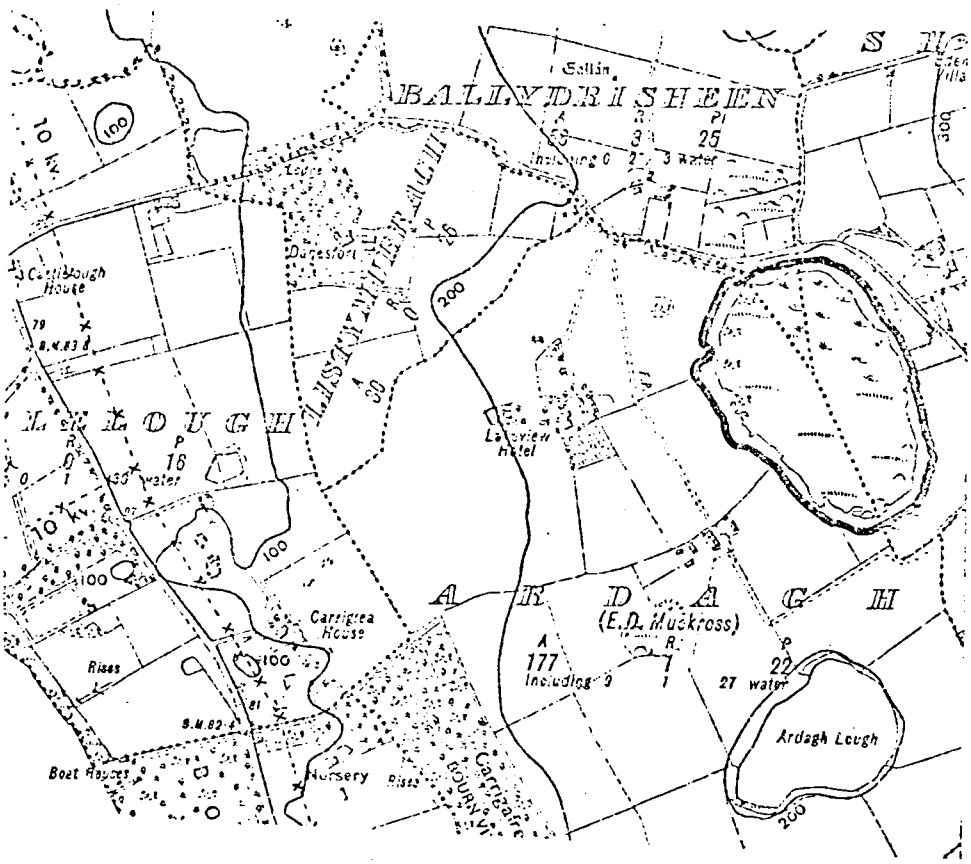
Recommendations

The effluent from a piggery at the margin of the bog must not be fed into the lagg without treatment and should in fact be removed as slurry for spreading on the fields.

No further planting should be allowed and it would seem that a conservation order should be made on the bog to this end. Rhododendron should be removed as soon as possible.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	ISLANDS IN UPPER LAKE AND LOUGH LEANE
Acreage	c. 30 acres
Scientific interest	Ecological, botanical
Rating	Regional
Priority	C

Description and Evaluation

Lake islands are generally important for vegetation study by reason of being removed from grazing. Though light grazing is natural in vegetation, sheep, cattle and goats are grazed at much greater density, and also concentrate on strata different to the natural grazers.

Many of the islands in these two lakes have interesting communities: in the Upper Lake, Arbutus I is especially important for its woodland of Arbutus, Taxus (yew) and Juniperus (juniper) in a heathy vegetation of Calluna (heather) and Ulex gallii (autumn gorse). Thin oak woodland occurs on this island as on Duck Island and McCarthy's I. Ronayne's Island was formerly inhabited so is less interesting.

The Lough Leane islands are different in character being formed of limestone often carved by wave action. Arbutus(holly) and yew again occur and some individuals are considered the largest in the Killarney area. Sorbus anglica S. rupicola (white beams) are other characteristic species. The shorelines of these islands are often of interest with Rhammus catharticus (buckthorn), Galium boreale (northern bedstraw), and Viola canina (dog's violet) giving them a midland character. V. lactea (heath violet) also occurs with such species as:-

Rubia peregrina	madder
Galium pumilum	slender bedstraw
Companuala rotundifolia	harebell
Vicia sylvatica	wood vetch
Botrychium lunaria	moonwort

In the wooded parts Orobanche hederae(ivy broomrape)occurs as an unusual form.

Rough,Brown,Cow and Lamb Islands would seem to be the most important of those in Lough Leane but a complete survey has not been made.

It is probable that nesting wildfowl use all the islands as they prefer these to a mainland shore.

Vulnerability

In general, access to such areas is in itself damaging since they are relatively natural and untouched. If this is combined with a few grazing animals, the result may be disasterous but there would be less influence from a fishing shed etc.

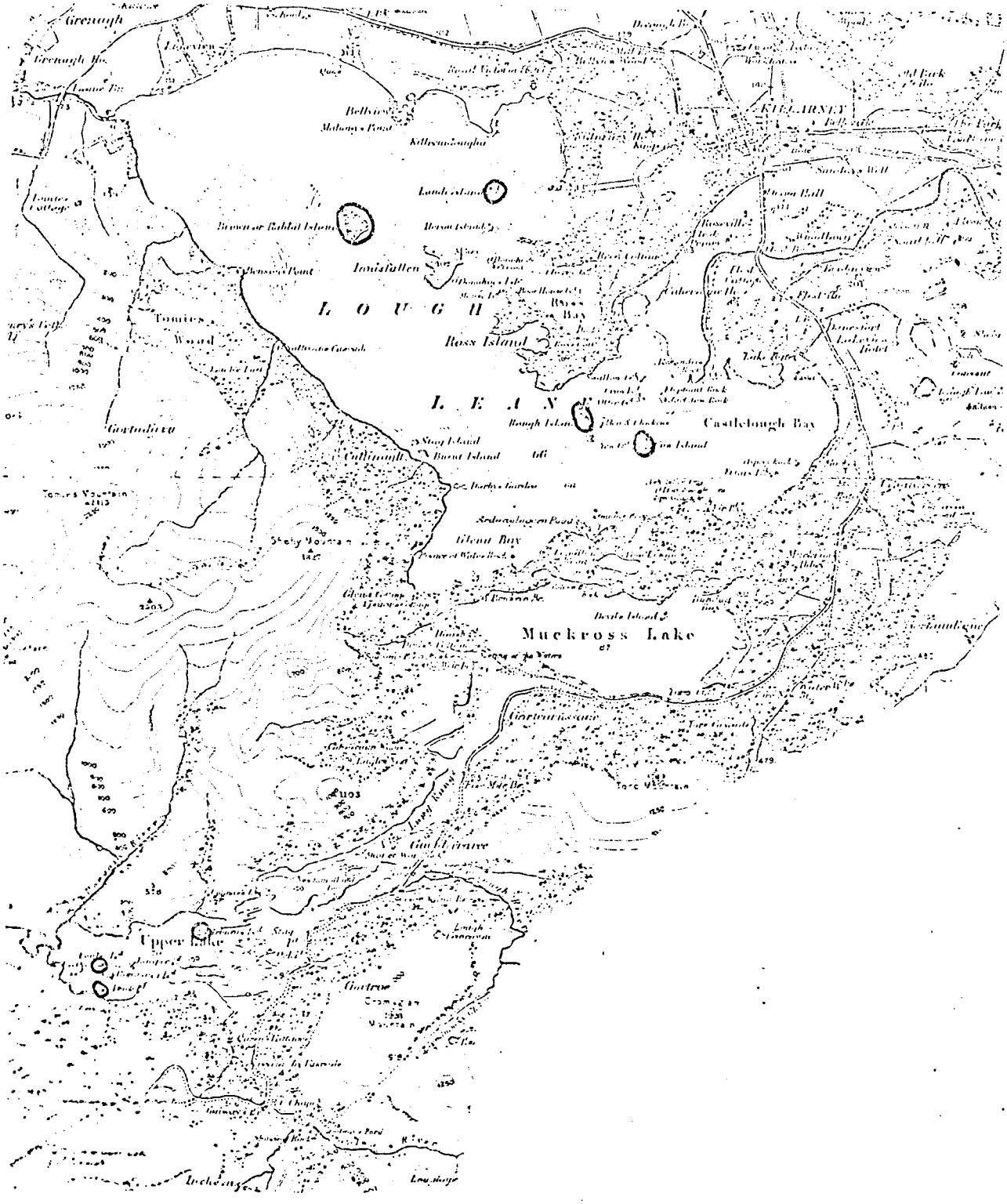
Recommendations

Landing on any of the islands, except Ronayne's I in the Upper Lake and Inishfallen in Lough Leane, should be discouraged and facilities should be repaired or improved only on those two islands.

Grazing should be prevented on any of the islands if it is suggested. Goats would be particularly harmful.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 1 Inch to 1 Mile



Name of Area	LITTLE SKELLIG
Acreage	18 acres
Grid reference	V 27 62
Scientific interest	Ornithological
Rating	International
Priority	C

Description and Evaluation

This island supports the second largest colony of the North Atlantic gannet in existance and in 1966 it was estimated at 17,500 pairs. They cover all available space on the rock and numbers of other species are insignificant.

Vulnerability

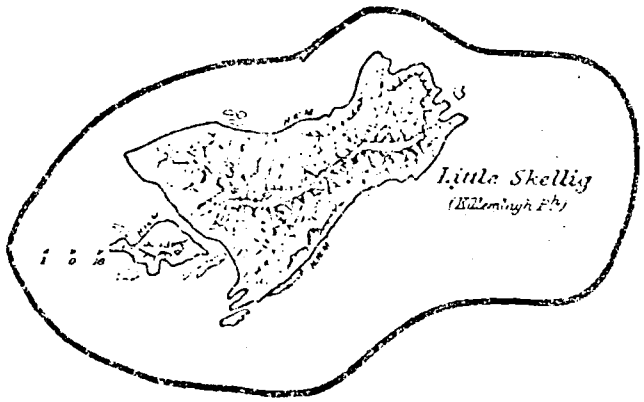
The island is unsuitable for landing on so the possibilities of disturbance to the nesting birds are remote. They would only be influenced by changes in food supply.

Recommendations

The present status of the island as a reserve of the Irish Wildbird Conservancy should be continued.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	TEARAGHT ISLAND
Grid Reference	V 18 94
Acreage	
Scientific Interest	Ornithological, zoological
Rating	International
Priority	C

Description & Evaluation

Inishtearaght is a very steep-sided island, covered in loose scree with an incomplete cover of vegetation. This is mostly of maritime species, Beta vulgaris (sea beet) and Silene maritima (sea campion) being conspicuous, while Festuca rubra (red fescue) is a common grass. The chief importance of the island is as a seabird breeding station and the following figures give an estimate of the populations

	1968	1969
Storm petrel	more than 25,000 pairs	
Manx shearwater		200 pairs
Fulmar		174 "
Lesser black-backed gull		28 "
Herring gull		15 "
Kittiwake		401 "
Razorbill		500 "
Guillemot		75 "
Puffin	25,000 "	7,500 "

The puffin numbers in 1968 show that this is the largest Irish colony and it may build up again to this level given favourable conditions. It is also an important colony for razorbill, manx shearwater and especially storm petrel.

Several unusual races of insects occur on this and other islands in the Blasket group.

Vulnerability

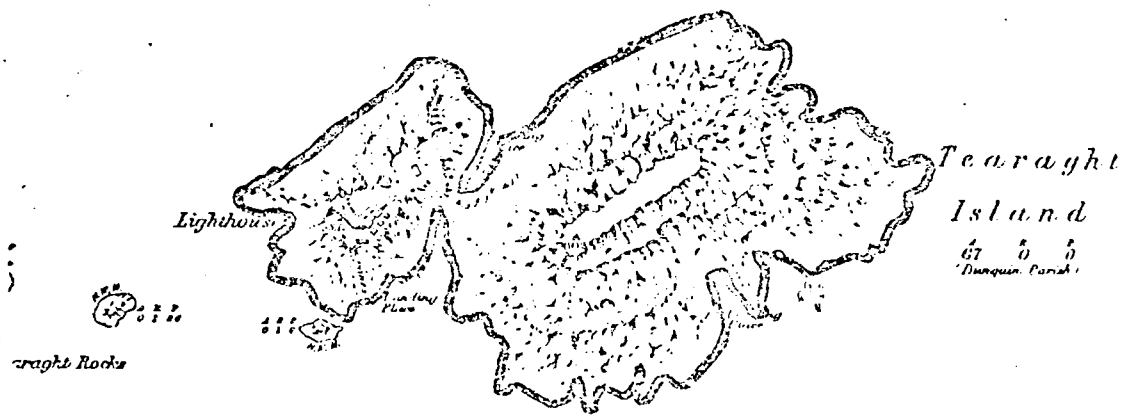
There is little likelihood of disturbance or development at this site, and oil pollution would seem to be the greatest threat.

Recommendations

The status of Tearaght Island as an internationally important nesting area for seabirds should be taken into consideration in any development proposals for the sea area or mainland nearby.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	INCH ISLAND AND MUDFLATS
Acreage	3008 acres
Grid reference	V. 63, 96
Scientific interest	Geomorphological, ornithological
Rating	International
Priority	B

Description of area

There are two important units within this area : the Inch spit with its sand hills and salt marshes and the extensive area of mudflats which lie east of it and provide feeding for huge numbers of wildfowl and waders.

The dune belt is intensely eroded. Most of the high dunes (50 ft. high or more) are residual dunes ; edges of the original structures, that have been reworked into ridges running with the prevailing wind. The blowouts that separate them have sometimes been excavated down to the water table so they are almost flat. There are also circular blowouts especially at the north end, and most are associated with the western edge.

The vegetation on those areas is fully representative of the west coast dune flora, the unstable areas dominated by Marram (Ammophila arenaria) with occasional animals such as Senecio vulgaris (groundsel) and Taraxacum officinale (dandelion) and Cakile maritima (sea rocket) on the foredunes.

The stabilized areas are rich in bryophytes, e.g. Rhytidiadelphus spp. and Hylocomium splendens which occur in the grass sward of Festuca rubra (red fescue). The drier old dunes are covered by such species as :-

Galium verum	lady's bedstraw	c
Lotus corniculatus	birds foot trefoil	c
Thymus drucei	wild thyme	l.c
Anthyllis vulneraria	kidney vetch	f

Viola tricolor	sea pansy	f
Geranium molle	cranesbill	f
Sedum acre	biting stonecrop	f
Centaurium erythraea	centaury	f
Valerianella locusta	lamb's lettuce	o
Arenaria serpyllifolia	sandwort	o
Erophila verna	whitlow grass	l.f.
Gentianella campestris	field gentian	r

The flat blowouts mentioned above have a duneslack community with such species as :-

Agrostis stolonifera	bent grass	a
Cynosurus cristatus	crested dogstail	c
Carex flacca	a sedge	c
Juncus articulatus	jointed rush	l.f
J. maritimus	sea rush	o
Salix cinerea	willow	o
S. repens	creeping willow	l.f.
Prunella vulgaris	heartsease	o
Anagallis tenella	bog pimpernel	o
Riccardia sp.	a liverwort	o
Bryum capillare	a moss	o
Anagallis minima	chaffweed	o

Behind the sand dunes the blown sand accumulates in tongue-shaped dunes or as a flat sheet giving rise to level grassland with Cynosurus cristatus (crested dogstail), Senecio jacobaea (ragwort), and Ulex europaeus (gorse). Then a dense stand of Juncus maritimus (sea rush) occupies the higher parts of the saltmarsh giving way to Armeria maritima (sea pink) Puccinellia sp, Plantago maritima (sea plantain) etc. Ranunculus sceleratus (celery-leaved crowfoot) occurs in the drains.

From the edge of the saltmarsh mudflats dominated by Zostera sp. (eelgrass)

stretch out for many hundreds of yards. There is abundant invertebrate food as well and both of these support the large wintering bird populations ; e.g

Brent goose	1750
Wigeon	3000
Pintail	1500
Mallard	500
Shoveller	200
Shelduck	40
Scamp	18
Red-breasted merganser	25
Common scoter	64

The grass Spartina townsendii (cord grass) is established in the N.W. corner and is slowly spreading out. More than one hundred discreet clumps now exist.

Evaluation

This diverse area contains the "finest dune belt in Kerry" *(Guilcher & King, 1961) as well as a most valuable area of mudflats - the second most important wintering area for the brent goose in the county.

The sand dunes at all stages of erosion and build-up are especially of interest and contain a good sample of dune flora and fauna, including one very rare species.

The wintering duck populations are large, and the numbers of pintail particularly notable. There are also good numbers of waders but a count is not yet available.

Vulnerability

The recreational use of Inch strand and sandhills does not yet constitute

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* Proc. R.I.A., 61 B, No. 17.

a threat to their scientific interest though the absence of foredunes at the northern end - the natural solution to the blow out - gives cause for concern. The caravan area is on stable grassland and is thus not likely to cause erosion.

However it may cause pollution of the mudflats in conjunction with the town of Inch which would be damaging if it resulted in a growth of green algae on the mud surface, replacing Zostera. A small pollution load is, if anything, beneficial to the productivity of mudflats though it reduces the scientific value of a self-supporting system. However, the growth of algae would indicate that the load was becoming too great.

The clumps of Spartina grass now in the N.W. portion of the mudflats are spreading and if allowed to cover the area will remove all feeding value for the goose and duck population.

Recommendations

Sericus consideration should be given to removing a strip of beach at the northern end from public use for several years to enable a fore dune ridge to develop. This could be encouraged by slight obstructions to the wind followed by planting of marram grass.

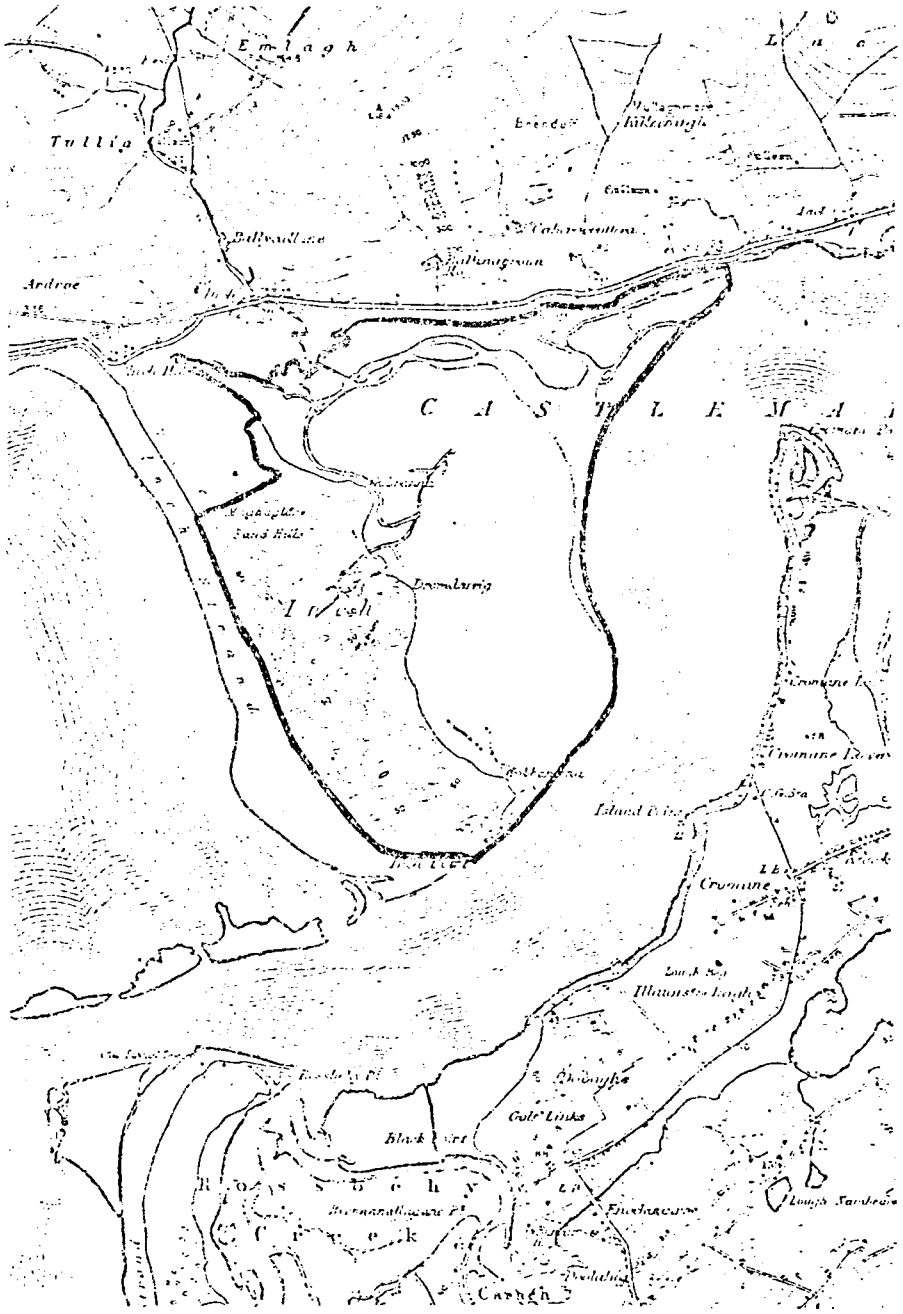
If signs of erosion develop in the stabilized grassland area they should immediately be revegetated and fenced off. Effluent entering the mudflat area should be treated and reduced if algae growth becomes pronounced.

Spartina must be restricted in its colonisation of the mudflats. At the moment digging up the clumps is the most satisfactory method, and this could be suggested to the voluntary organisations with the offer of some support.

To enable management of the dune and mudflat area with the restrictions that will be necessary it is suggested that it be made an area of Special Amenity (Section 44, Local Government (Planning & Development) Act, 1963.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 1 inch to 1 mile



Name of area	DERRYMORE IS. & TRALEE BAY (S. SIDE)
Acreage	2284 acres
Grid reference	V. 74 11
Scientific interest	Ornithological, ecological, geomorphological
Rating	International
Priority	B

Description of area

Derrymore foreland is a compound spit built of a series of pebble beaches, each slightly further out than the last. They are beautifully preserved*, many are visible, and where buried they give rise to pattern in the vegetation. Only in the N.W. corner are they largely obliterated by a covering of more recent sand dunes; these extend south as a narrow strip to the mainland.

The saltmarsh to the east is relatively narrow but it has also formed along the coast. At its outer edge extensive mudflats occur, with a vegetation cover of Spartina townsendii (cord grass) or Zostera spp. These reach Blennerville and the whole area is of great importance to wintering wildfowl and waders. The following figures indicate the numbers present in 1969.

Mallard	85
Teal	500
Wigeon	3200
Pintail	600
Shoveller	94
Shelduck	54
Mute Swan	16
Brent goose	1250

The plant communities on Derrymore island are mainly of saltmarsh type : Armeria maritima (sea pink) has a wide distribution even on some of the drier pebble beaches, while Juncus maritimus (sea rush) is dominant over large areas also. In one place such a stand has been invaded by Molinia caerulea

* Guilcher, A & King. C.A.M. (1961) Proc. R.I.A. 61 B 283 - 338

(purple moor grass) and Myrica gale (bog myrtle) suggesting the classical succession of saltmarsh to raised bog. Many of the normal saltmarsh plants are found while in the interior of the spit, standing water occurs in several of the troughs between ridges and less common species are found, e.g. Ranunculus baudotii (a water crowfoot) and Potamogeton pectinatus (a pondweed).

The sand dunes at the N.W. corner of the area which support an interesting plant species are relatively stable and free from erosion, but those nearer the mainland have much bare sand and are migrating eastwards. There is no evidence of a ridge of foredunes here.

Spartina townsendii (cord grass) is actively spreading and has established colonies quite far out on the mudflats as well as in the channels and at the edge of the saltmarsh.

Evaluation

Derrymore spit is the only large pebble spit in Kerry and is a fine example of this land form, probably one of the best in Ireland. Its present vegetation cover is also of interest and includes a most unusual community.

The mudflats to the east are very rich in wildfowl and are the second most important area in Kerry. With those at Inch Island they hold half the population of pale-breasted brent geese in winter, a race that visits Ireland only.

Vulnerability

The mudflat area is chiefly threatened with being overwhelmed by Spartina growth - a fate that would remove practically all its feeding value to the brent geese. There is apparently shooting in the area and steps must be taken if there is undue pressure on the wildfowl. In view of the extensive area involved, overshooting is probably unusual but the position at weekends may need some regulation.

The island itself would be endangered by removal of shingle or sand, while recreational development might conceal or destroy valuable features.

Recommendations

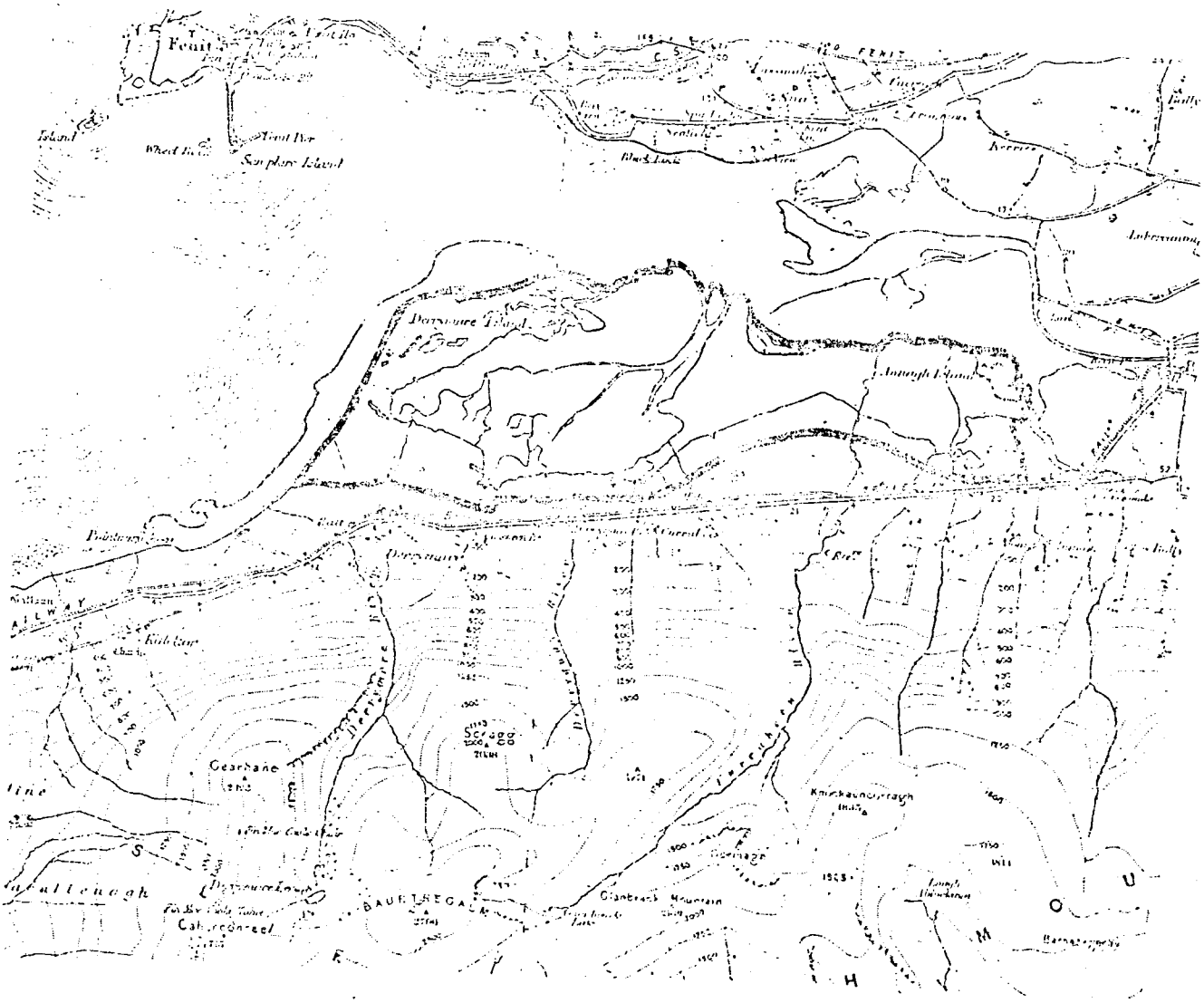
In view of the low-lying character of the area any development would be visible and from this amenity aspect alone none should be permitted.

The scientific values should be preserved by general planning control, augmented by shooting restrictions.

Control of Spartina should be given the highest priority in this area and the voluntary bodies approached to discuss removing it.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 1 Inch to 1 Mile



Name of area	GWEESTIN VALLEY (Barry's Glen)
Acreage	9.4 acres
Grid reference	V. 952, 982
Scientific interest	Geological
Rating	International
Priority	A

Description of area

South of the Gweestin River chalk deposits occur in sloping ground covered by hazel wood. It is a hard yellowish chalk of Cretaceous age and is present in only very limited quantity. The outcrop has been once cleared by bulldozer but is now reasonably overgrown.

Evaluation

This is the only occurrence of Cretaceous chalk outside Co. Antrim and as such poses fascinating questions about the former extent and subsequent erosion of all the post-Carboniferous rocks. It is of international significance in upper Cretaceous palaeocartography.

Vulnerability

The site might be destroyed by removal of the chalk for local uses.

It is being overgrown by vegetation at the moment but this only constitutes a threat to its appreciation.

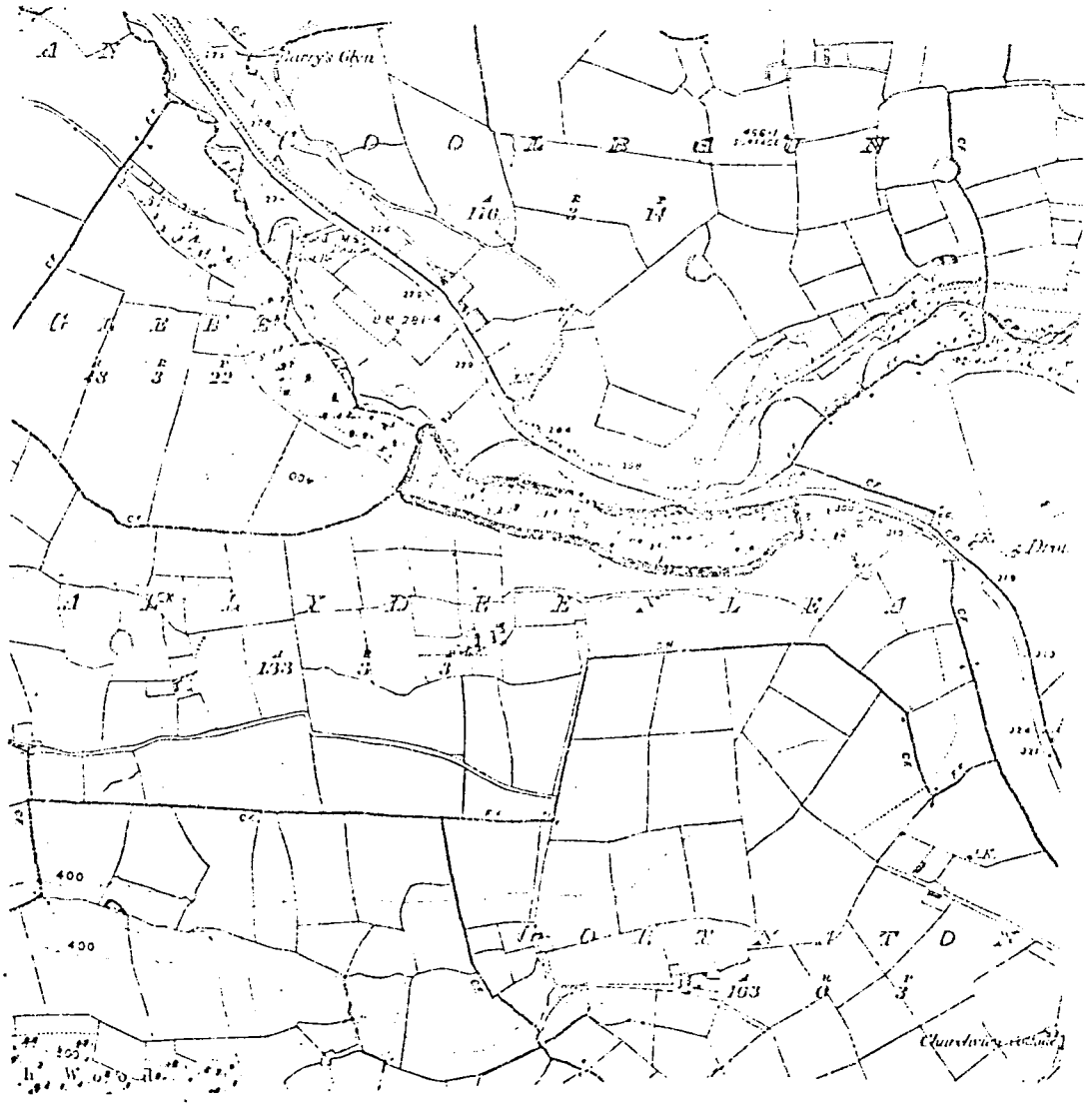
Recommendations

Any alteration of the site should be prevented except its clearing. It might feature on a tourist itinerary in which case it should be reexcavated and fenced. A descriptive notice by the main road might be considered.

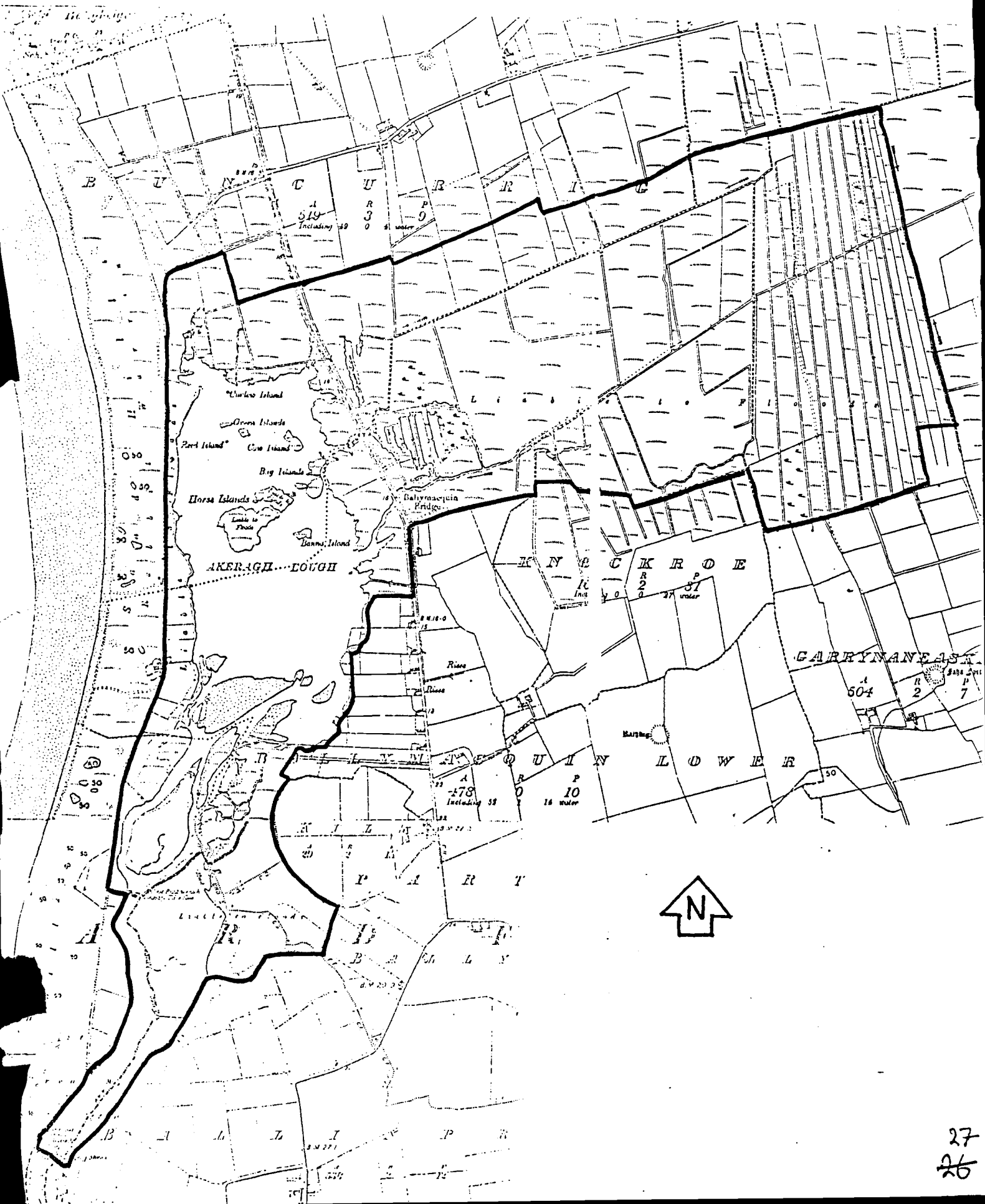
Local use of the material must be prevented if it presently occurs.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



MAP SHOWING AREA OF SCIENTIFIC INTEREST Scale 5 inches to 1 mile



Name of Area	AKERAGH LOUGH
Acreage	591 acres
Grid Reference	Q 76 27
Scientific Interest	Ornithological; ecological; botanical
Rating	International
Priority	A

Description of Area

Akeragh Lough is a shallow lagoon formed behind a line of high dunes, and receiving both fresh and salt water. The brackish condition is a most productive one, and algal and invertebrate populations are large. A black organic mud occurs beneath superficial shell sand deposits and the resultant system supports a most interesting and important bird community. In winter, (1969), the following were counted:-

Mallard	85
Teal	1900
Gadwall	65
Wigeon	40
Pintail	10
Shoveller	55
Tufted duck	2
Shelduck	10
Whooper swan	8

Mallard and teal breed near to the lough while in autumn it is visited annually by north American species of waders and wildfowl. These number about 12 species and at least six have proved to be almost annual visitors.

The area also has considerable botanical interest, mostly in salt marsh plants. The margins of the lake vary from Agrostis stolonifera (creeping bent) with Lythrum salicaria (purple loosestrife), Iris pseudacorus (yellow flag) and Epilobium hirsutum (willowherb), to Phragmites reedswamp with Sparganium spp. (burweed), Carex riparia (a sedge) etc. There are also stretches of Scirpus

maritimus (sea clubrush) and S. tabernaemontani (glaucous clubrush) and some of Juncus maritimus (sea rush).

True salt marsh occurs at the south end with Puccinellia spp. Cochlearia officinalis (scurvy grass), Carex distans (a sedge), etc.

The more interesting species include:-

Ranunculus sceleratus	celery-leaved crowfoot
Trifolium fragiferum	strawberry clover
Oenanthe lachenalii	water dropwort
Blysmus rufus	red blysmus

Evaluation

The freshwater - saltwater transition is an interesting and productive situation. In this way, Callitriche (water starwort) and Chara spp. can occur in the water with salt marsh species only a few yards away. Many of the plants are well-known as food of dabbling duck which occur in great numbers. The population of teal is exceptional in the south-west while Akeragh is the second most important locality for gadwall in Ireland.

The lake is the only stretch of water in north Kerry and as such it attracts migrating waders. The north American species are the most widely known and an important feature of the autumn passage but there are also substantial numbers of the less common europaen species such as ruff, grey plover, curlew sandpiper, wood sandpiper, spotted redshank, little stint, etc.

Vulnerability

The two most damaging threats to this area are an increase in disturbance and drainage. Both would destroy much of the scientific interest in the lough.

Drainage is relevant to all the area, the part east of the road being one of the main feeding areas of teal in winter.

Recommendations

There have been conflicts over land use in this area and positive action is required to preserve its scientific values, which are internationally known.

Akeragh Lough should be covered by a conservation order under Section 46, Local Government (Planning & Development) Act 1963. This is especially important in that part of the area west of the road.

Access to the sandhills west of the lake should be severely limited.

Drainage must not take place within or adjacent to the area on the map.

Name of area	OYSTER HALL (on Spa-Fruit foreshore)
Acreage	7.6 acres
Grid reference	Q. 765, 148
Scientific interest	Geological
Rating	National
Priority	C

Description of area

Extensive deposits of solifluction-earth occur in this area which are divided by a glacial horizon of till and outwash gravel. Under the lower deposits there are peats and silts of interglacial age (Gortian Warm 'stage'). These rest on a raised beach which rises to a height of 15 ft. over present mean sea level.

Evaluation

Interglacial sites are comparatively rare in Ireland and this one will probably be made the type locality for one stage of the (Hoxnian) Gortian interglacial in a new classification being prepared. Thus it will be of national or international importance.

Vulnerability

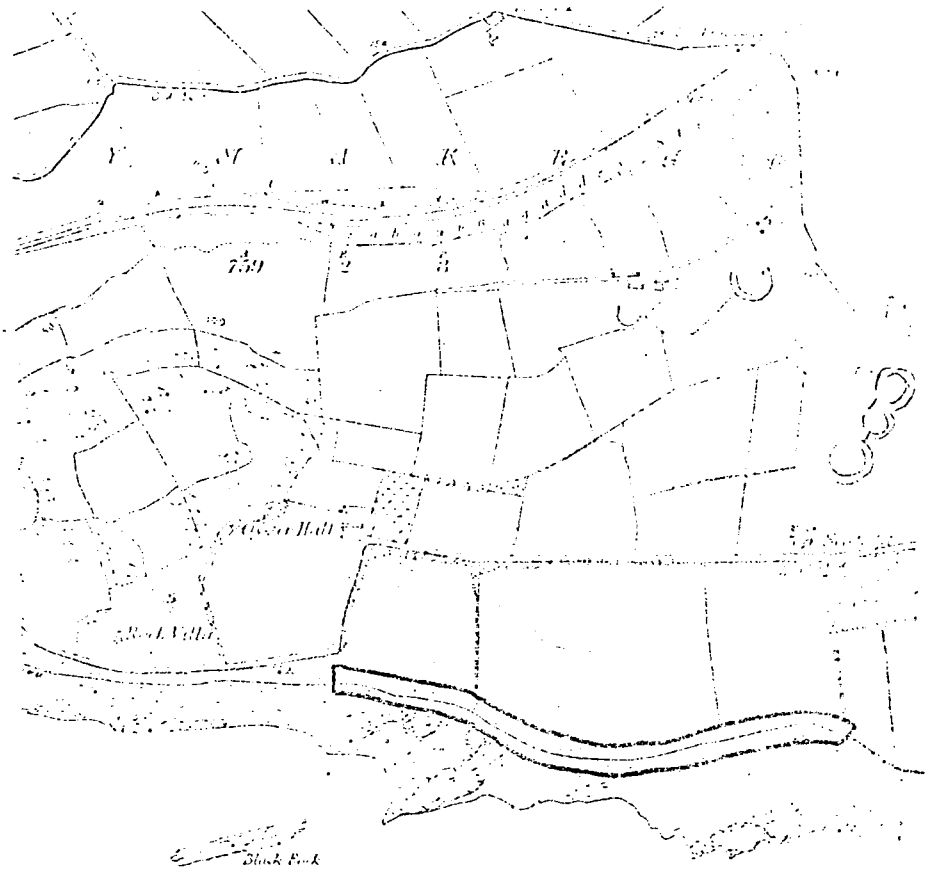
Coastal erosion seems the only damaging influence in the area and the provision of groynes may remove this danger. It is not known how extensive the peat beds are inland.

Recommendations

The site should be protected with the rest of the coast from erosion but this must not take the form of extensive concreting. This office should be informed of any such plans.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	LAMBS HEAD
Acreage	282 acres
Grid Reference	V53 57
Scientific Interest	Botanical, Ecological
Rating	International
Priority	B

Description of Area

Lamb's Head is a rocky headland with dry ridges of old red sandstone running along its length, separating wetter boggy patches from each other. These have a typical blanket bog flora with Rhynchospora alba (white beak-sedge), Sphagnum rubellum, Campylopus sp. (mosses), Calluna vulgaris (heather) and Trichophorum cespitosum (deer sedge) while the ridges are covered by heath vegetation, a Ulex gallii (autumn gorse) - Erica cinerea (bell heather) community with Schoenus nigricans (black bog rush) and Molinia caerulea (purple moor grass) common and some Carex panicea (a sedge), Thymus drucei (wild thyme) and Hypochaeris radicata (cat's ear). Juniperus communis (juniper) also occurs in this heath as does Simethis planifolia (Kerry lily) and Empetrum nigrum (crowberry) and Jasione montana (sheep's bit).

Occasional pools occur with Potamogeton polygonifolius (pondweed), Juncus articulatus (jointed rush) in them and Hypericum elodes (St. John's wort), Viola palustris (bog violet) and Anagallis tenella (bog pimpernel) at their edges.

On the cliffs Rhodiola rosea (roseroot) is found.

Evaluation

Lamb's Head with Abbey I. and Lamb's I. constitutes the only locality where a plant species grows in Ireland or Great Britain.

The occurrence of Rhodiola and Empetrum nigrum at such a low level is also of interest.

Vulnerability

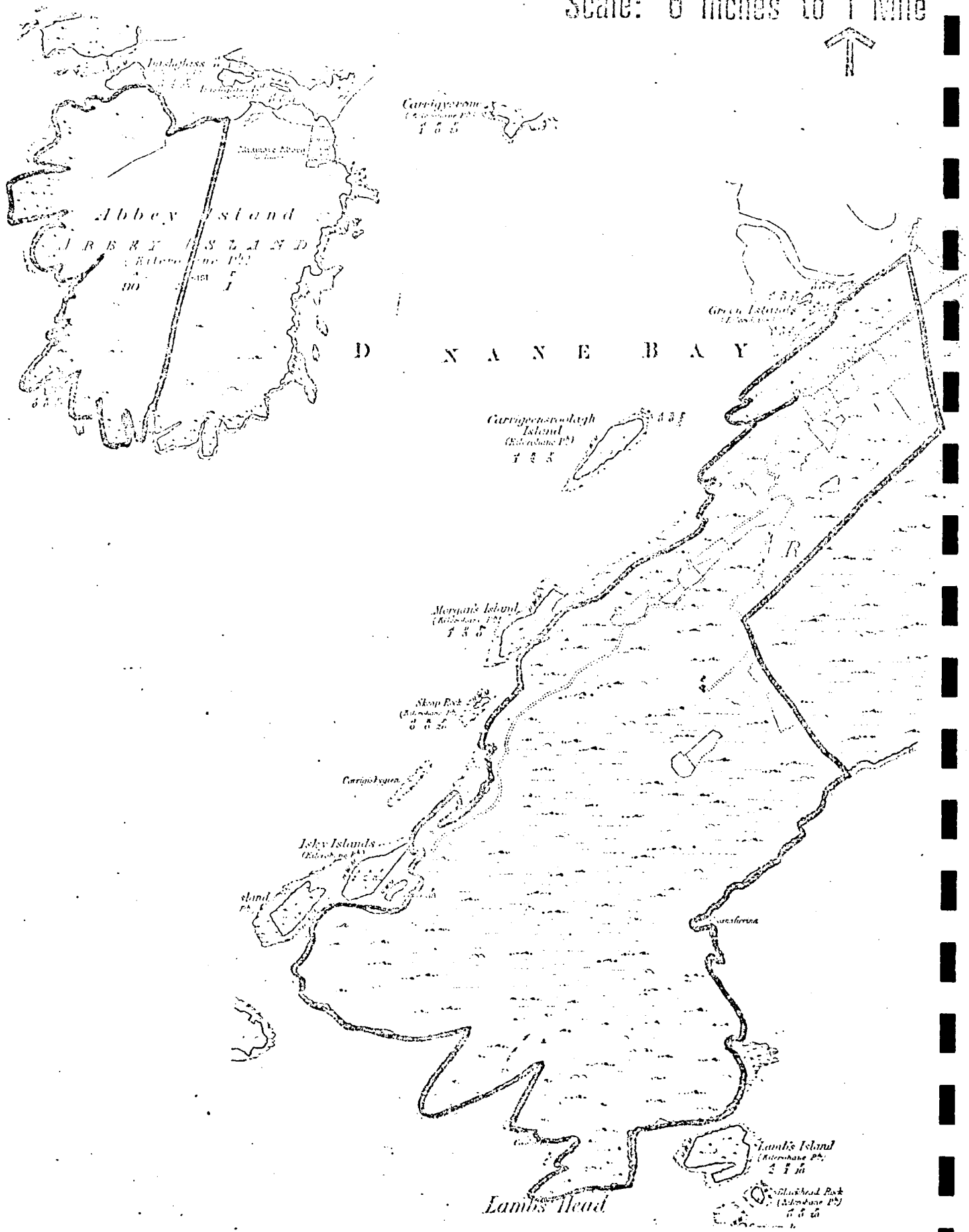
The area is mainly threatened by building which not only obliterates the habitat of the rare species in question but discourages it by changes in land use.

Recommendations

As much as possible of the area should be preserved intact and free from development and this part should be covered by a Conservation Order (Section 46, Local Government (Planning and Development) Act 1963). The legislation was passed for just this situation. Outside the Conservation Area only low-density building should be allowed and even this on amenity grounds might be undesirable - a headland being so visible from many parts of the mainland.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	URAGH WOOD & CLOONEE LAKES
Acreage	652 acres
Grid Reference	V84 64
Scientific Interest	Ecological, Botanical, Zoological
Rating	International
Priority	B

Description of Area

Uragh Wood covers much of the hillside on the west side of Lough Inchiquin. It is a typical shallow soil oakwood, fairly open with quite small trees: the canopy is not quite closed at about 40ft from the ground. The main tree species is Quercus petraea (sessile oak), followed by Betula pubescens (birch), Sorbus aucuparia (rowan), Salix cinerea (willow), Crataegus monogyna (hawthorn) and Corylus avellana (hazel). In the most open places Populus tremula (aspen) occurs, while near to the lakeshore and especially on the islands in Cloonee L., Arbutus (strawberry tree) is quite common with less Juniperus (juniper) and occasional yew (Taxus baccata).

The understory contains scattered hollies (Ilex) now rapidly spreading onto all available substrates. A random count of 100 square metres in one part of the wood showed one Ilex seedling per sq. m while other tree seedlings also occur, including Quercus (oak). The ground vegetation is relatively poor. Most of the area is covered by either bracken (Pteridium aquilinum) or Deschampsia caespitosa (tufted hair grass) and these are followed by Rubus fruticosus, (bramble) and bryophytes or filmy ferns (Hymenophyllum spp.). The moss-covered boulders form a conspicuous feature sometimes but are being submerged by taller vegetation. In fact, the growth of the low shrubs is striking: Calluna (heather) reaches 3ft in places and Vaccinium myrtillus (frochan) is also large.

The characteristic species would include:-

Dryopteris aemula	crinkled buckler-fern	c
Hedera helix	ivy	f
Blechnum spicant	hard fern	f

Deschampsia flexuosa	wavy hair-grass
Ajuga reptans	bugle
Oxalis acetosella	wood sorrel
Saxifraga spathularis	St. Patrick's cabbage
S. geum	" " "
Dicranum majus	a moss
Sphagnum sp	" "
Hylocomium brevirostre	" "
Plagiothecium undulatum	" "

Carex pallescens (a sedge) and Moehringia trinervia (three-veined s . are occasional plants while Neottia nidus-avis (bird's nest orchid) recorded. Two very rare lichens occur, one has not been seen else Ireland.

The aquatic and heathy vegetation is also of great interest in this a lake contains Eriocaulon aquaticum (pipewort), Isoetes lacustris (q Elatine hexandra (waterwort), Lobelia dortmanna (water lobelia) and intermedia (bladderwort). At their edges Cladium mariscus (saw se as well as more abundant Phragmites (reed), while on slightly drier chium angustifolium (blue-eyed grass) is widespread.

Where peat development has occurred both Drosera intermedia (sund Rhynchospora fusca (brown beak sedge) and Pinguicula grandiflora (l wort) are found as well as more typical species of blanket bog, and included in the area, Anthemis nobilis (chamomile), Parentucellia v (yellow bartsia), and Botrychium lunaria (moonwort) grow.

Char occur in both the lakes (Salvelinus colii) as well as several in beetles. In fact, the invertebrate fauna has been * examined for se and many records of spiders, molluscs and beetles made.

Evaluation

This valley contains very interesting plant and animal communities, representative of the Kerry flora and fauna. Uragh Wood has been f

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* Irish Naturalist 7, 206 - 219.

was the only wood in which oak regeneration under mature trees was seen on this survey. It is thus ecologically valuable.

The char race concerned is fairly widespread but some of the other animals recorded here are decidedly rare in the country.

The whole valley is a fine ecological unit and would be an excellent centre for field study. A good deal of diversity occurs in a relatively small area.

Vulnerability

The Cloonee Lakes and L. Inchiquin could suffer eutrophication if development occurs in their vicinity but their size leaves greater leeway than in the case of some other acid lakes. However, any nutrient addition is undesirable.

Some of the interesting species coexist with the prevailing patterns of land use (e.g. Parentucellia viscosa) and thus might die out if this was altered.

Uragh Wood appears to have a secure future in view of the fact that it is to be managed as an oakwood by the Forestry Division and because it is regenerating at present. It will probably show a tendency to spread outside its boundaries because of this.

Recommendations

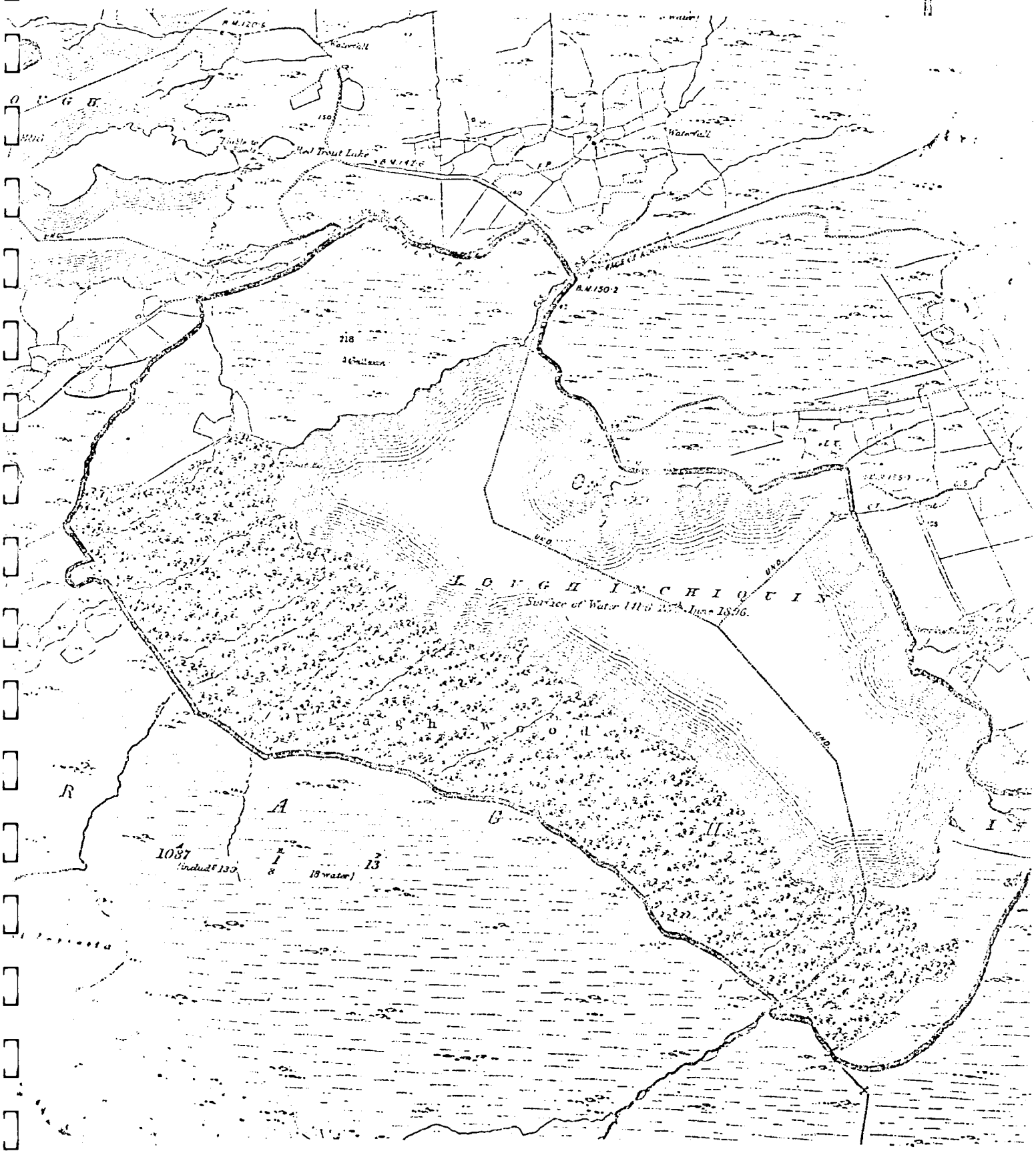
The area is of both a high scientific and amenity value and is in good condition at the moment. It is thus attractive for recreational development. However, the appearance of holiday housing could be most destructive and it seems best that the valley should be covered by a Special Amenity Area Order, under Section 42, Local Government (Planning & Development) Act, 1963. In this way development could be wholly prevented by upper Cloonee and L. Inchiquin and controlled by the lower Cloonee Lake.

Agreement should be sought with the Forestry division so as to prevent coniferous afforestation in the upper part of the valley and their intention to preserve Uragh Wood could be reinforced by the passage of a Conservation Order on it, to

protect several of its rarer species. Amenity planting of native broad-leaved species could greatly enhance the value of the area and would be self-supporting once established. It would make of the valley an exceptional ecological and scenic unit.

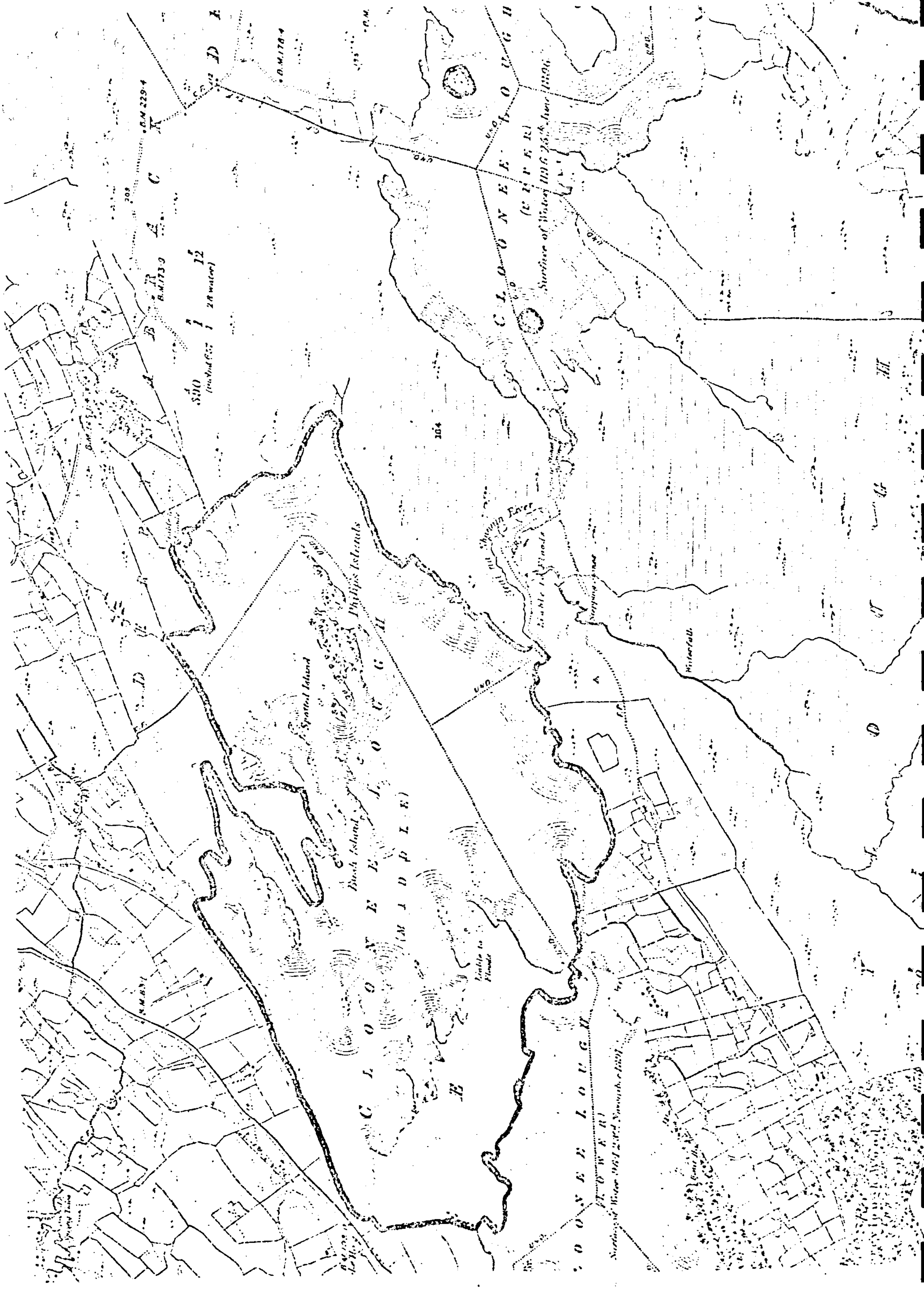
MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 inches to 1 Mile



MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	INCH-ANASCAUL COASTAL CLIFFS
Acreage	122 Acres
Grid reference	Q. 62, 00
Scientific interest	Zoological
Rating	National
Priority	B

Description of area

The coastline at this point is composed of high cliffs of glacial drift partly vegetated by maritime plants at the base and by terrestrial plants higher up. The former would include Armeria maritima (sea pink), and Plantago maritima (sea plantain) while the latter consist of:-

Rubus fruticosus	bramble
Hedera helix	ivy
Ulex europaeus	gorse
Hypochaeris radicata	catsear
Festuca rubra	red fescue
Lonicera perclymenum	honeysuckle
Calluna vulgaris	heather

The plant cover on top of the cliffs is rough grassland with abundant Pteridium aquilinum (bracken). The following species were seen :-

Dactylis glomerata	cock's foot
Anthoxanthum odoratum	sweet vernal grass
Achillea millefolium	yarrow
Ranunculus ficaria	celandine
Teucrium scorodonia	wood sage
Stellaria graminea	field chickweed
Rumex acetosa	sorrel
Vicia sepium	bush vetch
Lotus corniculatus	birdsfoot trefoil

Luzula campestris woodrush

A rare invertebrate species occurs in this area and has been seen in recent years.

Evaluation

This site is of national or international importance for an invertebrate species that occurs nowhere else in Ireland and possibly not in Britain either.

Vulnerability

Plant cover in the area could be altered by large scale burning or treatment with herbicides.

Further research is needed to identify the adverse factors on the species.

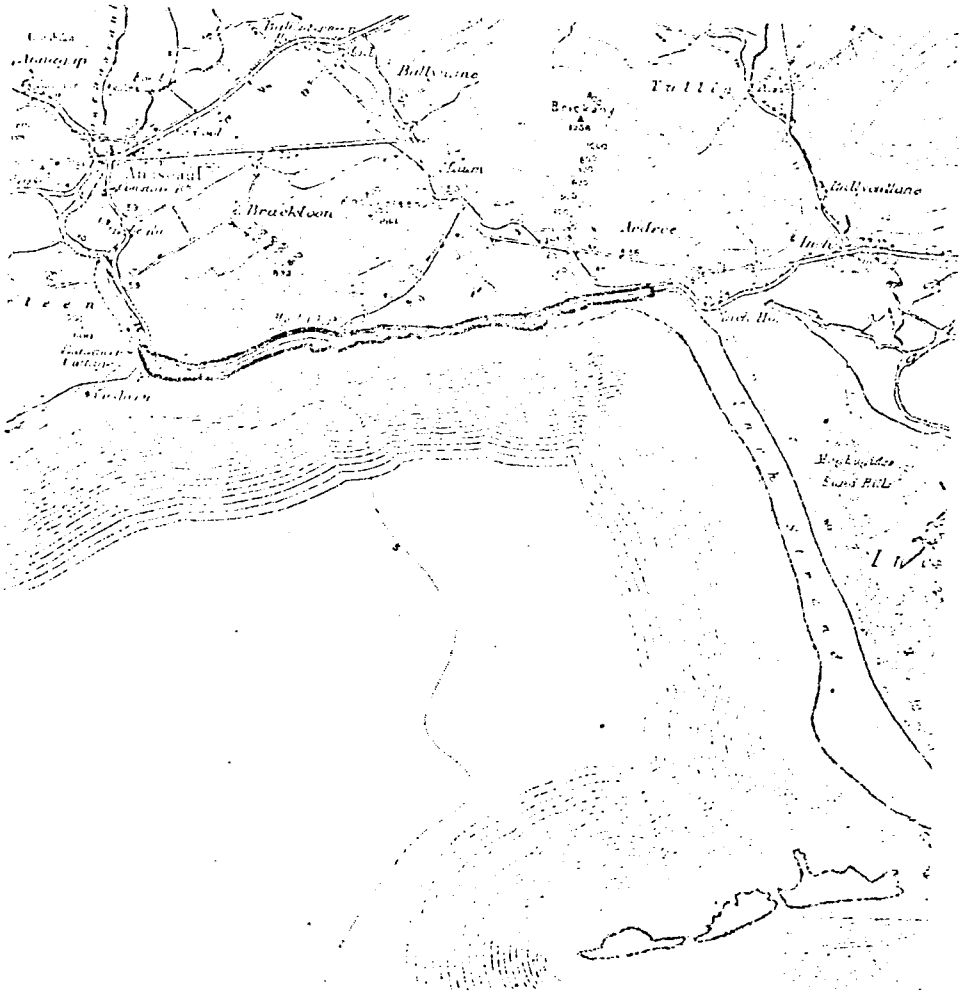
Recommendations

Habitat changes are unlikely to take place in this area but should be prevented south of the road.

Herbicide treatment of road edges and the fields included should be outlawed and steps taken by agreement to prevent more than a small fraction of the area being burnt in any one year.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 1 Inch to 1 Mile



Name of area	KILMURRY BAY
Acreage	6.4 Acres
Grid reference	V 6599
Scientific interest	Geological
Rating	National
Priority	C

Description and evaluation

This is a well exposed, accessible example of large scale aeolian dunes preserved in rocks of Devonian age. It is an unusual geological feature that could be described for the general interest of visitors.

It is probably the best example of these structures in Great Britain or Ireland and possibly in Europe.

Vulnerability

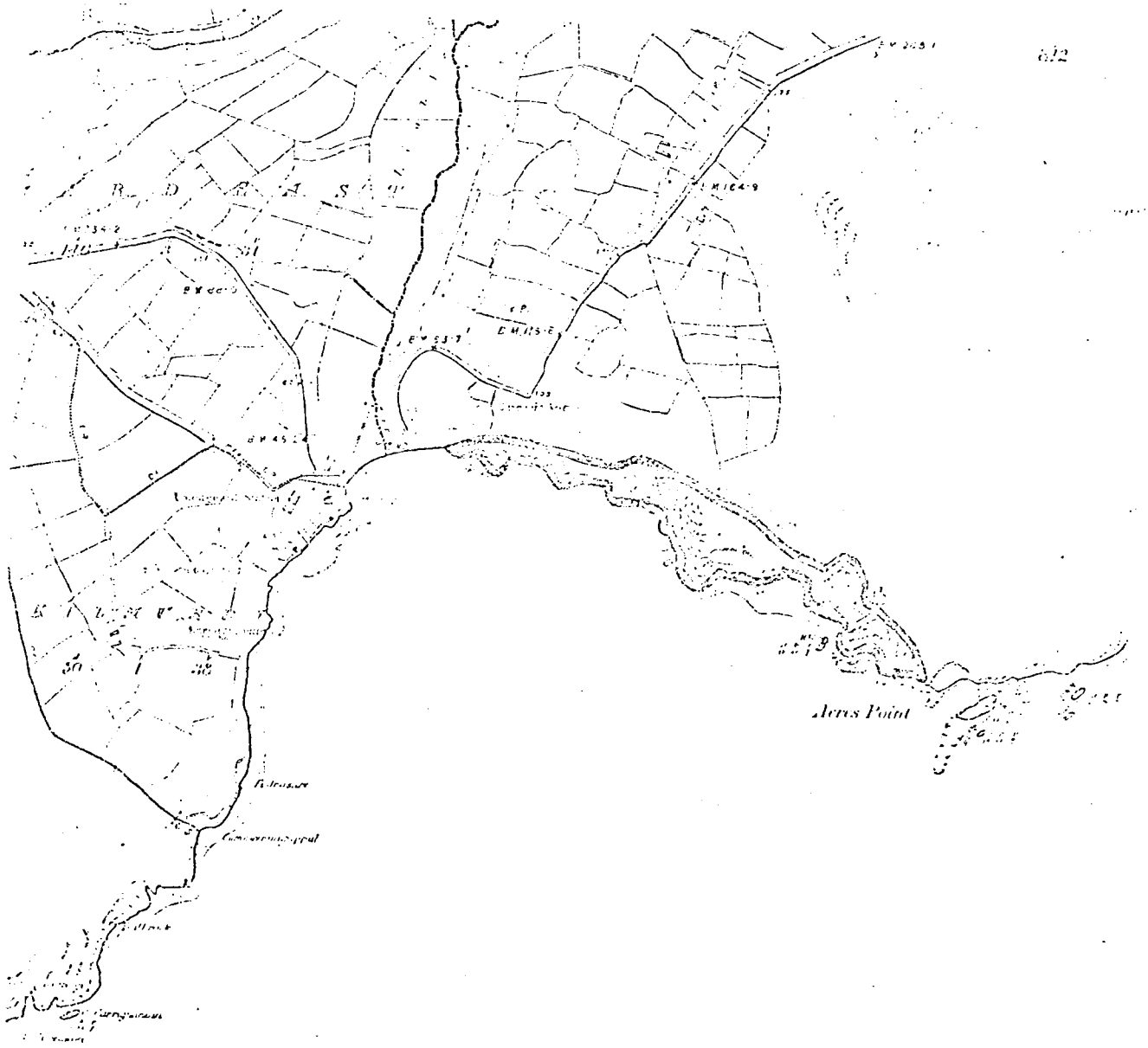
Being exposed as a sea-cliff section this site is relatively secure and is not in danger of commercial exploitation.

Recommendations

This site will be mentioned in the geological guide to the Dingle peninsula and is worthy of a signpost on that account.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	BRANDON MOUNTAIN
Grid Reference	Q 46 11
Acreage	7424 Acres
Scientific Interest	Botanical, ecological
Rating	National
Priority	B

Description & Evaluation

The high cliffs, corries and summit ridges of this mountain complex have the greatest concentration in Kerry of alpine and arctic-alpine species. The area is extensive but has been relatively well explored for its higher plants, lichens and bryophytes. Many lowland plants find their Irish altitudinal limits on Brandon.

The most important areas are the east facing cliffs above the Coomaknock Lakes and north facing cliffs nearer the sea. The following species occur among commoner mountain plants:-

Salix herbacea	dwarf willow
Oxyria digyna	mountain sorrel
Juniperus communis	juniper
'Deschampsia alpina'	hair grass
Poa alpina	alpine poa
Polystichum lonchitis	holly fern
Asplenium viride	spleenwort
Saxifraga stellaris	starry saxifrage
S. rosacea	tufted saxifrage
S. hirsuta	St. Patrick's cabbage
Rhodiola rosea	roseroot
Cystopteris fragilis	brittle bladder-fern
Polygonum viviparum	alpine bistort
Saussurea alpina	sawwort
Alchemilla alpina	alpine lady's mantle

Carex bigelowii	a sedge
Lycopodium alpinum	alpine club moss
Thalictrum alpinum	alpine meadow-rue

The vegetation is extremely short in places and a reduced form of Ophioglossum (adders tongue) occurs. Empetrum nigrum (crowberry) and Rhodiola descend to sea-level. The forms of Saxifraga rosacea are very complex and occur in great variety.

Lists of the more interesting byrophytes and lichens would run to about 40 and 25 respectively. They both include some species or varieties found nowhere else in Ireland.

Rare species of invertebrates have been taken on the mountain.

Vulnerability

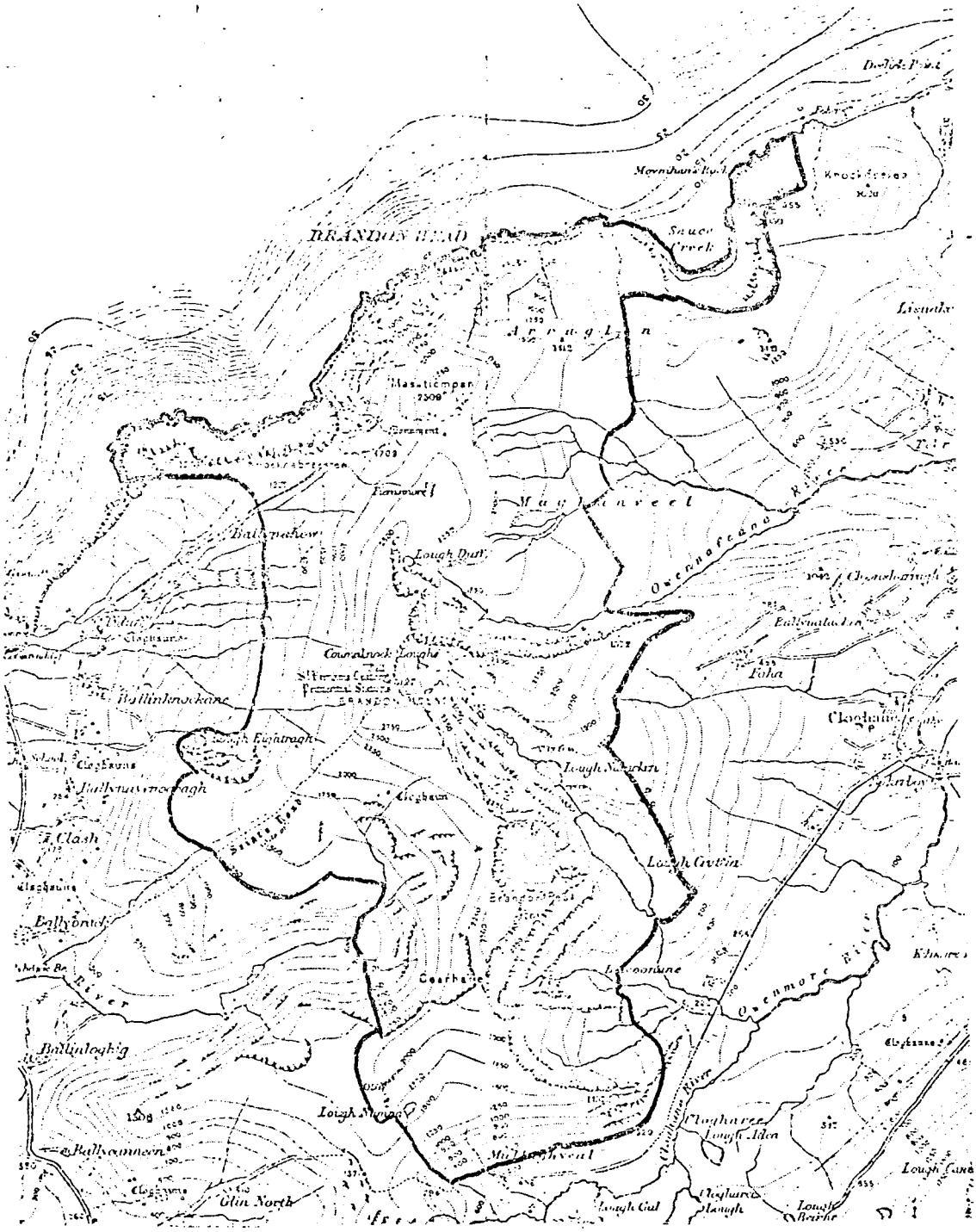
The mountain has been grazed for so long that the above species are now found only in secure places on cliffs. Access is difficult to many of them but there is some danger from the more intrepid collector.

Recommendations

Land use should remain in its present form.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 1 Inch to 1 Mile



Name of area	LOUGH DOON
Acreage	236 Acres
Grid reference	Q. 503, 058
Scientific interest	Geological
Rating	National
Priority	B

Description and evaluation of the area

This is one of the best preserved and most complete examples of a glacial corrie lake, striated valley and moraines. It may have formed as a tributary glacier to the main valley glacier that cut the present valley followed by the Connor Pass road.

Lying only 190 yds. from this main road it is probably the most accessible corrie in Ireland or Great Britain and is frequently visited by tourists and school parties.

Vulnerability

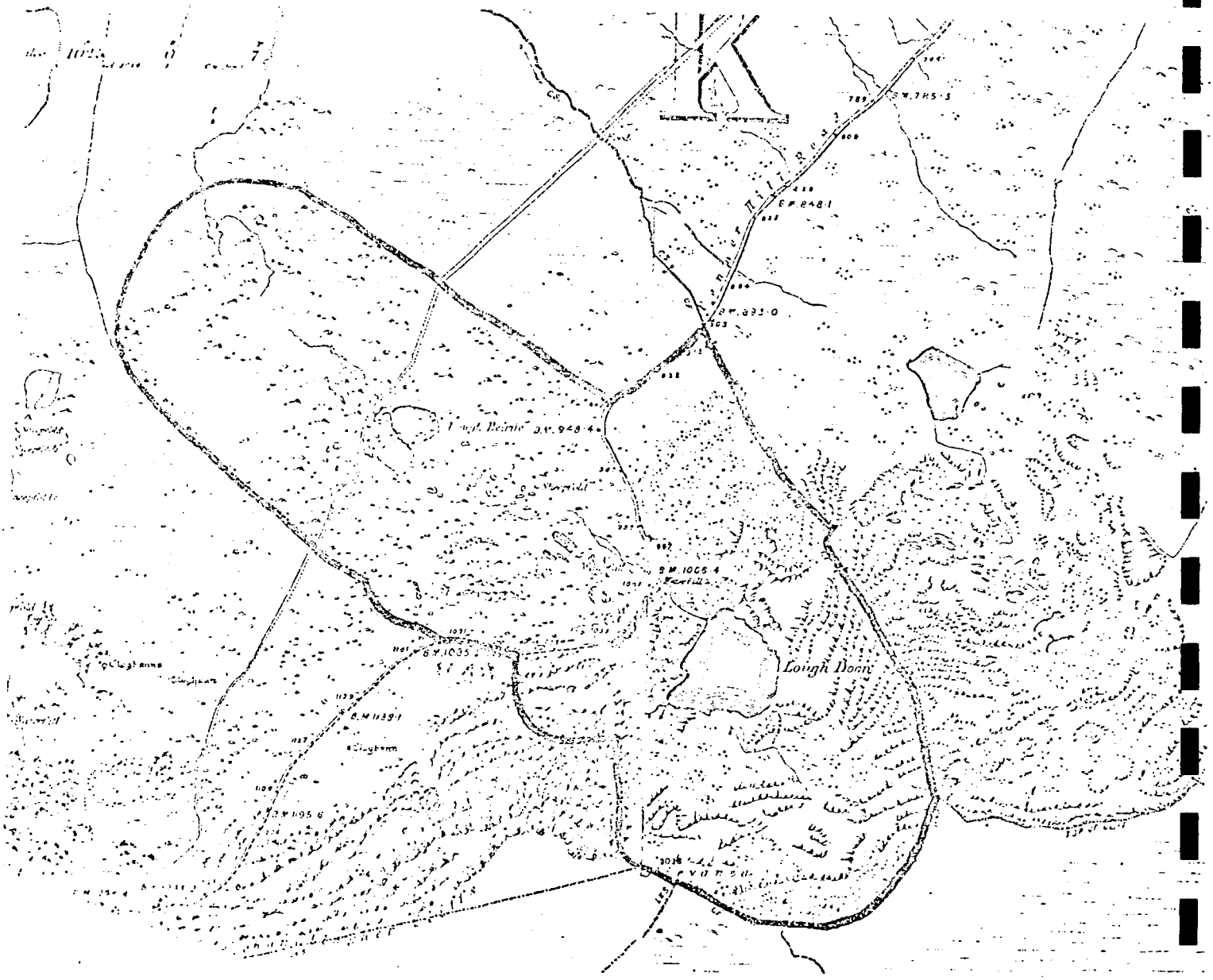
The landform could not itself be damaged, but rock painting or litter would detract from its appearance.

Recommendations

Utilization could be encouraged by making a rough path into the corrie and describing the area on a plaque. Precautions against defacement should be considered.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	LOUGH GILL AREA
Acreage	816 Acres
Grid reference	Q. 58, 13
Scientific interest	Botanical, geomorphological, zoological, ornithological
Rating	National
Priority	B

Description of area

The Castlegregory spit is a large tombola which has grown to link some of the Magharee Islands to the mainland. In this a lagoon, Lough Gill occurs "in a classical position". (Guilcher and King, 1961). Both the lake and the sand dunes, especially those on the west side, are of interest.

Lough Gill is a shallow lake bounded by marshes on its southern edge and by pastureland on the west. The water is base rich and there is good feeding for both fish and wildfowl. A good number of birds nest along the south shore, both wildfowl (87 adult mallard were seen in June 1969) and smaller species such as sedge and grasshopper warblers, reed bunting and water rail. In winter many duck occur as the following count shows : it is an average count from two recent years :-

Mallard	275
Teal	975
Gadwall	145
Wigeon	280
Pintail	175
Shoveller	280
Scaup	25
Tufted duck	500
Pochard	325
Goldeneye	2
Merganser	10
Mute swan	175
Whooper swan	80
Bewick's swan	45

The flora of the area differs substantially from the rest of the Dingle Peninsula. The lake itself has much marginal vegetation, Phragmites australis (reed), Typha latifolia (bulrush) and Iris pseudacorus (flag iris) are common along with Sparganium erectum (bur-reed), S. emersum, Caltha palustris (marsh marigold), Scirpus lacustris (lake rush), Lythrum salicaria (purple loosestrife) etc. Menyanthes trifoliata (bog bean), Rumex hydrolapathum (water dock), Carex diandra (a sedge), Berula erecta (water parsnip), Ranunculus lingua (spearwort) and R. baudotii (water crowfoot) are found at intervals.

In submerged plants L. Gill is also rich. There are upwards of six species of Potomogeton (pondweed) as well as two or three of Callitriche (water starwort), and Ruppia spiralis (tassel weed). An unusual Chara (stonewort) species also occurs.

Parts of the marsh along the south shore have become acidic and some unusual bog plants are present, for example Eleocharis quinqueflora (spike rush), Carex dioica, C. limosa (sedges) and Rhynchospora fusca (brown beak-sedge).

The dune flora is also diverse and probably is the richest in Kerry. This derives from a complete series of high dunes, blowouts and stable grassland. Grass -, herb -, moss - and lichen - dominated areas exist while the most interesting species would include :-

Arabis ciliata	hoary rock cress
Asperula cynanchica	squinancy wort
Gymnadenia conopsea	fragrant orchid
Spiranthes spiralis	lady's tresses
Phleum arenarium	sand timothy
Anagallis minimas	chaffweed

The fauna of the lake is likely to be diverse and interesting in this productive environment; it is known to include one rare species.

Evaluation

This is a very important area and contains the second largest number of wintering wildfowl in the south-west. The number of gadwall is especially notable and it is a major breeding area for mallard.

The flora is interesting also, including three species that are found nowhere else in Kerry.

Vulnerability

The bird populations are threatened chiefly by disturbance : overshooting in the winter, and recreation in the summer. The dunes to the west of Lough Gill are grazed, which damages their diversity. This would be further threatened by fertilization.

Blowouts occur in parts of the area, especially close to access points but they do not threaten the future of the area as much as in some other parts of Kerry.

Lowering the lake level would have an adverse effect on the marginal plant communities and thus the cover and feeding area of some wildfowl.

Recommendations

On a relatively small lake with access to all shores it is essential to prevent overshooting the wildfowl present. Thus a realistic safeguard for the future of shooting at L. Gill would be to ban shooting from part or all of one shore so that this could act as a refuge area at times of shooting pressure. This must be a shore with adequate vegetation cover - probably the south shore. It is recommended that this subject be taken up with the Department of Lands.

Recreational facilities should not be developed which would conflict with the summer breeding wildfowl or with the fishing. Sailing would be permissable, especially if it was restricted to the northern part of the lake, but power boats

should be prevented.

Care must be taken not to overstock the dunes, which would further break the vegetation cover and permit erosion. It would also be most undesirable to broadcast fertilizers on the high dunes or blowout areas though in the defined fields east of the sand dunes this would not be damaging.

Effluent from Castlegregory and other sources must be adequately treated before discharge into the lake. Damaging effects would quickly follow such pollution because of the small volume of water in L. Gill.

Name of Area	GREAT SKELLIG
Grid reference	V 25 61
Acreage	44 Acres
Scientific interest	Ornithological
Rating	National
Priority	B

Description and Evaluation

Apart from its great archaeological value the Great Skellig is important as a nesting site for seabirds, especially puffins. In 1969 the following count was made:-

Fulmar	582 prs.
Herring gull	250 "
Great black backed gull	12 "
Kittiwake	950 "
Razorbill	1,200 "
Guillemot	450 "
Puffin	6,500 "

In addition there are about 10,000 pairs of storm petrels and 5,000 of manx shearwater breeding on the island. The latter are concentrated on the S.E. slope of the island while the storm petrels are found over all the surface.

Vulnerability

Disturbance is the main threat to the nesting birds either from the sea or the air. The razorbill and guillemot are susceptible in the daytime when substantial numbers of eggs can roll off the nesting ledges if a group of birds takes flight. By contrast the puffins, shearwaters and petrels nest in burrows, of these, only the puffin is affected by visitors to the island as the other two appear at night.

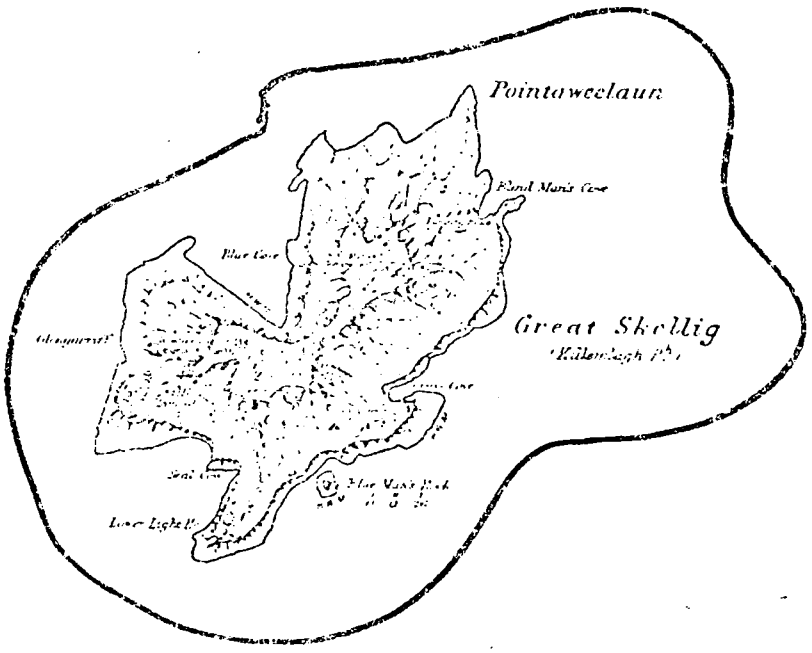
Recommendations

In any development of the island, consideration must be given to the auk (guillemot, razorbill and puffin) populations. These species are already declining whether through reduced food supply, pollution or disease, and the factor of disturbance could be another adverse influence.

The puffin slope (S.E. above the lighthouse road) is accessible to visitors who should be prevented from going over it.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	PUFFIN ISLAND
Grid Reference	V 34 73
Acreage	122 Acres
Scientific Interest	Ornithological
Rating	National
Priority	C

Description & Evaluation

Puffin Island is situated close to the mainland and is relatively gently sloping. It is thought to have the largest colony of Manx shearwaters in the country, c. 15,000 pairs and also to have 1,000 pairs of storm petrels. A count made in 1969 for other species shows:-

Fulmar	592 pairs
Shag	16 "
Lesser black-backed gull	100 "
Great " " "	25 "
Herring gull	200 "
Common gull	3 "
Kittiwake	167 "
Razorbill	677 "
Guillemot	175 "
Puffin	3,700 "

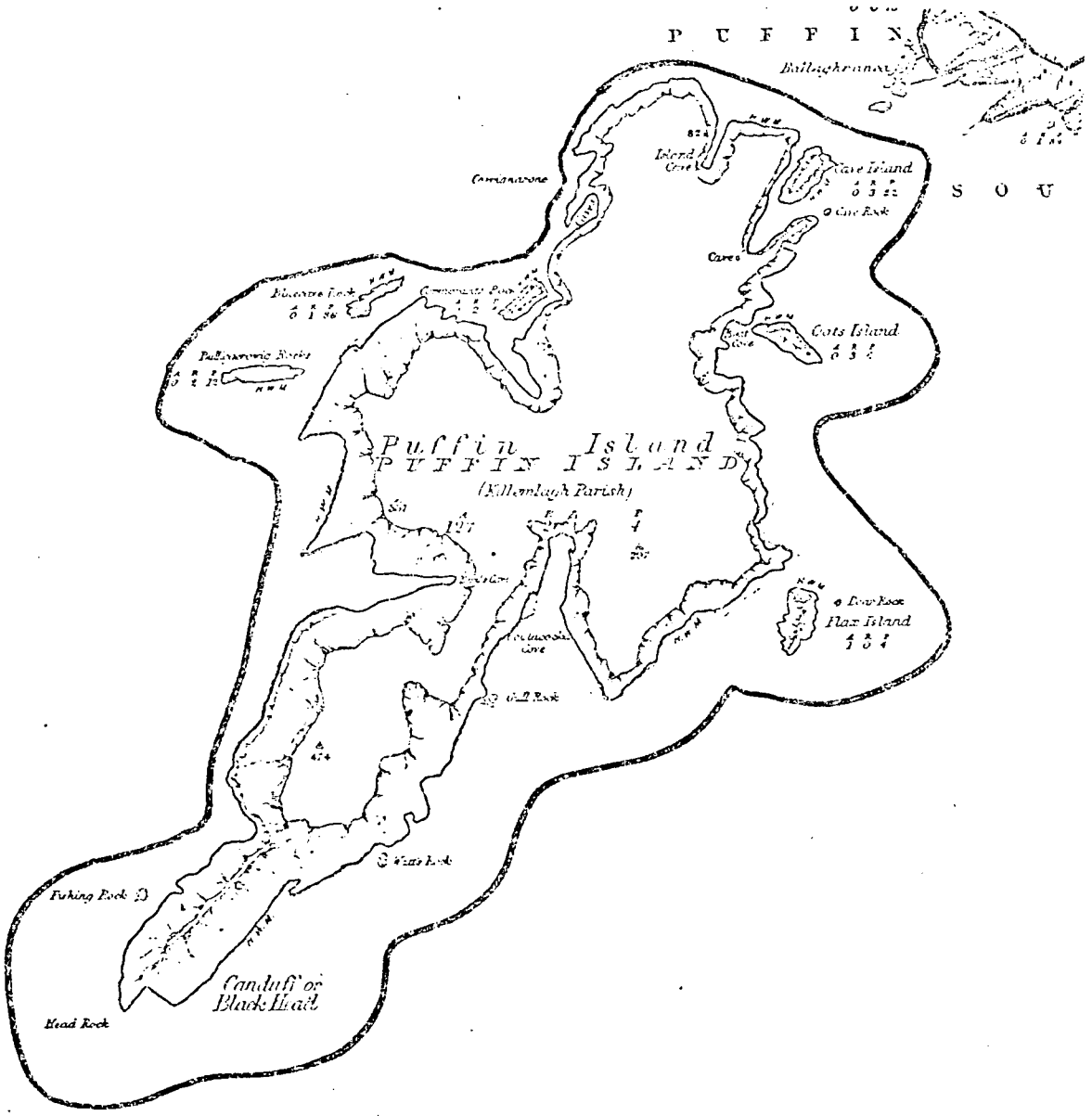
These numbers of puffins make the island an important colony for them also.

Vulnerability & Recommendations

Puffin Island is probably the most accessible of the Kerry seabird colonies and thus it is threatened by too frequent disturbance. Development on it is most undesirable but if restricted to a single house it could be designed to have relatively little impact on the bird populations. The more valuable slopes could be identified at a later stage.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	BAY VIEW
Acreage	12 Acres
Grid reference	Q. 762, 150
Scientific interest	Geological
Rating	National
Priority	C

Description and evaluation of the area

This site is the finest example in Ireland of a high Visean (carboniferous) reef with its associated reef apron of slumped micrites and calcarenites. The reef is exposed in a small quarry at Bay View while the off-reef facies are seen on the foreshore.

Vulnerability

The locality is not greatly endangered as further quarrying of the reef is permissible. However dumping could occur and obscure some of the features.

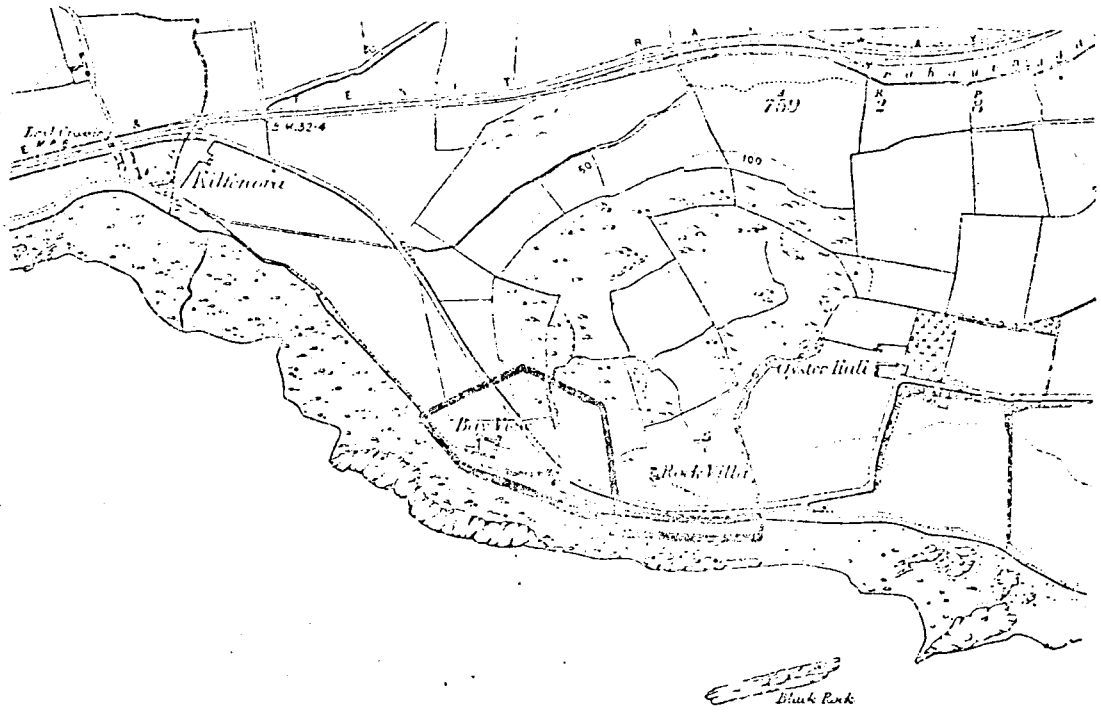
Recommendations

The site should be kept clear and quarrying allowed if applied for.

This office should be informed of any developments likely to affect the site.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	ROSSBEHY SPIT AND MUDFLATS
Acreage	227 Acres
Grid Reference	V6793
Scientific interest	Botanical, zoological
Rating	National
Priority	B

Description of Area:

Rossbehy Spit is a shingle and sand structure narrowest at its junction with the mainland and here breached by waves during rough weather. The part is in fact a shingle storm breach but shingle disappears beyond it until the tip of the spit is reached.

A good variety of plant communities occur from open sand to fixed dune grassland, dune slacks and saltmarsh. The transect from totally marine to terrestrial vegetation in the saltmarsh is particularly clear, being gradual. The saltmarsh is clearly grazed and this may allow a greater abundance of terrestrial Fucus spiralis (sea weed) than normally would occur.

There are several deep dune slacks, caused by wind erosion in which plants such as Sagina nodosa (knotted pearlwort) and Cicendia filiformis occur as well as commoner species, and there is even a record of Chara contraria (stonewort alga) indicated that standing water occurs.

The strand communities towards the end of the spit are of great importance and include a very rare plant species.

Choughs feed on the sand dunes, especially in winter, while Rossbehy creek is visited by flocks of waders.

The saltmarsh contains a rare animal species.

Evaluation:

Rossbehy Spit is not as valuable as Inch Island as a landform example and its communities are not as diverse, but the presence of a species found nowhere else in Ireland makes part of it of great scientific interest.

Vulnerability:

There is widespread wind erosion at the southern end of the spit which has resulted in it being breached by high seas. This gap is widening but there is a tendancy for young dunes to form along part of its edge.

The stable grassland communities are fragile on any dune system and once the vegetation cover is broken, blowarts quickly develop in some cases. The main axes of the dunes running with the prevailing wind suggests that high wind speeds could develop in this area which makes it especially vulnerable.

Driving of cars along the foreshore or removing material from it would both be damaging to the ecological balance of the area.

Recommendations

The natural processes of dune renewal should be encouraged at the south end of the spit and revegetation should also be started in other areas of Blowout especially those suffering from greatest usage.

Great care must be given to the planning of any mid-dune development to minimise the chances of erosion. Areas of saltmarsh should not be infilled and effluent must be prevented from entering its channels.

The outer half of the spit should be preserved from all development.

Name of Area	CLOGHER HEAD & COVE
Grid Reference	Q 32 03
Acreage	135 Acres
Scientific Interest	Geological
Rating	National
Priority	C

Description & Evaluation

These two areas share interesting Silurian rocks. At Clogher Head there are fine examples of volcanic rocks, e.g. rhyolites, volcanic ash, etc., while Clogher Cove is the type locality for the Ferriter Cove beds. Some associated strata are very rich in fossils.

The Silurian volcanic rocks are probably the best Irish formation.

Vulnerability

The volcanic rocks may be in danger of removal by quarrying.

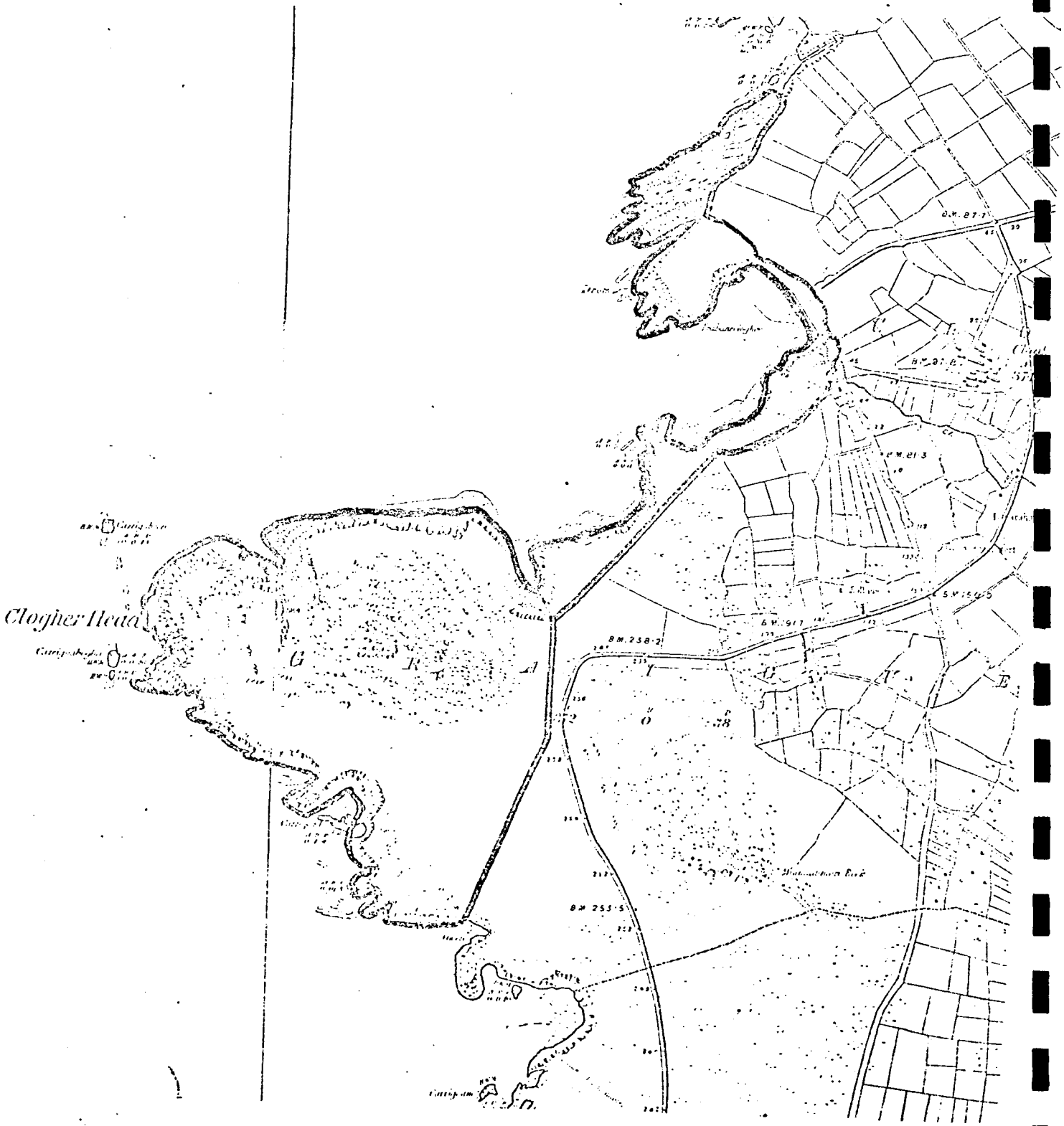
Building near Clogher Cove could obscure parts of the rock sections or render them difficult to work on.

Recommendations

Any development in these areas should be referred to this office as some parts are more vulnerable than others.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	ROSSDOHAN ISLAND
Grid Reference	V 72 64
Acreage	55 acres
Scientific Interest	Botanical, zoological
Rating	National
Priority	B

Description & Evaluation

The Rossdohan gardens find a place in this report by virtue of their informality and the spontaneous regeneration of many of the introduced species. The impression is of being in a southern hemisphere woodland with species from Australasia, South America and South Africa.*

Ferns, both as ground cover plants and tree ferns, are perhaps the most noticeable element and some of the species find here their only outdoor stations in Great Britain or Ireland. There are also many shrubs that are normally greenhouse plants.

Associated with many of the imported plants must be foreign species of insects and these require investigation. Only one is known at the moment - the stick-insect, Clitarchus hookeri.

There is a rich variety of animals and birds found in the woodland, especially since it is an area with otherwise little deciduous wood.

Vulnerability & Recommendations

The island is privately owned and managed towards the maintenance of the gardens in good condition. Shelter belts are necessary to minimise exposure.

There appears little danger to the area while it is in the hands of the present owners, but new building should not be allowed to encroach into the site outlined.

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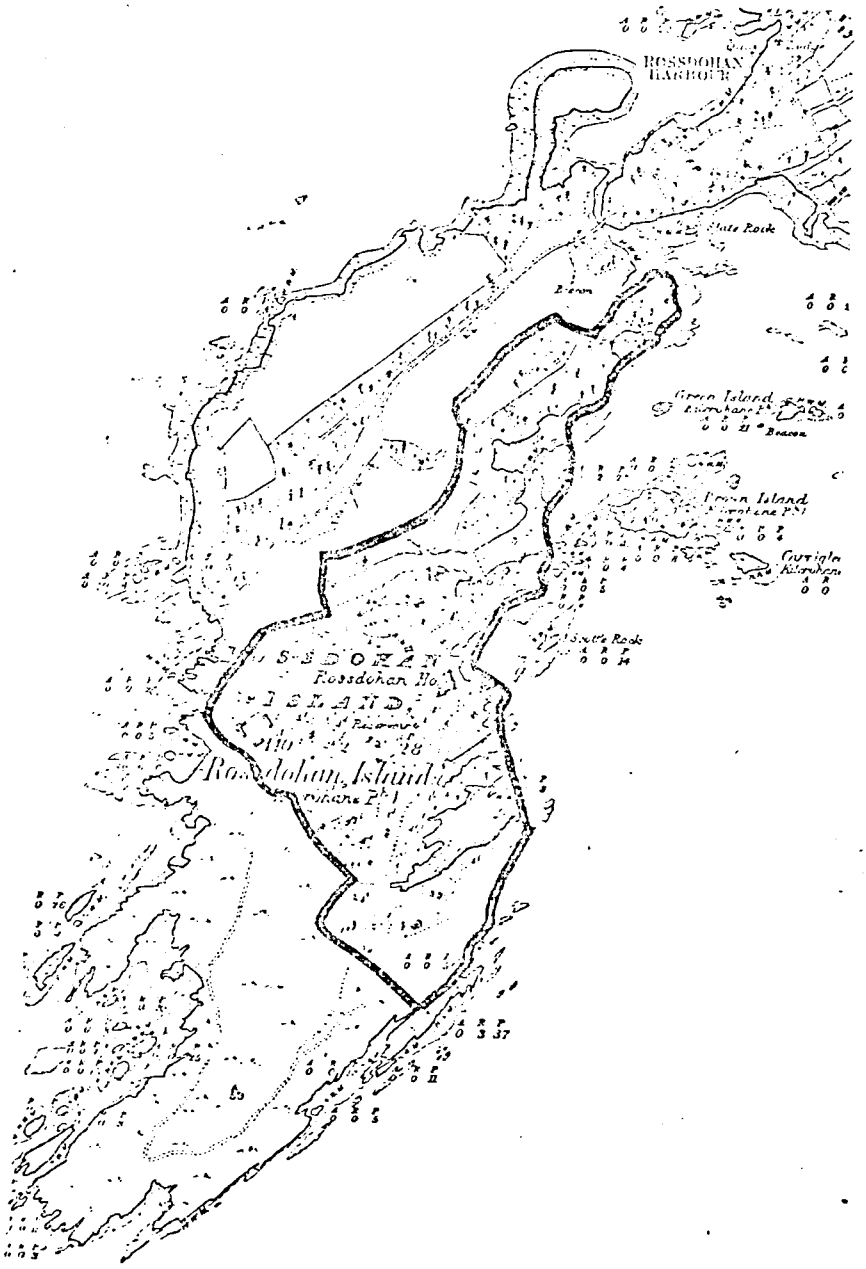
* See: Journal of the Royal Horticultural Society, 41, 1.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	CARAGH LOUGH
Grid Reference	V 71 88
Acreage	256 Acres
Scientific Interest	Botanical, ecological, zoological
Rating	Regional
Priority	B

Description of Area

The south end of Lough Caragh is relatively steeply enclosed and there are patches of oak woodland on some of the slopes. A larger area occurs in the Gortnagan townlands in a forestry zone.

The woodlands resemble those at Killarney but have some additional species. Cephalanthera longifolia (white helleborine), Equisetum variegatum (horse-tail), Rubia peregrina (madder), Milium effusum (wood millet-grass) and Silene dioica (red campion) occur in them and Pyrola minor (wintergreen) is found nearby.

The aquatic communities are rich in the lake and almost the full range of the calcifuge species is found. It includes:-

Isoetes echinospora	quillwort
Naias flexilis	naiad
Eriocaulon aquaticum	pipewort
Elatine hexandra	waterwort
Carex aquatilia	a sedge
C. acuta	"
C. limosa	"

Carex lasiocarpa (a sedge) occurs at the lake edge on peat while Viola canina (dog violet) is found on some rocky stretches.

Many interesting species of invertebrates have been taken in the lake and also in the woods nearby.

Evaluation

This was formerly an area almost as valuable as the Killarney oakwoods but it has now been much fragmented by coniferous plantings.

The aquatic communities are left as its most important feature and contain a full representation of the rarer Kerry species.

Vulnerability

Even the oakwoods that remain are vulnerable to afforestation, and some also are probably being overgrazed at the moment, though at a lower level than the Killarney woods.

The aquatic communities would be altered by eutrophication and their interest destroyed.

Recommendations

Further afforestation should be prevented S.E. of the lake where oakwood now prevails.

Pollution by sewage or farm effluent should be curtailed to a very low level by digestive treatment.

Name of area	BALLAGHISHEEN BOG
Acreage	771 acres
Grid reference	V. 68, 80
Scientific interest	Ecological
Rating	Regional
Priority	B

Description and evaluation

This is a patch of intact blanket bog in an area of high amenity. It is largely unstudied but appears to have an interesting stratigraphy and vegetation. The plant communities are fully representative of Kerry blanket bog and the status of the area may be increased if species of particular interest are found. At this stage several bryophyte species are noteworthy.

Vulnerability and Recommendations

The area is threatened mainly by hand-cutting of turf and by afforestation.

Both these operations should be controlled if they encroach on the area. Planting is the greater threat in that it spreads very quickly. Agreement with the Forestry division should be sought to preserve this bog in its present form.

Name of Area	INISHVICKILLANE
Grid Reference	V 21 91
Acreage	235 Acres
Scientific Interest	Ornithological, zoological
Rating	Regional
Priority	C

Description & Evaluation

Unlike the other Blaskets which consist mostly of Silurian and Devonian strata Inishvickillane has a complex structure in which volcanic rocks, agglomerates and lavas, play an important part. At the northern end there are fossiliferous rocks of Devonian age.

A 1969 count of the nesting seabirds follows:-

Fulmar	169 pairs
Shag	23 "
Lesser black-backed gull	34 "
Herring gull	154 "
Great black-backed gull	158 "
Razorbill	166 "
Guillemot	11 "
Puffin	230 "

Numbers of storm petrel were estimated at 10,000 pairs in 1966 and there is also a strong colony of manx shearwaters, situated on the south and west sides and near the centre of the island.

The population of some lepidoptera are of interest as colour forms.

Vulnerability

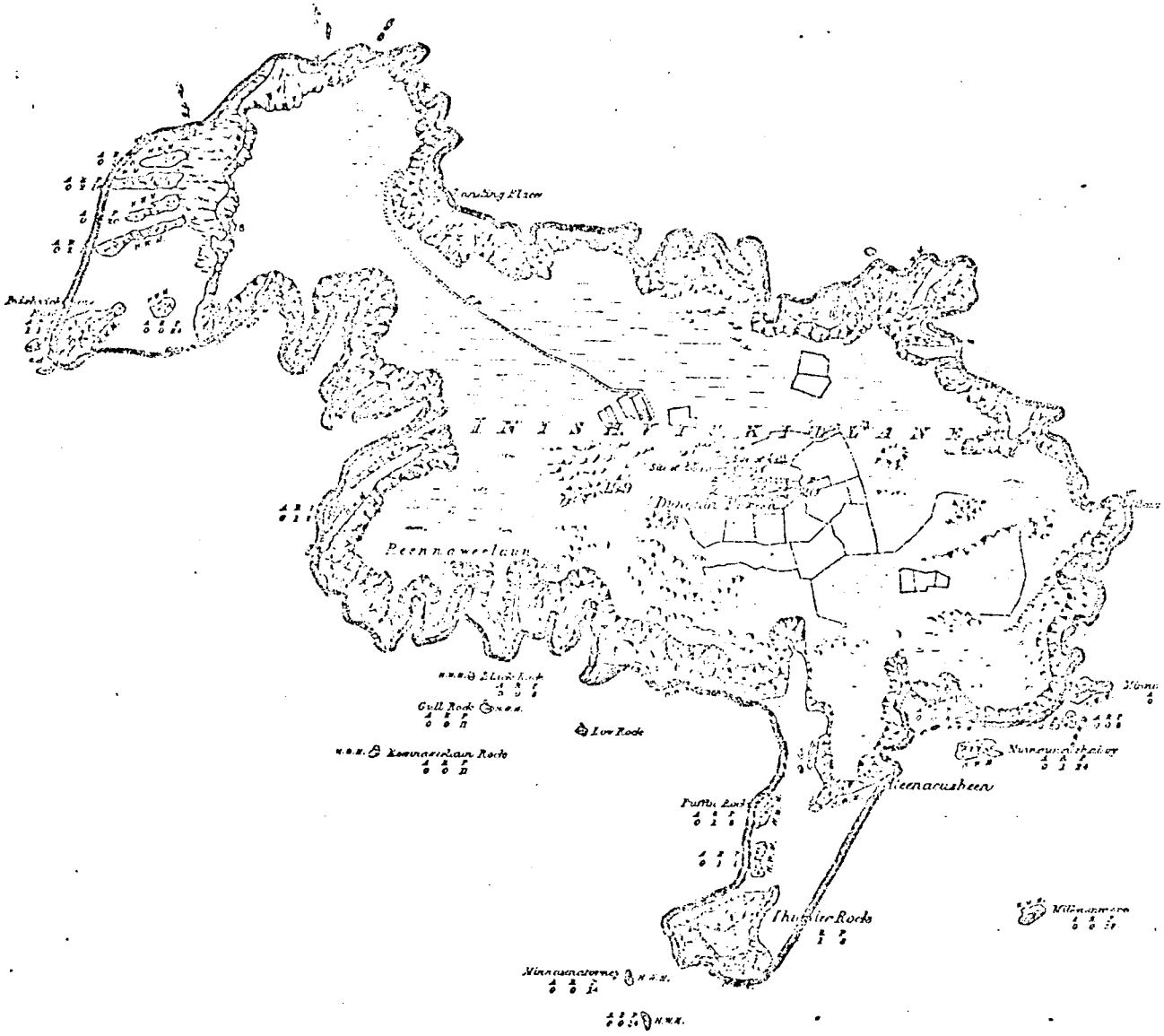
The main threat to the continuance of this colony would be oil pollution.

Recommendations

Further development of the Blasket area should take notice of the importance of this site as a seabird colony.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	ROUGHTY RIVER NR. MORLEY'S BRIDGE
Grid reference	W. 04, 75
Acreage	25 acres
Scientific interest	Botanical
Rating	Regional
Priority	B

Description and evaluation

The river has cut a shallow gorge in the sandstone for this part of its course and several unusual plant species grow on the exposed rock. Above it, blanket bog with a fully representative flora, or acid grassland are found.

One of the forms of Hieracium (hawkweed) has not been found elsewhere.

Vulnerability and Recommendations

The species would be affected by collection which is unlikely, or by afforestation.

A wide fringe of unplanted land should be left along the river at this point in the event of widespread afforestation.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile

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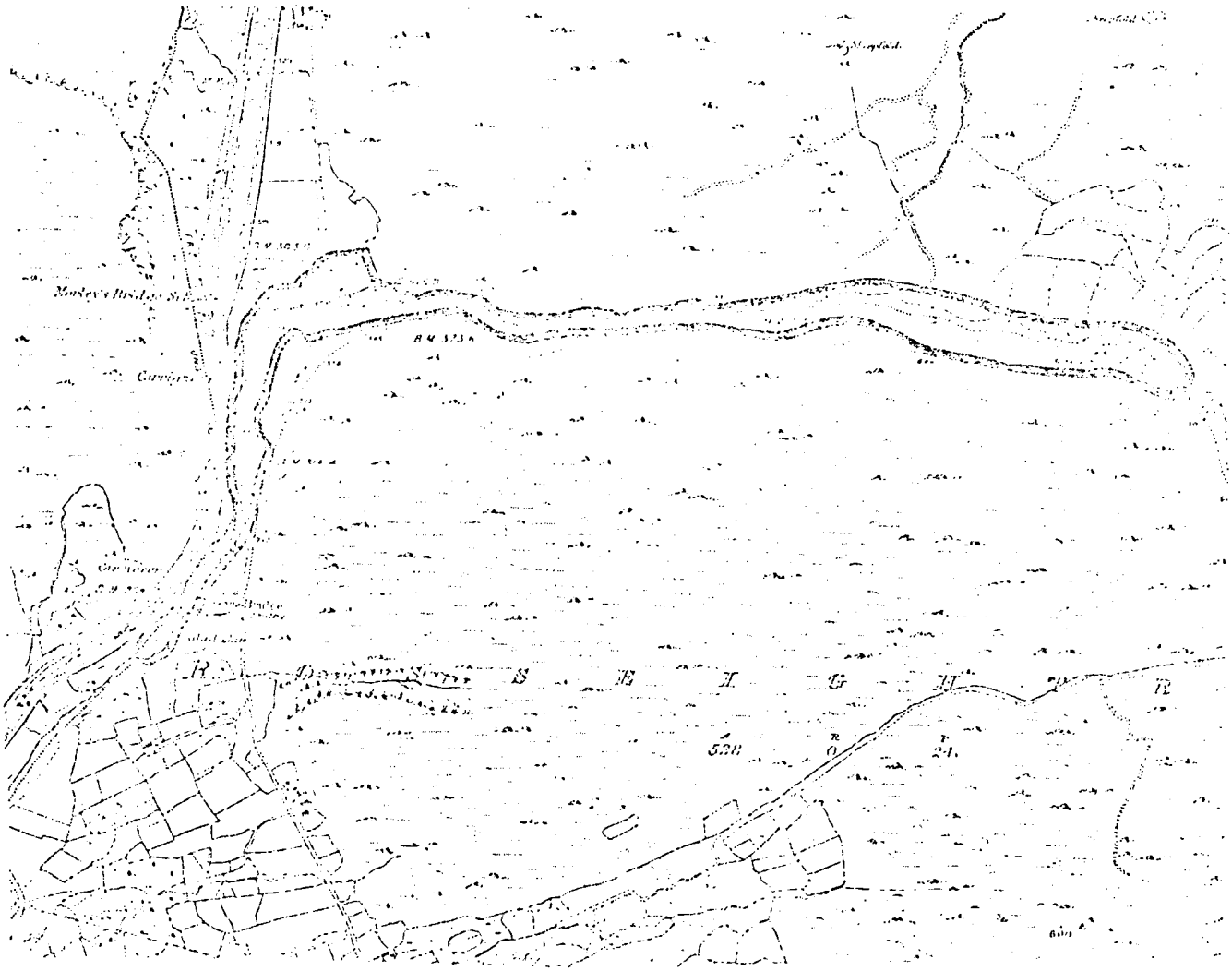


Name of area	LEHID HARBOUR
Acreage	78 Acres
Grid reference	V. 78, 63
Scientific interest	Botanical, ecological
Rating	Regional
Priority	B

Description of area

This is a varied area containing mature oak woods, sometimes including planted pines and firs (Abies), young woodland in a very active stage of succession, open heathy places being colonised by birches, and also areas dominated by gorse (Ulex europaeus). Below these Lehid Harbour, an inlet of the sea which dries out at low tide, is a completely sheltered bay where salt marsh plants grow on the roots of oak trees.

The algae zonation includes Fucus spp., Pelvetia sp., and Ascophyllum sp. which on the upper shingle is followed by salt marsh plants such as Plantago maritima (sea plantain), Aster maritima (sea aster), Puccinellia sp. (sea poa) and Glaux maritima (sea milkwort). A low clay bank behing the beach supports well-grown trees, especially oak (Quercus sp.), on whose bases Cochlearia officinalis (scuroy-grass), Armeria maritima (sea pink) and Tripleurospermum maritimum (scentless mayweed) are found.

Woodland herbs grow at this level also but attain exceptional abundance higher up in a recently closed stand of Betula pubescens (birch) and Corylus avellana (hazel). Here there is a dense growth of Endymion non-scripta (bluebell) with about 30 plants to the sq. ft. and also quantities of Oxalis acetosella (wood sorrel), Chrysosplenium oppositifolium (golden saxifrage), Conopodium majus (pignut), Anemone nemerosa (wood anemone), Carex sylvatica and C. remota (sedges). Locally Luzula sylvatica (greater woodrush) and Vaccinium myrtillus (frochan) are abundant and some Quercus (oak) occurs as young trees. Luzula pilosa (woodrush) is found occasionally in this area while Euphorbia hyberna (Irish spurge) occurs throughout.

Young birchwood covers much of the perifery of Lehid Harbour but is replaced by older stands, mostly of oak at its innermost point. The oakwood community is well shown with some areas filled by an understory of holly (Ilex aquifolium) including very large trees up to 30-40 ft., some barer and dominated by Vaccinium myrtillus (frochan). Pines and firs (Abies spp.) are scattered through this area but are sufficiently widely spaced not to cause much modification of the vegetation. There is one area near the road where Abies have become the dominant tree while to the north of this, Ardea Wood shows the full development of Quercus petraea (sessile oak) with open well-spaced trees but with an abnormal ground cover due to grazing.

Little Ilex (holly) occurs in it and no seedling oaks. In fact regeneration seems to have been unsuccessful for 60-70 years and the wood may have been planted. Certainly it has been managed to exclude any other species, such as birch, from the canopy. Ground cover is made up of Vaccinium myrtilus (frochan), Agrostis tenuis (velvet bent), Anthoxanthum odoratum (sweet vernal grass) and Oxalis acetosella (wood sorrel) with scant Calluna vulgaris (heather), Blechnum spicant (hard fern), Veronica officinalis (common speedwell) Endymion non-scripta (bluebell) and Conopodium majus. Mosses include Leucobryum glacum Dicranum majus, Hylocomium brevirostre, Pleurozium schreberi, and Polytrichum formosum.

The last type of habitat is a heathy area close to the southern end of the site. Ulex europaeus (gorse), Pteridium aquilinum (bracken) and Rubus fruticosus (bramble) are present as well as Euphorbia hyberna (Irish spurge) which is common. Ophioglossum vulgatum (adders tongue) and an interesting Rosa sp. occur here.

Evaluation

This is a very diverse area where many facets of ecology are exemplified and invite study. The extreme shelter of the marine habitat allows an abrupt marine/terrestrial boundary while a variety of plant successions are active on

land. The presence of Euphorbia hyberna in a wide spectrum of communities is also interesting.

The variety of tree ages and heights allows many passerine and larger birds to live in the area. It appears most suitable for woodcock.

From the sea or land this area is of great scenic value with its woodland reaching the water's edge.

Vulnerability

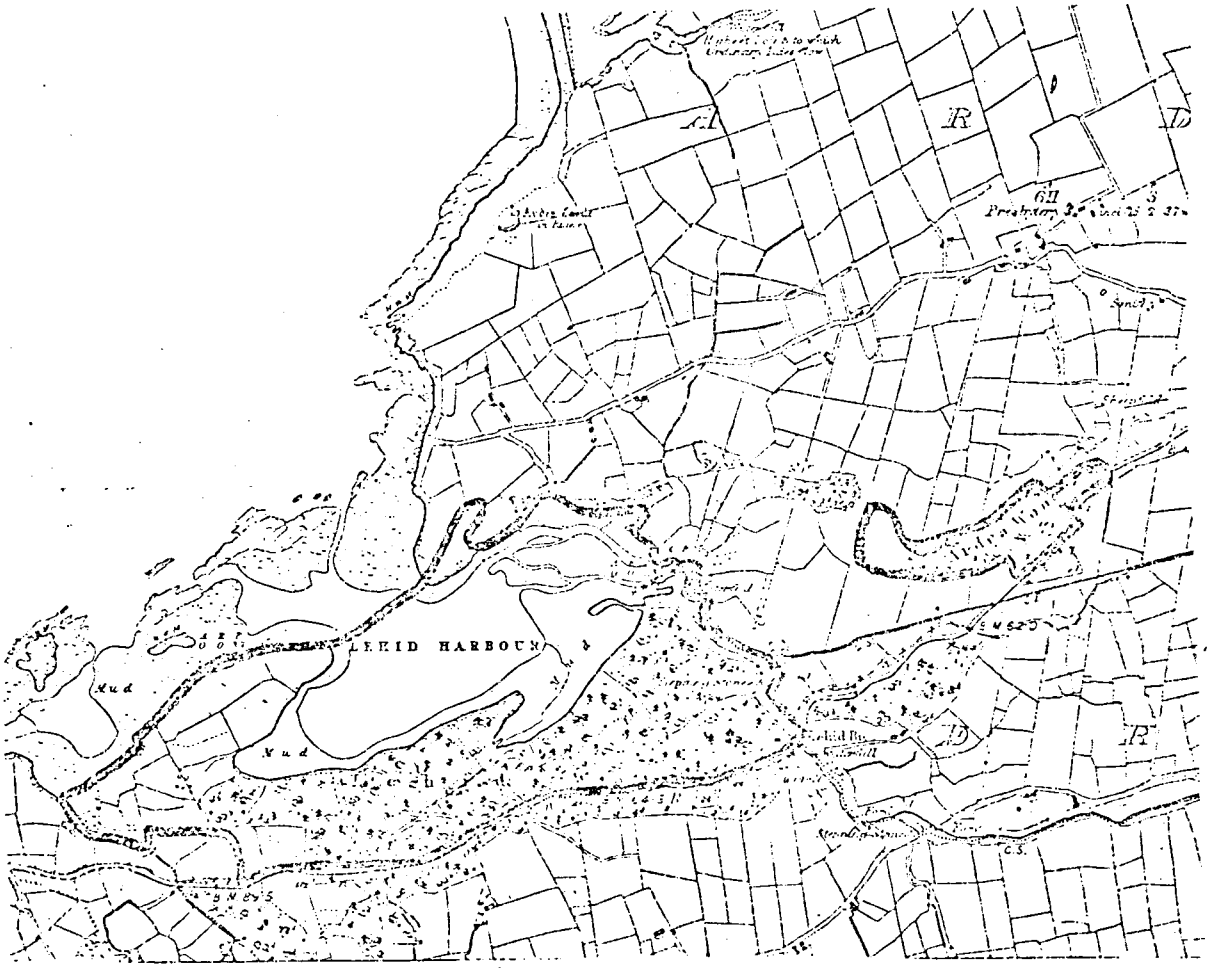
The wooded area is most threatened by clearance for replanting or for building close to the sea.

Recommendations

Both the above pressures should be resisted by agreement with the landowner and by general planning control. The attraction of the area stems from its untouched aspect as well as from the trees themselves. Any new building would detract from this value though the area could withstand much greater numbers of visitors. The access road north of Lehid Harbour could have car parking facilities on it.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	SLEA HEAD COASTAL CLIFFS
Grid reference	V. 33, 96
Acreage	28 acres
Scientific interest	Zoological
Rating	Regional
Priority	B

Description and evaluation

On the sea cliffs typical plant species such as Armeria maritima (sea pink), Silene maritima (sea canpion) and Festuca rubra (red fescue) grow and they support an interesting insect community containing one unusual race.

Vulnerability

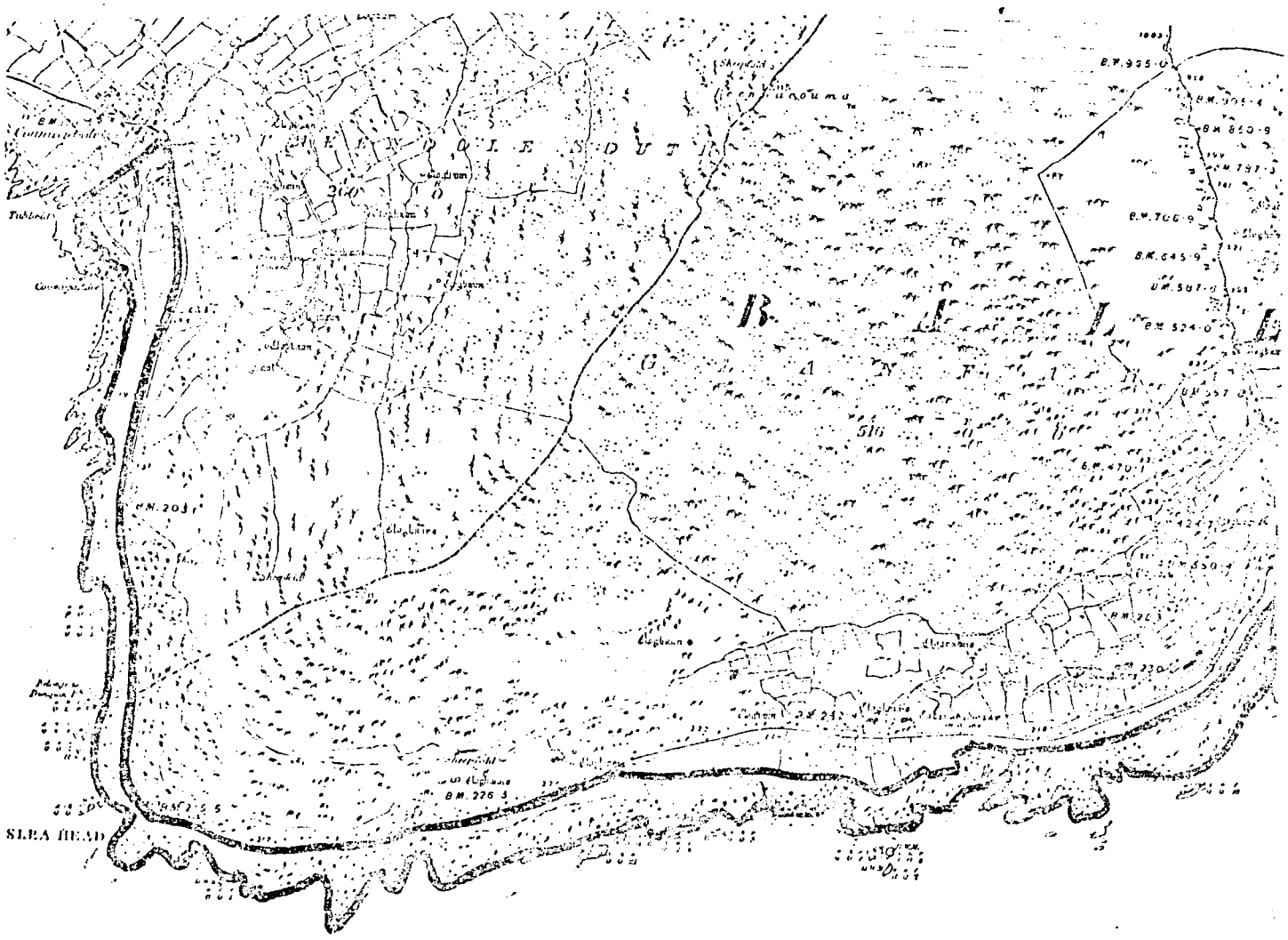
Disruption of the natural plant cover by spraying would be the most damaging influence.

Recommendations

Habitat alterations should be kept as small as possible.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	LOUGH NAGARRIVA
Acreage	4 Acres
Grid Reference	V 969, 606
Scientific Interest	Zoological
Rating	Regional
Priority	C

Description & Evaluation

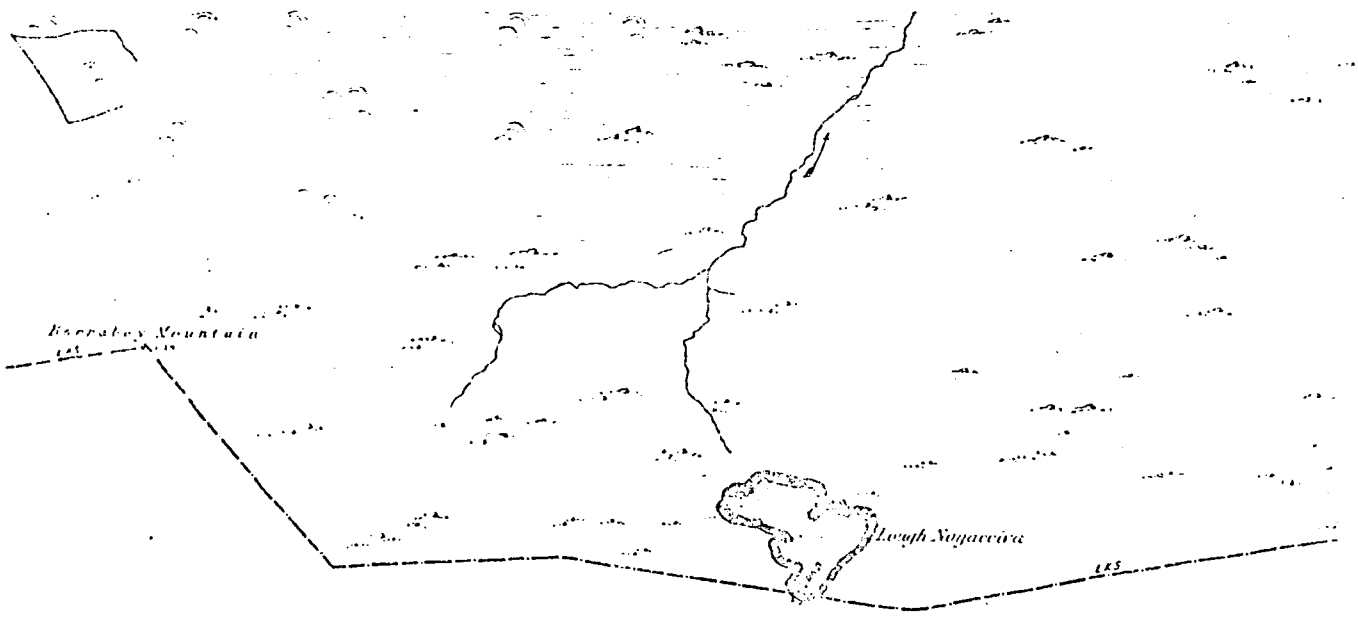
This is a high mountain lake and its importance is due to an invertebrate species. It is the type locality for this species which has now proved to be fairly widespread in Ireland. In fact, the type specimens represent a very aberrant form.

Vulnerability & Recommendations

Land use in the catchment area should remain in its present form. The fertilization of surrounding lands should be prevented, whether for hill grazing or forestry improvement.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	BARROW HARBOUR
Acreage	920 Acres
Grid Reference	Q 7317
Scientific interest	Ornithological, botanical
Rating	Regional
Priority	B

Description of Area

Barrow Harbour, an area of almost level mudflats uncovered at low tide, is surrounded by limestone outcrops and drift ridges. It is covered by Zostera (eel grass) with some Fucus spp on the rocks.

Food is abundant and growth of green algae of small extent so that the area can support large numbers of wildfowl in winter. For example, the following were counted in January, 1969:-

Mallard	220
Teal	340
Wigeon	200
Pintail	70
Shoveller	350
Shelduck	40
Mute Swan	40
Brent Goose	200
Common	25
Red brested Merganser	15

The thin limestone soil near to the harbour supports an interesting flora dominated by Ulex europreus (gorse) and Prunus spinosa (blackthorn), Koeleria cristata (crested hair grass), or by annual species in the driest conditions.

Poa pratensis (meadow grass) and Festuca ovina (sheep's fescue) are common constituents as well as:-

Trifolium campestre	hop trefoil	f
Anthyllis vulneraria	Kidney vetch	f
Geranium molle	Cranes bill	f
Sedum acre	Biting stonecrop	f
Cerastium diffusum	Mouse-ear chickweed	f
Ranunculus bulbosus	Bulbous buttercup	f
Rosa spinosissima	Burnet rose	o
Saxifraga tridactylites	Rue leaved saxifrage	l.f.
Gentianella campestris	Field gentian	o
Carex muricata	A sedge	"
Spironthes autumnalis	Lady's tresses	"
Arabis hirsuta	Loary Rock-cress	"
Rubia peregrina	Madder	"
Trifolium striatum	A clover	"
Silybum marianum	Milk thistle	"

On rocks by the sea Limonium binervosum(sea lavender) occurs while patches of saltmarsh around the harbour support such species as Trifolium fragiferum (strawberry clover), Parapholis strigosa (sea hardgrass) and Ruppia spiralis (tassel pondweed).

Evaluation

This is a most interesting area, important ornithologically for quite large numbers of wildfowl, and botanically as the best example in Kerry of a limestone coastal flora. Several species are rare in Kerry and two are at their distribution limits in the country.

Vulnerability

Increased pollution of Barrow Harbour would lead to algal growth and probably reduce the attractiveness of it to wildfowl and waders. There is very little through-flow to keep mud area open. The bird life is open to disturbance from all sides which must influence the numbers present. Building may obliterate parts of the limestone flora which would also be very susceptable to fertilization.

Recommendations

Development which would conflict with the scientific interest in the area (see Vulnerability) should be prevented. In particular steps should be taken to reduce disturbance to the wintering wildfowl if overshooting is, or becomes, prevalent. Being landlocked, the harbour lacks the refuge area found on most open coasts.

Name of Area	BOUGHIL AND LOUGH BARFINNEY
Acreage	60 Acres
Grid Reference	V. 8576
Scientific Interest	Botanical, Ecological
Rating	Regional
Priority	C

Description of Area

The rocky slope overlooking L. Barfinneyis formed by a series of small cliffs above a scree slope of large rocks. Alluvial fans occur at the bottom of gullies tenanted by a Nardus - Agrostis (moor grass - bent) community. Elsewhere, the drier sites are covered by Calluna (heather) or Pteridium, (bracken) andthe wetter by blanket-bog species including Molinia caerula, (purple moor-grass).

The cliff vegetation includes the following additional species:-

Ulex gallii	o
Erica cinerea	f
Luzula sylvatica	l.a
Festuca vivipara	f
Carex binervis	o
Hedera helix	o
Oxalis acetosella	o
Saxifraga spathularis	o
Hymenophyllum wilsonii	o
Epilobium nerterioides	o
Thymus drucei	o
Alchemilla alpina	r
Salix herbacea	r

Many representative mountain bryophytes also occur but do not include any very rare species.

Lough Barfinneywas the site of an experiment in lake fertilization to see how the growth of brown trout could be changed by eutrophication. Consequently, there is ecological data on the lake and possibly some residual effects.

Evaluation

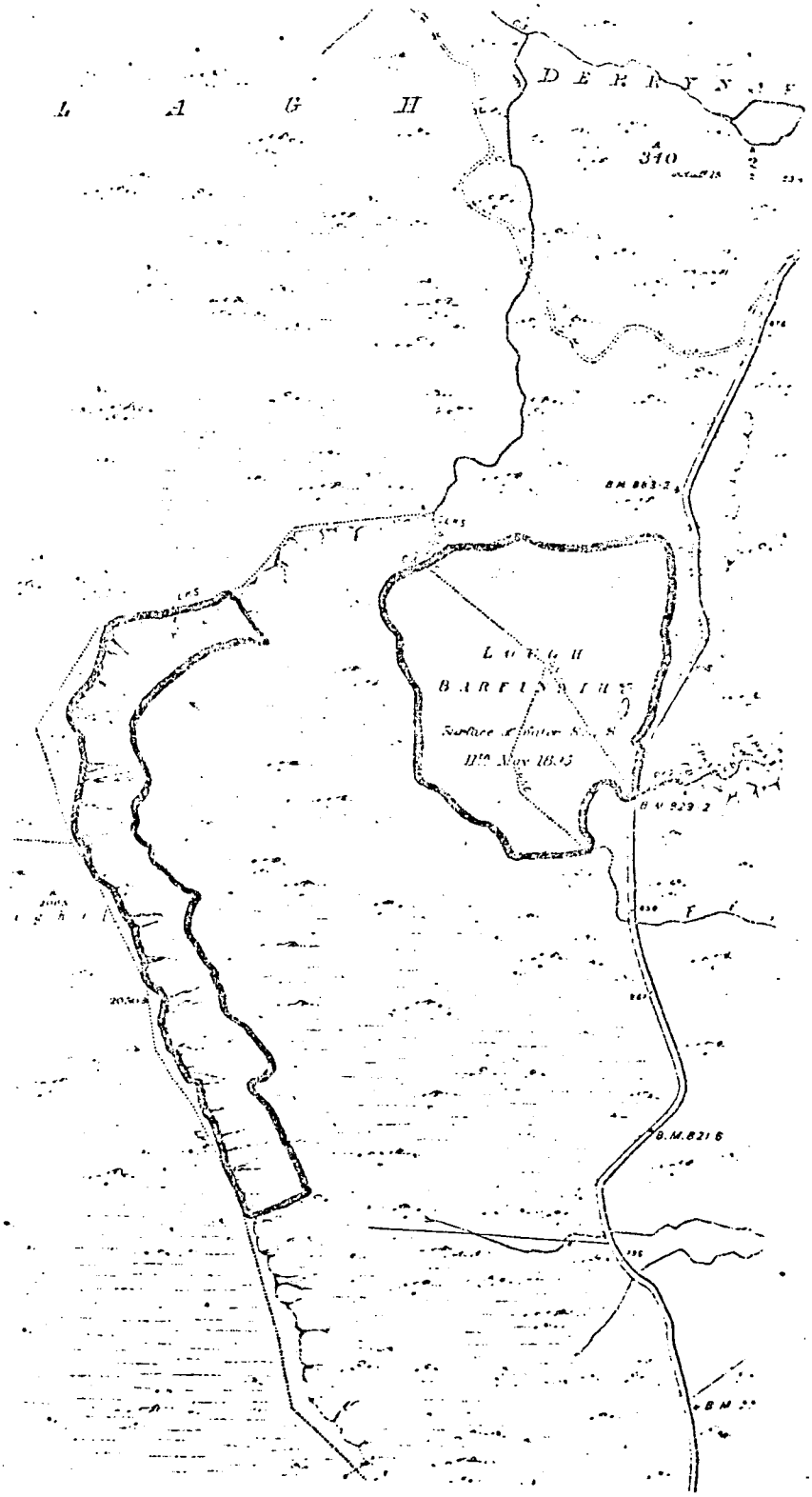
This cliff is one of only three sites for Alchemilla alpina (alpine lady's mantle) in the country and is the most accessible of them.

Recommendations

Land use should remain in its present form.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	FERMOYLE TOMBOLA AND MARSH
Acreage	129 Acres
Grid reference	Q. 54, 13
Scientific interest	Geomorphological : ecological
Rating	Regional
Priority	B

Description of area

Fermoyle island is an old red sandstone structure now linked to the mainland by a sand isthmus and itself largely covered by sand dunes. They are in an active state of change and are almost completely covered by vigorous Ammophila arenaria (marram). Very little stabilized grassland occurs so the flora is not as diverse as on some other dunes. Some indication of habitat conditions is afforded by Valeriana officinalis (marsh valerian) which grows on the open dunes.

The main biological interest is centred round the adjacent marsh which was formerly fresh but has been lately invaded by the sea. Vegetational changes have been extensive and are presumably still going on. A large area of Myrica gale (bog myrtle) has been killed along with a stand of willow and alder. Molinia caerulea (purple moor grass) still persist in a reduced form while the plants that are spreading include:-

Iris pseudacorus	flag iris
Phragmites australis	reed
Juncus maritimus	sea rush

A sand surface leads down to the marsh from the sandhills; on this, scattered tufts of Ammophila arenaria (marram) occur despite periodic flooding by sea water. Puccinellia sp. (saltmarsh grass) is spreading over part of the area and Sagina procumbens (pearlwort) and Bellis perennis (daisy) are common locally. Ranunculus baudotii (crowfoot) is said to occur in the marsh.

The area has a nesting population of mallard, lapwing and mute swan and is visited in winter by teal, wigeon and occasional wild swans in addition.

Evaluation

The Fermoyle tombola is a good example of this landform since it is small enough to appreciate from the road above.

Ecologically the marsh is interesting because of the changing conditions. It is one of few examples of sea invasion, probably the only one in Kerry but there is a history of sea invasion into this area; e.g. the dunes were open in 1855, closed in 1958.

Vulnerability

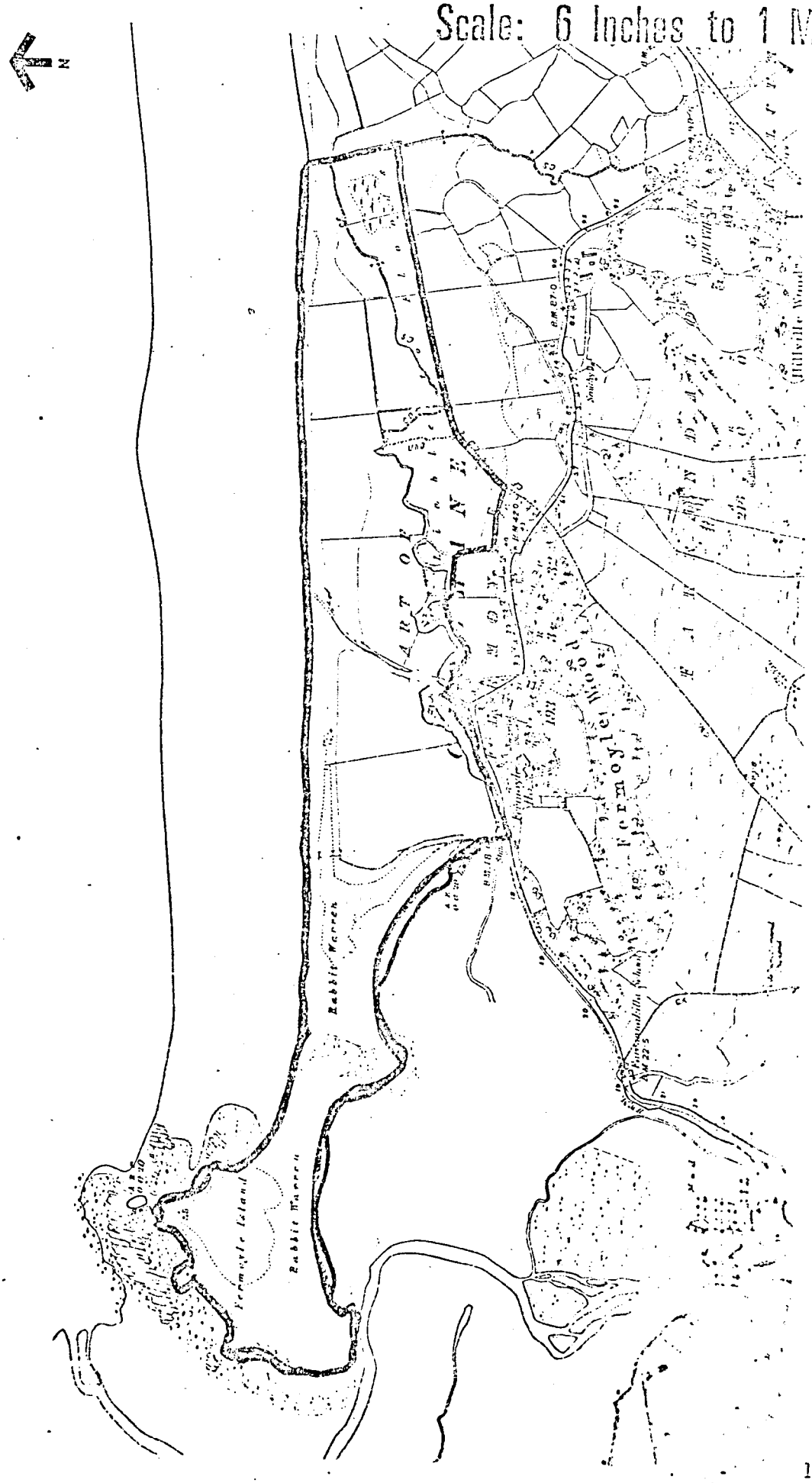
Erosion, initiated either by beach material being removed or by overuse in recreation has allowed the sand dune ridge to be penetrated by the sea. The rest of the tombola is endangered by the spread of this damage but the wider part of the sand dunes seems relatively well protected.

Recommendations

Natural sand build-up should be encouraged in the area of the 'breach' and especially on its western edge. All further removal of beach material should be prevented in the interests of coastal stability. The marsh would revert to a freshwater one eventually, and this would also be an interesting process.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	PUFFIN SOUND - HORSE ISLAND CLIFFS
Grid Reference	V. 35 66
Acreage	
Scientific Interest	Ornithological
Rating	Regional
Priority	B

Description & Evaluation

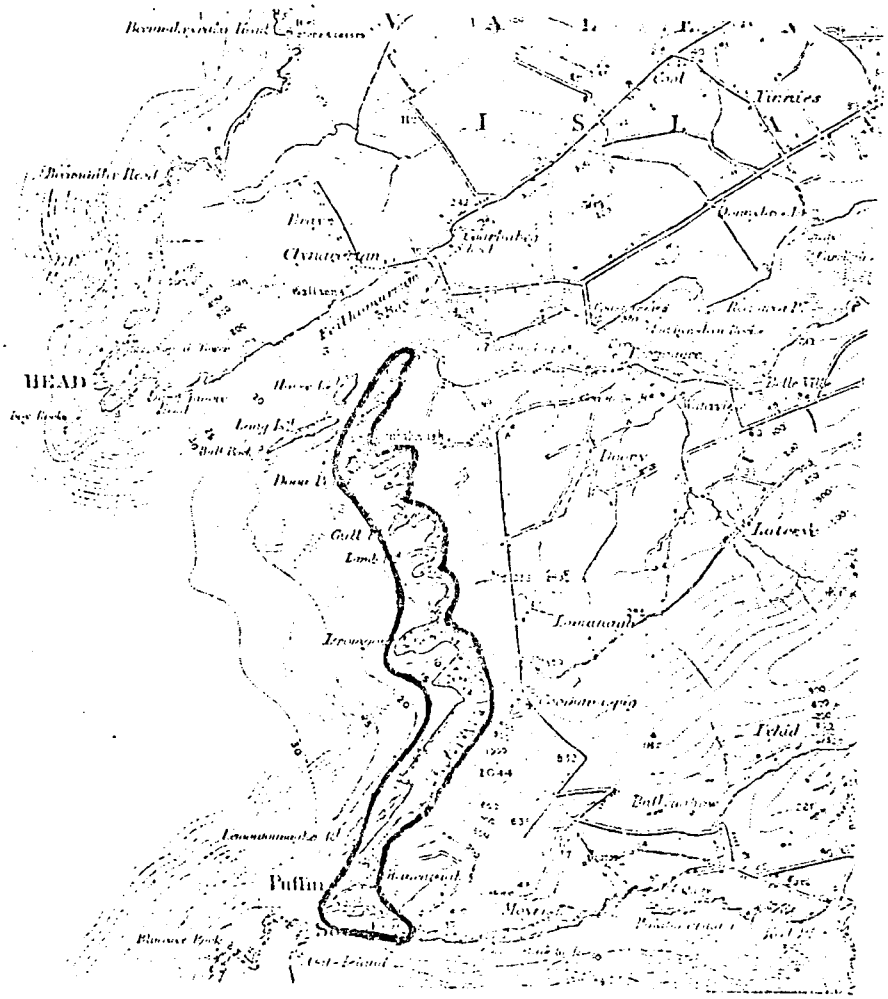
These sea cliffs contain a very large number of nesting choughs and are valuable for this reason. It is probably the greatest concentration in the country and flocks of up to 300 birds have been seen. The cliffs are cut in old red sandstone which forms impressive scenery and they rise to over 800 feet.

Vulnerability and Recommendations

Choughs are hole-nesting birds so prefer the rockiest sections of the cliff for nesting areas. These also attract the visitor and it is important that any cliff walk or access point is designed to minimize disturbance to the bird-life.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 1 Inch to 1 Mile



Name of Area	LOUGH CURRANE
Acreage	620 Acres
Grid Reference	V54 66
Scientific Interest	Zoological, Botanical, Ornithological
Rating	Regional
Priority	B

Description of Area

This large lake whose bed has been glacially deepened below sea-level has interesting stretches of shore line and islands. Those islands at the eastern end have scraps of native scrub on them with Arbutus while Church Island has a flourishing tern colony. (c. 70 prs of Common Terns in 1969).

The lake itself contains char (Salvelinus colii) but has very sparse marginal vegetation. The shores, however, are covered by blanket bog with such typical species as Pinguicula grandiflora (greater butterwort), Rhynchospora alba (white beak-sedge), Drosera anglica and D. intermedia (sundews) and elsewhere by birch or hazel woodland where the rock can support it.

At one place a sandstone cliff forms an interesting site with a waterfall and a variety tree species, including Fraxinus excelsior (ash), Corylus avellana, (hazel), Quercus petraea (sessile oak), Ilex aquifolium (holly) and Arbutus unedo, (Strawberry tree). The moist ground vegetation includes two saxifrages as well as:-

Chrysosplenium oppositifolium	golden saxifrage	c
Ranunculus ficaria	lesser celandine	f
Dryopteris aemula	crinkled buckler-fern	f
Sanicula europaea	wood sanicle	f
Lysimachia nemorum	yellow pimpernel	l.f.
Blechnum spicant	hard fern	o
Luzula sylvatica	woodrush	o
Veronica montana	wood speedwell	l.f.
Hymenophyllum wilsonii	filmy fern	o

Hookeria lucens	a moss	o
Mnium punctatum	" "	o
Isothecium myosuroides	" "	f
Thuidium spp.	" "	c

Evaluation

There are some interesting communities in and around this lake and they are of greater value because of their accessibility. The patch of woodland described seems to be ungrazed and is regenerating.

A representative area of blanket bog is included in the area.

Vulnerability

Lough Currane is the scene of much recent recreational building. This is likely if not controlled, to cause eutrophication of the lake, with subsequent danger to the game fish population including the char.

The more interesting stretches of shore line are not likely to be built on but some of the islands might be modified. The tern colony would be very susceptible to disturbance.

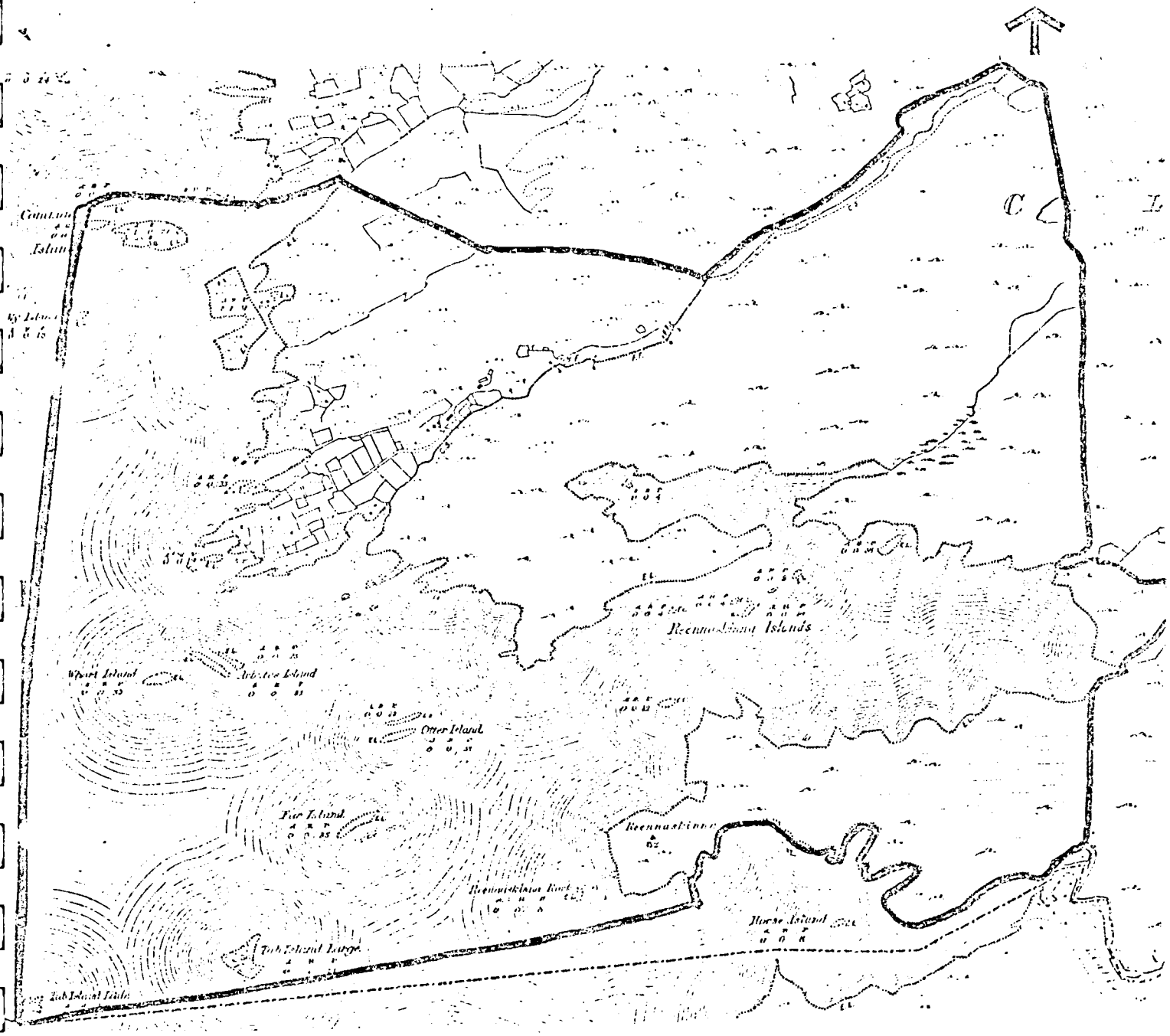
Recommendations

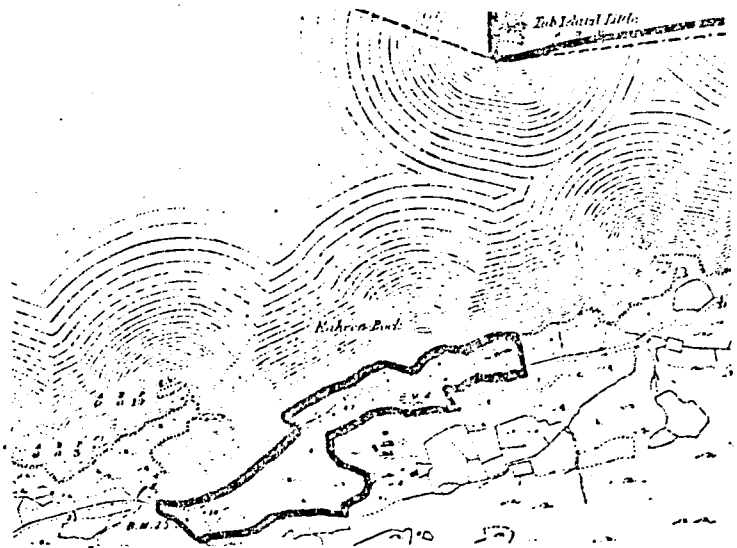
Strict planning control is necessary to prevent harmful pollution in the lake and to preserve the attractive features of the shore and islands. The area is suitable for further development with these limitations and it would seem desirable that it is made an Area of Special Amenity (Section 42, Local Government (Planning and Development) Act, 1963). This would give grounds for greater control and for confining new bungalows to the western half of the south shore.

It is important to prevent modifications to the Quarter Gannet and Daniel's Islands, and to limit boats landing on them. The small islands in the eastern end of the lake should likewise be preserved.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile





Name of Area	BEGINISH ISLAND (nr. Dunquin)
Grid Reference	V. 28 98
Acreage	37 Acres
Scientific Interest	Ornithological
Rating	Regional
Priority	C

Description & Evaluation

Beginish Island at the east end of the Blasket group is a low lying marine island, and attractive to terns for this reason. The largest colony of common terns in County Kerry nests here (about 150 pairs). In addition, the following nest:-

Storm petrel	100 pairs
Common gull	2 "
Great black-backed gull	16 "
Lesser " " "	2 "
Herring gull	29 "
Black guillemot	3 "

Vulnerability

Of all seabirds, terns are the most susceptible to disturbance and are liable to desert the colony if too many people are present.

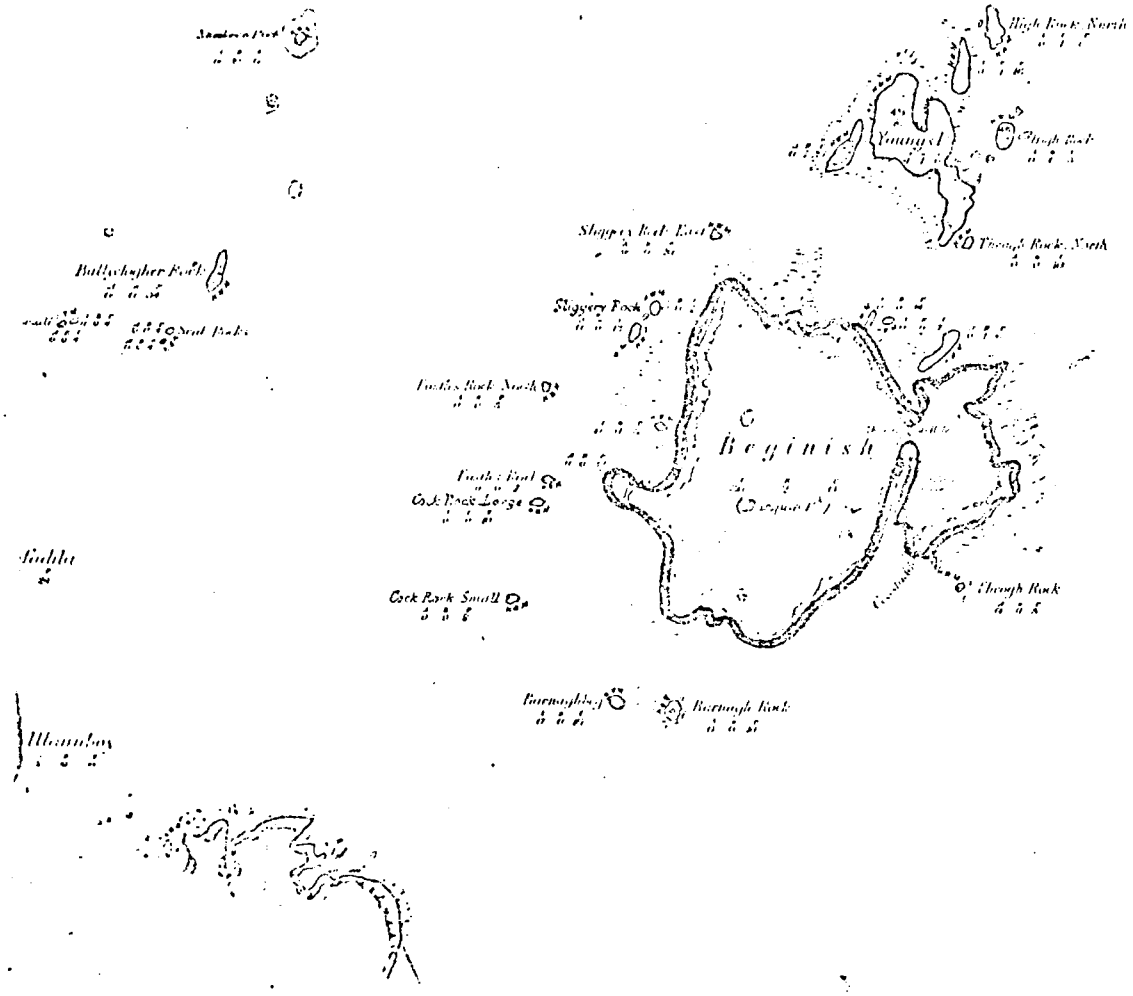
Recommendations

Access to the island should not be encouraged during the breeding season.

Continued grazing to keep the grass short is desirable.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	FAHAMORE SHORE
Grid Reference	Q. 60 19
Acreage	64 Acres
Scientific Interest	Ecological, Botanical
Rating	Regional
Priority	C

Description & Evaluation

The low limestone shore in this area is formed of a series of shallow inter-connecting pools. These support a marine community characteristically southern in appearance. Red algae are frequent and the agar seaweeds Gelidium and Pterocladia are especially abundant.

The manner of limestone erosion makes this habitat very attractive to pool dwelling species.

Vulnerability and Recommendations

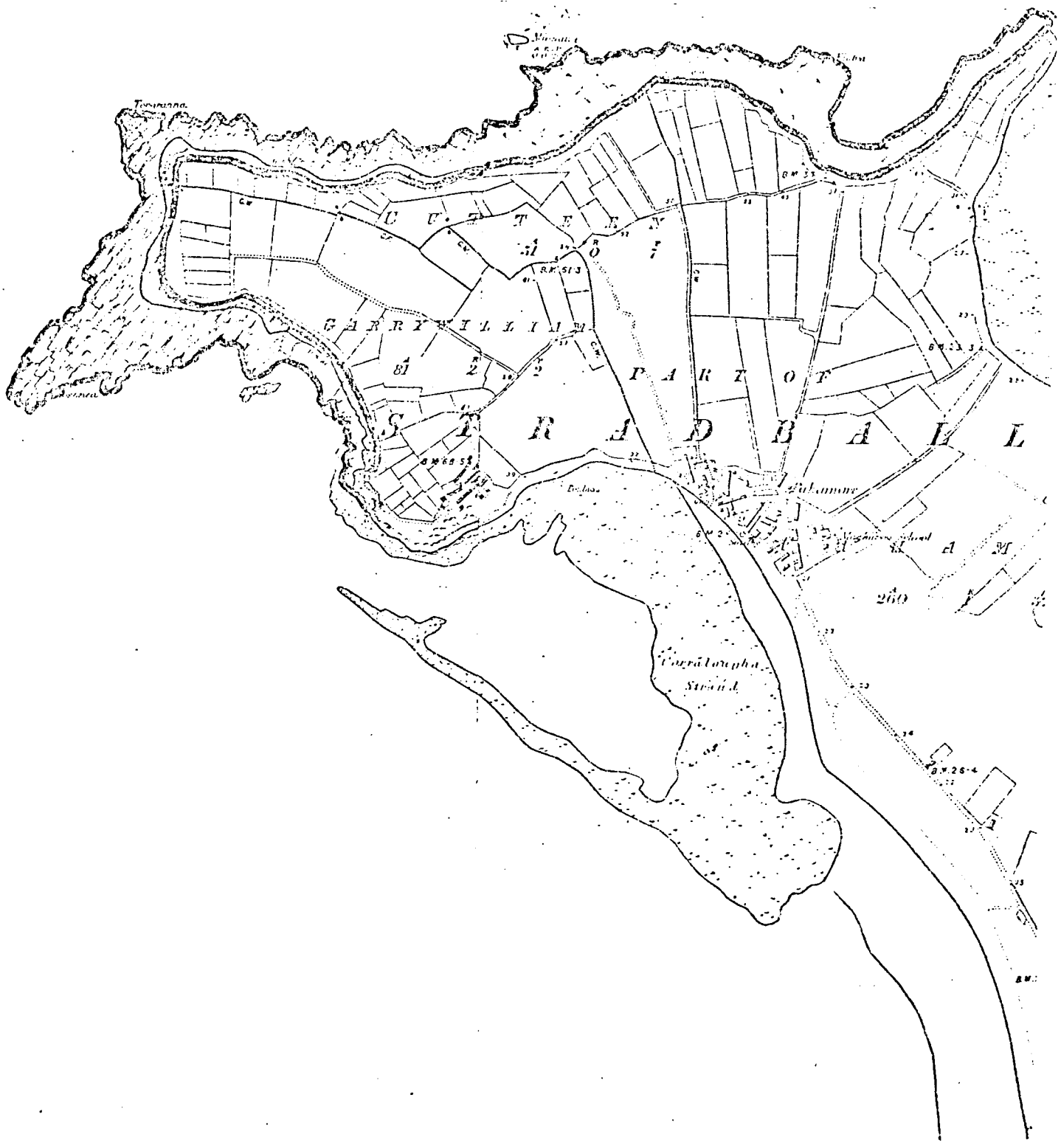
Coastal development should be concentrated away from the present area as the shore communities would be susceptible to pollution.

They could also be changed or destroyed by pier construction.

In the event of a crude oil coming ashore, this area should not be sprayed with detergents.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	PARKMORE POINT
Grid Reference	V 39 97
Acreage	11 Acres
Scientific Interest	Ecological
Rating	Regional
Priority	C

Description of Area

Parkmore Point is a small promontory close to Slea Head and open to the Atlantic swell. It consists of irregular platforms with nearly vertical sides of sandstone or conglomerate.

Zonation is very well developed on these steep sides and a black lichen zone is followed below by a barnacle Chthalmus zone, then a mussel zone which becomes mixed with small algal species at its base. The large algae, e.g. Laminaria, occur below this level.

Small variations in community structure can be correlated with slope and shelter.

Evaluation

This headland resembles many of the exposed points in Kerry and is chosen as an example of them because it has been described in a popular book. *

Vulnerability and Recommendations

No threats to this community are obvious at the moment but it would be damaged by various seaborne substances including most of the detergents used to emulsify oil. In the event of an oil spill, this area should not be treated with detergent.

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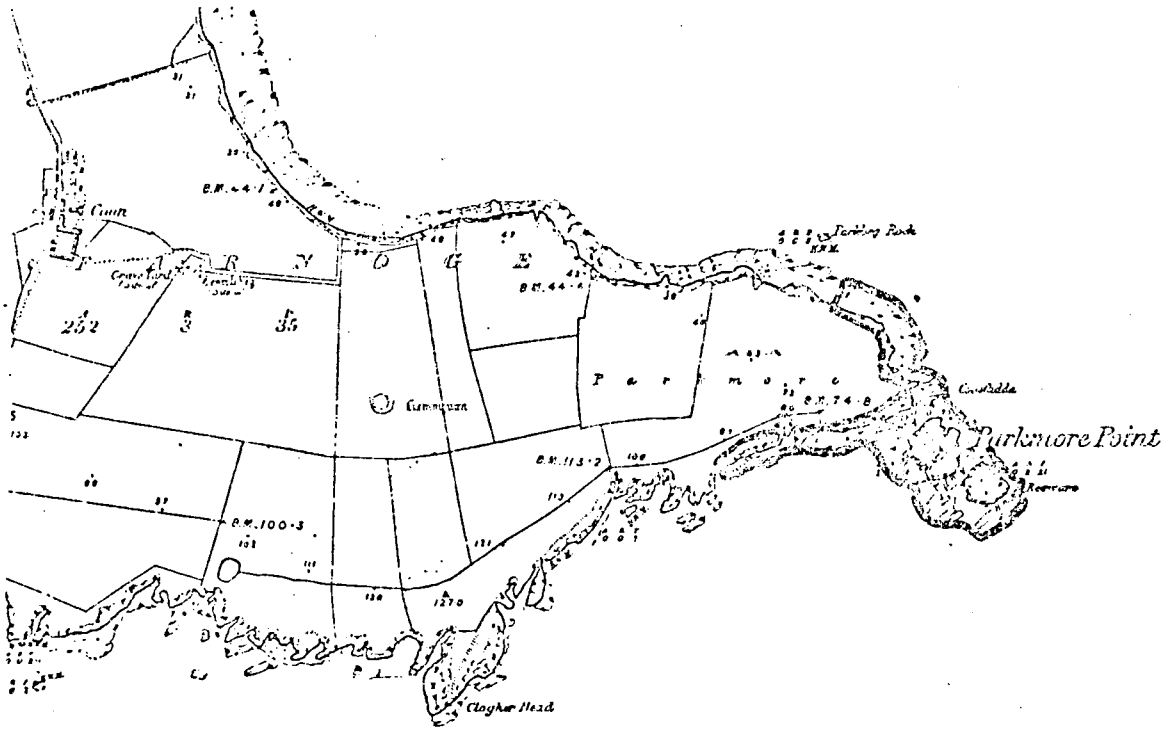
* Lewis, J. R., (1964) The Ecology of Rocky Shores. E.U.P., London.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	DOONEEN WOOD
Acreage	22 Acres
Grid reference	R. 016, 125
Scientific interest	Ecological
Rating	Regional
Priority	B

Description of area

Dooneen Wood is predominantly of oak (Quercus petraea) situated on clayey soil on the southern escarpment of the coal measures shales. The other species of trees that occur include Sorbus aucuparia (rowan), Salix cinerea (willow), Corylus avellana (hazel), and Fraxinus excelsior (ash).

The scattered large individuals (c 1 foot diameter) form a loose canopy that is now filling in with the other tree species. There is some regeneration but the youngest oak trees are 1" diameter so it has not occurred recently. This is probably due to a large population of cattle that pass through and graze the wood. The ground is mudded in places but elsewhere shows a good variety of herb species including Euphorbia hyberna (Irish spurge), Viola reichenbachiana (a violet) and Stellaria holostea (stitchwort), as well as those species more characteristic of the oakwood community.

Some felling is occurring at the south end of the wood.

Evaluation

This is an oakwood interesting because of its substrate and position. It has a good variety of species both animal and plant associated with it.

There are very few natural or semi-natural woods on the coal measures formation.

Vulnerability

The wood is threatened by felling and possibly by planting with coniferous species.

Grazing pressure is also slightly high.

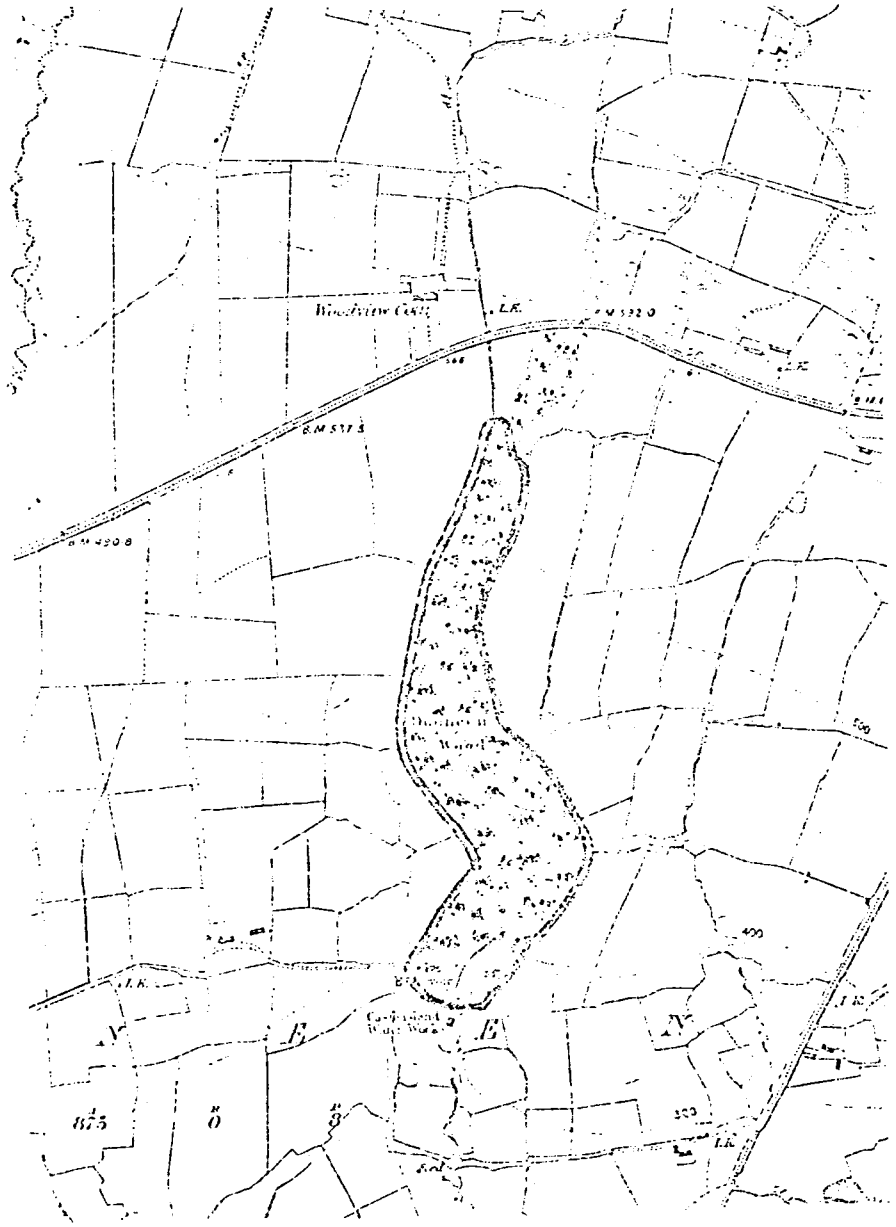
Recommendations

Selective thinning of the large trees is all that can be allowed in this wood and regeneration to fill the gaps must be assured. The legal basis for such limited exploitation might be a Tree Preservation order reviewed every five years and applied to different trees. This could be prepared by An Foras Forbartha.

Wholesale felling must be prevented as must be afforestation.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	CASHEN RIVER ESTUARY
Grid Reference	Q. 89 36
Acreage	64 Acres
Scientific Interest	Botanical
Rating	Regional
Priority	B

Description & Evaluation

The estuarine part of the Cashen river is a broad and quite deep stream whose bottom is covered by mud and sand. The muddy parts are colonised by a very rare species of plant that has only been found in one other place in Ireland.

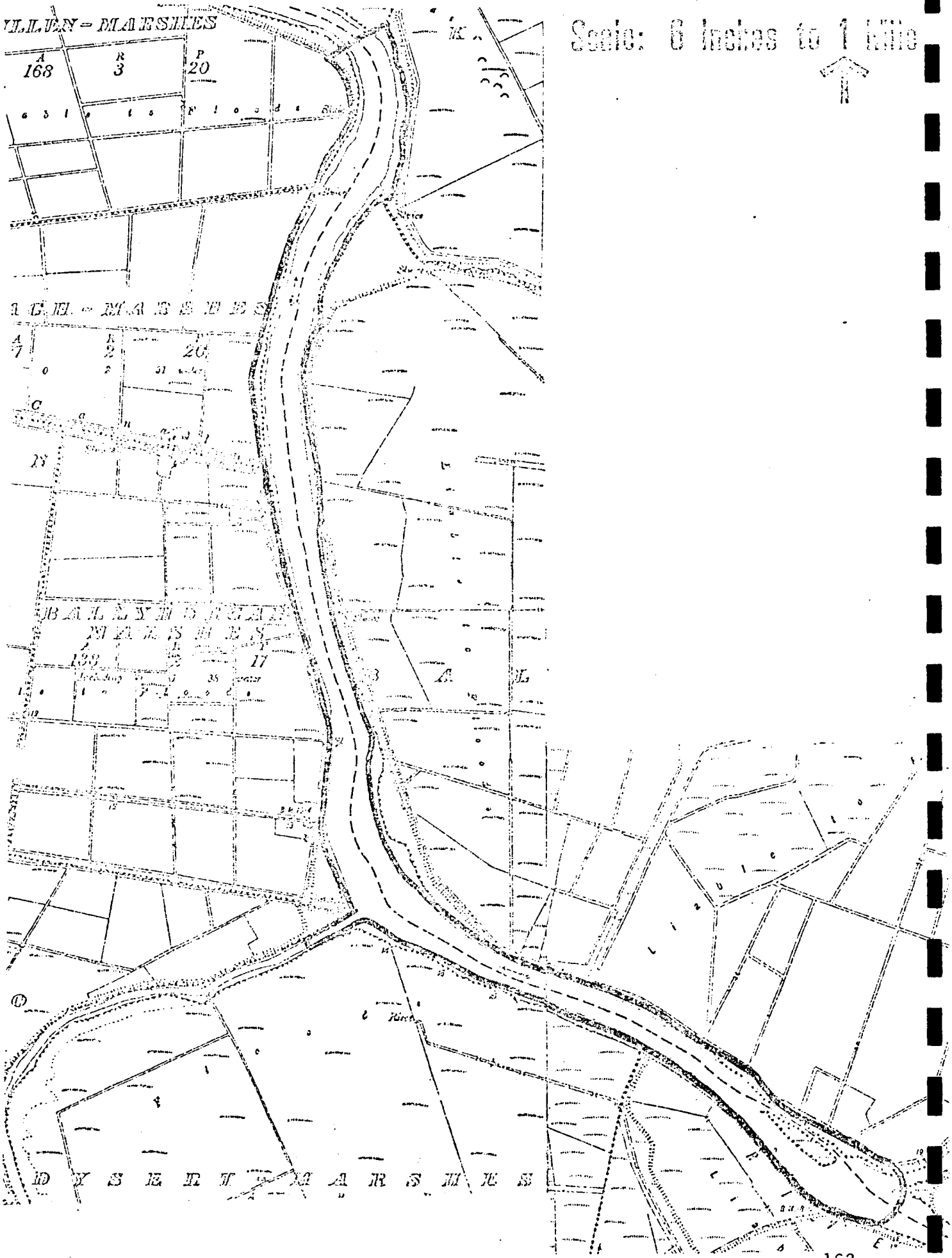
Vulnerability and Recommendations

Water borne pollution would influence the occurrence of this species since an increase in nutrients would probably be followed by the spread of green algae, reducing the quantity of the other species.

The pollution load of the river system should not be further increased.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	COOMASAHARN LOUGH
Acreage	341 Acres
Grid Reference	V6384
Scientific Interest	Zoological, Botanical
Rating	Regional
Priority	C

Description of Area

This is a rocky elongated glacial lake stretching out from a series of north-facing cliffs. The margin is stony with only very limited aquatic vegetation, but the lake has sufficient productivity to support a char population (Salvelinus fimbriatus). At the edge of the lake acid grassland with Juncus effusus, Nardus stricta, Agrostis tenuis (common bent) etc. grades into a heath community dominated by Calluna vulgaris (heather) and Sphagnum spp. (moss) with Pedicularis sylvestris (lousewort), Juncus squarrosus (heath rush) etc., Listera cordata (lesser tway-blade) occurs in small quantity while Leucorchis albida (small white orchid) also has been found.

There is open bushy vegetation near the exit of the lake and in a few other places This is made up of Salix spp (willows), Ilex aquifolium (holly) with Lonicera periclymenum (honeysuckle) and Rubus fruticosus (bramble). In it Chrysospleniu oppositifolium (golden saxifrage), and Oxalis acetosella (wood sorrel) are found with occasional Carex pallescens (a sedge). Saxifraga spathularis, (St. Patrick's cabbage) covers many of the rocky outcrops and screes.

Evaluation

This lake is chiefly included because it has a population of char, a glacial relict fish that has now differentiated into a number of very restricted races. S. fimbriatus has not been taken in any other lake in Ireland.

The plants include three species relatively rare throughout the county.

Vulnerability

As with other mountain lakes the risk of pollution is slight but would be damaging if increased.

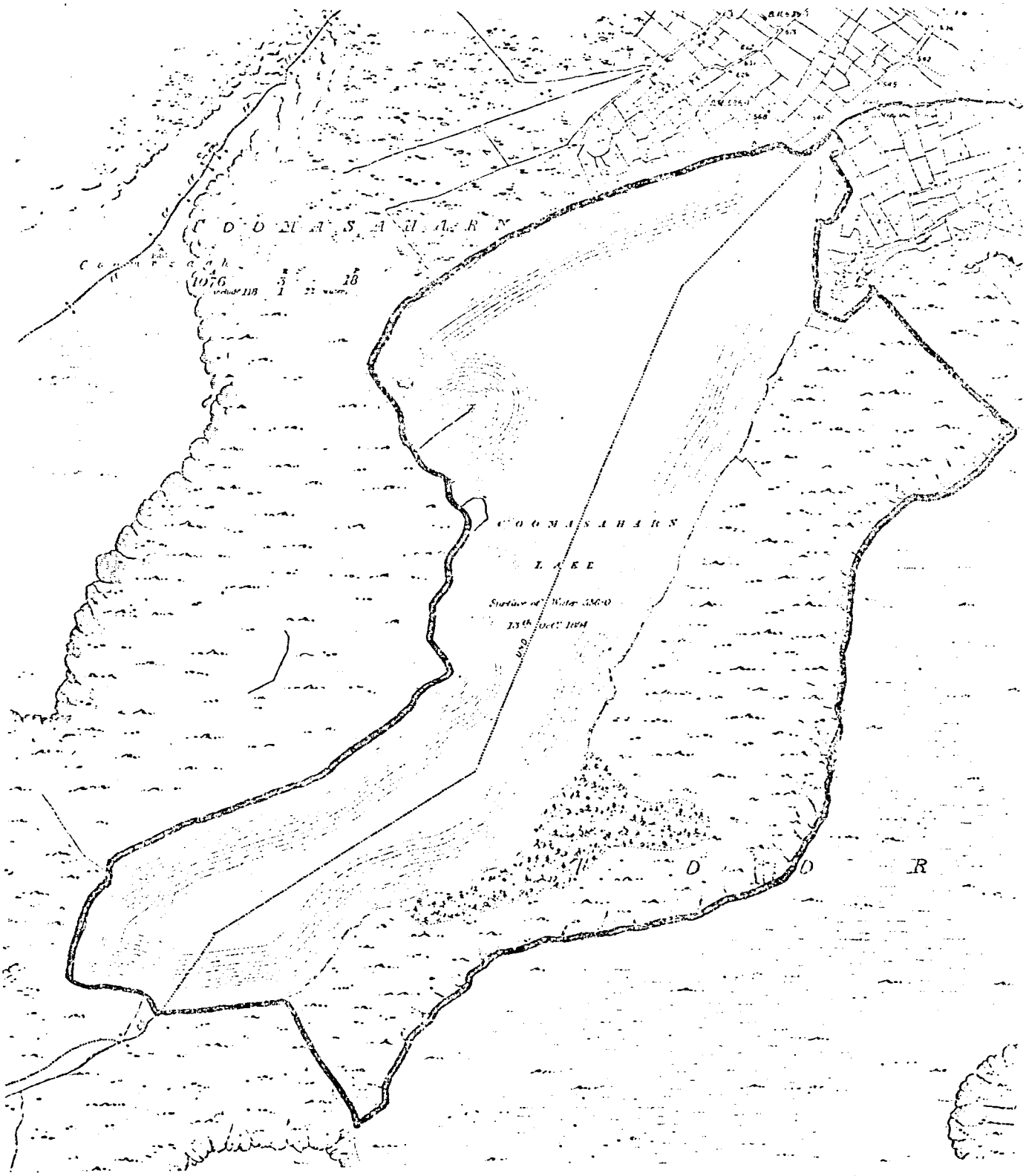
Afforestation could cover the habitat of some of the plant species.

Recommendations

Land use should remain in its present form and if afforestation spreads into the area, it should be confined outside the area shown on the map.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	DERRYNANE SALTMARSH & SAND DUNES
Acreage	89 Acres
Grid Reference	V51 58
Scientific Interest	Ecological, Botanical
Rating	Local
Priority	B

Description of Area

This is an extensive area of salt marsh and inundated fields covered by vegetation ranging from marine to terrestrial. In the part near to Caherdaniel, large stands of Juncus maritimus (sea rush) occur, usually pure but sometimes with some J. gerardii (salt mud rush) in them. In addition, there are grassy places with Festuca rubra (creeping red fescue) and Puccinellia maritima (sea poa), supporting both Carex distans and C. extensa (sedges), Cochlearia officinalis (scurvy grass) and Limonium humile (sea lavender). The salt marsh closest to the sea is mostly of Armeria maritima (sea pink), with Fucus spiralis and Enteromorpha sp (seaweeds) at its lowest levels, Aster tripolium (sea aster) and Blysmus rufus (red blysmus) higher up.

As one goes inland Phragmites australis (reed), Scirpus maritimus (sea clubrush) and Carex dlisticha (a sedge) appear with such heathy vegetation as is associated with the surrounding land and rock outcrops. Salix repens (creeping willow) occurs in the latter situation.

The area towards Derrynane is somewhat different having been cultivated at one time and being influenced also by blowing sand from the sandhills. The species that are additional here include:-

Lythrum salicaria	purple loosestrife	o
Veronica beccabunga	brooklime	l.c.
Apium nodiflorum	fool's watercress	l.a.
A. graveolens	wild celery	r
Berula erecta	water parsnip	r
Samolus valerandi	brook weed	o

Cardamine pratensis	lady's smock	f
Triglochin maritimum	sea arrowgrass	f
Plantago coronopus	buckshorn plantain	f
Scirpus tabernaemontani	glaucous clubrush	l.c.
Trifolium fragiferum	strawberry clover	l.c.
Sagina maritima	sea pearlwort	o
Scirpus cernuus	bristle rush	r
Carex punctata	a sedge	r

The sand dunes that come close to the salt marsh are similar to many in the county in that there are extensive blowouts. This is, of course, damaging to the dune communities but has produced an interesting ecological effect behind. Here a smooth sandy surface replaces the salt marsh one would expect, a community of Festuca rubra - Ammophila arenaria (red rescue, Marram) grading into a sand flat with Glaux maritima (saltwort) hummocks and isolated plants of Cochlearia (scurvy grass) and Carex extensa (a sedge).

The sandhills themselves contain several interesting species, for example:-

Rubia peregrina	madder
Arabis hirsuta	hoary rock-cress
A. brownii	" " "
Calystegia soldonella	sea bindweed
Anagallis minima	chaffweed

There is an old record for the natterjack toad in the area and a good variety of shore birds has also been seen. With the provision of better feeding areas that will hopefully follow the activities at Derrynane House, this may be expected to improve further.

Evaluation

This is a very interesting area with a range of coastal vegetation types. Rubia peregrina (madder) is a rare plant off the limestone in Kerry and this station for Arabis brownii is its most southern in Ireland.

It would be a suitable centre for field study of salt marshes and sand dunes.

Vulnerability

The dangers of further sand dune erosion need not be emphasised here, as management to stabilize them has begun.

The salt marsh communities are in little danger from development though dumping could conceivably cover some of the area.

Recommendations

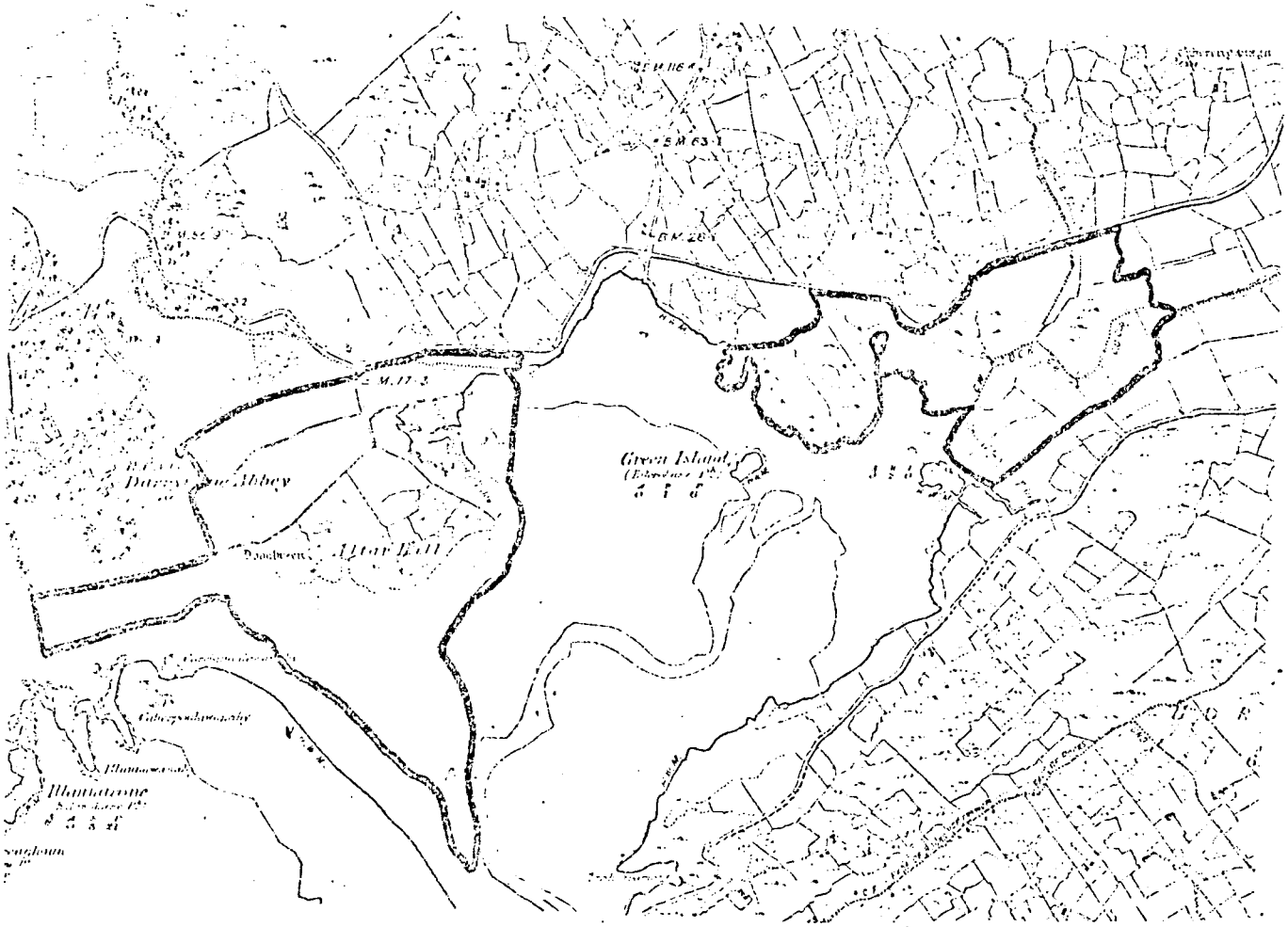
The Office of Public Works should be supported in its programme to create a bird sanctuary in front of Derrynane House. Though this will cover fairly interesting salt marsh vegetation it will further improve the habitat diversity and the educational potential of the area.

If a sizeable toad population is demonstrated in the area, a Conservation Order should quickly be passed to dissuade collectors from trapping the animals. This apparently has been a problem at Rossbehy.

For sand dunes see page

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	MAGHAREE ISLANDS
Grid Reference	Q. 58,22
Acreage	C. 70 Acres
Scientific Interest	Ornithological
Rating	Regional
Priority	B

Description of Area

The Magharees are low limestone islands with short-turf vegetation on their surfaces. A variety of seabirds nest including terns, common gulls and cormorants. Barnacle geese have occurred in winter.

The more important islands are:-

Reennafardarrig	sandwich tern	125 pairs
	common tern	100 "
Illauntannig	common gull	50 "
Gurrig Island	cormorant	67 "

The other islands have nesting gulls, black guillemots, shags, etc.

Evaluation

Two features of the bird fauna of the Magharee Islands are noteworthy: the southernmost large colony of common gulls occurs as does the second tern colony in Kerry. The archipelago is thus of at least regional importance.

Vulnerability and Recommendations

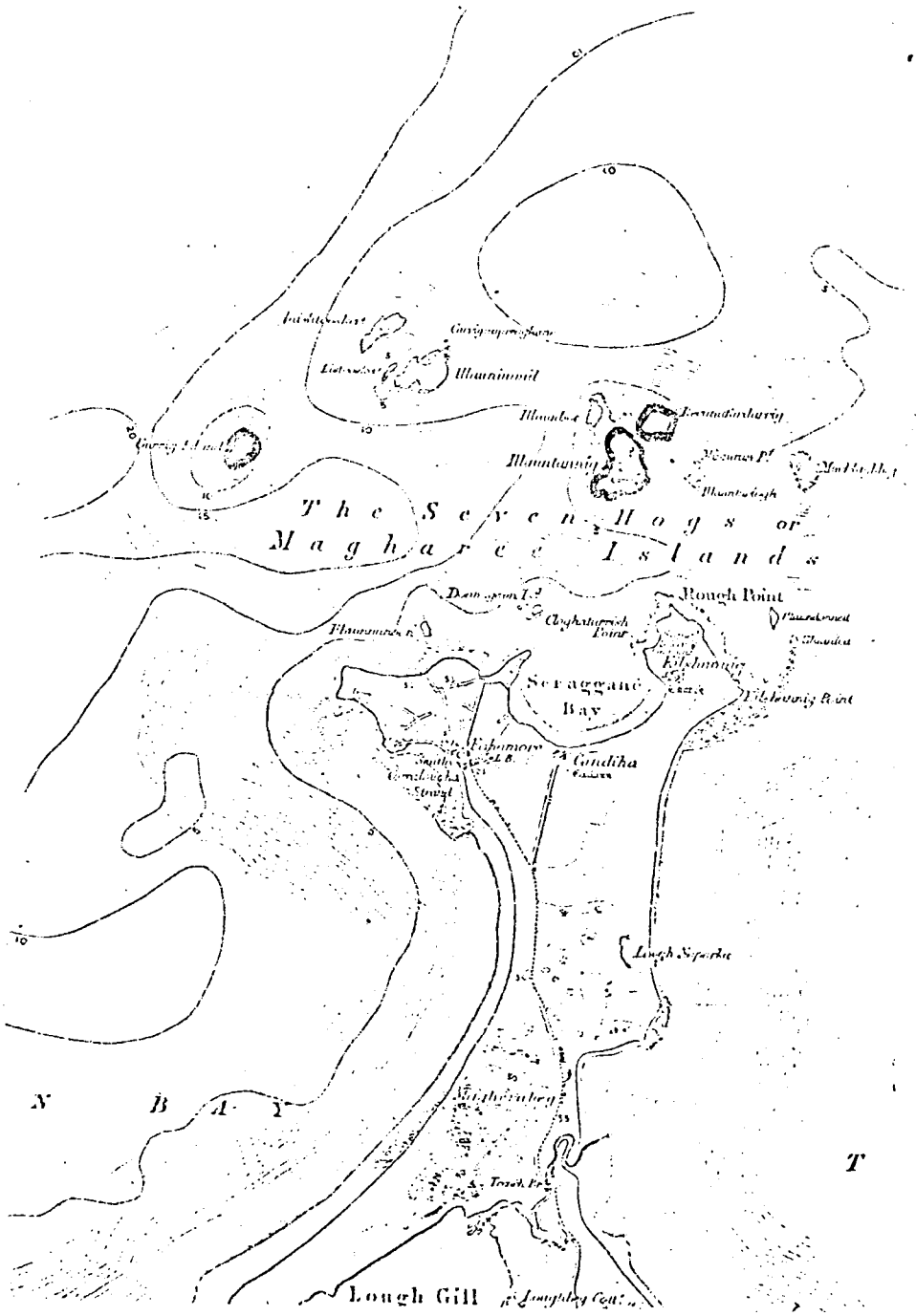
Terns are very susceptible to disturbance so there should be no landing on Reennafardarrig during the nesting season.

Illauntannig can be visited but people should not penetrate into the gull colony.

Grazing of the islands should continue.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 1 Inch to 1 Mile



Name of area	CARRIGAWADDRA CLIFFS
Acreage	76 Acres
Grid reference	W. 08, 82
Scientific interest	Ecological
Rating	Local
Priority	B

Description of area

On this area of cliff and block scree a luxuriant forest vegetation is becoming established and spreading in the complete absence of grazing. The open woodland at present is composed of birch, holly, oak and rowan while seedling numbers are high for all species. In order of abundance they would be birch, rowan, holly and oak.

The ground vegetation includes Calluna vulgaris and Erica cinerea (heathers) of large size (up to 3 ft.), Dryopteris aemula (crinkled buckler-fern) with fronds 2 ft. in length and also luxuriant Luzula sylvestris (woodrush). On the cliffs both Hymenophyllum species (filmy ferns) cover large areas while Leucobryum glaucum (moss) and other oakwood species are frequent. The scree supported much Saxifraga spathularis (St. Patrick's cabbage), Lonicera periclymenum (honeysuckle), Rubus fruticosus (bramble) and Pteridium aquilinum (bracken) and Pteridium aquilinum (bracken).

Other species that occur are:-

Endymion non-scripta	bluebell
Digitalis purpurea	foxglove
Dryopteris borreri	male fern
D. dilatata	buckler fern
Athyrium filix-femina	lady fern

In wetter places at the base of the cliff Carex laevigata (a sedge) occurs with Juncus effusus (soft rush), Dactylorhiza fuchsii (spotted orchid) etc.

Evaluation

This area is subject to very similar conditions as some of the rocky Killarney woods with the notable exception of the grazing factor. Many of the species are common to both places except that Carrigawaddra has not got the diversity of lower plants that a mature wood naturally collects and the interest stems from the abundant regeneration of all tree species present.

Vulnerability

The site is very steep but could be grazed by sheep. This would remove much of its value.

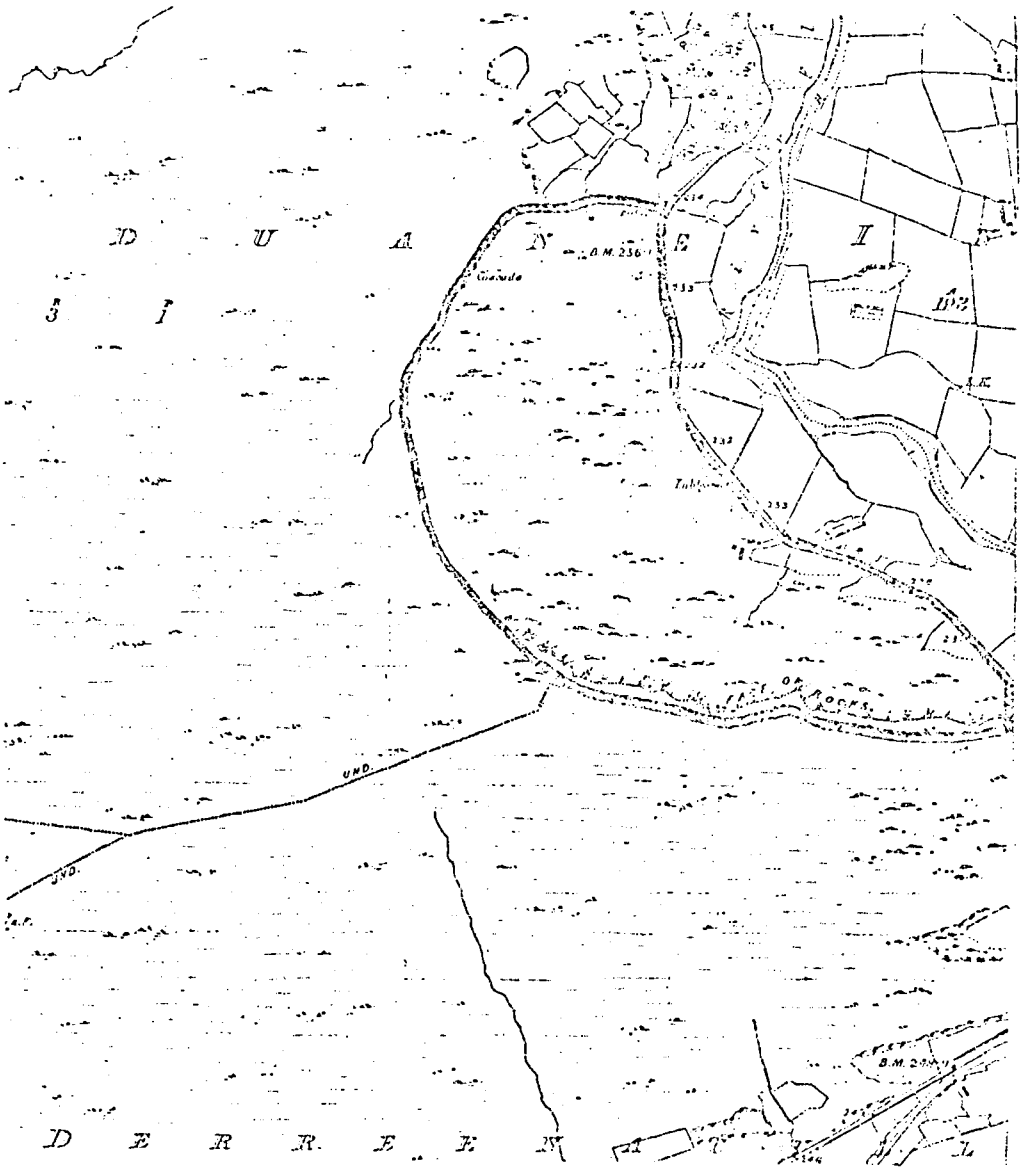
The only other threat that appears possible is the invasion of the wood by introduced species, such as Rhododendron, Acer (sycamore) or Fagus (beech). Several sycamores do occur at the base of the cliff near a ruin.

Recommendations

Land use should continue on its present lines. No grazing should be allowed and the landowner approached if necessary.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of area	WOOD NEAR KILGARVAN
Acreage	50 Acres
Grid reference	W. 02, 73
Scientific interest	Ecological, botanical
Rating	Local
Priority	B

Description of area

This is a wood of recent origin with fairly young trees. These are mainly of oak (Quercus petraea) but Sorbus aucuparia (rowan) is regular with birch (Betula pubescens). There are a few large individuals of ash while hazel and holly make up a thin understorey and alder becomes prominent towards the base of the slope. Oak reaches 40 ft. in height with a diameter of 15 inches.

Regeneration is good though not abundant and tree seedlings of all ages exist.

The wood is situated on boulder clay and the ground flora is characteristic and moderately rich. It includes:-

Oxalis acetosella	wood sorrel	c
Luzula sylvestris	woodrush	c
Viola riviniana	violet	f
Potentilla sterilis	barren strawberry	f
Dryopteris aemula	crinkled buckler-fern	f
D. dilatata	brood buckler-fern	f
Sanicula europaea	wood sanicle	f
Ajuga reptans	bugle	f
Athyrium filix-femina	lady fern	o
Euphorbia hyberna	irish spurge	o
Conopodium majus	pignut	o
Blechnum spicant	hard fern	o

Digitalis purpurea	foxglove	o
Lysimachia nemorum	yellow pimpernel	o
Hypericum pulchrum	St. John's wort	o
Carex laevigata	a sedge	o
Plagiothecium undulatum	mosses	
Hookeria lucens	"	
Polytrichum formosum	"	
Hylocomium brevirostre	"	

Evaluation

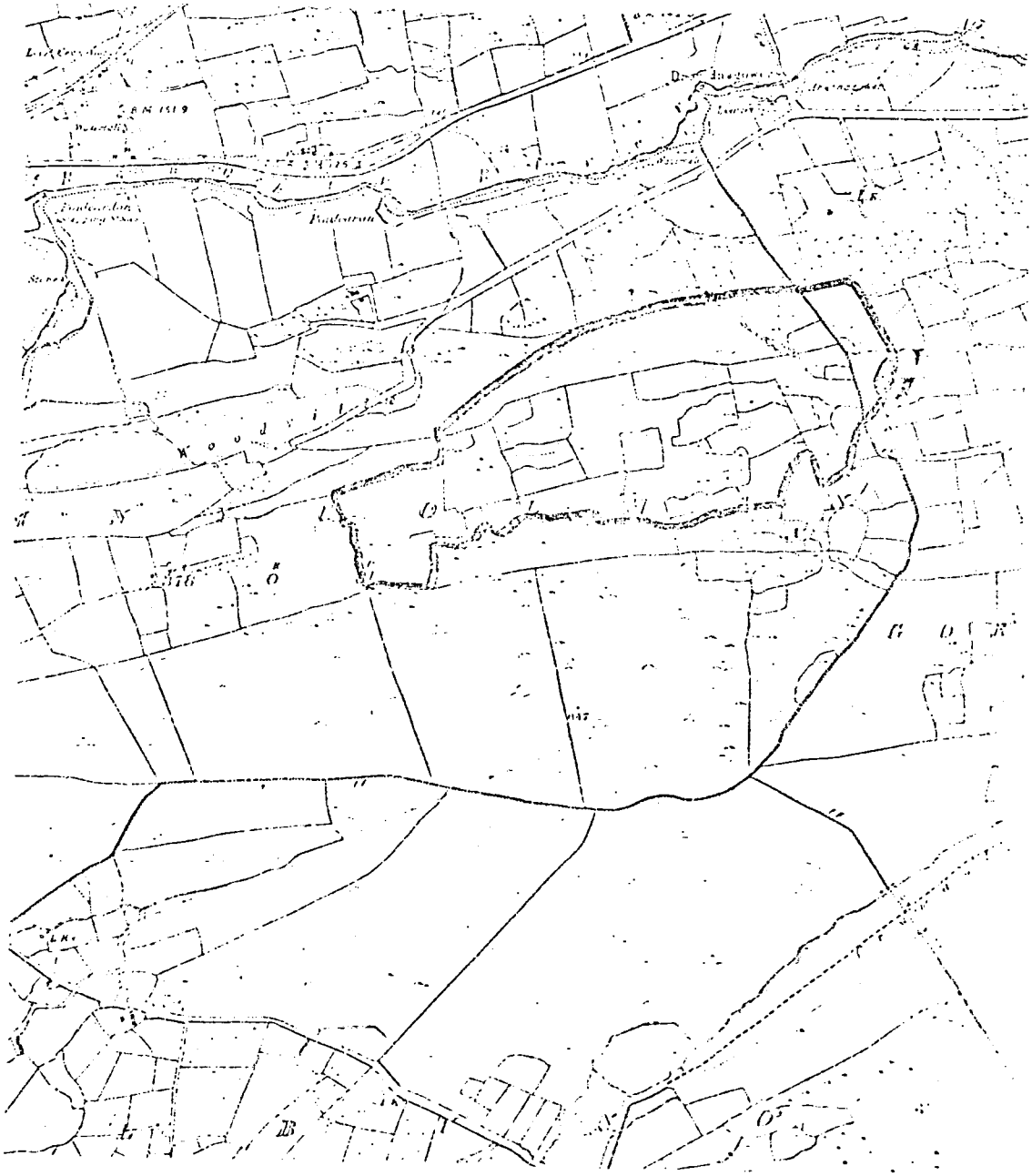
Felling or afforestation are the main threats, followed by grazing.

Recommendations

The wood should be preserved intact and grazing density not increased without adequate fencing.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	MUCKSNA WOOD
Acreage	16 Acres
Grid Reference	V9099
Scientific Interest	Ecological, Botanical
Rating	Local
Priority	B

Description of Area

This wood consists of both native and introduced tree species, many of them well grown (ca. 80ft) and some regenerating. Abies sp (fir), Pinus (pine), Quercus (oak) and Fagus (beech) form the largest trees with Larix (larch), Fraxinus (ash), Acer (sycamore) and Ulmus (elm) as yet somewhat smaller. Corylus (hazel) is common in the understory and some Ilex (holly) also occurs.

The ground vegetation is well developed and in this damp habitat lower plants are particularly fine. The following are common species:-

Dryopteris pseudomas	male fern
D. dilatata	broad buckler fern
D. aemula	crinkled buckler fern
Blechnum spicant	hard fern
Mnium undulatum	a moss
M. hornum	" "
Hookeria lucens	" "
Hylocomium brevirostre	" "

A good variety of woodland herbs occurs indicating quite a rich soil, probably glacial drift. Conopodium majus (pignut), Endymion non-scripta (bluebell), Ajuga reptans (bugle) and Chrysosplenium oppositifolium (golden saxifrage) are common together with Primula vulgaris (primrose), Veronica chamaedrys and V. montana (speedwells), Carex sylvatica (wood sedge), Viola spp and Euphorbia hyberna (Irish spurge). Vaccinium myrtillus (frochan) also is frequent, with Lonicera periclymenum (honeysuckle).

Some of the invertebrate fauna has been examined in this wood, especially the *molluscs.

Evaluation

This is an interesting wood containing well-grown trees of a great variety of species. There is very little woodland in the county on fertile at such a low level and it has ecological value for this reason as well as the abundance of bryophytes and ferns. It is also one of the few woods that has a good variety of bird life.

Vulnerability

Mucksna Wood is naturally susceptible to underplanting with conifers or clear-felling. There is a plantation nearby probably under the same ownership.

Recommendations

The wood should be preserved in its present condition and preferably managed to maintain its diversity.

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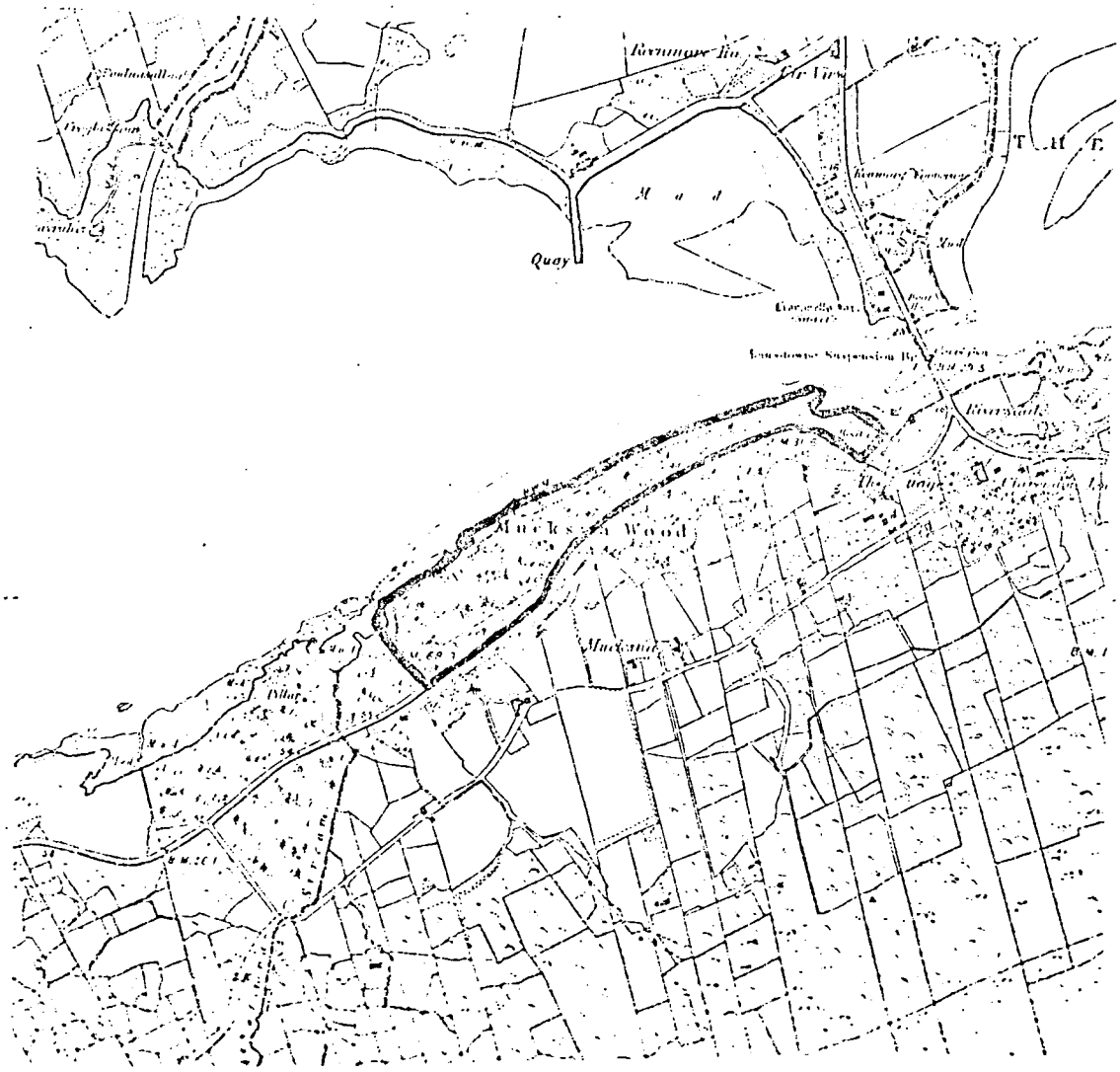
* Irish Naturalist, 7, 218.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	LOUGH ACOOSE
Acreage	166 Acres
Grid Reference	V77 85
Scientific Interest	Ecological, Zoological, Botanical
Rating	Local
Priority	B

Description of Area

Lough Acoose is an open mountain lake surrounded by bog-covered slopes, except for its rocky edges. No cliffs occur and the lake is shallow enough to have some marginal vegetation especially at the east end. Here a small area is covered by Chrysosplenium oppositifolium (golden saxifrage), Montia fontana (blinks) and Iris pseudacorus (flag iris) with lesser quantities of Ranunculus hederaceus (ivy-leaved crowfoot), Myosotis caespitosa (forget-me-nc and Lythrum salicaria (purple loosestrife). Hippuris vulgaris (mare'stail) and Carex rostrata (a sedge) occur in slightly deeper water while the submerged plant: include Subularia aquatica (water awlwort), Lobelia dortmanna (water lobelia), Potamogeton praelongus (a pondweed), Isoetis echimospara (quillwort) and quantities of Juncus bulbosus (bulbous rush). The reedy vegetation includes Carex curta (sedge) and C. aquatilis.

Elsewhere the slopes are of bracken (Pteridium), heather (Calluna vulgaris) or acid grassland (with Juncus articulatus rush).

The lake contains a population of char (Salvelinus obtusus).

Evaluation

This is a good example of an upland lake with representative plant and animal communities. The char race is recorded from four Kerry lakes and two in Wicklow.

Vulnerability

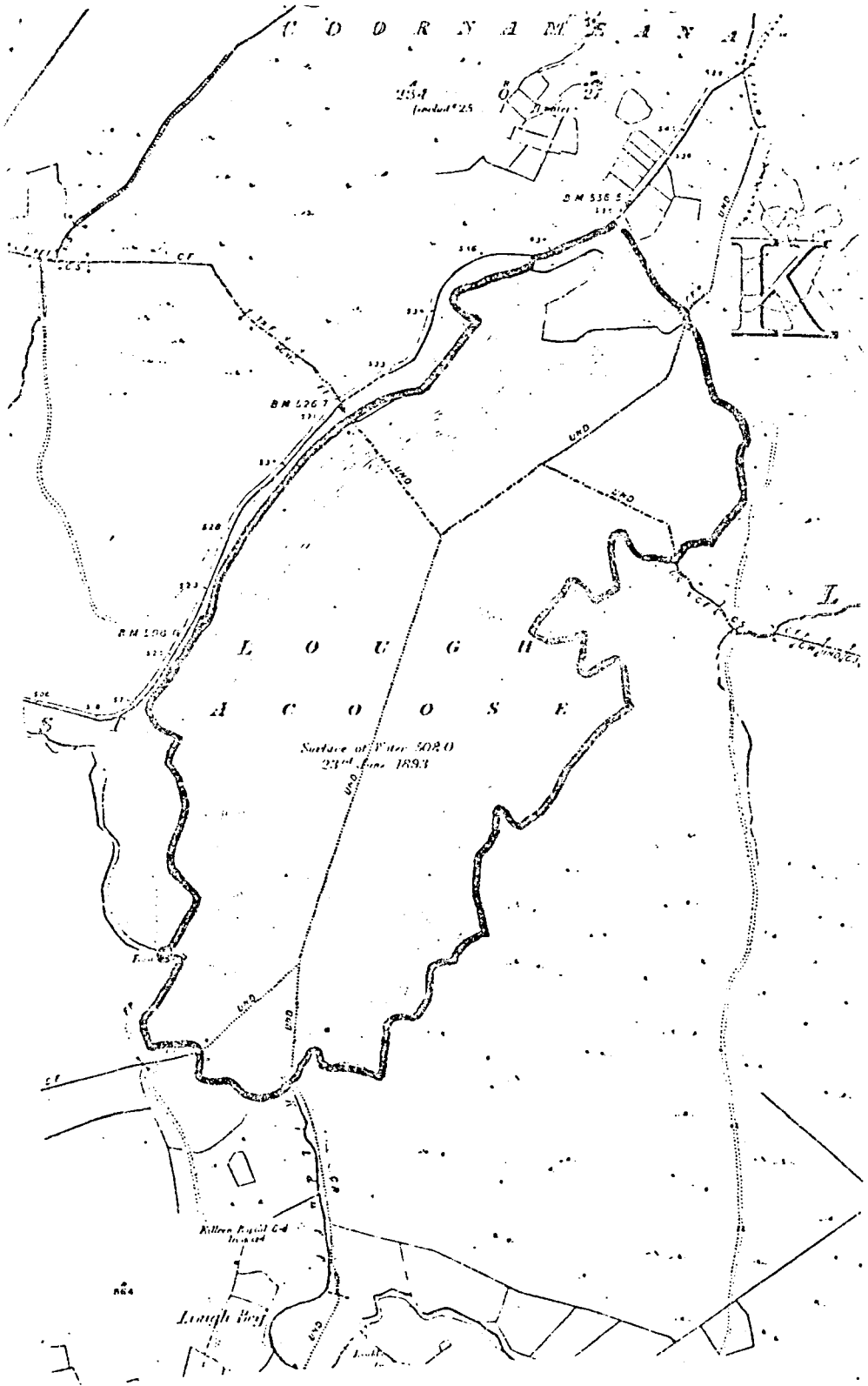
The only threat to the maintenance of this lake in its present condition would come from pollution if additional building were to take place. A small increase in incoming matter would eventually alter the character of the whole lake, especially since it is at present oligotropic (poor).

Recommendations

Extreme purity or absence of effluent should be made a condition for any further development.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	SPANISH ISLAND
Grid Reference	V. 75, 59
Acreage	3 Acres
Scientific Interest	Ornithological
Rating	Local
Priority	C

Description of Area

Spanish Island is a small shingle island close to the shore. The low vegetation is suitable for nesting terns and 60-70 pairs of arctic or common terns nest.

Evaluation

This is probably the third most important colony in County Kerry.

Vulnerability

Disturbance is the main threat to the successful breeding of terns.

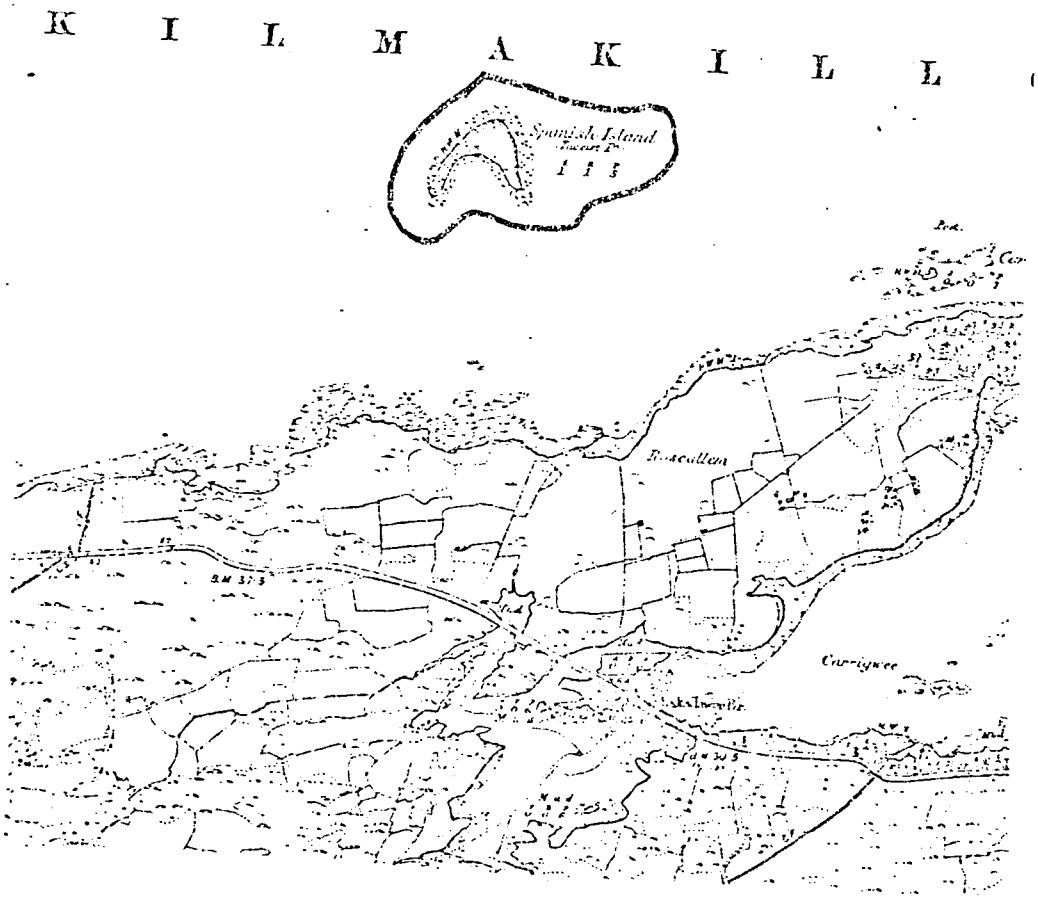
An increase in the few pairs of black-headed gulls would be detrimental to the colony.

Recommendations

Access to the island should be discouraged.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	"GRAIGUES WOOD"
Acreage	16 Acres
Grid Reference	V 5964
Scientific Interest	Ecological
Rating	Local
Priority	B.

Description of Area

This is an oak woodland vigorously regenerating and spreading on to areas of blanket bog within and outside its limits. The main trees are Quercus petraea (sessile oak) and Betula pubescens (birch) with some Salix cinerea (willow) and Ilex aquifolium (holly). The largest individuals are comparatively young though about 30ft high.

The ground flora is not well-developed due probably to the youth of the stand, but Euphorbia hyberna (Irish spurge), Saxifraga spathularis (St. Patrick's cabbage) occur with more common species such as Pteridium aquilinum (bracken), Solidago virgaurea (golden rod), and Oxalis acetosella (wood sorrel). In the more open places Molinia caerulea (purple moor grass) is widespread with Erica tetralix, (cross-leaved heath).

Evaluation

This stand is of value because it is regenerating: an occurrence rare in Kerry or Ireland. Because of its open character there is likely to be a diverse insect population.

Vulnerability

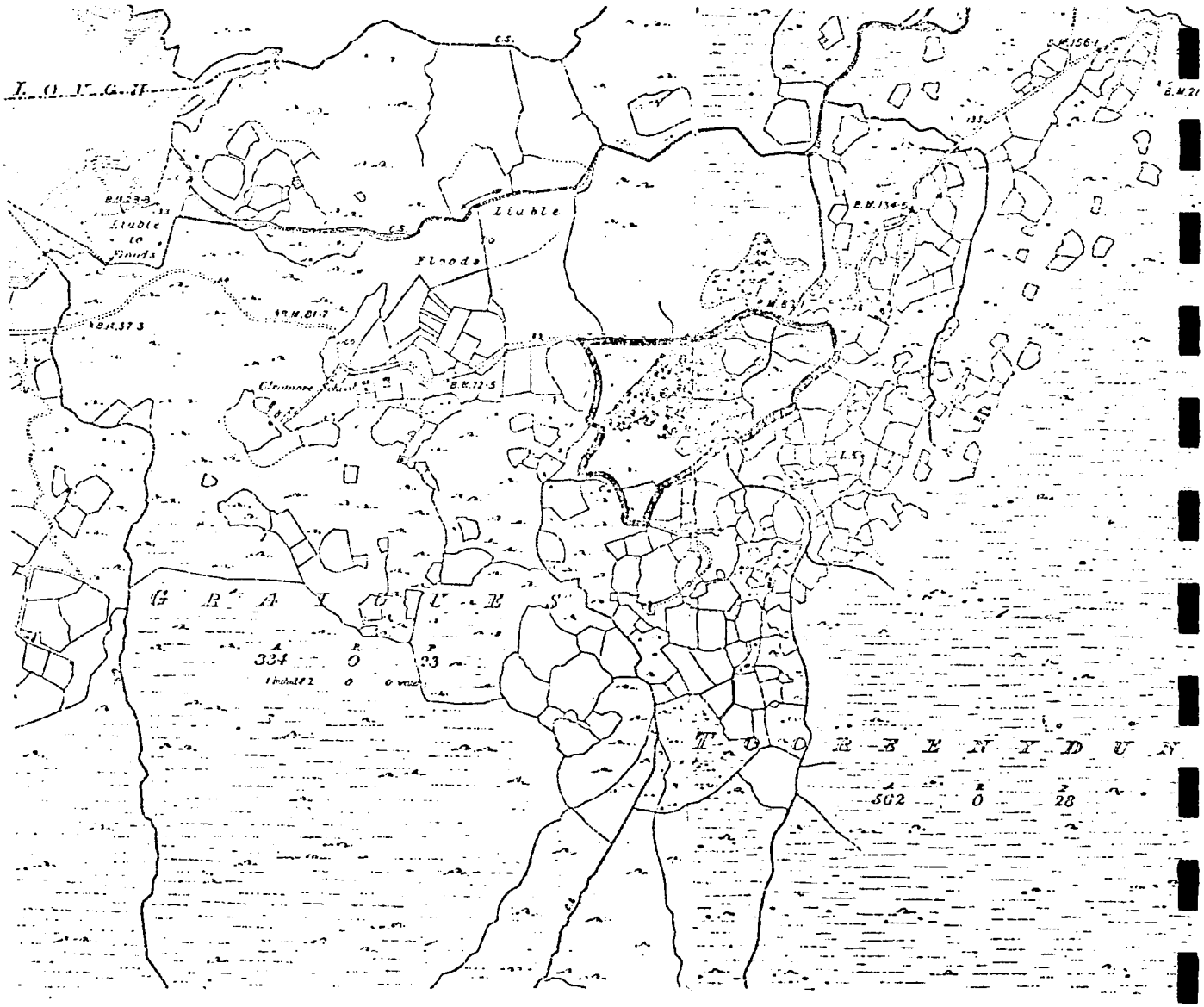
The wood could be cleared for afforestation as there is some already in the valley.

Recommendations

The area outlined should be preserved intact, if necessary by Tree Preservation Order. Agreement should be sought with the Forestry Division to secure its future as an oak wood.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	Cromane Pt - Roscullen Pt shore.
Acreage	3136 Acres
Grid Reference	V 70 00
Scientific interest	Ornithological, ecological
Rating	Local
Priority	B

Description of Area:

This is a large area of mudflats and salt marsh free of Spartina townsendii (cord grass) and used by numbers of wintering wildfowl including Brent Geese. Cromane point is of moranic origin and, formerly cultivated it is now partly an area of salt marsh - an Armeria maritima (sea dominated community). With Puccinellis maritima (sea poa), Astet tripolium (sea aster), Limonium humile (sea lavender), Plantago coronopus (sea plantain) and Juncus maritimus (sea rush) on the edges of ditches, the terminal part is of some interest, including as it does some reworked beach deposits. Low lying areas caused by the abandoned lazy beds have a similarity to more normal saltmarsh pans.

The flatter parts, probably uncultivated, are now dominated by an almost pure stand of Juncus maritimus (sea rush).

All along the southern part of the area, the land that is covered by spring tide has interesting vegetation, including the following plants additional to those above:-

Carex distans	A sedge
Triflochin maritimum	Sea arrow grass
Cochlearia officinalis	Scurvy grass
C. Arrgliea	" "
Sperguleria media	Spurrey
Samolus valerandi	Brook-weed
Oenanthe lachenalii	Water dropwart

Scirpus maritimus (clubrush) and Phyragmites australis (reed) occur in or on the edges of channels.

A wildfowl count is not available for the area at the moment but it is known to provide feeding for substantial numbers of duck and waders. It is often visited by Brent Geese also.

The Natterjack Toad is found along this shore of Castlemaine Harbour.

Evaluation:

This is a fairly interesting coastal area supporting locally important populations of wintering birds on the mudflats, and a few plant species as well as the Natterjack Toad in the adjacent marshes.

Vulnerability:

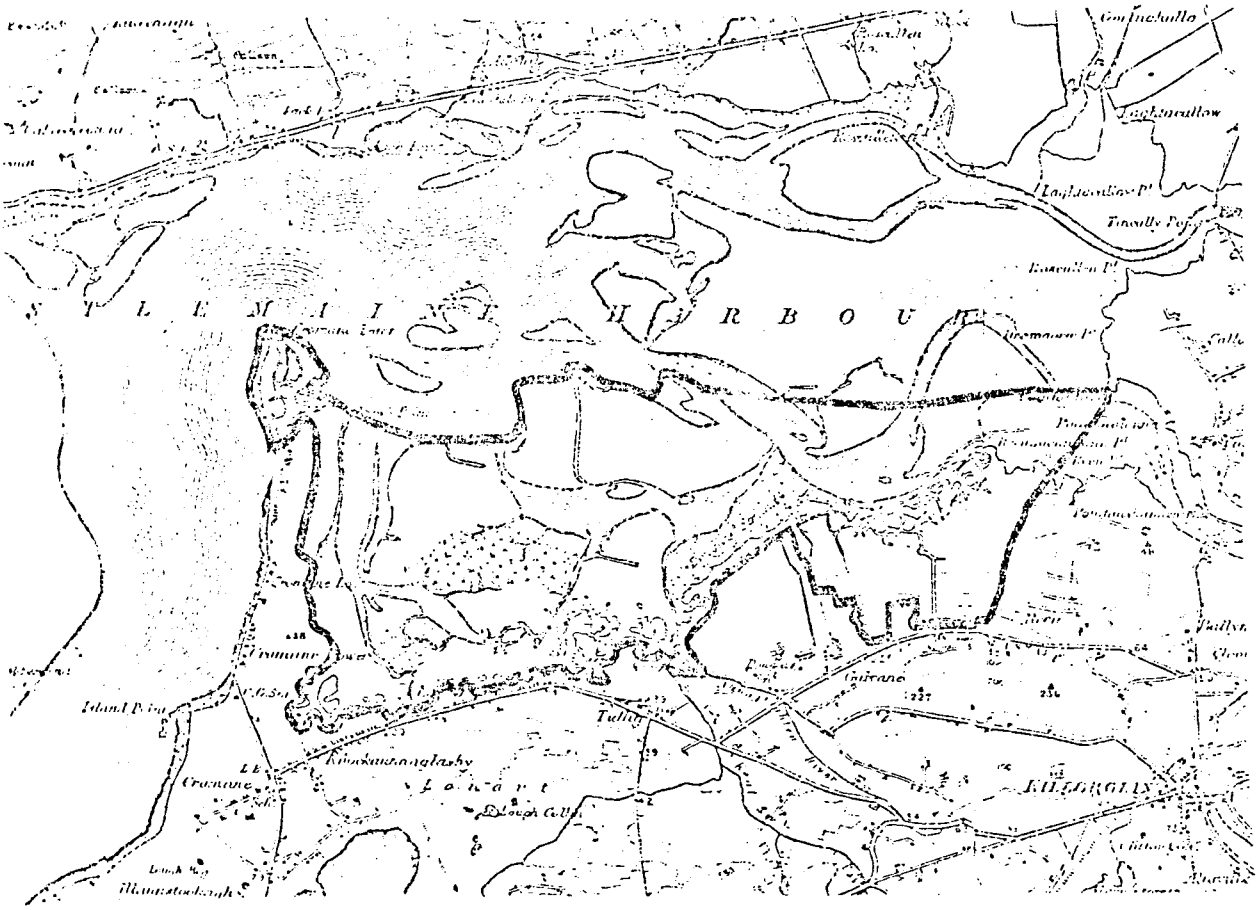
Land reclamation, including Spartina (cord grass) spread would be most destructive to this area which could also be damaged by industrial pollution.

Recommendations

Land use should remain in its present form and Spartina growth checked if it occurs.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 1 Inch to 1 Mile



Name of area	DUNBEG (nr. Fahan)
Acreage	5.6 Acres
Grid reference	V 349972
Scientific importance	Geological (historical)
Rating	Local
Priority	C

Description of area

This is a cliff exposure of difficult access at which upside-down bedding of rocks was first demonstrated. It was established that certain sedimentary structures only formed on the top of sediments and when these were seen reversed it was clear that subsequent folding of the rocks had turned several strata over.

Evaluation

This is Ganley's classic locality for false-bedding and is of historical interest only.

Vulnerability

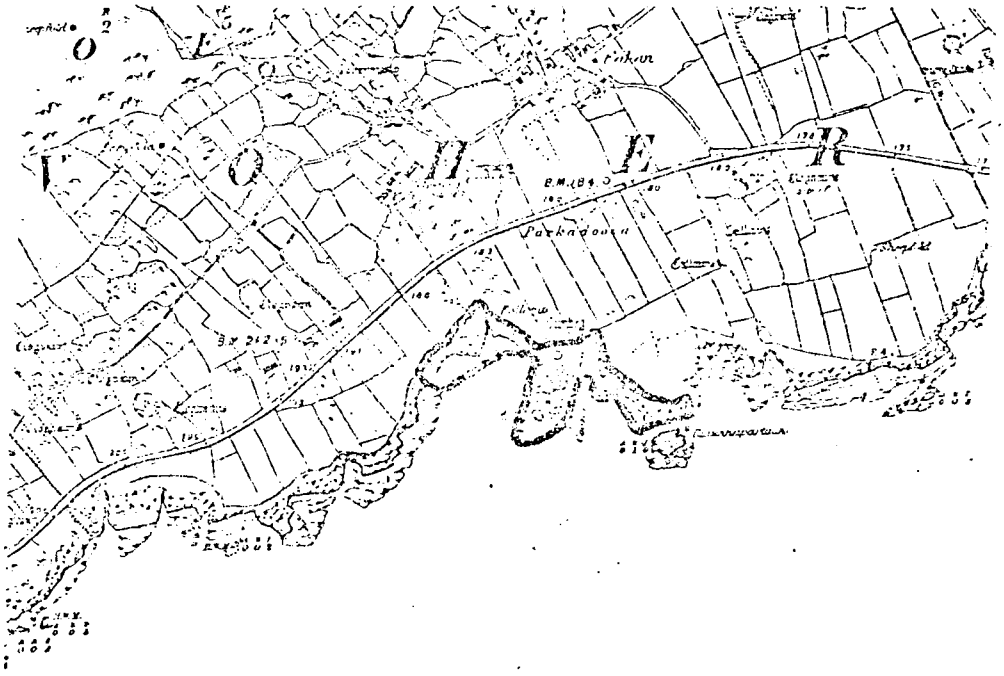
A secure site

Recommendations

Not a suitable site for opening up.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	GLANLEAM WOOD
Acreage	40 Acres
Grid Reference	V 41 77
Scientific Interest	Ecological, botanical
Rating	Local
Priority	B

Description & Evaluation

Glanleam Wood is another example of a semi-natural wood composed of sub-tropical species. These are mostly plants from Australia, New Zealand, Tasmania, S. America and S. Africa but there are some northern species from Japan.

Among the naturalised genera Clethra, and Myrtus are very frequent while the tree-fern Dicksonia also spreads freely. The ground cover includes the ferns, Woodwardia and Phyllitis.

The wood is also important for having native species of bryophte, as well as probably the finest collection of hybrid forms of the Saxifraga hirsuta - S. spathularis complex in Ireland.

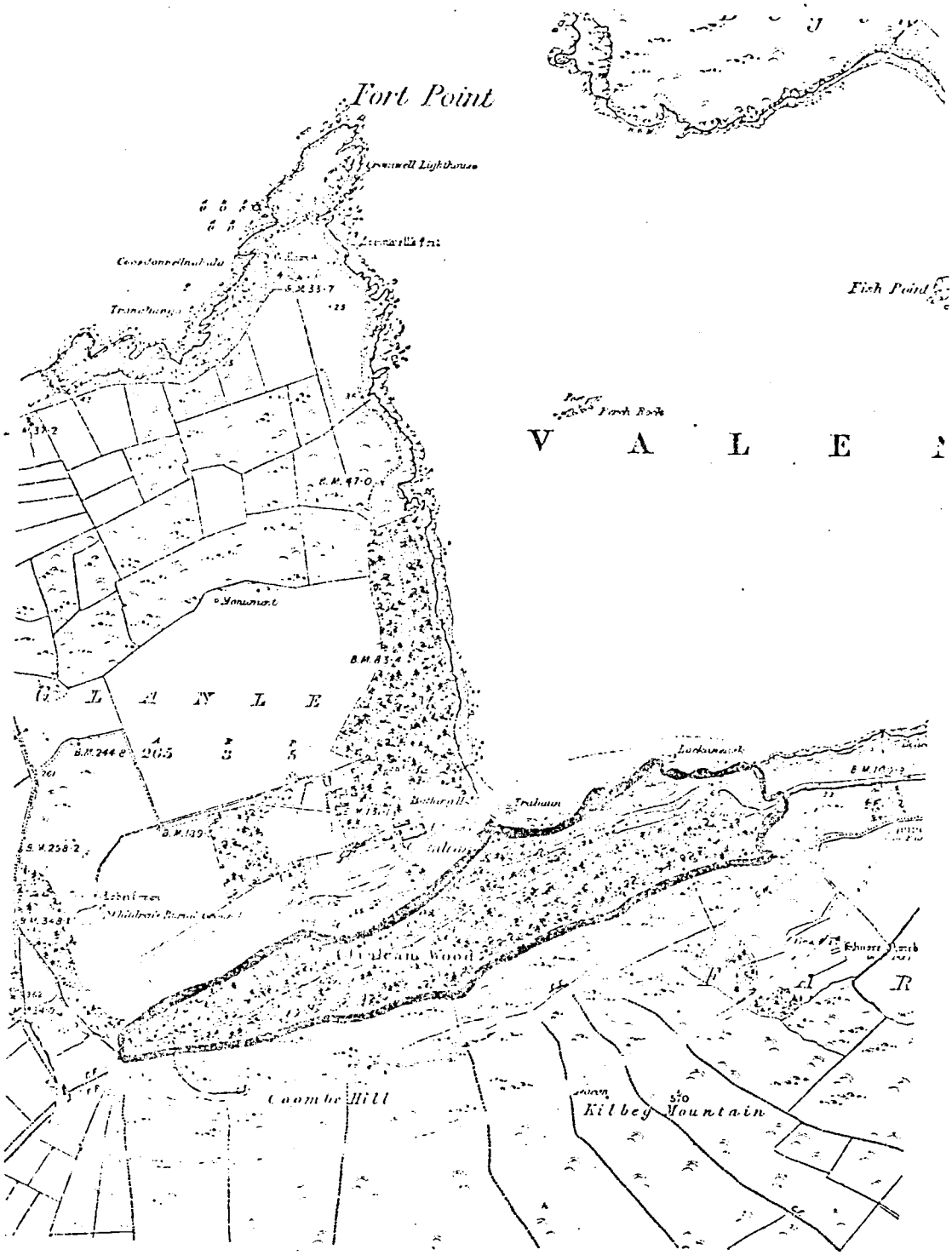
Vulnerability & Recommendations

The area will probably continue to be maintained as a garden, but if this involved clearing patches of the native species in the ground flora it would be damaging.

Land use should continue as at present.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	GLANMORE LAKE
Grid Reference	V 78 56
Acreage	193 Acres
Scientific Interest	Ecological
Rating	Local
Priority	B

Description of Area

Glanmore Lake is open to the east and north but on the west side a steep slope rises 6-700ft. This is wooded with planted trees such as Abies sp, (silver fir), surrounded by a dense thicket of Rhododendron.

The islands in the lake have fragments of natural woodland on them including Arbutus, oak and holly.

Evaluation

The woodland west of the lake is thought to be important for its nesting bird populations. It also gives some amenity value to the lake.

The presence of Arbutus on the islands makes them of scientific interest. Though this tree is widespread in the south-west, in this case it forms a community rather than occurring as isolated individuals.

Vulnerability

The island vegetation could be injured by picnicking or otherwise landing on the islands.

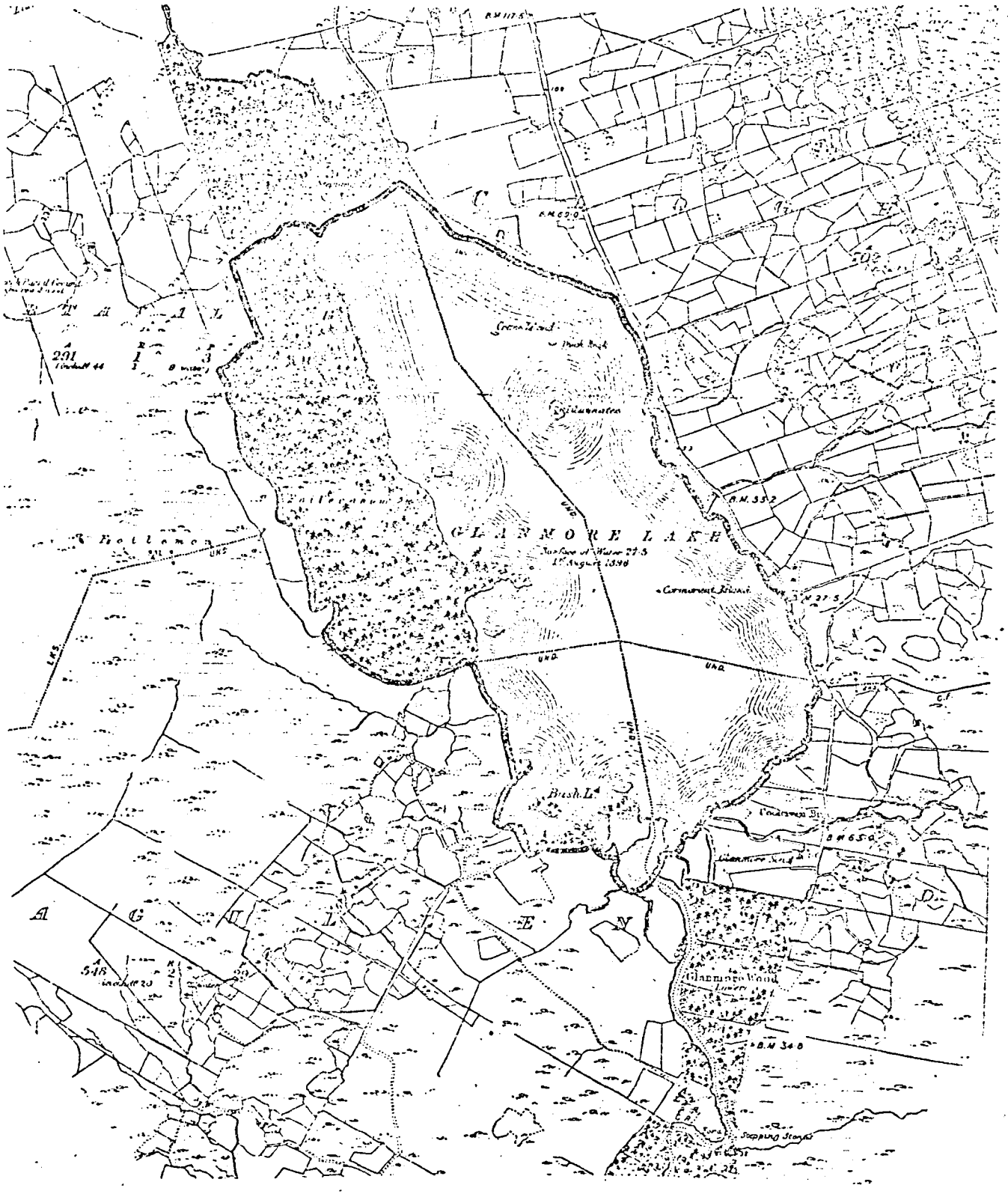
Recommendations

In view of the recreational importance of this area and the possibility of the lake being used for boating, a policy of education about the importance of the island vegetation should be pursued in conjunction with the youth hostel.

The importance of the area does not justify the complete prohibition of landing on the islands but fires must be discouraged. It would be best to prohibit them on the wooded islands, especially Bush Is. as they would lead to the damaging of trees, quite apart from the fir risk.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	INISHTOOSKERT
Grid Reference	Q. 24 00
Acreage	229 Acres
Scientific Interest	Ornithological
Rating	Local
Priority	C

Description of Area

Inishtooskert rises to 573 feet and is the second largest of the Blasket Islands. Its vegetation contains fewer species than the other islands and its birdlife is also fairly restricted, e.g.

Storm petrel	3 - 5,000 pairs
Fulmar	40 "
Shag	12 "
Great Black-backed Gull	298 "
Razorbill	50 "
Puffin	40 "

Evaluation

The storm petrel and great black-backed gull numbers are the most significant features of the island. It is, in fact, one of the largest nesting colonies for this gull in S.W. Ireland.

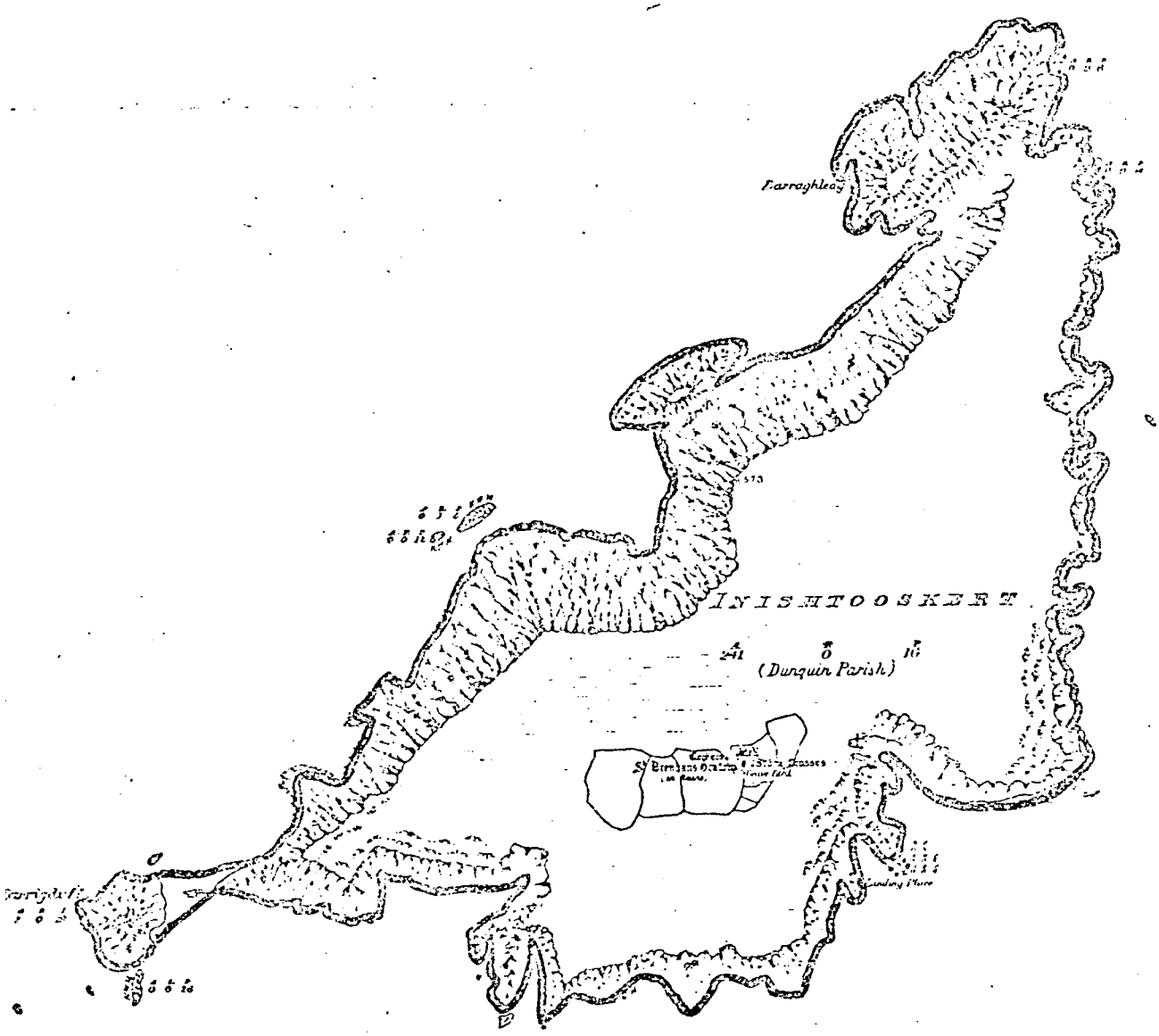
Vulnerability and Recommendations

There seems little likelihood of development in this area.

Land use should remain at its present level.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	CARHOO WEST
Acreage	33 Acres
Grid Reference	V 43 99
Scientific interest	Ecological
Rating	Local
Priority	B

Description of Area:

This wood originated with a planted strand of sycamore (Acer pseudo platanus) and beech (Fagus sylvatica), but seems to have infiltrated later by Salix cinerea (willow), Quercus petraea (oak) and latterly Rhododendron ponticum. The ground surface is very wet with blanket bog tendancies at the south end (where Betula pubescens (birch) is frequent), but open streams and muddy areas nearer the sea. The ground flora includes the following species:-

Primula vulgaris	Primrose	f
Lonicera periclymenum	Honeysuckle	f
Chrysosplenium oppositifolium	Golden saxifrage	f
Endymion non-scripta	Bluebell	f
Ranunculus ficaria	Celandine	f
Digitalis purpurea	Foxglove	o
Oxalis acetosella	Wood sorrel	lf
Dryopteris dilatata	Buckler fern	o
Scrophularia nodosa	Fig wort	o
Thuidium tamariscinum	A moss	c
Eurynchium striatum	"	c

Two unusual liverworts have been recorded in the vicinity. The bird life is diverse and in an area with so little deciduous woodland, Carhoo wood forms a focus of the distribution of chiffchaffs, long-tailed tits, red polls, goldfinches, Woodcock, etc. Several mammal species occur also.

Evaluation:

This woodland is chiefly valuable because of the rarity of similar stands in the Dingle peninsula. There is a coniferous wood nearby and a smaller deciduous one, completely grazed underneath. It has considerable educational value locally.

Vulnerability:

The wood does not produce commercial timber at the moment and may be threathened by coniferous afforestation. Rhododendron is not as serious a threat in this wood as in some others though it will reduce the interest of the ground flora and repress tree vegetation.

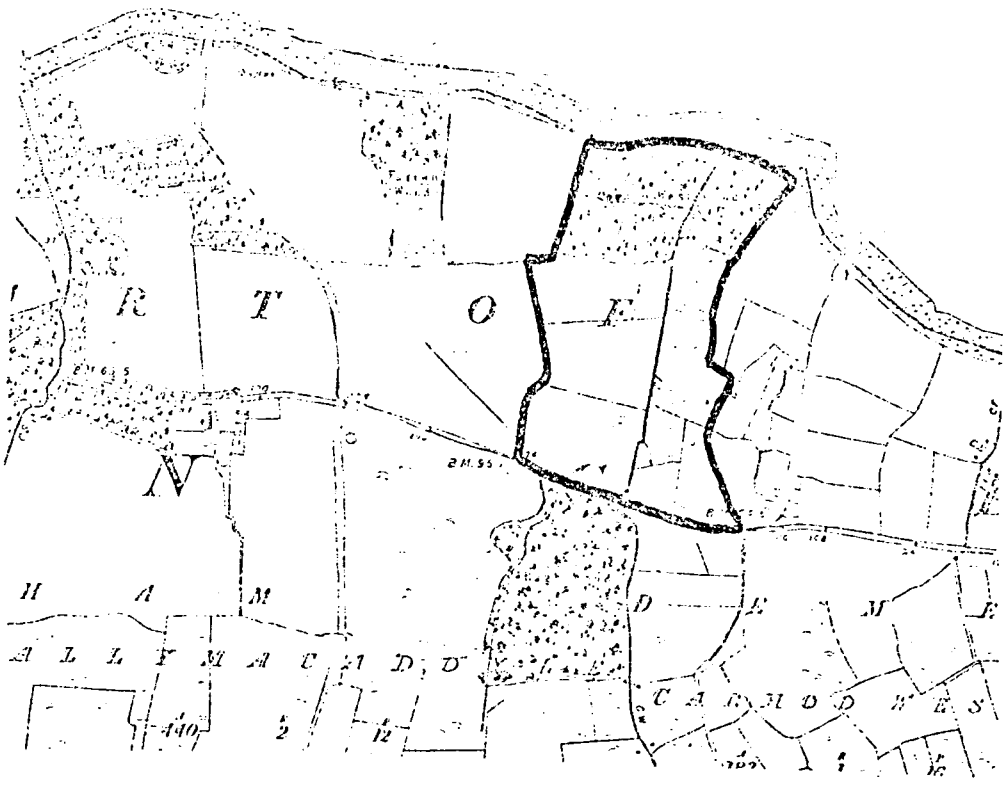
Recommendations:

This wood should be preserved intact, including the part nearest to the road where birch colonisation is occurring.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile

D I N G L E H A R



Name of Area	SLATE QUARRY, DOOHILLA
Grid Reference	V 39 77
Acreage	20 Acres
Scientific Interest	Ornithological
Rating	Local
Priority	B

Description and Evaluation

This disused quarry houses an important population of choughs numbering at least 20-30 pairs. As such it is one of the largest colonies in the county.

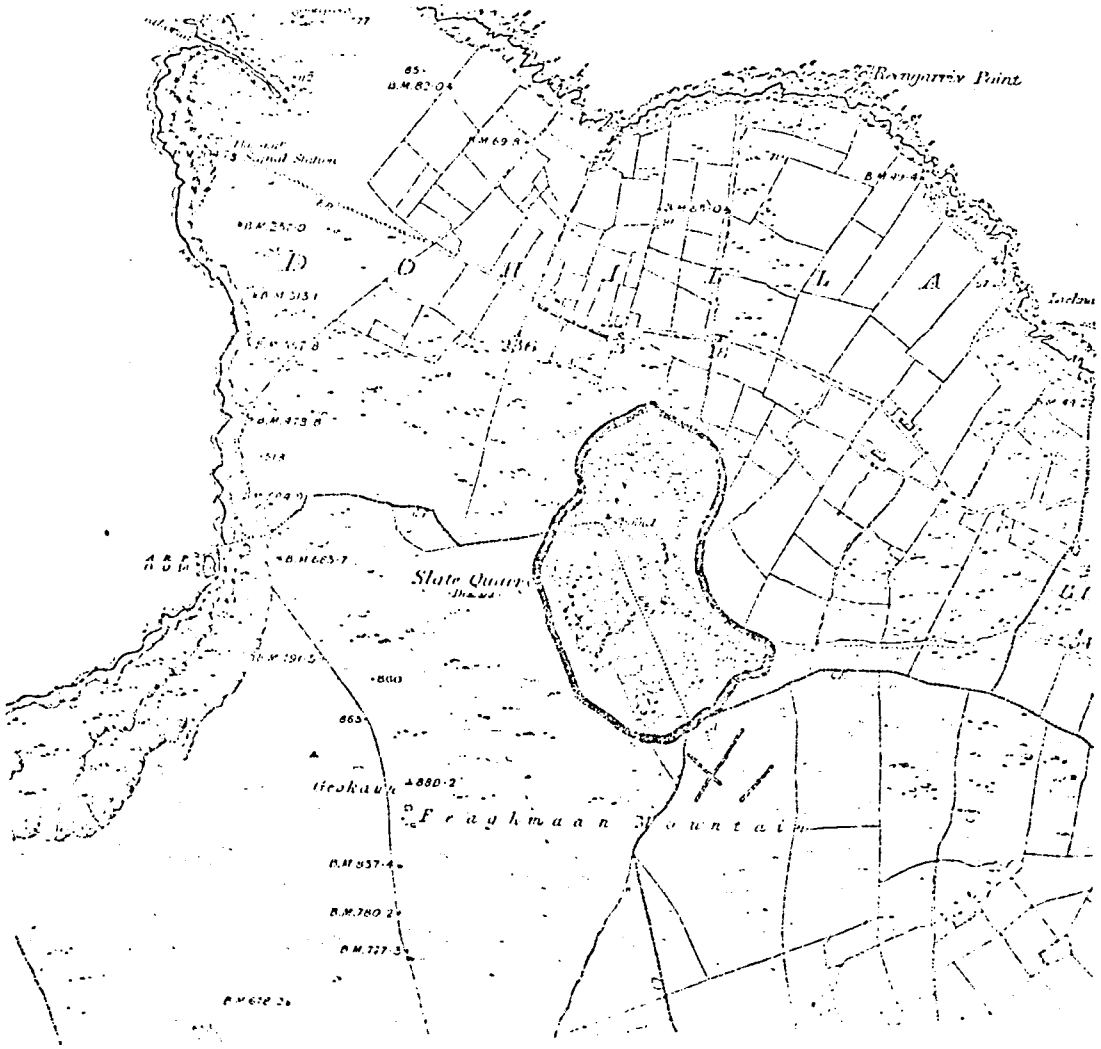
Vulnerability and Recommendations

Disturbance is not likely to occur but any unnecessary access should be prevented.

Land use should remain in its present form.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	BEAL POINT
Acreage	80 Acres
Grid reference	A 90 48
Scientific interest	Ecological, botanical
Rating	Local
Priority	B

Description of Area

The sand dunes at Beal Point are formed of several compressed dune ridges without dune slacks. There is active growth around the point and a narrow foredune ridge is present. No bare sand is found in the high dunes except for small inactive blowouts but along the coast there has been under-cutting by the sea followed by slumping. In this way a lot of sand is exposed to wind erosion and some is obviously occurring.

Ammophila arenaria (marramgrass) is naturally abundant but there are areas of fixed dunes with Festuca (fescue) grassland. These appear less extensive than on some systems due to an absence of grazing. For the same reason there are few areas dominated by mosses though all the characteristic species of this habitat were seen.

The grassland has an unusual character with much Asperula cynanchica (squinancy wort) and some Arabis hirsuta(hoary rock cress) scattered in it. Euphrasia cf nemorosa (eyebright) is common as are Rhinanthus minor (yellow rattle), Linum catharticum (flax) and several orchid species.

To the east of the point a flatter salt marsh area near the river mouth supplies several species of interest.

Evaluation

This is one of the more interesting parts of the Kerry coastline, resembling the dunes at Stradbally most closely. It differs in topography and in absence of grazing on the main dunes and is thus ecologically valuable.

The associated salt marsh has a good representation of species for the west coast.

Vulnerability

The dune erosion at the south end of the area is obviously caused by removal of beach material. This allows the sea to come right up to the dunes and break their protective cover of vegetation. Such foreshore removal is still going on; sand is taken regularly and parts of the storm beach of rocks seem also to have been removed.

Grazing is not now a problem but could build up swiftly and become one, like so many western dunes.

The most valuable areas are not suited to camping or caravanning.

Recommendations

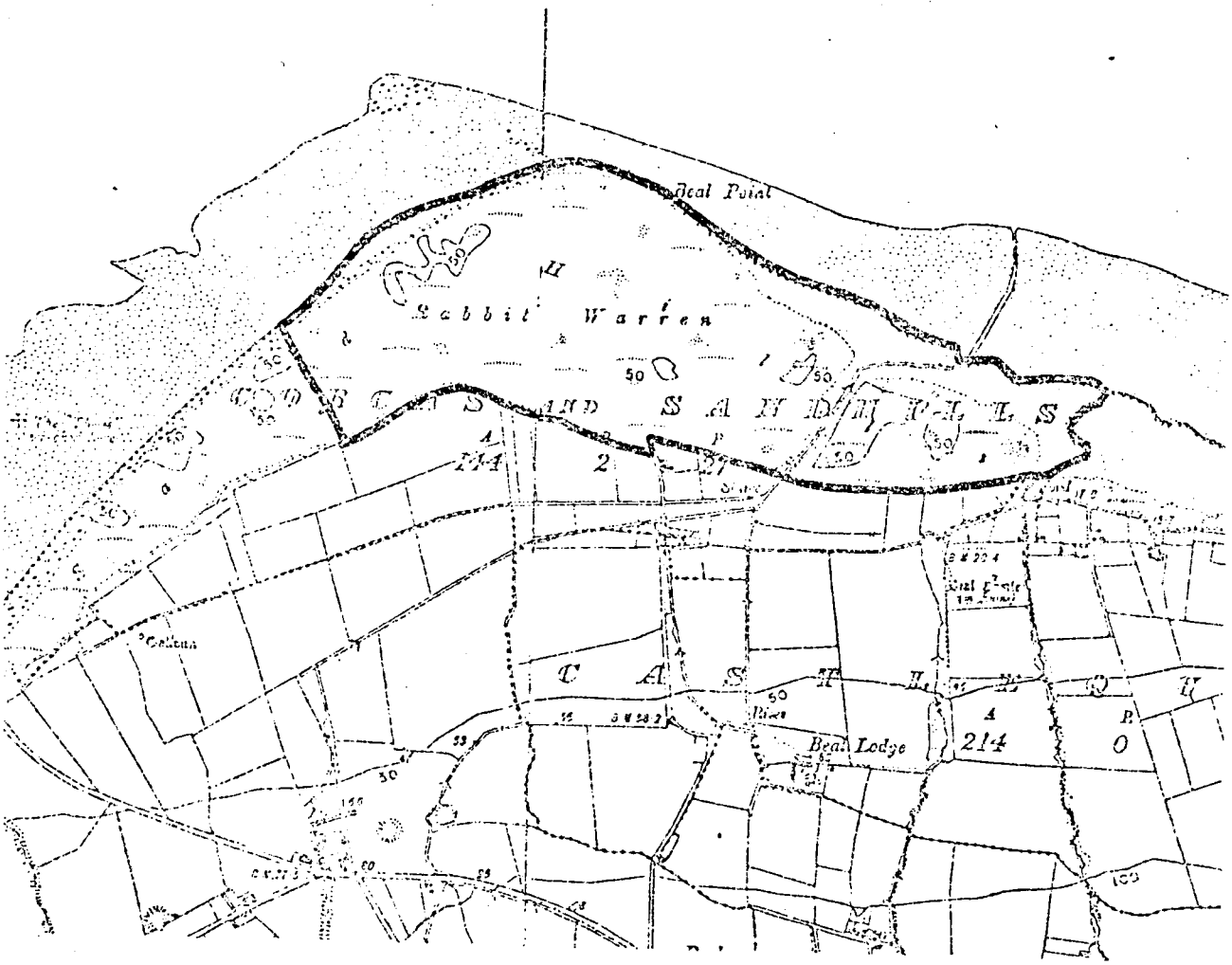
Removal of beach material must be prevented at the south end of the area if the dunes are to remain at all stable. The foredunes here have been altered into a shape both structurally and aerodynamically unstable and must be given several years to recover. They will do this by a gradual plantation and decrease in angle of the seaward slope.

Visitor usage should not be encouraged while these dunes are so vulnerable as it is bound to cause blowouts around paths.

Intensive grazing should not be allowed on the dune grasslands.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	LIMESTONE RIDGE NEAR CHURCHILL
Acreage	9 Acres
Grid Reference	Q7617
Scientific interest	Botanical
Rating	Local
Priority	A

Description of Area

This site is a rocky limestone ridge situated in pasture land. Its flora consists of plants of thin dry soils as well as those that grow on the rock itself. The latter group would include: Polypodium vulgare (polypody), Sedum acre (biting stonecrop), Asplenium Vita muraria (wall rue), Parietaria judaica (wall pellitory), Jasione montana (sheep's bit) and Rosa spinosissima (burnet rose).

Where a vegetation cover is complete it is found to consist of: Festuca rubra, F. ovina (fescues), Cynosuruscristatus (crested dogs tail), Poa pratensis (meadow grass) with smaller quantities of Luzula campestris (woodrush), Bellis perennis (daisy), Trifolium repens (white clover), Pilosella officinarum (mouse-ear hawkweed), Thymus drucei (wild thyme), Galium verum (lady's bedstraw) etc.

A large number of annual species occur, e.g.:

Arenaria leptoclados	Sandwort
Valerianella locusta	lamb's lettuce
Catapodium rigidum	A grass
Veronica hederifolia	Speedwell
V. arvensis	"
Saxifraga tridactylites	Rue leaved saxifrage
Erophila verna	Whitlow grass
Geranium molle	Cranes bill

Evaluation:

A small site with several unusual species, this is one location where Parietaria grows in a natural habitat away from buildings. It resembles many of the outcrops around Barrow but has several additional features.

Vulnerability

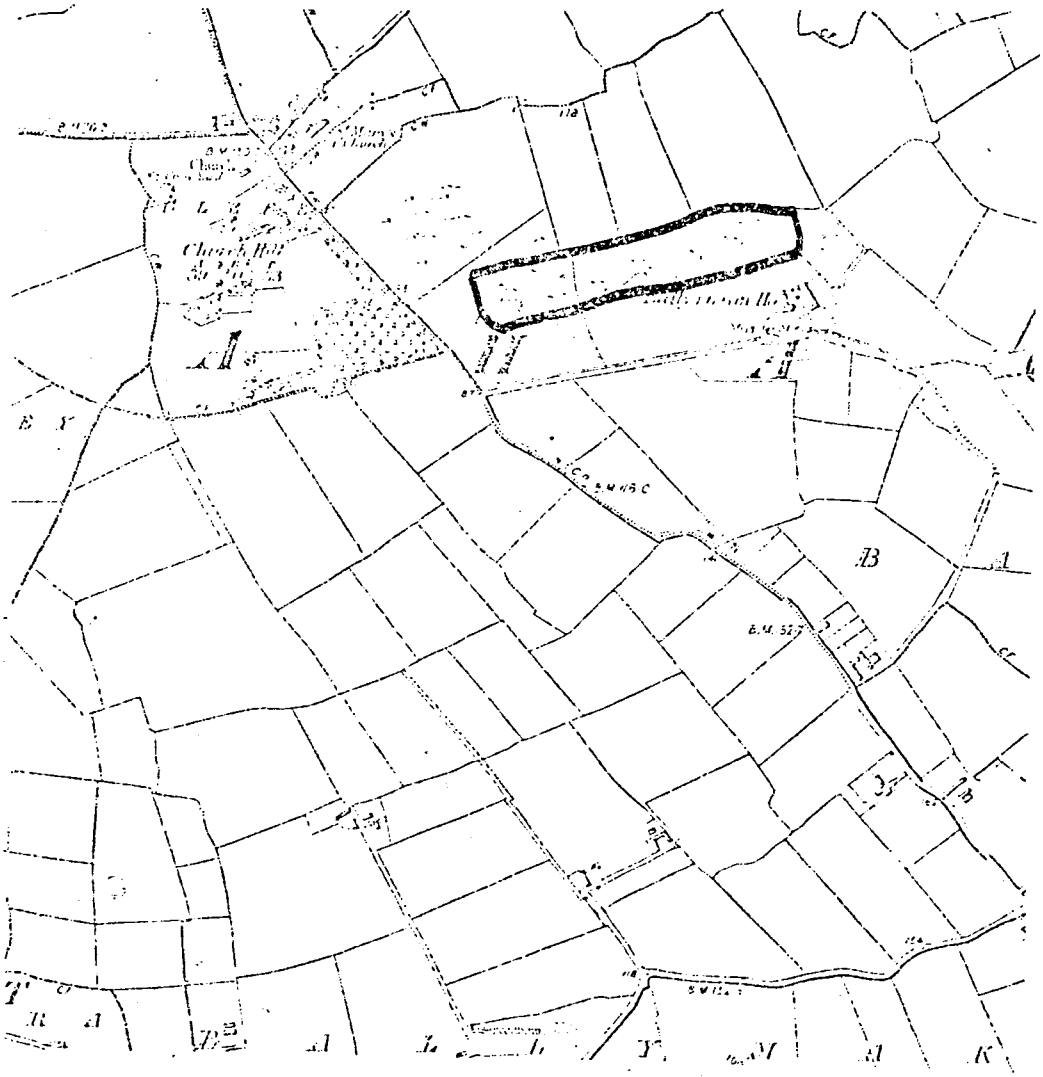
This site is threatened by grazing but more especially by fertilization, since it occurs in pasture land.

Recommendations

Agreement should be sought with the landowner to prevent the spreading of fertilizers on this area.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	INISHABRO
Grid Reference	V 21 93
Acreage	129 Acres
Scientific Interest	Ornithological
Rating	Local
Priority	C

Description and Evaluation

Inishabro contains the nesting sites of a wide variety of seabirds on its slopes but in total number these are less significant than on the other Blaskets listed. They include:-

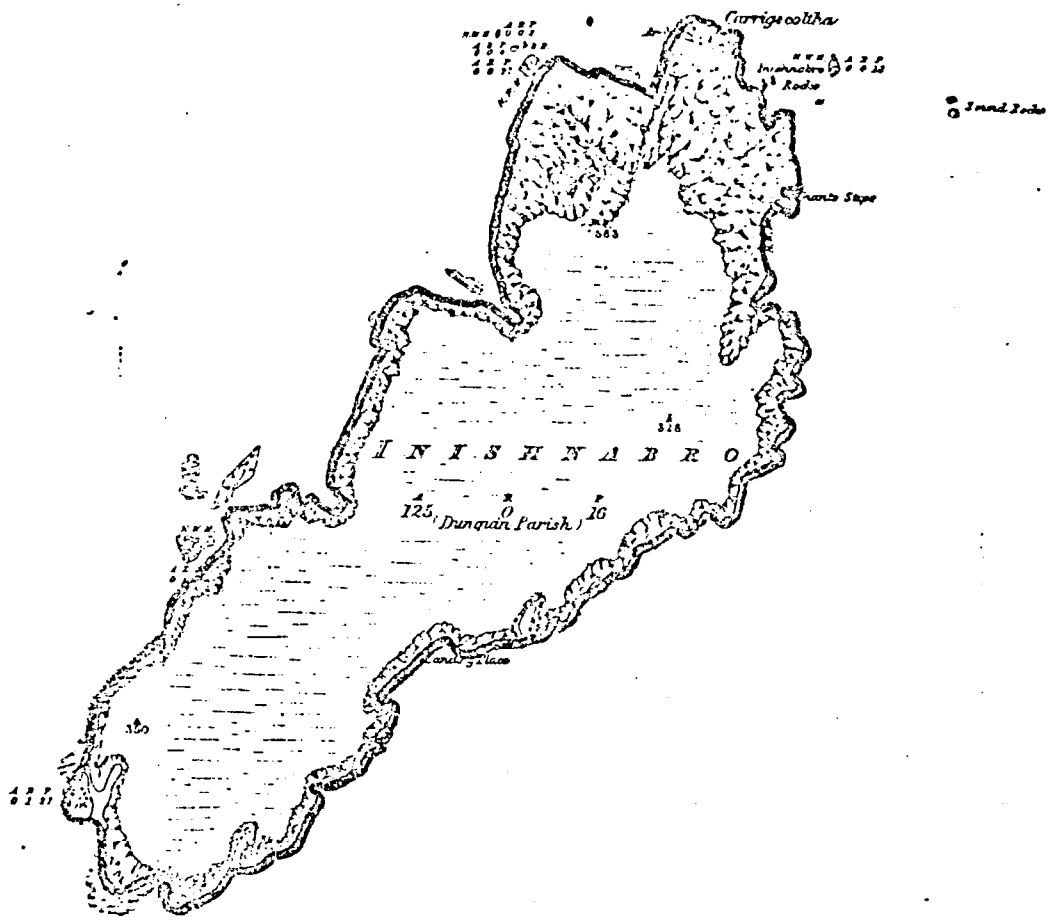
Manx shearwater	c. 1,000 pairs
Storm petrel	c. 1,000 "
Fulmar	362 "
Shag	40 "
Great black-backed gull	25 "
Lesser " " "	125 "
Kittiwake	110 "
Razorbill	818 individuals
Guillemot	316 "
Puffin	590 "

Vulnerability and Recommendations

See Inishvickillane (p. V16)

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

Scale: 6 Inches to 1 Mile



Name of Area	ILLAUNABARNAGH & MUCKLAGHMORE ISLAND
Acreage	
Grid Reference	Q 68 22
Scientific Interest	Ornithological
Rating	Local
Priority	C

Description

These are small marine islands, the first with a colony of nesting terns, (about 50 paris), the second with 30 pairs of cormorants.

Evaluation

Tern colonies of any size are relatively rare in Kerry and this would be one of the five or six most important ones.

Some work is in progress on the cormorant population which apart from another to the west is the largest in the county.

Vulnerability

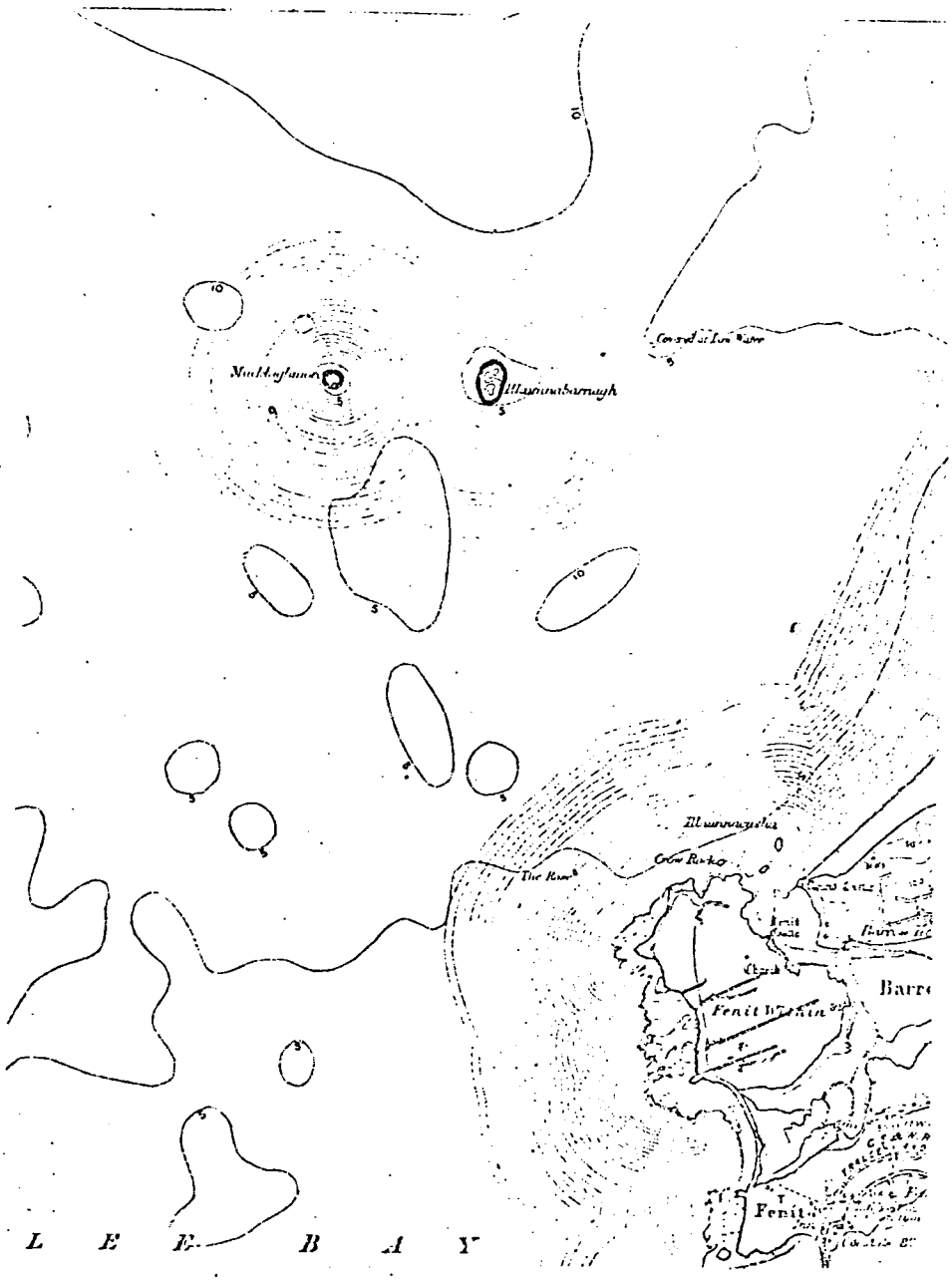
Both colonies would be adversely affected by too frequent landing on the islands with its consequent disturbance.

Recommendations

Landing on the islands should be discouraged.

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

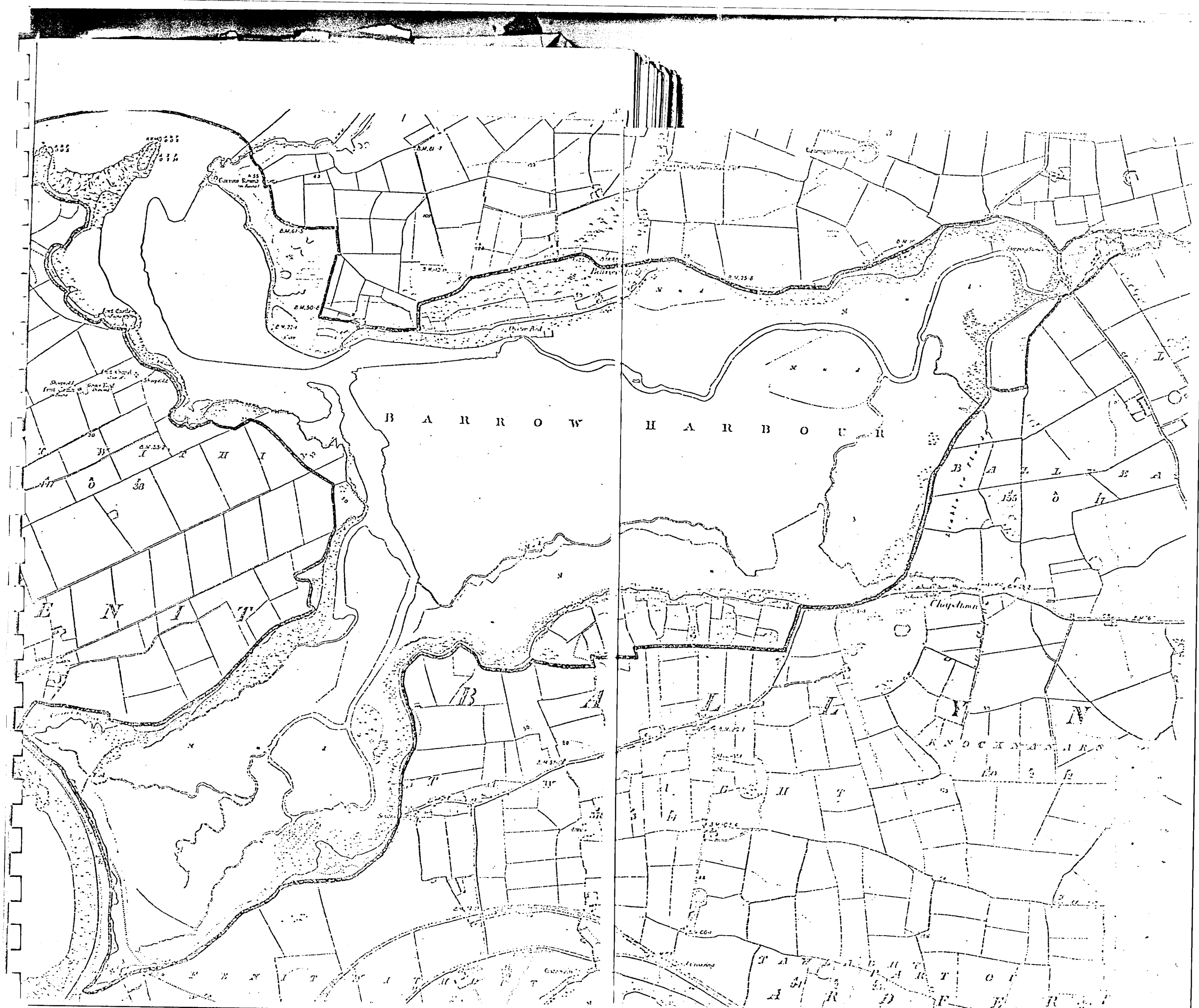
Scale: 1 Inch to 1 Mile



Area	No protection necessary	General planning control	Special Amenity Area Order	Conservation Order	Tree Preservation Order
Mucksna Wood					x
Lough Acoose		x			
Spanish Island	x				
Graigue's Wood		x			
Cromane Pt. - Rosscullen Pt.		x			
Dunbeg (nr. Fahan)	x				x
Glanleam Wood					
Glanmore Lake		x			
Inishtooskert	x				
Burnham Wood		x			
Slate Quarry, Doohilla	x				
Beal Point		x			
Limestone ridge, Church Hill		x			
Inishabro	x				
Illaunabarnagh Island					
Horse Island	x				
Mucklaghmore Island					

Area	No protection necessary	General planning control	Special Amenity Area Order	Conservation Order	Tree Preservation Order
Derrymore I. & Tralee Bay (s. side)		x			
Gweestin valley (Barry's Glyn)		x			
Akeragh Lough					
Oyster Hall coastline				x	
Lamb's Head		x			
Uragh Wood and Cloonee Lakes			x	x	
Inch-Anascaul coast					
Kilmurry Bay	x			x	
Brandon Mountain		x			
Lough Doon					
Lough Gill area			x		
Great Skellig			x		
Puffin Island		x			
Bay View		x			
Rossbehy dunes					
Clogher Head and Cove	x			x	
[illegible] Island		x			
[illegible]Derrynane		x			
[illegible]Tralee Islands					

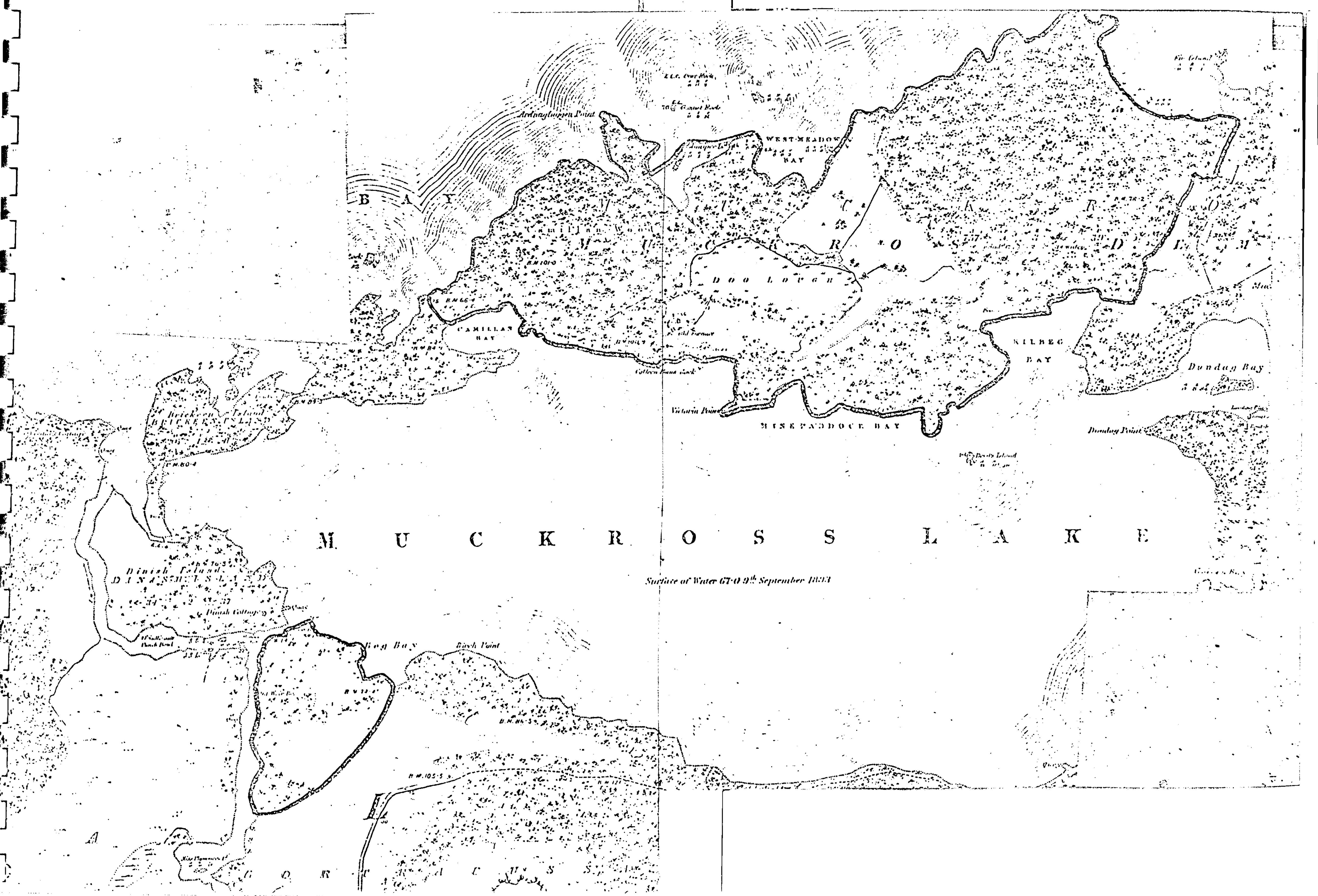
Area	No protection necessary	General planning control	Special Amenity Area Order	Conservation Order	Tree Preservation Order
Ballaghisheen Bog		x			
Inishvickillane	x				
Roughty River nr. Morley's Br.		x			
Lehid Harbour		x			
Slea Head cliffs		x			
Lough Nagarriva	x				
Barrow Harbour		x			
Boughill & Barfinny L.	x				
Fermoyle tombola and marsh		x			
Puffin Sound - Horse I Cliffs		x			
Lough Currane			x		
Beginish I. (Dunquin)		x			
Fahamore shore		x			
Parkmore Point	x				
Dooneen Wood					
Cashen R. estuary					x
Coomasaharn Lough		x			
Derrynane		x			
Skelligaree Islands		x			
		x			

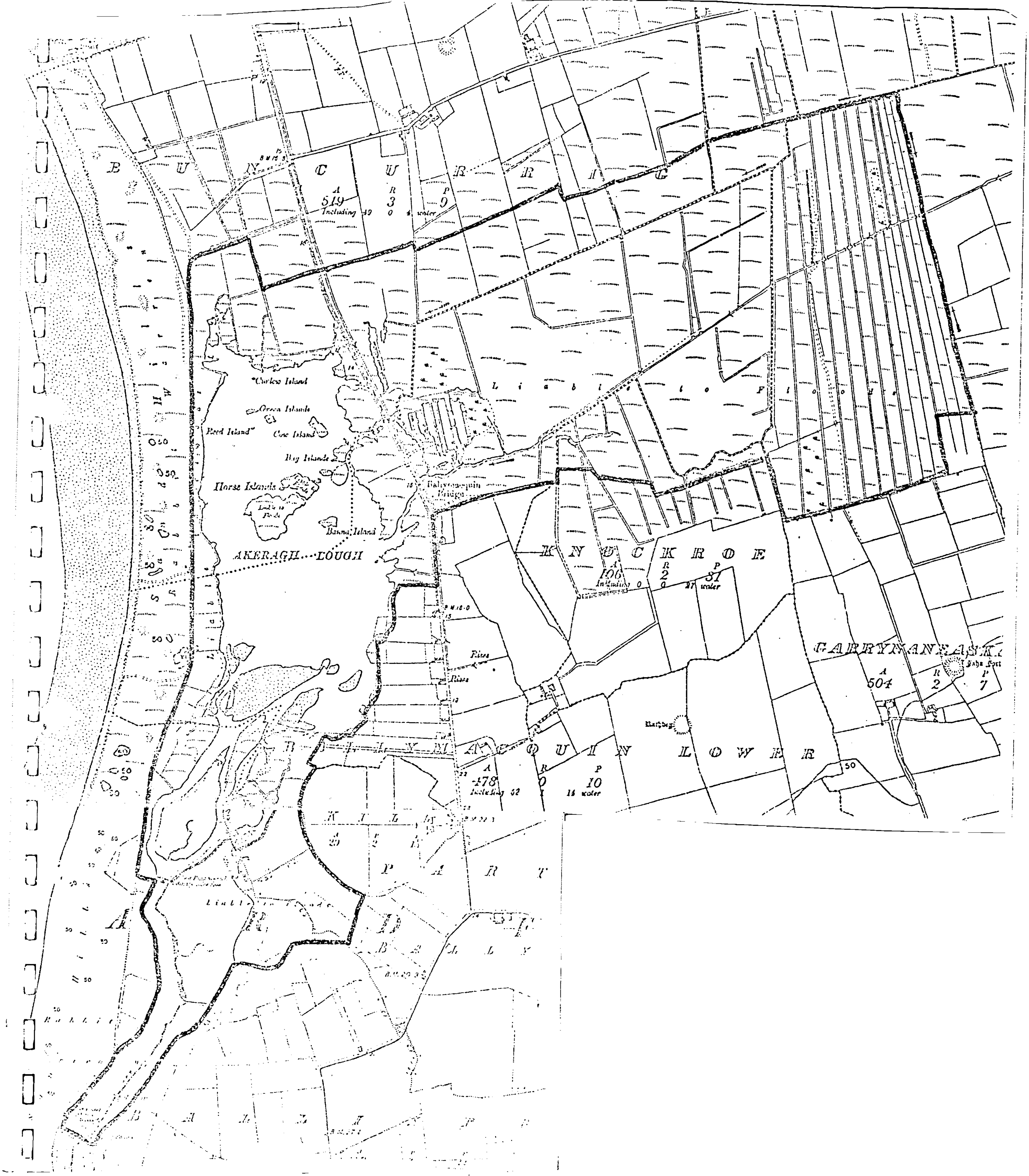

B A R R O W
H A R B O U R
Chapelhuan


Surface of Water 353
6th January 1894
Lough Eiggy
Surface of Water 337
12th January 1894
Lough Cappanalea
Surface of Water 311·4
2nd February 1894
Lough Nakirka
Surface of Water 317·9
25th July 1893
Loughanacummeen
Surface of Water 204·0
24th January 1896
Suggahard Island
DOOLAGH
GORT NA GANNIVORE
GORT NA GANNIVORE
Caragh Lough

MAP SHOWING AREA OF SCIENTIFIC INTEREST —

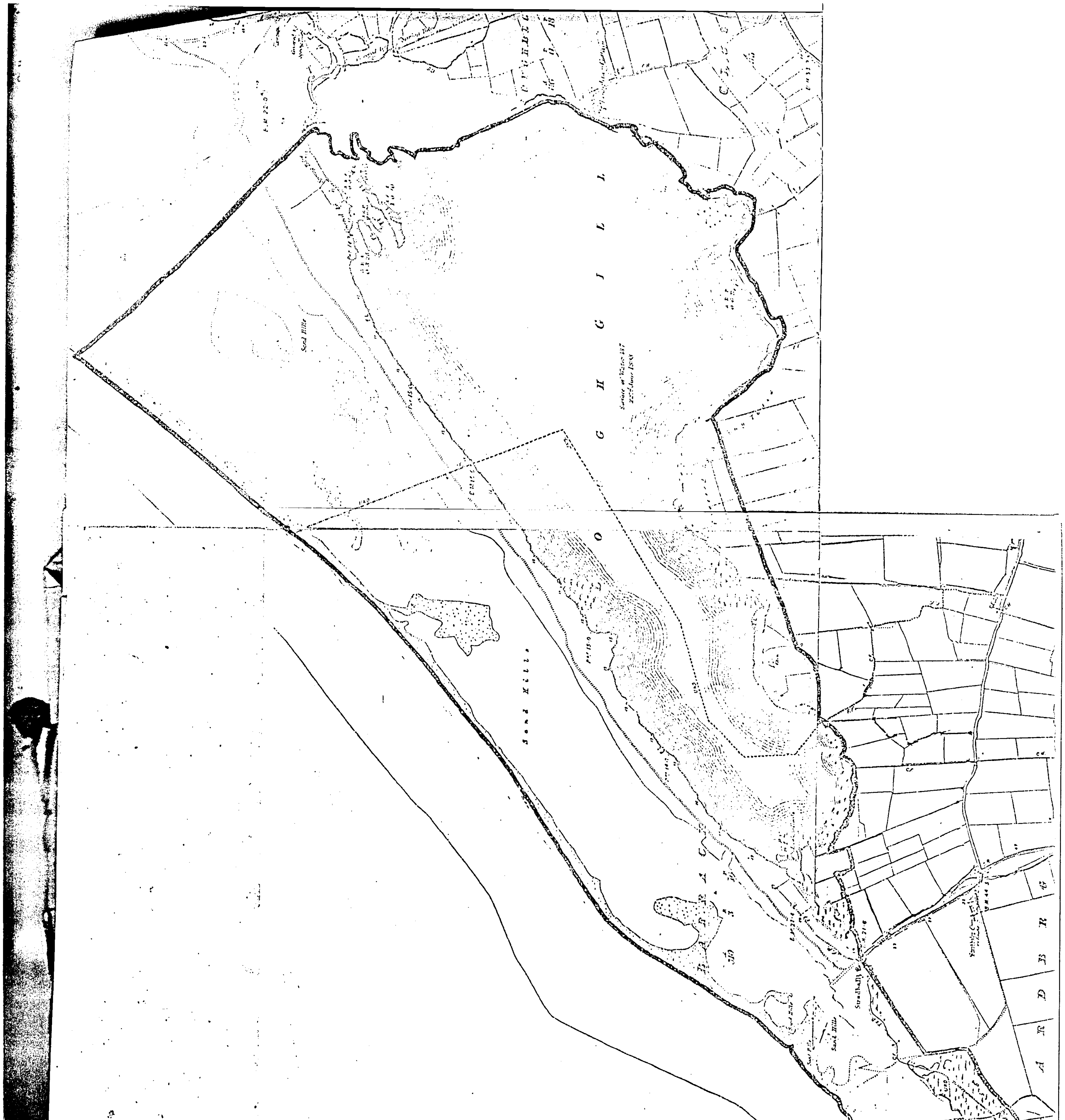
Scale: 6 Inches to 1 Mile





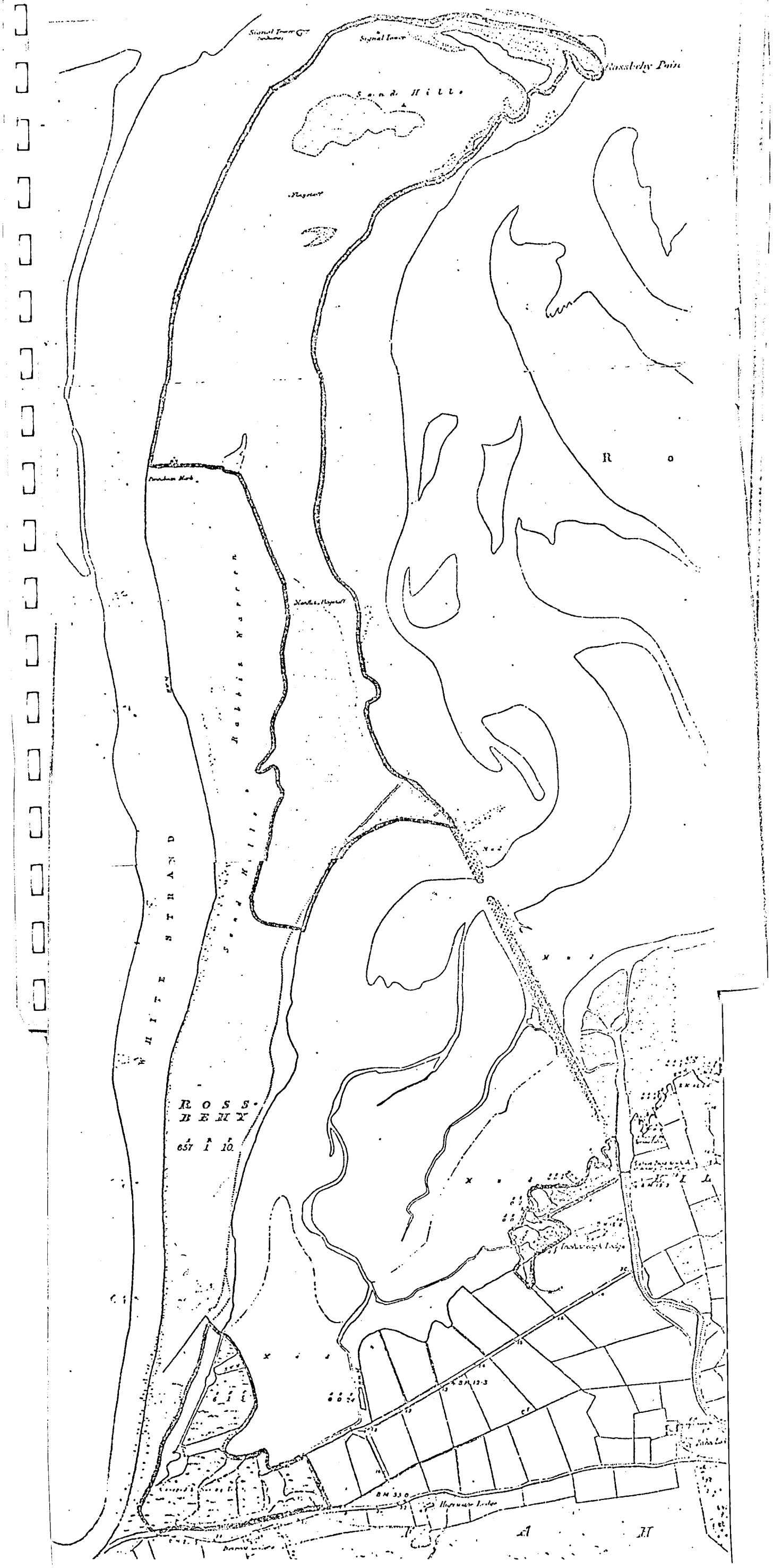
B U N C U R R A G
A R P
519 3 9
Including 49 0 4 water
Curlew Island
Green Islands
Reed Island
Cow Island
Horse Islands
Banna Island
AKERAGH LOUGH
L i a b l e t o F l o o d s
K N O C K R O E
A R P
106 2 31
Including 0 0 27 water
A R P
504 2 7
Q U I N L O W E R
A R P
478 0 10
Including 52 1 14 water
50

MAP SHOWING AREA OF SCIENTIFIC INTEREST —


Sand Hills

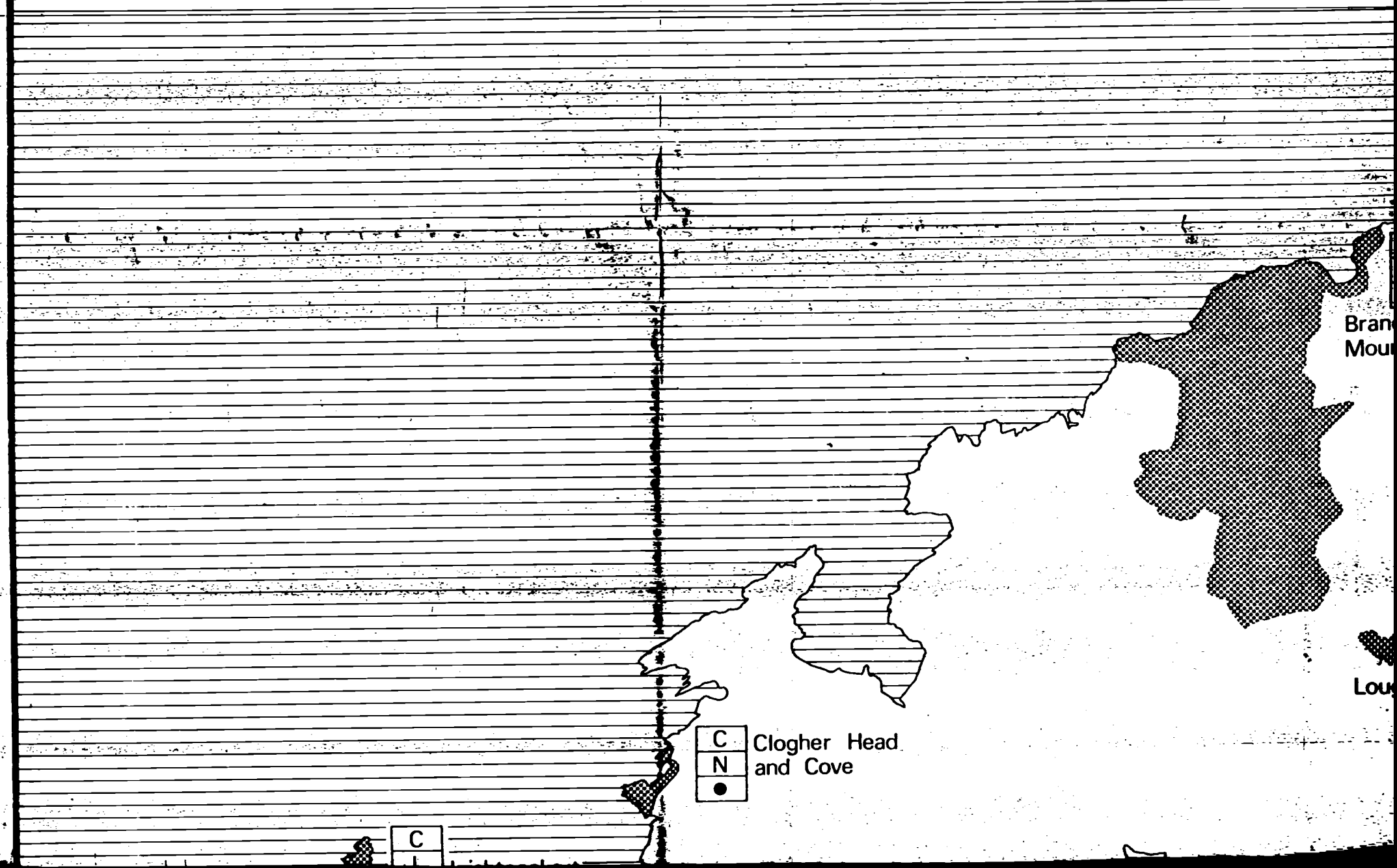
MAP SHOWING AREA OF SCIENTIFIC INTEREST

Scale: 6 Inches to 1 Mile



CO. KERRY

Areas of Ecological and Geological Interest



Beal Point
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Cashen Estuary
Akeragh Lough
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R
Magharee Islands
C
L
Illaunabarnagh and Mucklaghmore Island
Fahamore Shore
C
R
B
R
Barrow Harbour
A
L
Limestone Ridge near Church Hill
C
N
Bay View
C
N
Oyster Hall
B
N
Lough Gill area
B
R
Fermoyle tombola and marsh
B
INT
Derrymore Island and Tralee Bay
B
INT
Inch Island and mudflats
B
N
Inch-Anascaul Coastal Cliffs
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Beal
Point

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Cashen River
Estuary

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Beginish Island

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Slea Head
Coastal Cliffs

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Dunbeg

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Parkmore
Point

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Carhoo West

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Tearaght Island

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Inishnabro

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Inishvickillane

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Slate Quarry
Doohilla

B
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Glanleam Wood

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Horse Island

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Puffin Sound –
Horse Island Cliffs

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Puffin Island

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Little Skellig

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Great Skellig

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Cromane Point–
Roscullen Point
shore

Rossbehy
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Newfoundland Bog

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Ballaghisheen Bog

Upper Lake
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Uragh Wood and
Cloonee Lakes

Derrynane salt marsh
and sand dunes
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■ O

Spanish Island
C
L
□

B
L
■
Glanmore
Lake

B
L
■ O

2 1½ 1 ½ 0 2 4

A INT ● △ Gweestin Valley

C R ■ O Islands in Upper Lake and Lough Leane

A N ■ O ● Ross Island

A R ■ Ardagh Bog

A INT ■ O Muckross Woods

△ Torc Waterfall

B N ■ O ▲

C INT ▲ △ ugh aum

B L ■ Carrigawaddra Cliffs

B N ■ O ▲ Mangerton Mountain

A INT ■ O

B R O △ Roughty River near Morley's Bridge

B L ■ O Wood near Kilgarvan

ksna d

C R ▲ Lough Nagarriva

8miles

OCTOBER 1972

CONSERVATION AND AMENITY ADVISORY SERVICE

PRIORITY		A B C
RATING	International	INT
	National	N
	Regional	R
	Local	L
INTEREST	Ecological	■
	Ornithological	□
	Geological	●
	Botanical	O
	Zoological	▲
	Geomorphological	△
Small or indeterminate area		△