

Report on Areas of
Scientific Interest in County Cork

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PREFACE

This report follows one produced in April 1972 (Fahy, E: A Preliminary Report on Areas of Scientific Interest in County Cork, An Foras Forbartha) for the impending County Development Plan. It is primarily a revision of the list of areas, already partly done in 1981 for Areas of Scientific Interest in Ireland, An Foras Forbartha. However the descriptive material has been much expanded to enable the reader to visualize the character and qualities of each area and to see how they have been evaluated. This emphasis was suggested by Mr B Kelleher in discussions following his initial request for the report (1/2/84).

Many people co-operated in the preparation of the report and the help of T. O'Mahony, C. Hutchinson, J. Cross, T. Curtis, D. Kelly, J. Cullinane, P. Whelan, T. Kelly and C. Douglas is acknowledged. The Forest and Wildlife Service provided data for the Appendix.

INTRODUCTION

The purpose of this report and the National Heritage Inventory of which it forms a part, is to list sites of special interest for ecological or geological reasons along with a selection of areas which encompass the full range of natural habitats and the variation in rock type that make up our country. In this way both the uniquely Irish features of the countryside and also the more 'ordinary' but still characteristic things may be recognized, valued and preserved.

Selection of Areas

Objects of scientific interest, whether geological or ecological, occur in all shapes and sizes from one fossil leaf or a population of small animals living under a log to a drumlin field covering hundreds of square miles or the entire race of the Irish jay. To conserve everything it would be necessary to freeze the countryside and its many uses in their present form and to allow no change in population, behaviour or technology in the future. This is obviously impossible and the choice must be made as to what and how much to conserve.

This report concentrates on sites rather than species, on natural areas rather than artificial ones and on facets of the Cork countryside that are of significance in the national or even the European context. The concentration on sites is important for in the long run plants or animals survive because they occur in a habitat that suits them, not because man takes special care of each individual. In addition every habitat contains a multitude of organisms besides those which are of special interest. Many of them are still unknown and it is by maintaining their habitat that they will survive for study in the future. The ecological relationships between organisms and between an organism and its environment will also be preserved. These interactions are often subtle and sometimes of more importance than the organisms themselves. They may also be essential to the species' survival so it is much easier to preserve a species in its natural habitat than to take it into a zoo or a botanic garden where success is far from automatic.

Recent action on conservation has given more emphasis to rare species than is desirable and the Council in its executive role can do something to correct the balance. The implementation of the EEC Bird Directive, the

Berne Convention and the Wildlife Act for example, has had the effect of directing attention towards species that are uncommon in Europe or Ireland, sometimes for quite natural reasons, at the expense of the rich communities and habitats on which they depend. Bogs continue to be developed, marshes and rivers drained and patches of woodland felled without legislative notice.

In summary the criteria by which areas are chosen for inclusion are as follows:

- 1) Naturalness
- 2) Species richness and diversity of habitat
- 3) Rarity of species, habitat conditions or geological phenomenon
- 4) Typicality, to show a habitat at the centre of its range of variation as well as at its extremes
- 5) Size and isolation from environmental change
- 6) Existence of scientific research
- 7) Accessibility and possibilities for educational use

It will be apparent that the ecological part of the survey is based largely on plants and birds with inputs from other aspects of zoology where relevant. The reasons for this bias are:

- 1) The distribution of plants and birds is much better known than that of other groups. Therefore the presence of particular species or a high number of one species can be properly evaluated. With lesser known groups the significance of one species' presence may be unknown because people may never have looked for it before.
- 2) Plants do much to create the habitat used by other organisms. Diversity in the vegetation is thus often reflected by diversity and interest among animal groups.
- 3) Plants and birds are better known to the general public than most organisms and their use in descriptions gives some idea of what an area looks like. As well as this people find it easier to identify with them rather than with woodlice, sea anemones or slugs which, objectively, have just as much value as part of the Irish heritage.

Mention of rare species will be noted in the site descriptions but they are used often in the context of indicators of richness and diversity. An organism is rare because it is intolerant of most environments and is restricted to a narrow set of conditions. It thus indicates that special factors exist in an area in addition to those seen at first sight, and suggests an interesting ecology.

The rare plant species protected by the Flora Protection Order 1980, are listed in Appendix 1 along with details of their localities. The Council should be aware of their presence in its programme of engineering work and development control. In some cases the location of these plants

cannot be pinpointed accurately but a knowledge of the species' requirements may enable An Foras Forbartha or the Forest and Wildlife Service to give advice as to their treatment. Where such species occur in one of the main listed sites, the name of the area is given an asterisk in the text.

The geological side of the inventory is mainly a list of the rock exposures most important in elucidating the structure and history of the county but it also includes sites at which particular phenomena, for example ripple marks, are well shown. There are areas of importance to other earth sciences too, particularly to glacial studies but large-scale geomorphological features which have considerable interest sometimes but will survive all developmental pressures have generally been left out.

Although the attempt has been made to cover all relevant literature and to consult those with specialised knowledge of the county, the report remains incomplete. Knowledge of our fauna and flora is not sufficiently large to allow definite decisions to be made about the significance of many natural occurrences.

It is hoped that the appearance of such a report will stimulate those with further local knowledge to make it known, so such contributions are invited. They will assist both local and central government in the better planning and management of the environment.

Evaluation of Areas

The rating scheme used in this report grades the sites into four different categories: international, national, regional and local importance. The attempt has been made to decide on an overall ecological or geological value for the area, to look at the site first and the species that use it second. There are exceptions to this general rule, however, when one group of organisms or even one species dictates a high rating to an otherwise indifferent site.

It is felt that this approach to grading the areas will be the most useful one for the Council. The local authority is charged with 'preserving rural amenities' and this may be interpreted as 'maintaining the ecological diversity of the county'. Its powers enable an authority to restrict or promote certain types of land use in certain areas. It cannot make a blanket ordinance to preserve wildlife and its conservation policy must be based on valuable habitats rather than simply on birds or bats.

Site evaluation is a difficult task and one that is partly subjective. Existing rating schemes are few and the one for wildfowl and wading birds is that most widely in use. It holds that any site with 1 per cent of a species population at any time of the year should be considered of international importance, irrespective of the intrinsic quality of the site or what happens there during the rest of the year. This has the merit of being objective, two different people will arrive at the same answer, but it seems too restricted to be used by the Council in its broader role of environmental care. It will tend to rate bird sites as more important than sites with other organisms which have no separate rating scheme.

METHODS OF SITE PROTECTION

The main legal framework for the conservation of our flora and fauna is the Wildlife Act, 1976. It allows the State to create nature reserves by

acquiring land and to designate refuges on private land. It controls the purposeful destruction of plants or animals by hunting, etc., and it provides for the Wildlife Advisory Council to assist with policy, objectives and programmes for wildlife conservation. Implementation of the Act by the Forest and Wildlife Service has been limited and has tended to concentrate on species rather than areas. Some nature reserves have been created but they have mostly been woodlands already in public ownership and other habitats, with the exception of Lough Hyne, have been neglected.

Local authorities have the opportunity to re-emphasize the value of habitats by their policies of public involvement and information and by development control. Their role in species protection (by Conservation Order) has been complicated by the 1976 Planning Act to the point where it is scarcely usable. They can still, however, zone lands for amenity (and conservation) and restrict development within them. While they cannot control exempted development directly, it is clear that they can have considerable influence with grant-giving bodies, if they will use it.

The Council has also a positive role to play in stimulating public awareness of the national heritage and thereby encouraging respect for the natural environment. As a first step it should inform most landowners of the special nature of their land. A few owners may be inclined to immediately fell a woodland or drain a marsh if they think they are about to be prevented from doing so; the notification procedure should therefore be used with discretion. It is felt, however, that occasional losses brought about in this way will be outweighed by a reduction in inadvertent damage to sites, now the most frequent cause of their destruction. The majority of people would be pleased to have a site of importance on their land if they are approached in the right way.

The Council should also make information about areas of scientific interest available to the public as it will get a positive response and, in many cases, assistance in preserving such amenities. Including a list of areas to be preserved in the Development Plan is only one avenue open to the Council and it should consider other ways also, perhaps in conjunction with schools and colleges.

The development of some of the areas is also to be encouraged if it does not interfere with their intrinsic value. Development will usually mean increasing accessibility by opening paths or parking places, sometimes the preparation of interpretive material. The latter aspect may be done in co-operation with voluntary bodies where there is a large amount of goodwill, as yet seldom used.

The current worldwide interest and concern for the natural environment means that there is a considerable 'market' for such amenities, quite apart from their benefit to formal education.

INTRODUCTION TO THE COUNTY

The geology of Cork consists of uplifted east-west folds of Devonian or Old Red sandstone. In the valleys between the folds limestone was later laid down, especially in the Cork-Cloyne region. Both these rock types have features of interest whether they are fossils (Ballyheady, Ringabella), structure (Old Head of Kinsale) or lithology (Little Island). Metallic deposits in them have been mined, in some cases from Bronze Age times (Mount Gabriel).

Much later than the rocks were laid down, the area was glaciated and the coastal regions today bear traces of ice movement from the Irish Sea (Ballycrouneen Bay) as well as from the local Cork-Kerry ice sheet (Cloyne Esker). The south coast also shows a raised beach platform (Howe's Strand, Courtmacsherry Bay) which was formed when the land mass was depressed by the weight of the ice. This is used as a reference point to calculate relative sea and land levels in the whole of north-west Europe. Glaciation is also marked in the mountains by the presence of corries (Barley Lake), some with arctic-alpine plants growing on their cliffs (Caherbarnagh). In other places the plants have persisted high up on the hills (Knockowen) where competition from more vigorous species is reduced.

The region is perhaps best known today for its mild climate which allows southern species of plant and animal to survive in the wild and in cultivation, and also attracts large numbers of wintering birds (Ballymacoda). Seashore communities are exceptionally rich (Lough Hyne) and include seaweeds and animals whose centre of distribution is Mediterranean (Roaring Water Bay). On land, the occurrence of organisms from Spain and Portugal is also noteworthy (Glengarriff). They spread northwards along the coasts of Brittany and SW England after the last glaciation but have mostly died off in the intervening regions.

The woodlands of Cork are an important part of its heritage and there are traces of the ancient forests which once covered the whole county. The Gearagh, a unique riverine forest, retains much interest despite being reduced in area by the Lee reservoir. The adjacent Toon Bridge woodland is rich in species and there are many fragments in the western half of the county, some more natural (Cleanderry Wood) than others (St Gobnet's Wood).

Many of the woodlands occur in valleys too steep for cultivation, and in fact the deep valleys of the south coast are a distinctive and valuable feature of the county. Several valleys are listed as such in the report. They are considered as the land least modified by modern development and still largely dominated by the rivers that cut them. Because of their gradient the rivers of Cork have suffered drainage to a much lesser extent than in most counties and this gives them an intrinsic interest. Their valleys act also as wildlife reservoirs or arteries from which the surrounding landscape can be recolonised if necessary.

The other habitats in Cork that stand out are the coastal marshlands east and west of the city (Ballycotton Bay, Ballyvergan and Garrylucas) and the heaths of the far west. Blanket bog has been much cutover and the steep slopes do not favour its development but patches of heathland occur in many coastal regions (Crookhaven) and on islands (Sherkin and Cape Clear). In such places the chough is never far away and it feeds also on old pastures and sand dunes. There are more of these birds in Ireland than in any other European country, except Spain, and Cork has a significant part of the Irish population (e.g. on Dursey Island and Mizen Head).

In Cork City itself are a number of sites whose strict scientific interest does not justify their inclusion in this report but whose importance to people is much increased by their being within a built-up area. Areas such as Kilcully Glen, Shanbally Wood and Jennings Wood have interesting ecological features and also exceptional recreational and educational value. They are often appropriate places to be developed for a much wider use in education than they receive at present. It is suggested that a special survey be done of sites within the Borough and environs of Cork with a view of defining their importance and increasing their usefulness to the community.

SUMMARY OF AREAS OF SCIENTIFIC INTEREST

Name of Area	Grid Reference	Interest	Description	Page
INTERNATIONAL IMPORTANCE				
1) Ballyheady	W 603 601	Geological	Type locality for a fossil fish	8
2) Ballymacoda	X 06 73	Ecological (0)	Marshy fields and mudflats used by large flocks of wintering birds	9
3) Cork Harbour		Ecological (0)	A complex of estuarine mudflats holding the largest shorebird numbers on the south coast.	
a) Great Island Channel	W 81 70		National importance for wildfowl and waders	11
b) Douglas Estuary	W 71 69		Regional importance for waders	13
c) Tivoli/Dunkettle	W 73 72		Regional importance: wader roost & mudflats	14
d) Lough Beg & Currabinny	W 79 63		Local importance: wader roost and plant life	15
e) Rostellan/Aghada	W 87 66		Local importance: permanent water	17
f) Whitegate Bay	W 83 63		Local importance: wader & wildfowl feeding area	18
4) Courtmacsherry Bay (Howe's Strand)	W 55 43	Geomorphological/geological	Raised beach platform, a reference point for NW Europe	19
5) Gearagh	W 29 69	Ecological (B,O) geomorphological	Alluvial woodland in a braided river channel, unique in Ireland	20
6) Glengarriff Woods	V 92 57	Ecological (B,Z)	Well developed Atlantic oakwood with many plant and animal species	22
7) Lough Hyne	W 09 28	Ecological (B,Z)	Land-locked bay with reduced tides and rich plant and animal communities. Southern species notable	23
8) Mountgabriel	V 93 34	Geological archaeological	Bronze age copper mines with no later interference	24
9) Ringabella Bay & Point	W79 58	Geological geomorphological	Glaciated raised marine platform: also a fossiliferous mudstone of interest	25

<u>Name of Area</u>	<u>Grid Reference</u>	<u>Interest</u>	<u>Description</u>	<u>Page</u>
NATIONAL IMPORTANCE				
10) Ballycotton Bay (incl. Garryvoe)	W 98 64	Ecological (B,O) geological	Mobile shingle beach with small wetlands behind. Towards the east a stratified glacial till cliff	26
11) Ballycroneen Bay	W 90 61	Geological	Type site for an Irish Sea glacial till	28
12) Ballydesmond	R 151 042	Geological	Best examples of frost polygons occur in a quarry	29
13) Bandon Valley	W 56 53	Ecological (B,O)	Good development of plant communities (woodland & marsh):also a wader roost near Kinsale	30
14) Bantry Drumlins	V 99 50	Geomorphological	Small drumlin swarm produced by the local mountain glaciation	32
15) Black Ball Head	V 584 397	Geological	Igneous rock intrusions with interesting structures	33
16) Blackwater Valley	W 78 98	Ecological (B,O,Z) geological geomorphological	Partly wooded limestone-floored valley with unusual flora. Several cave systems occur	34
17) Bull & Cow Rocks	V 41 40	Ecological (O)	Seabird breeding colonies, important for gannet, storm petrel and auks	36
18) Castlepook Caves	R 615 113	Geological	Extensive cave system with fossils of pre-glacial fauna	37
19) Knockowen	V 81 55	Ecological (B)	High level plant community of interest	38

Name of Area	Grid Reference	Interest	Description	Page
20) Old Head of Kinsale	W 62 42	Ecological(O) geological	A large seabird colony of kittiwake and guillemot with an important rock exposure on the cliffs	39
REGIONAL IMPORTANCE				
21) Araglin Valley	R 88 04	Ecological(B)	Partly wooded area on varying rock type: well developed flora	40
22) Awbeg Valley	R 68 05	Ecological geological	Limestone valley with interesting woods and marshes. Caves have yielded animal remains	41
23) Ballincollig Cave	W 58 69	Geological Ecological(B)	Small caves, probably with animal remains. Limestone flora also of interest	42
24) Ballyvergan Marsh	X 09 76	Ecological(B,O)	Reedswamp with well-developed plant and bird communities	43
25) Bride Valley and Bunah glanna	W 68 90	Ecological	Upland rivers with mossy woodlands, blanket bog and rock	44
26) Caherbarnagh Mt.	W 19 88	Ecological(B,O)	The small glacial lakes, L. Murtagh and Gortavehy have interesting plant and animal life	45
27) Castlefreke- Dirk Bay	W 34 32	Ecological(B,O)	A wide range of habitats occur with good fens, dunes and woodland	46
28) Clonakilty Bay	W 40 38	Ecological(B,O)	The estuarine mudflats and Inchydoney dunes are the sites of interest	48
29) Cloyne Esker	W 90 67	Geomorphological geological	An esker, unusual because of its age and formed beneath a local ice-sheet	49
30) Dursey I. & Firkeel	V 48 40	Ecological(O)	Maritime grassland and cliffs with many choughs: also a bushy valley at Firkeel important to migrants	50

Name of Area	Grid Reference	Interest	Description	Page
31) Garrylucas Marsh	W 61 43	Ecological (B)	Coastal reedswamp behind Garristown beach with a rich flora	51
32) Gowlane	V 670 495	Geological	Excellent example of soil podsolisation produced by turf stacks	52
33) Kilcolman Bog	R 58 11	Ecological (B,O)	A lake and fen with large numbers of wintering wildfowl and some uncommon plants	53
34) Lee Valley	W 53 71	Ecological (B)	A varied limestone valley with aquatic flora of interest	54
35) Lough Allua	W 19 65	Ecological	Both the lake and surrounding rocky places have unusual communities	55
36) Rock Farm Quarry	W 76 71	Geological ecological (B)	Limestone quarry with good Carboniferous exposure and an interesting calcicole flora	56
37) Sherkin Island	W 02 25	Ecological (B,Z)	Rocky heath and pastures hold a rich flora. Intertidal life is well developed and in a natural state	57
38) Shournach Valley	W 53 79	Ecological (B)	Upland valley with woodland and marshes	58
39) Three Castles-Mizen Head	V 73 25	Ecological (B,O)	Exposed coastline with interesting flora and a concentration of chough	59
40) Toon Bridge	W 29 70	Ecological (B)	Sloping oak woodland with a diverse flora, contrasting with the nearby Gearagh	60
LOCAL IMPORTANCE				
41) Adrigole Harbour	V 80 49	Ecological (O)	A small tern colony occurs on an island	61
42) Ballybutler L. & L. Aderry	W 92 73	Ecological (B,O)	Rich lowland lakes with fen and marsh and high numbers of dabbling duck	63

<u>Name of Area</u>	<u>Grid Reference</u>	<u>Interest</u>	<u>Description</u>	<u>Page</u>
43) Baltimore Cliffs	W 04 24	Ecological(O)	Heathy and grassy coastline with a flourishing chough colony	64
44) Banteer Ponds	W 37 97	Ecological	Series of small wetlands surrounded by agricultural land	65
45) Barley Lake	V 88 57	Geomorphological	Good example of a large corrie lake	67
46) Bateman's Lough	W 40 45	Ecological(O)	Fluctuating lake in grassland with a good winter bird population	68
47) Blarney	W 61 74	Ecological(B)	Base-rich woodland and wetlands support a rich flora	69
48) Cape Clear Island	V 96 22	Ecological(O)	Seabird colony and some patches of heath are of value	71
49) Carrickshane Hill	W 90 73	Ecological(B)	Limestone hill with a species-rich flora	72
50) Carrigacrump Caves	W 903 653	Geological Ecological(B)	Complex cave system with many passages. The quarry also has an interesting vegetation	73
51) Carrigtwohill Caves	W 810 730	Geological	A relatively small system with fine development of dripstone	74
52) Cleanderry Wood	V 67 55	Ecological	A small semi-natural oak wood with rich communities	75
53) Cloonties Lough	W 23 36	Ecological(B)	Acidic hill lake with unusual plant life	76
54) Courtmacsherry Estuary	W 51 42	Ecological (B,O)	Extensive mudflats with wildfowl and waders. Some plants of interest at Broad Strand and Harbour View	77
55) Crookhaven	V 78 24	Ecological(B)	Unusual heath communities occur on rocky outcrops	78

<u>Name of Area</u>	<u>Grid Reference</u>	<u>Interest</u>	<u>Description</u>	<u>Page</u>
56) Eagle Lough	R 50 51	Ecological (B)	Possibly the only turlough in the county ,Eagle Lough has,at least,an interesting plant life	79
57) Gallanes Lough	W 39 43	Ecological (O)	Small lake with relatively high wild fowl numbers:surrounded by floating fen	80
58) Glanmire Wood	W 72 73	Ecological (B)	Deciduous woodland on the eastern bank of Glashboy River	81
59) Glashgarriff R. & L.Gal	W 42 75	Ecological	Wetland habitats of interest,including waterfall,river, fen and lake	82
60) Glenbower Wood	W 99 78	Ecological	Some unplanted areas retain interesting plant & bird life	83
61) Gouganebarra L.	W 09 66	Ecological	An upland acid lake with a better known ecology than most	84
62) Hungry Hill	V 76 49	Ecological (B)	Some interesting vegetation occurs on this rocky mountain, especially on cliffs and beside streams	85
63) James Fort/Sandy Cove	W 63 48	Ecological (B)	Two sites on the west side of Kinsale Harbour with unusual botanical features	86
64) Killaneer House Glen	W 37 56	Ecological	Relatively natural woodland in an agricultural landscape	87
65) Leamlara Wood	W 83 77	Ecological	Fragment of semi-natural oak woodland, unusual in East Cork	88
66) Lissagriffin L./Barley Cove	V 77:27	Ecological (O)	Lagoonal lake & dune grassland are used by a varied bird population	89
67) L.Namaddra & L.West	V 950 603	Ecological (Z)	Mountain lakes with unusual forms of freshwater mussels	90
68) Myross Wood	W 20 36	Ecological (B)	Modified woodland but still with interesting moisture-loving vegetation	91
69) Ovens Caves	W 551 697	Geological	Easily entered caves with nice erosional features	92

Name of Area	Grid Reference	Interest	Description	Page
70) Owens I.	V 871 394	Ecological(O)	A rock on the eastern side of the islands holds a small tern colony	93
71) Priory Wood, Lismire	R 34 08	Ecological	A small but varied wood in a deep valley: has a rich flora	94
72) Prohus Wood (Sullane Bridge)	W 26 73	Ecological	Relatively young oak stand with little recent modification	95
73) Roaring-water Bay (Calf Isl.)	V 96 26	Ecological(B,O,Z)	A rich and varied area with abundant marine life including breeding terns as well as unusual island vegetation	96
74) St Gobnet's Wood	W 1977	Ecological(B,O)	An oak and beech wood, easy of access and with a rich fauna and flora	97
75) Seven Heads Coastline	W 48 36	Ecological(O) geological	Grassland and cliffs much used by choughs. The rocks at Lions Cove and in Dunworley Bay also of interest	98
76) Sheep's Head	V 72 33	Ecological(B,O)	Maritime influence on coastal communities of interest	99
77) Whiddy Island	V 967 487	Ecological(O)	One of the largest tern colonies in the county (56 prs) occurs here	100

1) BALLYHEADY

W 603 601

Area: 300 m²

Interest: Geological

Rating: International Importance

The local Carboniferous slates bear fossils of an extinct fish, Rhabdoderma (Coelacanthus) elongatus in the vicinity of Ballyheedy school. Three sites have been excavated; two are now covered by the tarmacadam of the school yard but the third beside a roadside cottage or lodge is still open. The whole area, including the school, is the site of an old quarry which is the reason that the fossils were first discovered.

Evaluation: This is the type locality for the fossil - the place of first description - and so is of international importance.

Vulnerability & Recommendations: The site is scarcely visible on the ground and is therefore mainly of interest to specialists. However it could be damaged by further building or by road widening and its existence should be communicated to the local road engineers.

The school should be prepared to look after a small display of fossil material which could be arranged by the Geological Survey. It is comparatively seldom that vertebrate fossils are found and the coelacanth fishes form one of the most famous groups.

2) BALLYMACODA

X 06 73

Area: 694 ha

Interest: Ecological (ornithological)

Rating: International Importance

Farmland surrounds much of the estuary of the Womanagh River which escapes to the sea past two small spits. There is saltmarsh here and in a few other places but a considerable part of it has been reclaimed below Crompaun Bridge and is now marshy fields.

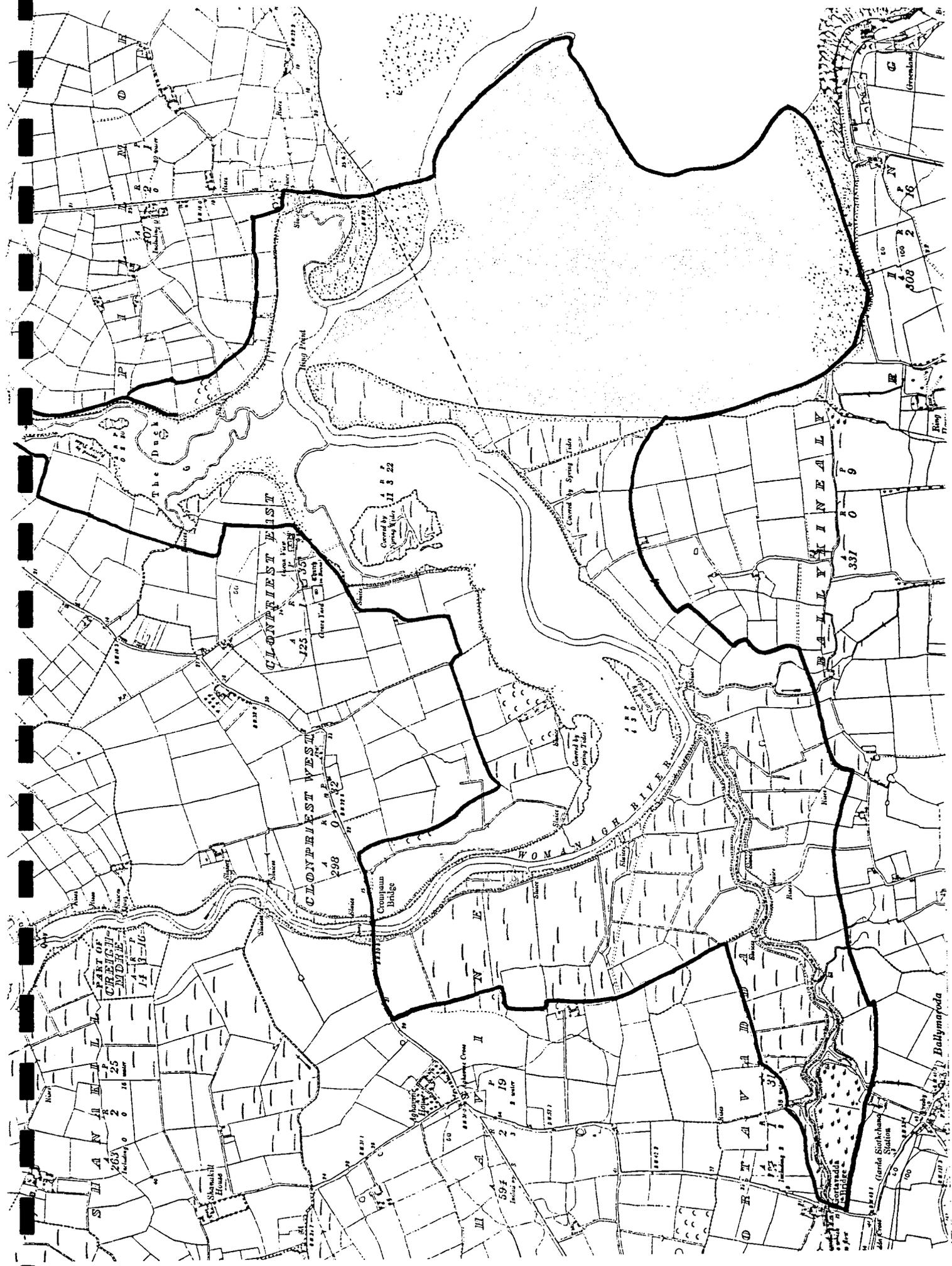
The interest of the area lies in its wintering birds which are mainly waders but also include some dabbling duck. Average (and peak) numbers of some species are given below:-

Mallard	100	Golden plover	9,500 (13,000)
Teal	200	Curlew	1,300
Wigeon	1,000	Black-tailed godwit	800
Shelduck	100	Bar-tailed godwit	400
Oystercatcher	300	Redshank	300
Lapwing	4,000 (8,000)	Dunlin	4,200

Most of these species feed in fields a short distance from the estuary and use it only as a roost. The shelduck, bar-tailed godwit, dunlin and others normally feed on the mudflats however. Roosting at times of high tide and darkness takes place on promontaries and islands which offer security from predators.

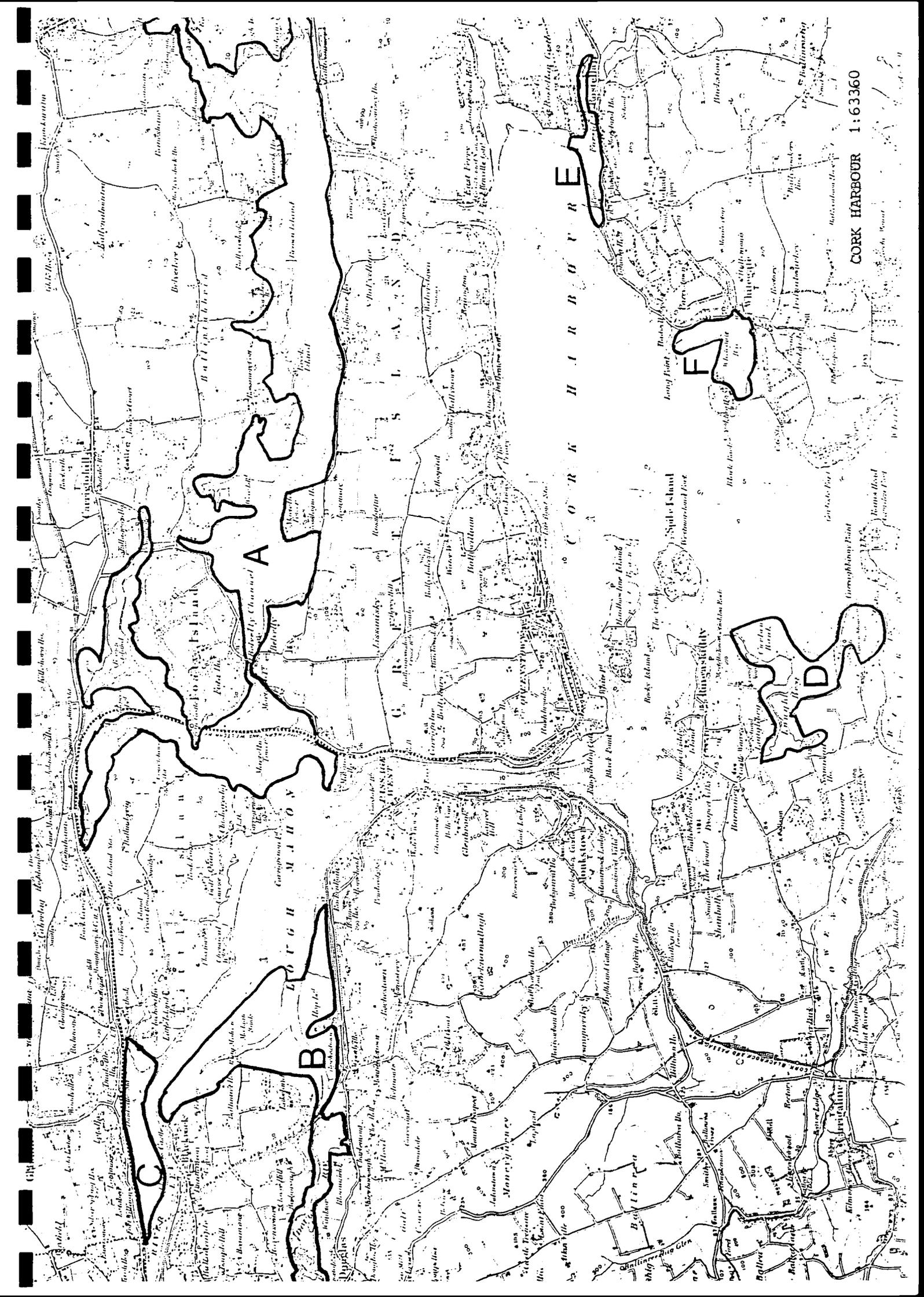
Evaluation: Ballymacoda supports a higher number of waders for its size than any other Cork estuary though the many sites around Cork Harbour contain a larger population in total. The regular presence of 10,000 or more golden plover and up to this number of lapwing creates a spectacle and value of international importance. The flock of black-tailed godwit is also notable.

Vulnerability & Recommendations: Birdlife is attracted to this area because of its rich feeding and lack of disturbance. The proportion of damp fields which cannot be used in winter may be



an important factor though at most times the waders feed in richer pastures and stubbles. The substantial area of mudflats offers alternative feeding also.

The maintenance of all these features should be attempted and in particular housing development should be prevented in sensitive areas. The site does not offer much potential for bird-watching by the public as the bird populations are too mobile.



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CORK HARBOUR 1:63360

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3) CORK HARBOUR

W 78 71

Area: 1,989 ha

Interest: Ecological (ornithological)

Rating: International Importance

3a) Great Island Channel.* W 81 70. Area: 1,236 ha

The mudflats and low shorelines from Little Island east to Ballynacorra form a unit of Cork Harbour of high value to bird life. Because of the extreme shelter the channels and mudflats are stable and their invertebrate life rich. Wild-fowl and waders occur in large numbers over the eight month period of September to April but especially from November to March. Shelduck are the most frequent duck with 800 - 1,000 centred on the Fota/Marino Point area. There are also large flocks of teal and wigeon, especially at the eastern end. Waders occur in greatest density north of Rosslague with dunlin, godwits, curlew and golden plover the commonest species. A population of about 80 grey plover is a notable feature of the area. All the mudflat areas support feeding birds but the roosts are more discrete since birds need rather special conditions for roosting. The main roosts are at Weir I. and Brown I. and to the north of Fota, at Killacloyne and Harper's I. Ahanesk supports a roost also but it is subject to disturbance.

Evaluation: Cork Harbour as a whole is of international importance for its wader flocks, especially golden plover and black-tailed godwit, and for its shelduck. Within the Harbour the north-eastern section, included in this site, is the most valuable and supports a population of wintering birds that appears relatively isolated from the rest.

Vulnerability & Recommendations: Reclamation works pose an ever-present threat to the mudflat feeding areas of the Harbour but seem least likely to occur in the North Channel. However the roadworks associated with the EI may affect part of the inlet at Glounthaune, not a particularly valuable site. The growth of Spartina grass is probably a more significant danger to the area as it is favoured by shelter and mud deposition. Spartina occurs now at Rosslague and Belvelly and there seems no reason why it should not spread eastwards to cover most of the upper mudflats in the North Channel. In this case it will displace feeding birds to other parts of the Harbour.

Because of its inherent wildlife interest and its use for mariculture, it is recommended that the North Channel and surrounding land is zoned for conservation and agriculture. Special provision should be made to preserve the roosting sites and feeding grounds in the Little Island - Fota area where industrialization may occur. At Ahanesk, shooting and other disturbance should be prevented in the vicinity of the bird roost.

3b) Cork Harbour - Douglas Estuary. W 71 69. Area: 372 ha

The Douglas Estuary is situated where the Tramore River enters Cork Harbour. Fine silt forms mudflats of 50-60 ha at low tide bisected by the winding river channel. Around the shore is a narrow fringe of brackish marsh with Spartina (cord grass) in the north-eastern corner and Phragmites (reed) at the western end. Damp grassland occurs on part of the southern side, extending to some low islands which are inundated in extreme high tides. Towards the east the land rises so that around Bloomfield and Besborough better fields occur. Outside the estuary much larger mudflats are found on the south side of Lough Mahon. The area is of interest for its birdlife for it provides food and a roosting site for several thousand waders and several hundred wildfowl. Average (and peak) counts during winter time are as follows:-

Teal	48	(181)	Black-tailed		
Wigeon	161	(550)	godwit	220	(481)
Shelduck	168	(577)	Bar-tailed		
Red-breasted			godwit	122	(474)
merganser	80	(120)	Redshank	197	(400)
Oystercatcher	314	(1,100)	Dunlin	684	(2,543)
Lapwing	948	(5,485)	Total Wildfowl	412	(1,074)
Golden plover	1,148	(3,400)	Total Waders	3,563	(37,355)
Curlew	236	(675)			

Evaluation: In ornithological terms the Douglas Estuary is an essential part of the Cork Harbour Complex and contains much higher numbers of waders than would be expected from its relative size. The density of birds/feeding area is calculated to be 23 ha which is the second highest figure in the sixteen separate units around the harbour. Golden plover, lapwing, the two godwits and redshank are the major species and the flock of black-tailed godwits forms more than 1 per cent of all those in Ireland.

Vulnerability and Recommendations: The Douglas Estuary is in an urban location with housing in its upper half, a golf course on the north side, a footpath along the old Rochestown railway and a major road planned across it. If it is to be maintained as a site of ornithological interest, disturbance of the bird life must be minimized, particularly at the roosting sites. Birds become accustomed to heavy traffic, industrial noise and people if they walk on a defined route. Most disturbance is caused by people with dogs breaking new ground close to a roost so the upper estuary and islands are the most vulnerable areas. Attention should be given to this aspect in any 'opening up' of the area which is otherwise to be recommended (see An Foras Forbartha, 1983).

3c) Cork Harbour - Tivoli/Dunkettle* W 73 72. Area: 80 ha

The mudflats off the reclaimed land at Tivoli and Dunkettle are rich in food organisms and attract large numbers of wading birds when they are uncovered. Oystercatcher, bar-tailed godwit, dunlin and knot are the major species with some curlew and redshank. A high tide roost occurs at Dunkettle and birds come from a wider area to it, including some from Little Island. A typical count for this roost is as follows (peak figures in brackets, when available):

Teal	50	Bar-tailed	
Oystercatcher	700 (1,500)	godwit	200 (500)
Ringed plover	15 (250)	Redshank	60
Curlew	40	Knot	1,270 (3,000)
Black-tailed godwit	220 (1,000)	Dunlin	2,000 (2,500)
		Lapwing	50 (1,800)

Evaluation: The area has both a feeding and roosting value to a significant part of the bird populations in the upper harbour. The reclamation of the Tivoli end of the site has somewhat affected its importance but there remains a roost on the infill at Dunkettle.

Vulnerability & Recommendations: Reclamation of the feeding mudflats and development on the reclaimed land are adverse influences but if sufficient land is left outside any industrial development it may continue to be used as a roost.

* See Appendix

3d) Cork Harbour - Lough Beg/Currabinny*. W 79 63. Area: 160 ha

Lough Beg is a small estuary on the western side of the harbour just north of Crosshaven. Two small intakes have been reclaimed at its western end and these brackish marshes now have some botanical interest. The saltwater/freshwater transition is marked by the presence of saltmarsh vegetation, grading into clubrushes (Scirpus maritimus, S. lacustris) and reedbed (Phragmites). A natural piece of reclamation at Lough More has created a shingle bank with grassland and here certain unusual plants grow, for example Lepidium latifolium (pepperwort), Kickxia elatine (fluellen) and Geranium rotundifolium (round-leaved cranesbill).

The mudflats of Lough Beg provide feeding for waders and wildfowl despite the growth of Spartina but it is mainly as a high tide roost that the area is listed. It has this function for a large part of the shorebird population of the south-western corner of the harbour, from Rafeen to the Owenboy River. Wildfowl (teal, wigeon, shelduck, mallard, shoveler) reach a maximum level of about 900 while up to 3,000 waders may occur, mostly golden plover, lapwing and dunlin.

The area adjoins Currabinny Wood on its southern side which is a Forest and Wildlife 'open forest' of mixed tree types. Beech, birch and conifers are frequent and there are areas of gorse, rocky outcrops and heathy grassland. Two plants of interest grow in these patches of heath, Orobanche rapumgenistae (broomrape), a parasite of gorse or broom (Cytisus scoparius) and Trifolium ornithopodioides (fenugreek), an annual clover of sporadic appearance.

Evaluation: The area is listed because of its floristic interest, notably at Currabinny and Lough More, and its ornithological importance as a roosting site for the SW Harbour. Orobanche is now a very rare species and Currabinny is its only station for many miles around.

Vulnerability & Recommendations: Lough Beg itself is in an industrial area and is subject to the pressures of reclamation and changes of land use that this entails. Proposals for dumping on the site of the bird roost have been made but have been deferred for the time being. Birds and heavy industry frequently live side by side in estuaries unless there is too much disturbance from people. There is every likelihood that the interest of Lough Beg will survive if the area included on the map is retained in its present form. An agreement between Penn Chemicals and the Irish Wildbird Conservancy, initially for two years, gives this area a temporary respite and may eventually lead to its preservation.

* See Appendix

At Currabinny the changes of use that would be detrimental to the flora are the clearance of gorse and broom either intentionally or by fire. The local forester should be alerted to the importance of his site if he does not already know it and the necessity of careful management stressed.

Some attention could well be given to extending the foot-path system and recreational role of Currabinny to Lough Beg by means of a shoreline path.

3e) Cork Harbour - Rostellan/Aghada. W 87 66. Area: 50 ha

Rostellan Lough differs from the rest of Cork Harbour in that it has been impounded and is no longer tidal. It has a distinct bird fauna therefore in which diving ducks and grebes are most noticeable. Little grebe (50), pochard (100) and tufted duck (60) are frequent species. Some of the former breed there along with mallard at the eastern end. Snipe are the most important waders though curlew and lapwing may visit the area.

The marginal vegetation is mostly of clubrushes (Scirpus lacustris, S. maritimus) with a little bulrush (Typha latifolia). Alder trees occur around some of the shore but there is much damp grassland also. In the waterbody itself algae are very common but a number of higher plants are inhibited by the brackish nature of the water.

The mudflats westwards to Aghada are used by feeding waders while the sea offshore forms a focus for different species, especially great crested grebe, scaup, goldeneye and red-breasted merganser.

Evaluation: Rostellan is an attractive area and the lake contributes much to its character. Though its scientific interest is not high in absolute terms, its birdlife offers an interesting contrast with the rest of Cork Harbour and could be used for educational purposes.

The main harbour off Aghada supports an important population of the sea feeding wildfowl, for which Cork Harbour is nationally significant.

Vulnerability & Recommendations: Drainage or reclamation would obviously endanger the future of the area which otherwise appears secure.

3f) Cork Harbour - Whitegate Bay. W 83 63. Area: 91 ha

The broad sweep of Whitegate Bay is now dominated by the Aghada power station on Long Point but it is still used by a good number of shore birds. Their roost used to be on Long Point but it has now moved to the vicinity of Corkbeg Island. Not all the feeding birds go to it and some fly north eastwards to Rostellan. The bird numbers in the area vary from day to day but typical figures would be:-

Shelduck	15	Redshank	30
Wigeon	220	Bar-tailed godwit	75
Dunlin	500	Turnstone	25
Knot	200	Oystercatcher	120
Curlew	80	Ringed plover	50

Evaluation: The area supports up to 10 per cent of the shore birds in Cork Harbour and can be thought of as locally important.

Vulnerability & Recommendations: Further reclamation of the bay seems unlikely in view of its amenity value but it would decrease the value of these feeding grounds.

4) COURTMACSHERRY BAY (HOWE'S STRAND)

W 55 43

Area: 29 ha

Interest: Geomorphological

Rating: International Importance

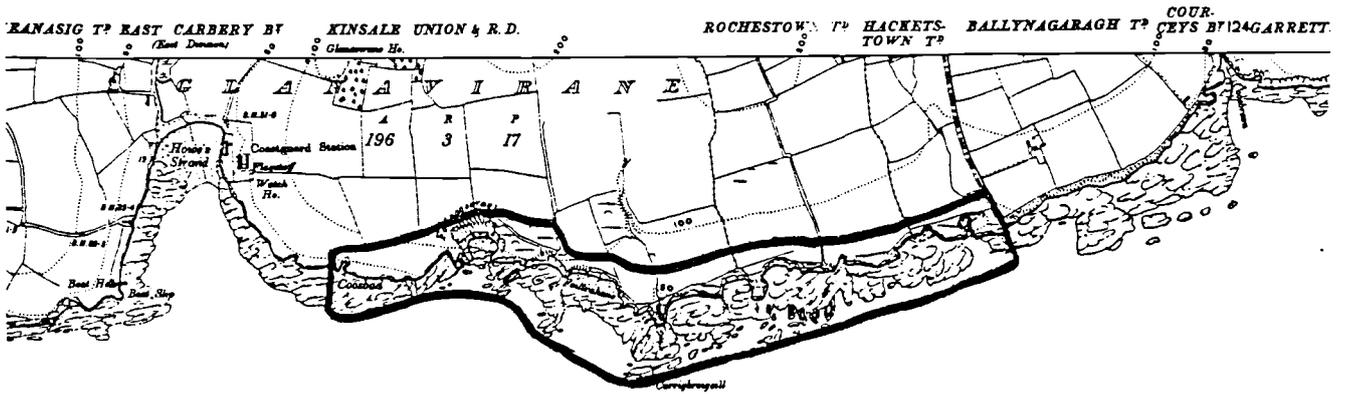
Along most of the northern shore of Courtmacsherry Bay a smooth platform of rock occurs above high tide mark and in front of a small cliff of glacial drift. The platform is connected to the rising ground behind and the drift fills the angle of an old line of cliffs forming the pre-glacial shoreline. The best known section lies in Glanavirane townland and it was here that it was first described (Wright & Muff, 1904) and illustrated.

Evaluation: This is the type section showing the stratigraphical position or relative age of the preglacial raised beach platform widespread in NW Europe. For this reason it is visited by numerous international parties and local specialists.

Vulnerability and Recommendations: The drift cliff backing the rock platform is subject to occasional erosion by storm waves but these do not endanger the interest of the site or, indeed, the farmland behind. The area seems secure from all forms of development.

COURTMACSHERRY BAY
(HOWE'S STRAND)

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5) THE GEARAGH

W 29 69

Area: 203 ha

Interest: Ecological (botanical, ornithological),
Geomorphological

Rating: International Importance

The Gearagh is the complex river channel of the Lee above the hydroelectric reservoir. The limestone valley of the river was filled with sand and gravel during glacial times and the river on meeting this flat expanse breaks into a multitude of channels, 2-6 m wide. The islands and some of the drier ground around the edges carry a woodland cover of oak (Quercus robur), ash, birch, willow (Salix atrocinerea, S. caprea) and hazel with some holly. The channels in between hold aquatic plants if they are not too shaded. Where they have been deserted by the main flow they are filled by marsh communities.

With the construction of dams lower down the valley, about 60% of the Gearagh was drowned in 1954-55 and the blackened stumps of the dead trees today show its former extent at times of low water. Tree felling occurred throughout the area before the waters rose and together with the submergence was enough to write off the whole Gearagh in many people's minds. Regrowth of the trees in the part that remained however, has created an ecologically rich area, unique in Ireland.

Beneath the woodland canopy which is composed of multi-stemmed trees 8-10 m high, the ground vegetation is fairly uniform. Allium ursinum (wild garlic), Anemone nemorosa (wood anemone), Euphorbia hyberna (Irish spurge), Veronica montana, V. chamaedrys (speedwells) and Conopodium majus (pignut) are conspicuous with Filipendula vulgaris (meadowsweet), Chrysosplenium oppositifolium (golden saxifrage) and Blechnum spicant (hard fern) in places. Oenanthe crocata (water dropwort), Osmunda regalis (royal fern) and Caltha palustris (marsh marigold) follow the river channels. There is a good selection of shrubs and small trees, Viburnum opulus (guelder rose), Euonymus europaeus (spindle tree) Prunus padus (bird cherry) and Rhamnus catharticus (buckthorn) are notable.

Away from the woodland which, if anything, gains in height as one goes upstream, the marshy ground has varied plant communities with many sedges and rushes and such aquatic species as Myriophyllum (water milfoil), Apium inundatum (marsh wort), and

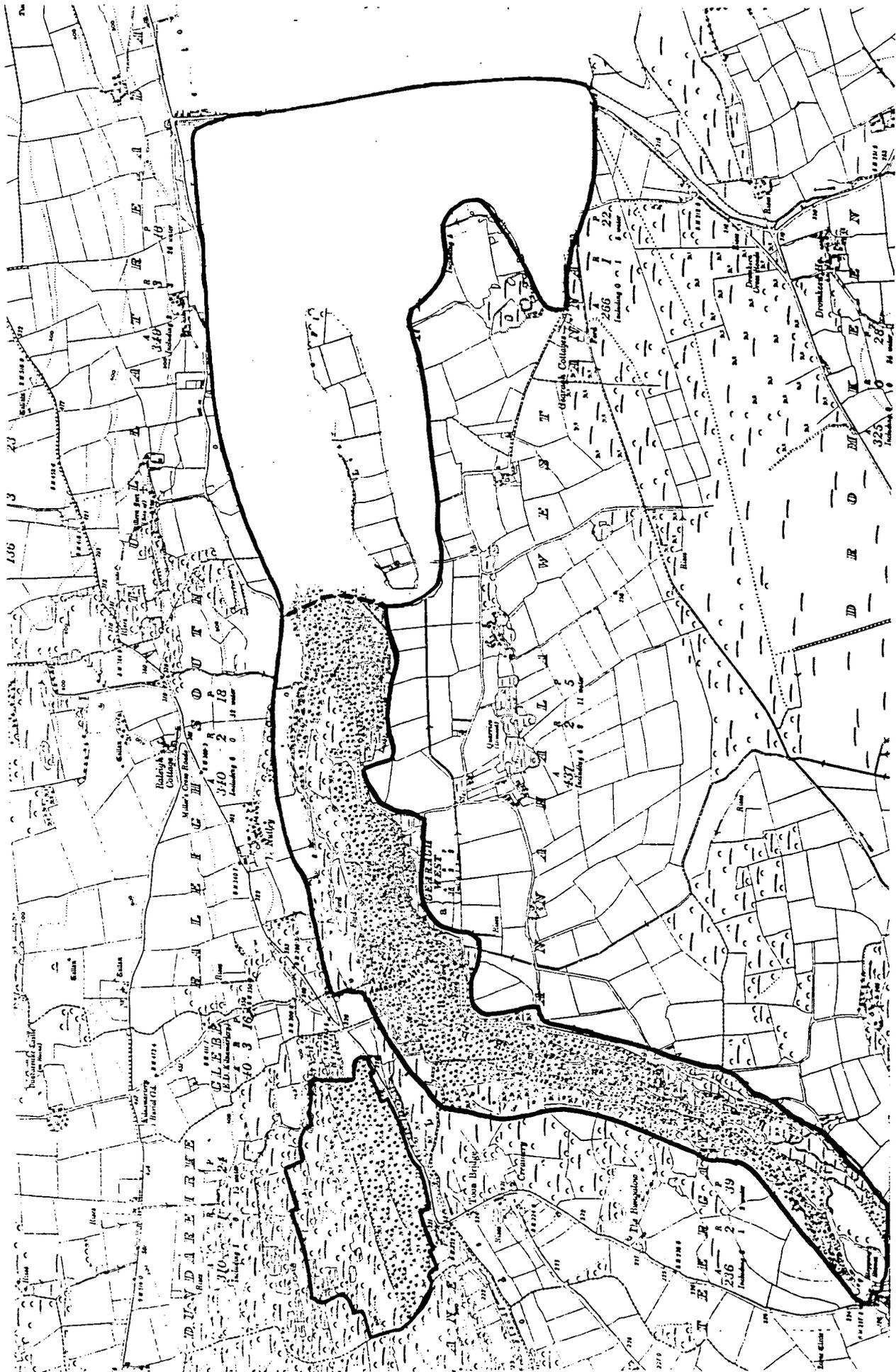
Typha latifolia (bulrush). Scirpus sylvaticus (wood clubrush), Carex vesicaria (a sedge) are two of the rarer species while on mud intermittently exposed in summer, Limosella aquatica (mudwort), Elatine hexandra (waterwort) and Lythrum portula (water purslane) occur.

Most of the area is not subject to disturbance except by grazing cattle and so the bird fauna is rich. Large numbers of mallard nest and in the winter they are joined by migrants to give a population of up to 750. These birds feed mainly downstream of the Gearagh woodland on the upper reservoir and occur with other surface feeders, especially teal (500-600) and wigeon (800). Occasionally large flocks of mute swans (300) have been recorded and there are usually some waders, lapwing and golden plover present on the marginal fields.

Evaluation: The Gearagh woodland is unique in Ireland and represents a habitat that has become very rare also in Europe. The Council of Europe adopted a resolution in 1982 recommending the conservation of such riverine forests in all member states because of their rarity and intrinsic interest.

The bird populations using the reservoir in the winter months form one of the very few inland aggregations of wildfowl in the county and are therefore of some value.

Vulnerability & Recommendations: The woodland is developing naturally after the widespread clearance it suffered 30 years ago and is little used by cattle or people. It seems secure in the ownership of the ESB though it could obviously be damaged by renewed tree felling which has recently been reported, or an increase in grazing pressure. Some overshooting is generally thought to occur around the lake and to control this, as well as to manage the woodland if necessary, the area should be made a statutory nature reserve under the Wildlife Act, 1976. Management thereafter could well include the opening of limited parts of the woodland to public access.



6) GLENGARRIFF WOODS

V 92 57

Area: 245 ha

Interest: Ecological (botanical, zoological)

Rating: International Importance

The Glengarriff woodland is the only sizeable remainder of the ancient forest that once covered all the hilly areas of West Cork. It survived the clearances that happened elsewhere as part of the Bantry demesne until taken over by the Forestry Division as it then was. The area was used as pleasure grounds for hunting and fishing and so is dissected by paths and lodges, mostly near the rivers. Much of the area was planted with conifers from 1920 onwards though patches of the natural oakwoods were left on the steeper slopes and around the Canrcosk river.

The woodland is formed of oak and holly with much birch and rowan and a little yew. *Arbutus* occurs on the more exposed ridges and rhododendron has spread widely since its introduction beside houses and paths. The commonest plants on the ground are *Calluna vulgaris* (heather), *Luzula sylvestris* (woodrush), *Vaccinium myrtillus* (frochan) and the ferns *Pteridium aquilinum*, *Blechnum spicant* and *Dryopteris aemula* but there is much small scale variation in the habitat from heathy places with *Galium saxatile* (heath bedstraw), *Carex echinata* (star sedge) and *Molinia caerulea* (moor grass), to rocks with *Solidago virgaurea* (golden rod) and *Umbilicus rupestris* (pennywort) and springs and flushes. The woodland herbs include *Ajuga reptans* (bugle), *Circaea lutetiana* (enchanter's nightshade), *Euphorbia hyberna* (Irish spurge) and *Digitalis purpurea* (foxglove).

In the sheltered warm conditions that prevail animal life is abundant and the insect fauna in particular is rich. Amongst the butterflies both the green and purple hairstreaks occur with the large heath, hollyblue and wood white. Some work on the moth and fly faunas also show the area to be interesting while the occurrence of the spotted (Kerry) slug (*Geomalacus maculosus*) is well known.

Evaluation: The Glengarriff woodland is the only sizeable remnant of oak forest in west Cork and can be equated with the Killarney woods in its ecological interest. It does not have the same variation as this larger area but even still can be regarded as of international importance. The occurrence of many southern and oceanic species in its flora and fauna is notable.

Vulnerability and Recommendations: The spread of rhododendron is a major danger to this area and every assistance with its clearance should be given. Grazing by the Sika deer is also a problem since it prevents the regeneration of the trees.

7) LOUGH HYNE*

W 09 28

Area: 222 ha

Interest: Ecological (botanical, zoological)

Rating: International Importance

Lough Hyne is a deep land-locked bay joined by a narrow channel to the sea. It was first a freshwater lake in postglacial time and was only later invaded by the sea. The narrowness of the channel and the presence of a rock platform or ridge within it means that tides are reduced to a metre or so and the zonation of communities that generally is found in intertidal regions is telescoped into a very small band. Rapids occur when the tidal levels outside and inside differ and this is unusual in a marine habitat.

The concentration of the intertidal zone, the warmth and shelter of the waters and the lack of disturbance by the larger predators including man all combine to produce an extremely rich fauna which combines all that can be found in rock pools with species characteristic of shallow inshore areas. The best represented groups are probably the sponges, sea slugs, sea urchins and fish and, amongst the plants, the red seaweeds. Warm water species are especially prominent and for some of them this is their only station outside Iberia or the Mediterranean. The surrounding land contains good populations of passerine birds, such as stonechat and linnet: wintering chiffchaffs are quite often present also.

Evaluation: The unique combination of environmental factors at Lough Hyne, and the resulting richness of the flora and fauna make it of international importance. This has been recognized by its designation as our first marine nature reserve. It is also the reason for the existence of a small university laboratory on the shore.

Vulnerability & Recommendations: The area could be damaged by water pollution and disturbance. Despite the presence of the nature reserve, there is as yet no wardening system in operation.

It is important that no development within the catchment gives rise to pollution in the lough.

*See Appendix

8) MOUNTGABRIEL

V 93 34

Area: 43 ha

Interest: Geological, archaeological

Rating: International Importance

A number of ancient copper mines exist on the eastern slopes of Mount Gabriel near Schull which are thought to date from the Bronze Age. They are visible as a series of short tunnels and tip heaps much covered by vegetation. The ore was mined by being hacked at with stones (mining mauls) and some of these still lie about.

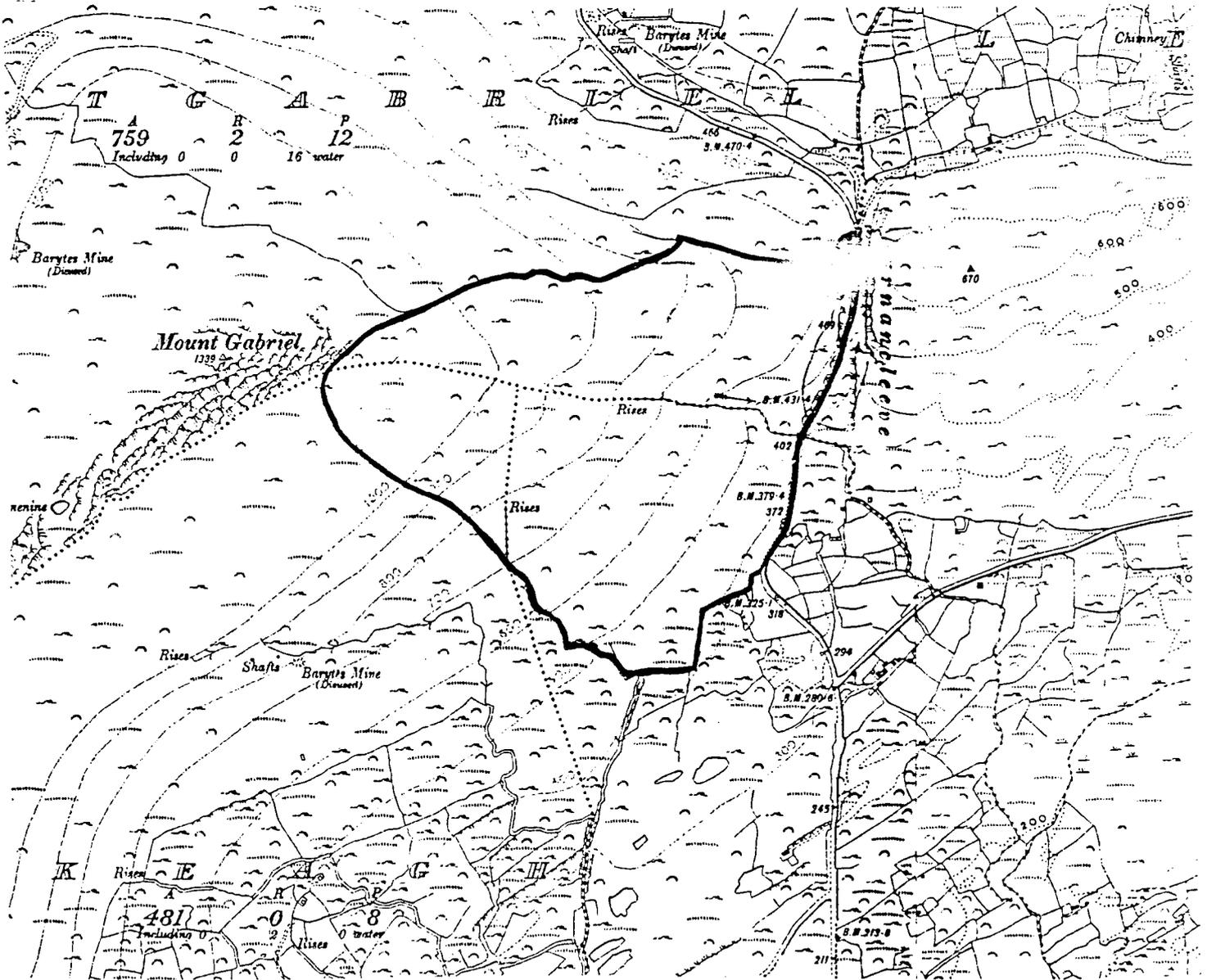
Evaluation: Mount Gabriel is considered to be the only Bronze Age copper mine in Europe which was not subjected to re-working later on. For this reason it is of very great importance and is becoming well-known in the literature.

Vulnerability & Recommendations: The site is vulnerable chiefly to souvenir hunters and for this reason it was made a National Monument in 1970. However it also offers tremendous educational potential and could provide the basis for a sensitive tourist development. Adequate protection would obviously have to be given them in this case.

There is undoubtedly some copper still in this general area so the mines will always be vulnerable to further development. There has been little recent interest, however, as amounts appear very small.

1:10560

MOUNTGABRIEL



9) RINGABELLA BAY AND POINT

W 79 58

Area: 8 ha

Interest: Geological, geomorphological

Rating: International Importance

A low cliff of glacial drift occurs at the narrows of Ringabella Bay, north-west of the point. It slopes down to high water mark beneath coarse shingle. At its base a smooth platform exists, itself sloping seaward at an angle of 3-10°. This is a 'fossil' beach and marks the coast as it was before glaciation. The marine platform is about 50 m wide and is partly covered by the glacial drift.

Ringabella Point, by contrast, has a much older fossil locality set in a black mudstone layer of the Cork beds. The outcrop is small, about 1 x 10 m in extent but has yielded goniatite and conodont fossils in some numbers. It is the type locality for one animal (Kazakhstania hibernica) and is also the only known place in western Europe where this genus occurs.

Evaluation: The Ringabella Bay site, like Courtmacsherry Bay (Howe's Strand), is of importance in showing that the raised marine platform of Ireland, Britain and Brittany pre-dates the first glaciation. It differs in certain features from the Howe's Strand section but the two are generally complementary.

The fossil locality at the Point is also of international importance and has been the subject of much study.

Vulnerability & Recommendations: The Ringabella Point site is secure from everything but practising geologists so its exact location should not be divulged. It lies in private land which already protects it to some degree.

The other site is partly adjacent to the public road and could be damaged by coastal protection work if this came to be necessary. Its existence should be notified to the road engineer of the district and advice should be sought before any road development or coastal protection takes place.

In view of its location close to Crosshaven it might be suitable for public display, i.e. a plaque explaining its significance.

10) BALLYCOTTON BAY (AND GARRYVOE)*

W 98 64

Area: 262 ha

Interest: Ecological (ornithological, botanical)
geological

Rating: National Importance

The small rivers flowing eastwards into Ballycotton Bay have been partially blocked by beach deposits so that three separate wetlands have developed. Ballycotton Lake was formerly open to the sea but it is now isolated and brackish, tending towards freshwater. Extensive reed beds (Phragmites australis) are a feature and these are spreading rapidly in the shallow conditions. To the north the estuary of the Shanagarry river remains tidal though a sand spit lies partly across its entrance. More permanent ponds occur north of Ballynamona where in addition there are thin reed-beds. These are best developed below Garryvoe where the marshes contain such interesting plant species as Carex riparia (pond sedge), Rumex hydrolapathum (great water dock) and Veronica catenata (pink water speedwell).

It is chiefly for their bird life that these wetlands are known. In winter they support populations of wigeon, teal, mallard, shelduck and pochard, numbering between 100-400. Waders such as golden plover (1,000), lapwing (800), curlew (400) and both godwits (each up to 100) are of frequent occurrence while a very wide range of other species may sometimes be found. These include waders and wildfowl from America as well as Eurasia. The populations of smaller birds are also interesting and include some breeding species not widely found elsewhere. The shingle beach itself is mobile and influenced by storms. This creates open conditions in which several unusual plants like Crambe maritima (sea kale), Atriplex littoralis (grass-leaved orach) and Brassica nigra (black mustard) grow. Raphanus maritimus (sea radish) is very noticeable in this community and there is some Elymus (sand scutch) and Leymus arenarius (sea lyme grass).

The shoreline at Garryvoe is formed of a cliff of glacial material being eroded by the sea. The different appearance of bands within this cliff and the differing composition of their incorporated stones show that there are two tills, each with a different origin.

* See Appendix

Evaluation: The beach and immediate hinterland of Ballycotton Bay has many features of ecological interest and is valuable especially because of its proximity to Cork City. This is the major reason that so many unusual bird species are recorded there: they must occur elsewhere also but are not seen by bird-watchers. The inherent interests of the area are the breeding and wintering birds, the botanical features of the strand and marsh at Garryvoe and the Garryvoe coastline which shows the relationship of two glacial tills, one being produced by the local mountain ice-sheet and the other, the Ballycraheen, by the Irish Sea glacier.

Vulnerability & Recommendations: These coastal sites may be affected by recreational or farming pressures and applications for housing development should be viewed in the light of their effects on the bird life. It is felt that permission should not be given within the outlined area. The water level in Ballycotton Lake now favours it as a nesting habitat for birds rather than a wintering or feeding area and there is a good case for wanting to control it. This would allow both segments of the bird fauna to exist and also would benefit the use of farming land nearby.

Coastal erosion has occurred in the area and is continuing at its southern end. It does not endanger the geomorphological site at the moment.

1:24994

BALLYCOTTON BAY (AND GARRYVOE)



11) BALLYCRONEEN BAY

W 90 61

Area: 42 ha

Interest: Geological

Rating: National Importance

The low cliffs of glacial drift behind the beach include a wind band of uniform material deposited by Irish Sea ice deflected westwards along St George's Channel. This is the type locality for the Ballycroneen till as it was described here in detail first.

Evaluation: The value of the site is as a reference point for the Ballycroneen till which occurs quite widely along the south coast.

Vulnerability & Recommendations: It is unlikely that development will adversely affect this site but coastal protection work if any should be designed in consultation with a suitable specialist.

12) BALLYDESMOND

R 151 042

Area: 5 ha

Interest: Geological

Rating: National Importance

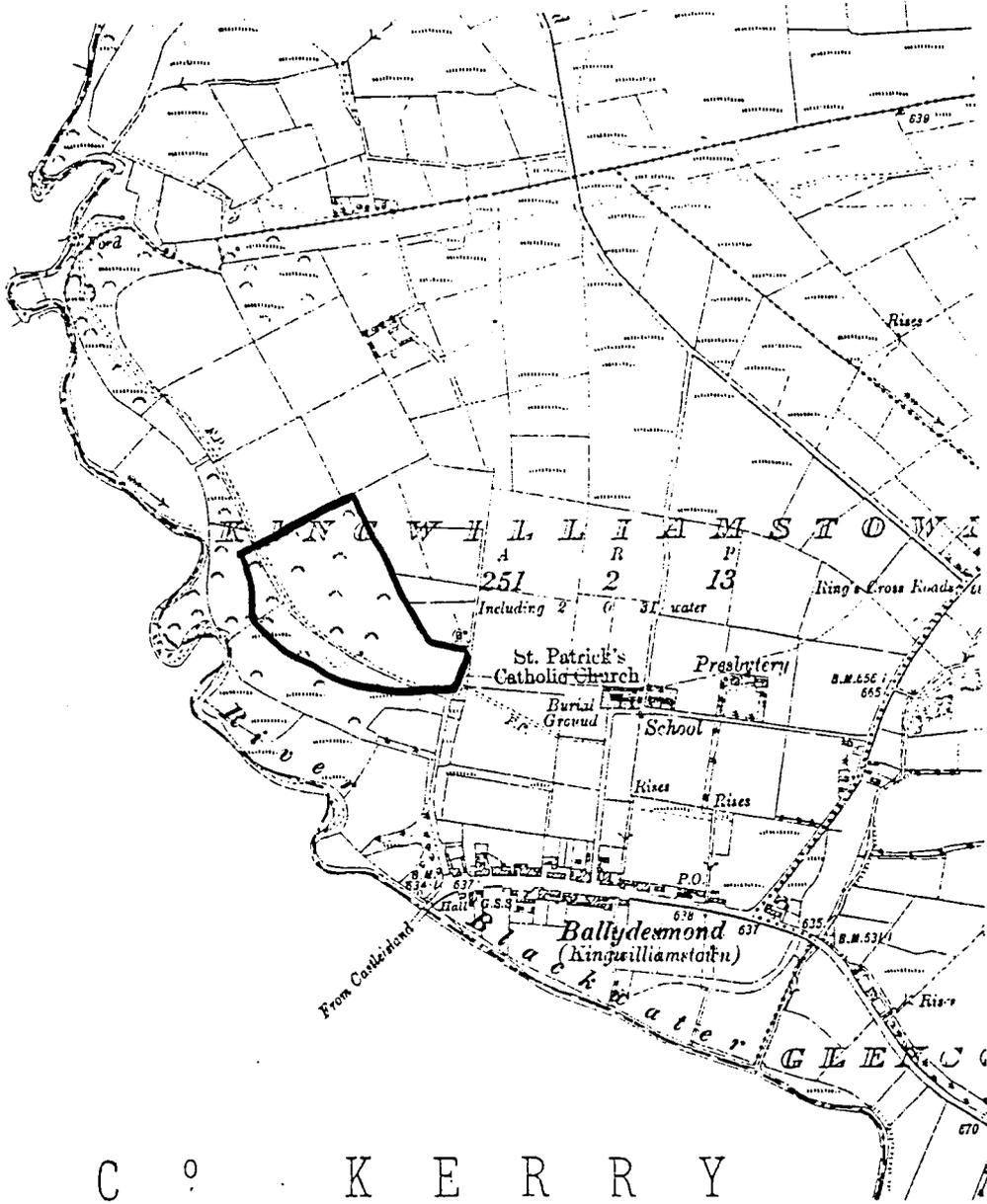
Frost polygons are the feature of interest here, exposed in the face of a working quarry. The polygons are formed by ridges of stones which collect between frost hummocks in tundra conditions. They occur close to an icesheet when a layer of permafrost affects soils with little vegetational cover. It is thought that Ballydesmond was not covered by ice during the last glaciation since it lies between the southern limit of the main (Midlandian) icesheet and the northern limit of the Cork-Kerry icesheet. The polygons were formed at this time, perhaps 15,000 years ago.

Evaluation: Unglaciaded regions are restricted to Munster and south Leinster, so frost polygons are mainly found here. Ballydesmond seems to be the best example of these features in the country since they have generally been obscured by soil development or destroyed by agriculture.

Vulnerability & Recommendations: The quarry was active in the 1970s and may still be, so the polygons are very vulnerable to damage. A section of the face should be fenced off to prevent access by earthmoving equipment, etc. This action should be taken urgently as some polygons have already been destroyed.

1:10560

BALLYDESMOND



C O K E R R Y

13) BANDON VALLEY

W 56 53

Length: 40km

Interest: Ecological (B,O)

Rating: National Importance

The Bandon River flows almost due east for much of its course, following a natural synclinal valley that itself extends to Cloyne. At Inishannon however, the river turns abruptly to the south crossing several ridges before reaching the sea at Kinsale. The interest of the valley lies partly in its aquatic habitats since the river has not been deepened artificially as is so often the case. Downriver from Dunmanway there are several marshy areas where ox-bows and disused channels house such plants as Achillea ptarmica (sneezewort), Apium inundatum and A.xmoorei (fools watercress), and Elatine hexandra (waterwort). Woods become more frequent towards Bandon especially where meanders of the river approach the valley's edge and create steep slopes. Such woods are generally semi-natural, stemming from planted trees and with species like sycamore and beech mixed in with the native oaks. The ground flora can be interesting however with Silene dioica (red campion), Moehringia trinervia (sandwort) and Euphorbia amygdaloides (wood spurge), here in the centre of its Irish range. Castlebernard Park still has extensive woodland but on the other side of Bandon oakwoods of perhaps greater value occur around the old railway line.

Below Inishannon the river becomes tidal before it becomes brackish and extensive reedbeds develop of Phragmites australis (reed), Glyceria maxima (reed sweet-grass) and some sedges. Leucojum aestivum (summer snowflake), Lysimachia vulgaris (yellow loose-strife) and Acorus calamus (sweet flag) occur locally, with Carex laevigata (a sedge), and Milium effusum (millet grass) associated with woodland. Here hairstreak butterflies also occur. Shippool Wood is now much planted with conifers but retains some ecological interest, Dunderrow Wood rather less.

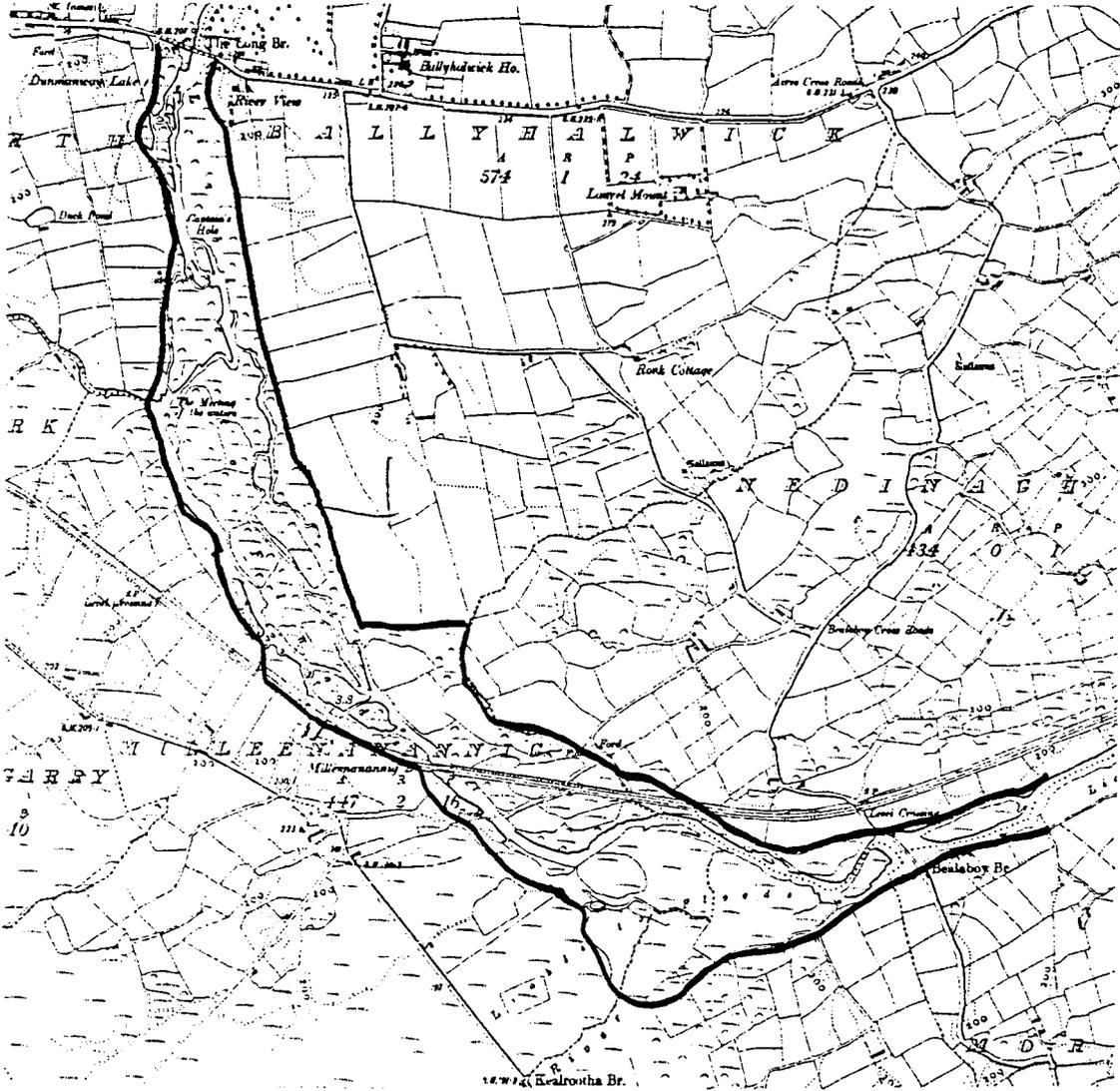
The upper part of the river, before it sinks into a narrow gorge at Bandon, floods occasionally in winter and at such times attracts such birds as lapwing and curlews as well as mallard and teal. Lower down the birdlife is more associated with woodland and includes characteristic species like owls, sparrowhawk, woodcock and jay. Cormorants and herons fish throughout and there are also otters in many places. Towards Kinsale the tidal mudflats provide feeding for a good variety of waders which collect on the small saltmarsh at Kinsalebeg to roost. Here up to 1,000 golden plover, 3,000 lapwing, 200 oystercatcher,

black-tailed godwit and curlew and up to 1,500 dunlin may be seen as well as rarer species, especially in autumn.

Evaluation: Large river valleys in cultivated regions frequently contain the only semi-natural habitats for miles around and offer a wildlife link across inhospitable country. The Bandon valley is specially valuable for its woodlands and its unmodified river bed, a rare enough habitat in the European context.

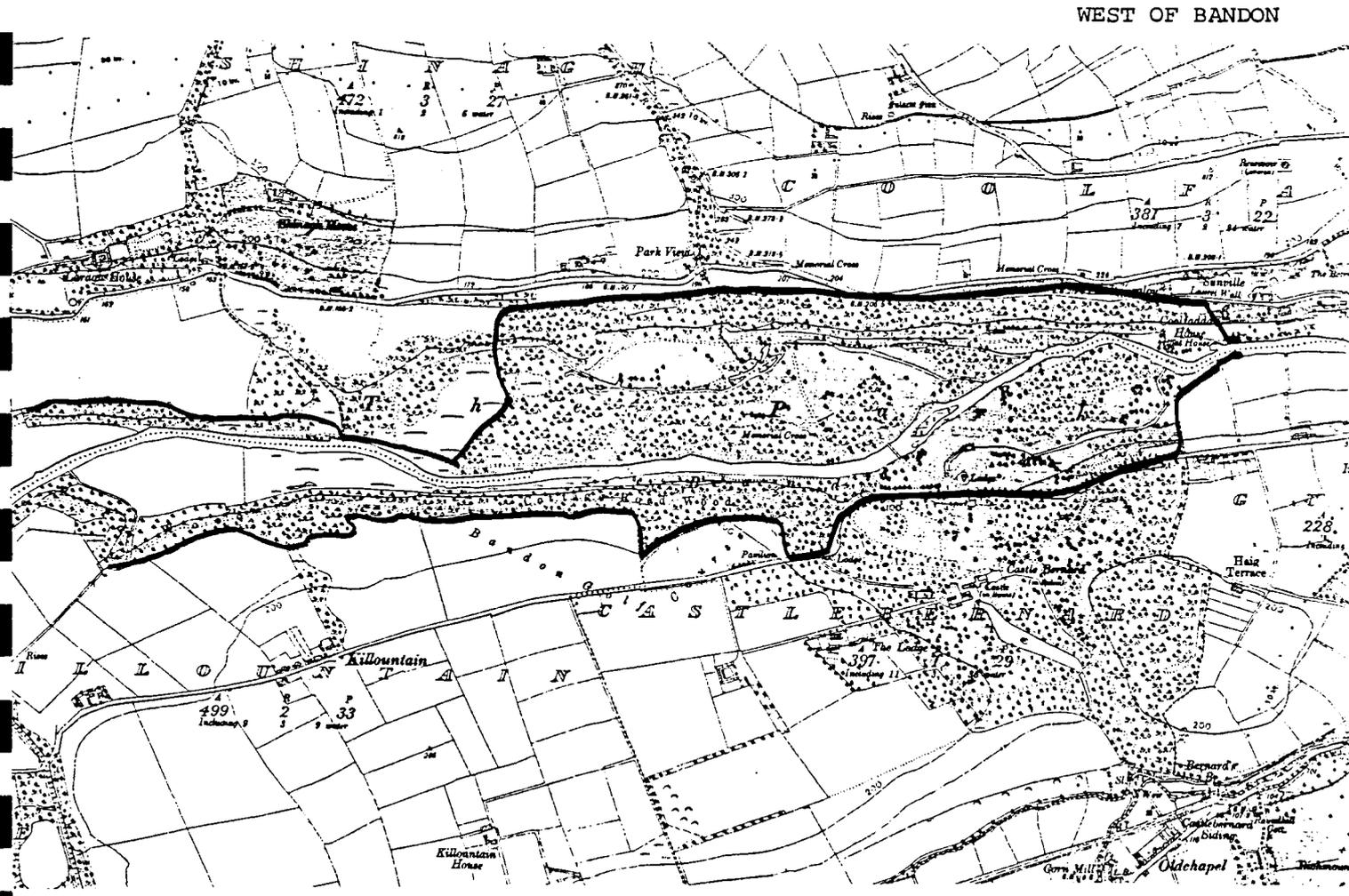
Vulnerability and Recommendations: Pollution and drainage are obvious threats to any river but the Bandon at the moment seems in relatively good condition. It is not accessible to many people however and consideration should be given to developing a long distance footpath, perhaps partly using the old railway line.

The more interesting sections of the valley are mapped overleaf.



BANDON VALLEY
SOUTH OF DUNMANWAY

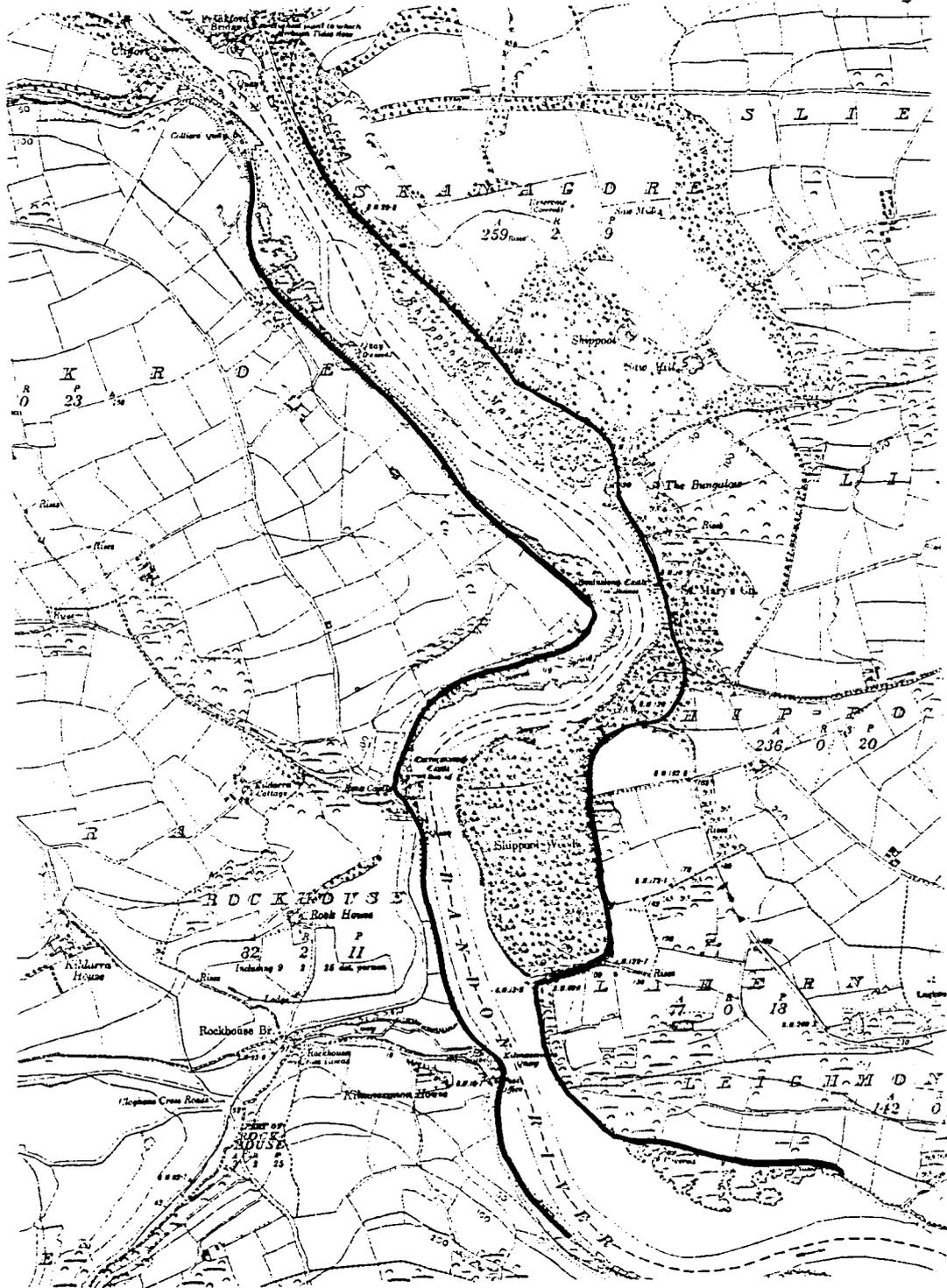
1:16246



WEST OF BANDON

BANDON VALLEY BELOW INISHANNON

1:16246



14) BANTRY DRUMLINS

V 99 50

Area: 3,578 ha

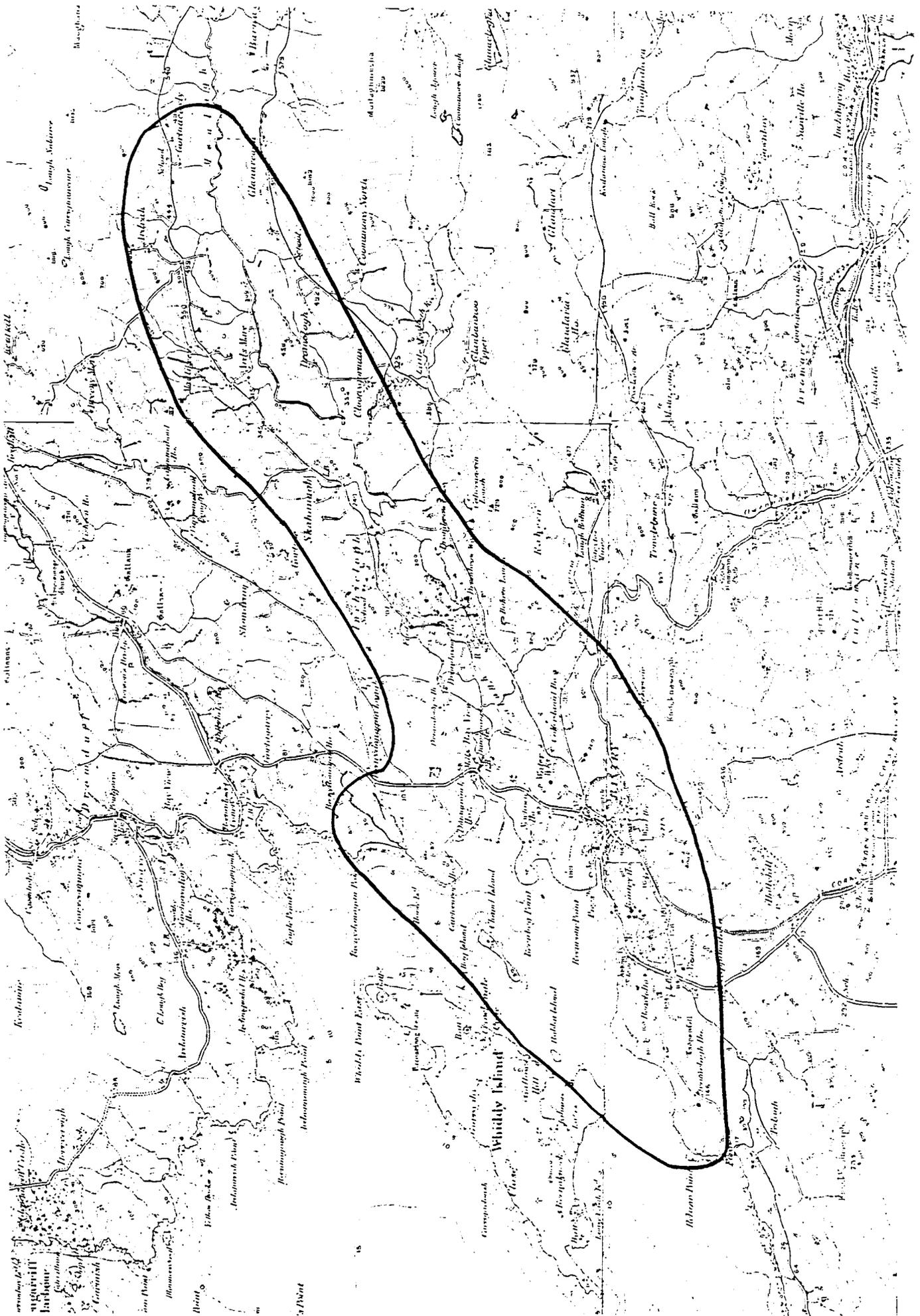
Interest: Geomorphological

Rating: National Importance

Drumlins are the low rounded hills which are sometimes formed beneath an ice-sheet as it moves slowly over the lowlands. They are particularly well developed in Ireland where they occur in a broad strip of country from Clew Bay to County Down. Here they were shaped under a regional ice-sheet of large size. The Bantry Drumlins by contrast were made by a small ice-sheet fed by the local Cork-Kerry glaciation and are the only example of this situation in the country.

The hills themselves have few distinctions. They are covered by fields, hedges and sometimes patches of trees and are used as grazing land. The most noticeable are those that occur offshore as low islands, occasionally eroded by the sea.

Vulnerability & Recommendations: The drumlins contain no deposits of sand or gravel worth extracting and are thus secure from most developments. New houses should not be placed so as to obscure their form, however, and the visibility of the islands especially should be maintained.



15) BLACK BALL HEAD

V 584 397

Area : 7 ha

Interest: Geological

Rating: National Importance

A small site on the cliff side, this exposure shows intrusions of igneous rock (tuff) into the local sandstones. They are of interest because of their mode of origin (probably fluidisation of overlying rock by hot gases) and their composition (rich in calcium carbonate). The area of interest measures about 120 x 180 m.

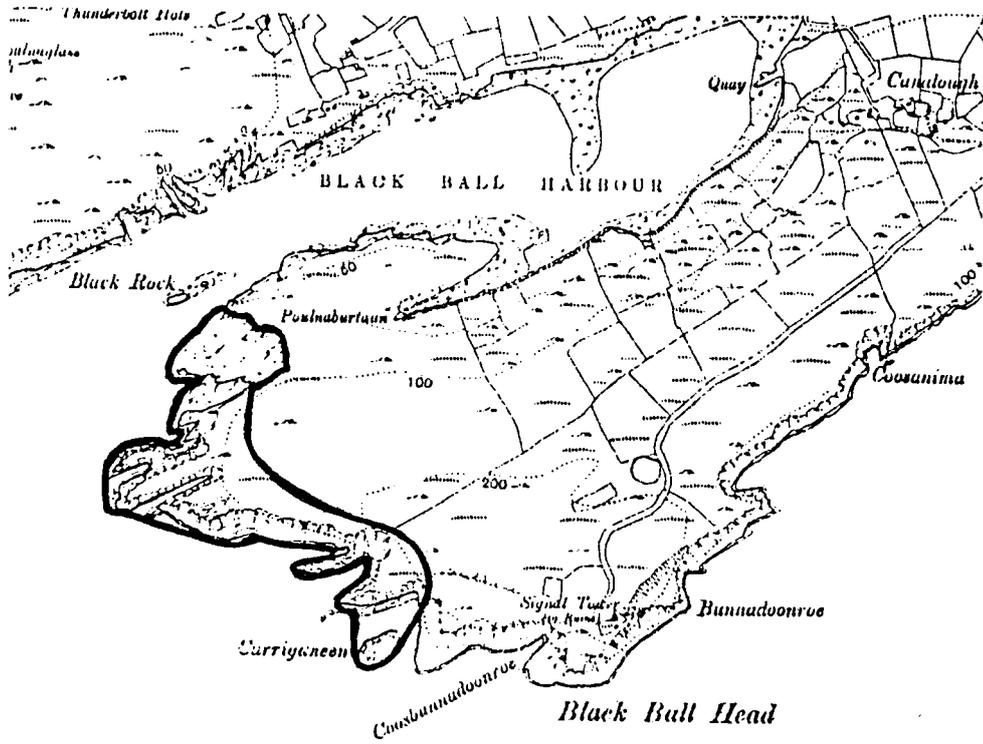
Evaluation: The area is of considerable interest to geologists as it provides evidence to explain some of the key features of rock intrusion and mineralization. It is one of very few similar sites in the country.

Vulnerability & Recommendations: It is possible that a use for the minerals contained in this area will be found and quarrying suggested. If the application is for a low value product, it should be resisted: if for a high value one, the situation should be reviewed, as a full geological investigation might yield even more information than the present exposure.

No other development or damage is likely.

1:10560

BLACK BALL HEAD



16) BLACKWATER VALLEY

W 78 98

Length: 80 km

Interest: Ecological (botanical, zoological, geological)

Rating: National Importance

As the fourth or fifth largest river in Ireland, the Blackwater drains a major part of Cork county and the mountains of Kerry. It runs in a wide valley down to Mallow but then the valley deepens as first the Nagles Mountains and then the Knockmealdowns impinge upon it. There is much woodland on the valley sides but the ecological interest lies also in the marshes, the river itself and occasional outcrops of the underlying limestone.

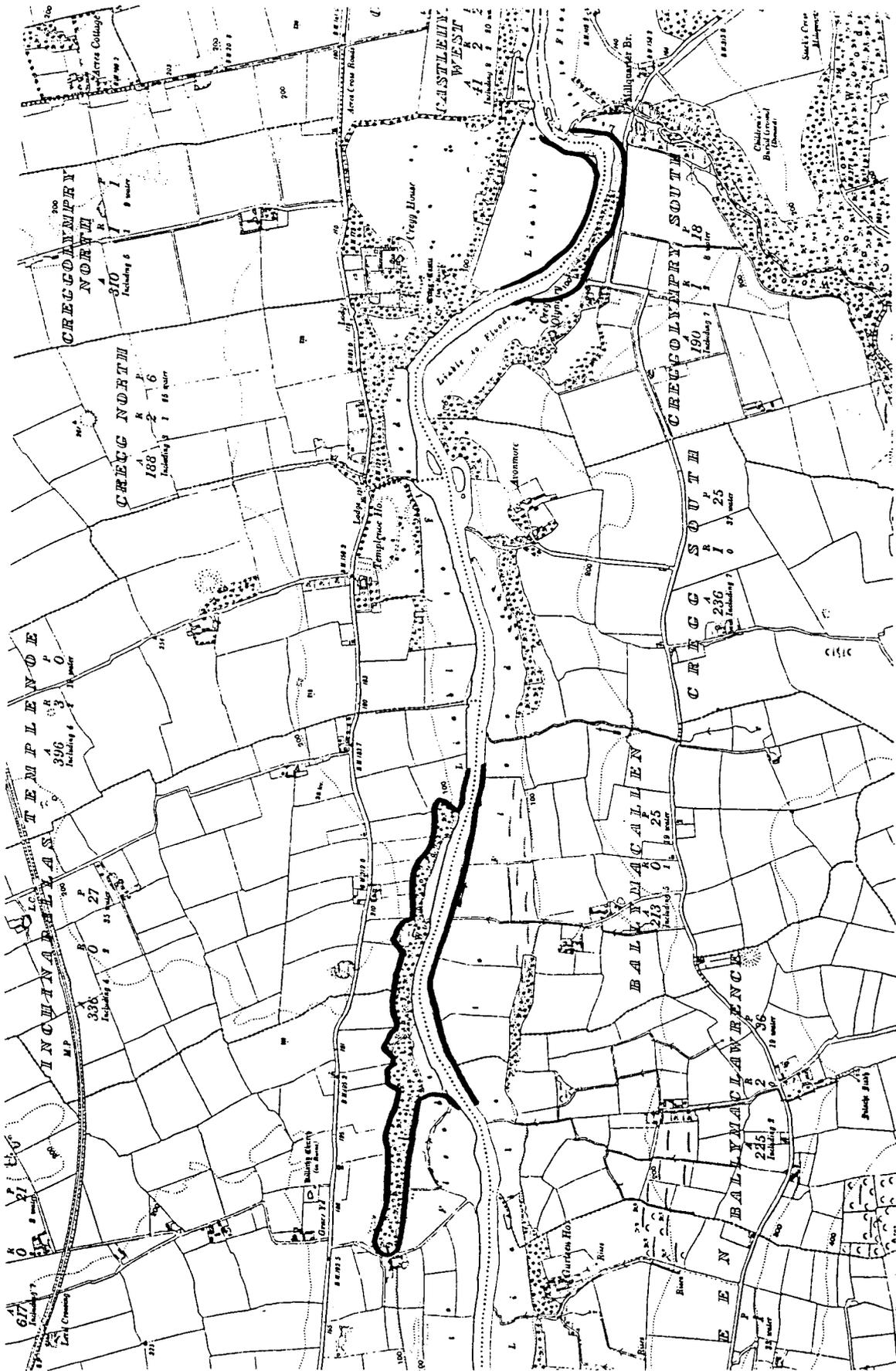
The riverside trees are alders and willows, including Salix triandra (almond-leaved willow). In between are beds of Scirpus lacustris (clubrush), Sparganium spp (bur-reeds) and Potamogeton spp (pondweeds). Butomus umbellatus (flowering rush) grows locally in the water and Rorippa sylvestris (wood yellow cress) enlivens the banks. The marshes of this lower section are characteristically bushy and amongst the willows R. amphibia (water radish), Carex acutiformis (pond sedge) and Scirpus sylvaticus (wood clubrush) occur along with much Cardamine pratensis (lady's smock), Filipendula ulmaria (meadowsweet) and Eupatorium cannabinum (hemp agrimony).

The drier woods have a very varied flora also. Dryopteris aemula (hay-scented fern) and Euphorbia hyberna (Irish spurge) continue eastwards on acid rocks from their headquarters to the west but there are many plants of richer soils, for example Viola reichenbachiana (wood violet), Ranunculus auricomus (goldilocks), Epipactis helleborine (broad-leaved helleborine) and Silene dioica (red campion). The sedge Carex depauperata occurs in its only Irish site.

The bird life of the river valley is notably rich: the lapwing, snipe and ringed plover nest by the river while there are several major heronries and good numbers of most woodland birds. These include blackcap, sparrowhawk, jay and long-eared owl. As regards insect life, butterflies are particularly well represented with fritillaries and the holly blue.

BLACKWATER VALLEY West of Fermoy

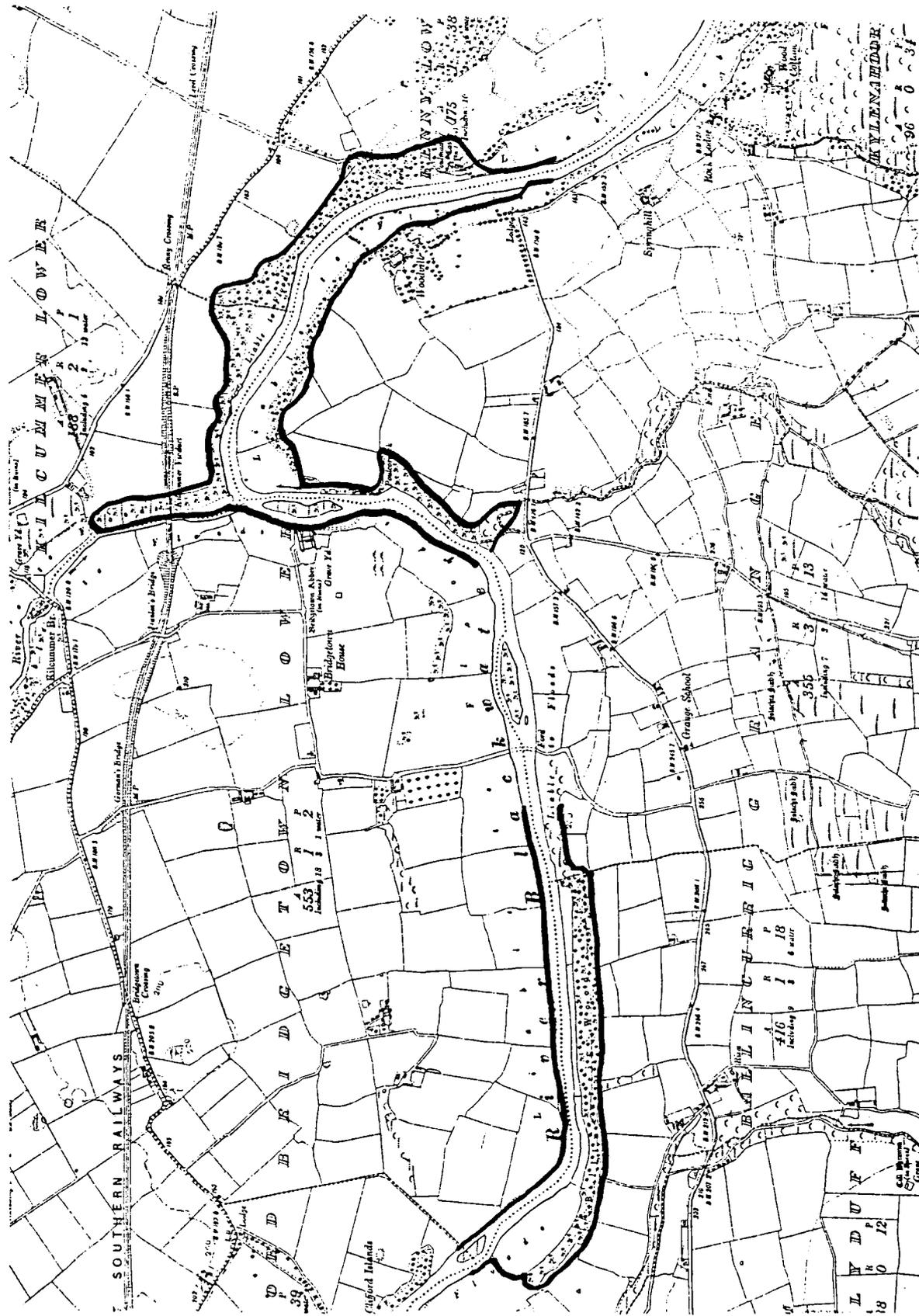
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BLACKWATER

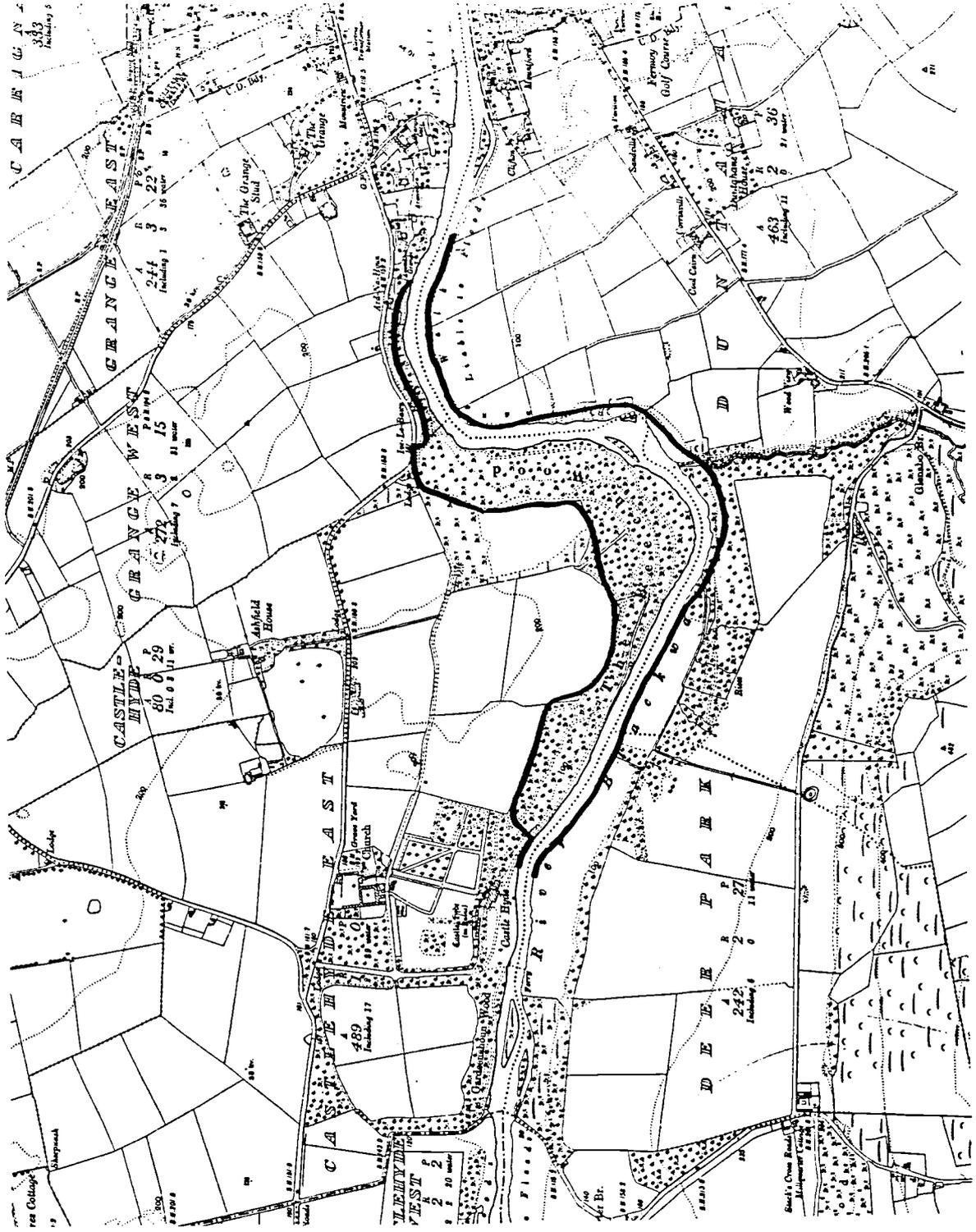
West of Ballyhooly

1:16246



BLACKWATER VALLEY West of Fermoy

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Limestone cliffs and caves near Killavullen and Ballyhooly are further points of interest and the basic soils support plant communities rare in Cork because of the generally acidic rocks. The Gortmore caves at Roskeen Bridge consist of three main series leading into the limestone escarpment. They have fine dripstone formations especially shawl and straw stalactites on the roof. Many of the passages are dry in normal weather though there are pools at intervals. The wettest and best cave has been interfered with by quarrying. Other caves at Castletownroche have been excavated and have yielded animal fossils from several periods.

Evaluation: The Blackwater has much of ecological interest contained in its valley and is probably the richest of the southern rivers from this aspect. The persistence of well-grown woodland and the variety of other habitats both wet and dry, account for this. The Gortmore cave system is one of the longest known so far in the county while those at Killavullen contain fossil material from the end of the glacial period.

Vulnerability & Recommendations: The lack of arterial drainage is an important factor in the survival and evolution of the aquatic communities here but pollution is probably a more significant threat.

The river is now best known to fishermen and there are few 'public' areas on its banks. There are only two State forests for example that reach the edge of the valley. The development of riverside paths and other rights-of-way could well be examined by the Council.

17) BULL AND COW ROCKS

Area: 9 ha

Interest: Ecological (ornithological)

Rating: National Importance

The Bull and Cow rocks form the extremity of the Caha Peninsula and lie respectively 4 and 2.5 km off Dursey Head. They are sandstone islands with little vegetation apart from grasses and plantain sward. Together they form a seabird breeding colony. The Bull Rock has had a gannet colony since the 1850s and it now contains about 1,600 pairs. There are also storm petrel (1,000 prs.), kittiwake (1,000 prs.), razorbill (1,500 prs.), puffin (400 prs.) and guillemot (2,600 prs.), most of which are on the Cow.

Evaluation: This area holds the second largest gannet colony in the country and also storm petrel, kittiwake and razorbill numbers of national significance.

Vulnerability & Recommendations: The sites seem relatively secure from development because of their small size and remoteness but could be affected by offshore oil activity. Habitat change should not be permitted, particularly on the Bull Rock.

Map - see page 50, Dursey Island

18) CASTLEPOOK CAVES

R 615 113

Length
Surveyed: 650 m

Interest: Geological

Rating: National Importance

Less than 1 km of passages are known in the Castlepook Caves which lie in the Awbeg Valley below the Ballyhoura Hills. The caves themselves have a certain interest in their wall sculpturing and dripstone formations (stalactites and stalagmites) but it is mainly for their animal remains that they are listed. Near the entrance, bones from a selection of animals that lived before the Ice Age have been discovered. These include woolly mammoth, brown bear, spotted hyena, wolf, arctic fox, wild horse and lemmings.

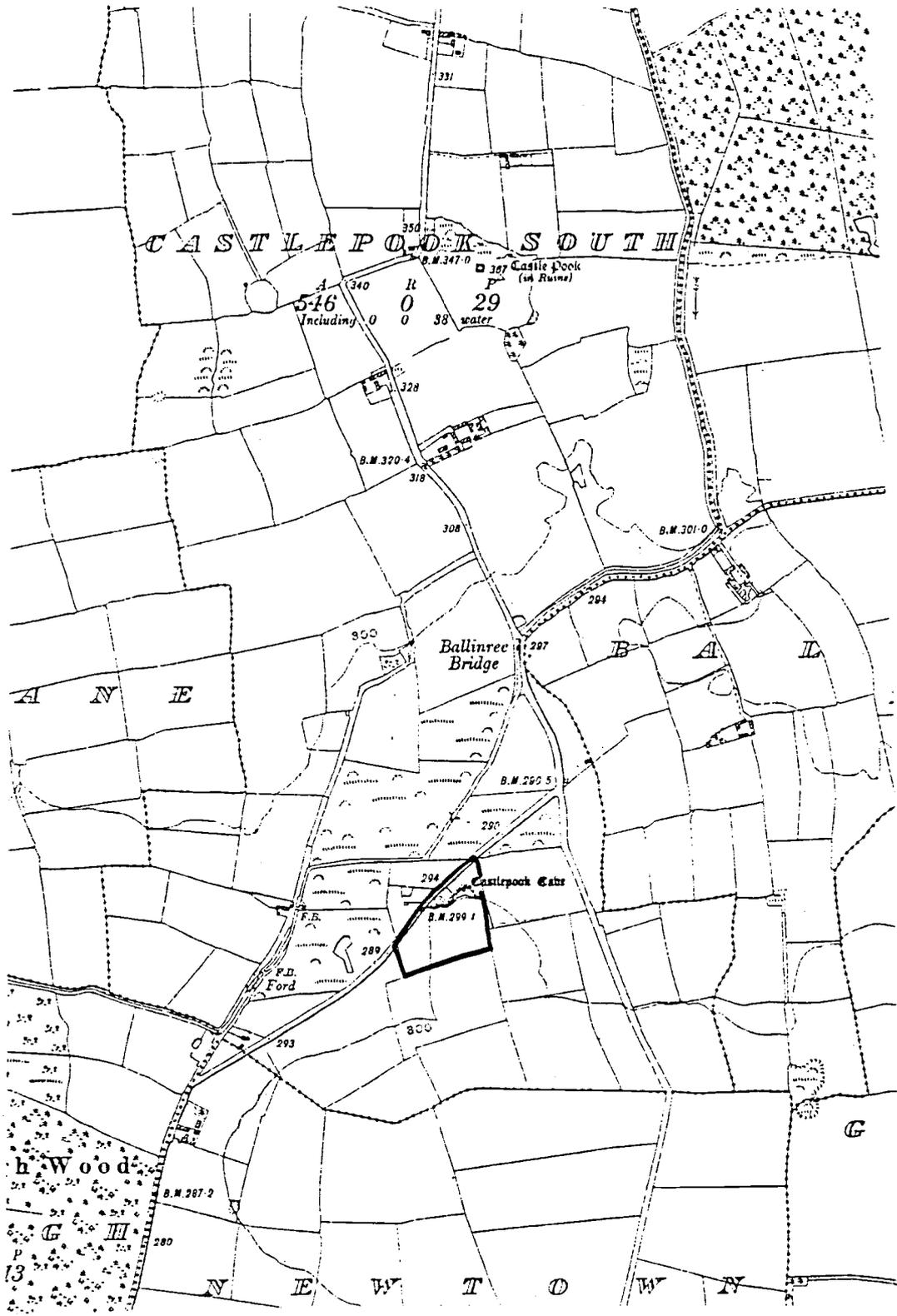
Evaluation: This cave has produced the richest preglacial fauna of any site and is very valuable on this account. Most caves contain a few animal bones if their entrances are naturally accessible but they generally are more recent in origin.

Vulnerability & Recommendations: The caves should be considered as a potential tourist amenity but any such development should be done in conjunction with a full scientific investigation.

Disruption of the cave system by quarrying should also be avoided.

CASTLEPOCK CAVES

1:10560



19) KNOCKOWEN *

V 81 55

Area: 92 ha

Interest: Ecological (botanical)

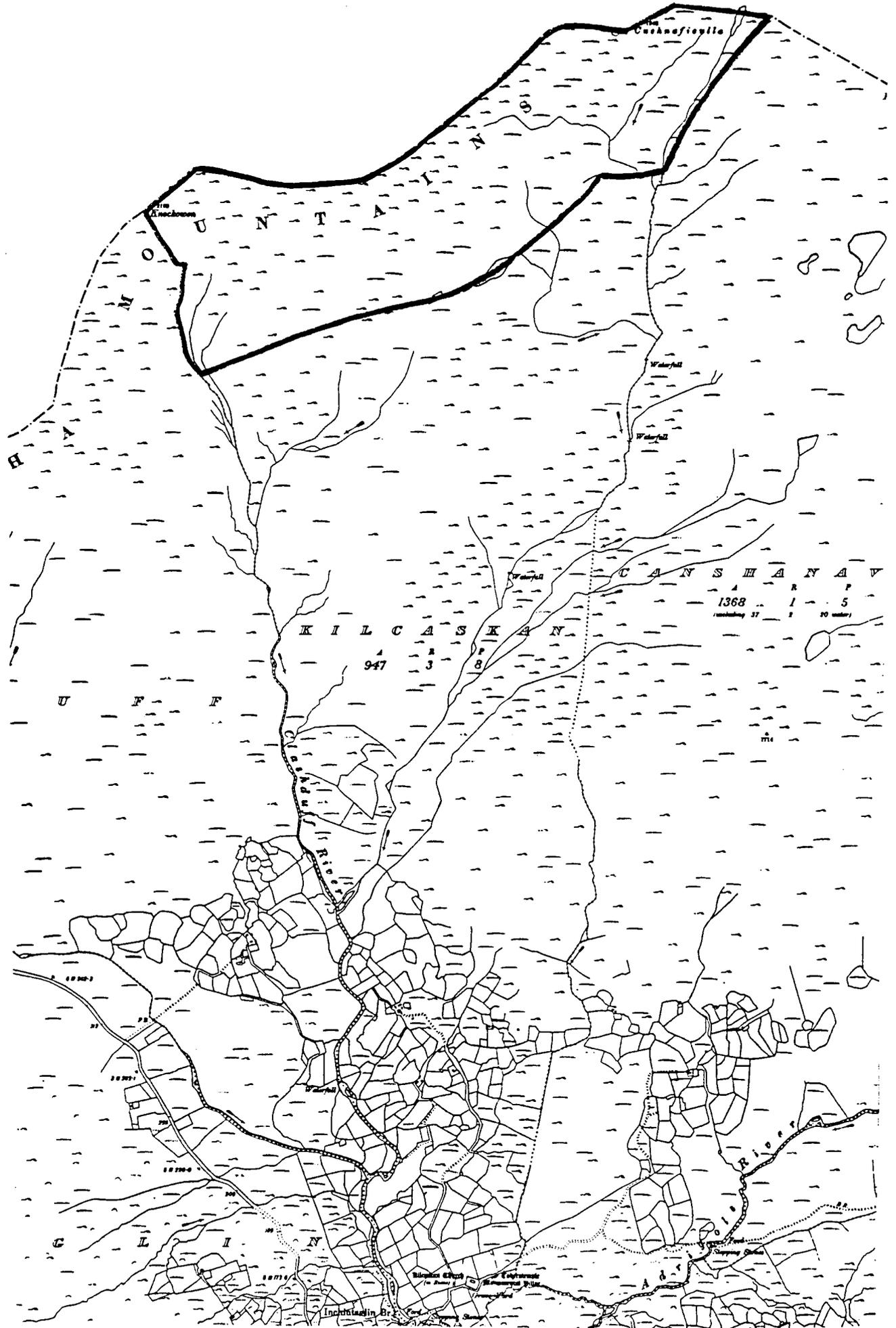
Rating: National Importance

South-east of the summit of Knockowen the ground consists of rocky slobes and outcrops. A heathy community covers most areas, including Calluna vulgaris, Erica cinerea (heathers), Festuca vivipara (viviparous fescue) and Racomitrium lanuginosum (woolly hair moss) but in the narrower cracks Minuartia recurva (sandwort) grows with various lichens and mosses. Campylopus atrovirens, a blackish moss, is conspicuous as are the scales of Cladonia lichens.

Evaluation: This is the only known station for the Minuartia in either Ireland or Britain and its nearest occurrence would seem to be in Northern Spain, about 1,000 km away. The reasons for its presence in Cork are of great interest and its persistence through the later part of the Ice Age seems possible.

Vulnerability & Recommendations: The exposed and isolated nature of the area and the fact that the Minuartia has persisted despite the numbers of sheep on the mountains, means that it is likely to last a good while longer without any attention.

* See Appendix



20) OLD HEAD OF KINSALE

W 62 42

Area: 230 ha

Interest: Ecological (ornithological, geological)

Rating: National Importance

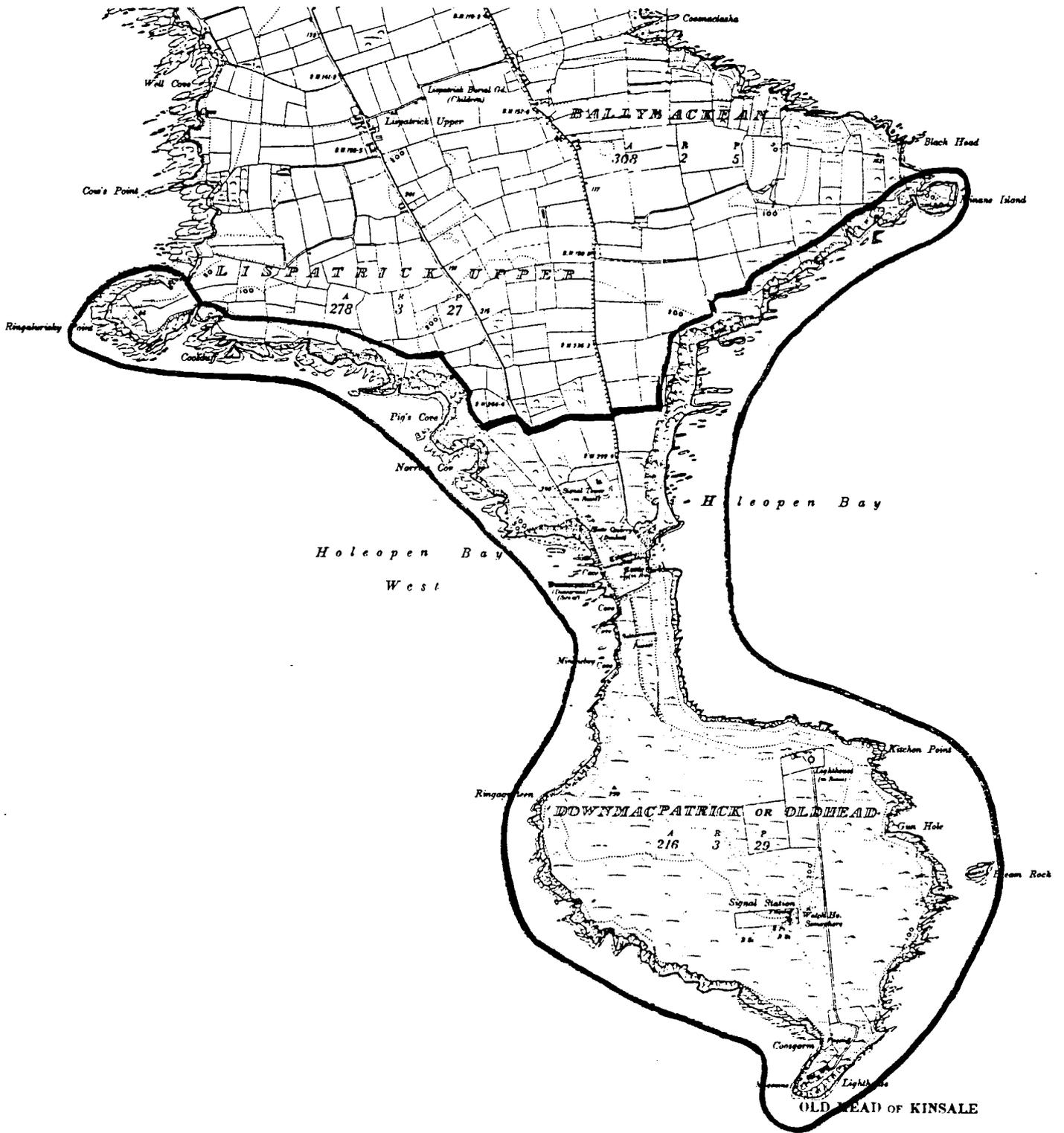
The sandstone and mudstone beds that make up this area lie tipped on their edges so that a cross-section of about 2,400 m is visible as one walks out the headland. It has many features of interest since it represents the transition between two geological periods - the Devonian and Carboniferous. On the smaller scale there is much sedimentological detail such as ripple marks and current bedding and several important goniatite fossil localities.

Old Head is known also for its seabirds and there are substantial numbers of kittiwake and guillemot as well as razorbill, shag and fulmar. There are about 1,000 pairs of each of the first two species and they nest on cliff ledges in the outer section of the area.

Evaluation: Both of its natural values are of considerable importance. The rocks in its cliffs form the type section of the Cork beds of the period and the seabird population contains two species in numbers which represent about 3 per cent of their Irish total.

Vulnerability & Recommendations: Cliff sections and their bird colonies are seldom vulnerable to development and the sites here are in no real danger. There are few exposures away from the cliffs so it is most unlikely that any of the fossil localities, which are most vulnerable, could be damaged.

The seaward part of the headland is not open to the public as far as is known but it would make an attractive amenity if developed with a cliff path.



21) ARAGLIN VALLEY

R 88 04

Length: 11 km

Interest: Ecological

Rating: Regional Importance

The deep valley of the Araglin River winds through sandstone hills before reaching the Fermoy limestone in its lower course. This contrast of rock type brings with it differences in soil and a wide diversity of plant and animal communities. A considerable amount of broad-leaved woodland exists east of Castlecooke. Oak and some beech are joined by hazel, wild cherry and goat willow (Salix caprea) to give a most attractive appearance, particularly in spring. Beneath the trees the ground flora is relatively rich with such species as Conopodium majus (pignut), Allium ursinum (garlic), Alliaria petiolata (garlic mustard) and Fragaria vesca (wild strawberry). The occurrence of Orobanche hederæ (ivy broomrape) suggests that woodland with its attendant ivy has persisted on this area for many centuries.

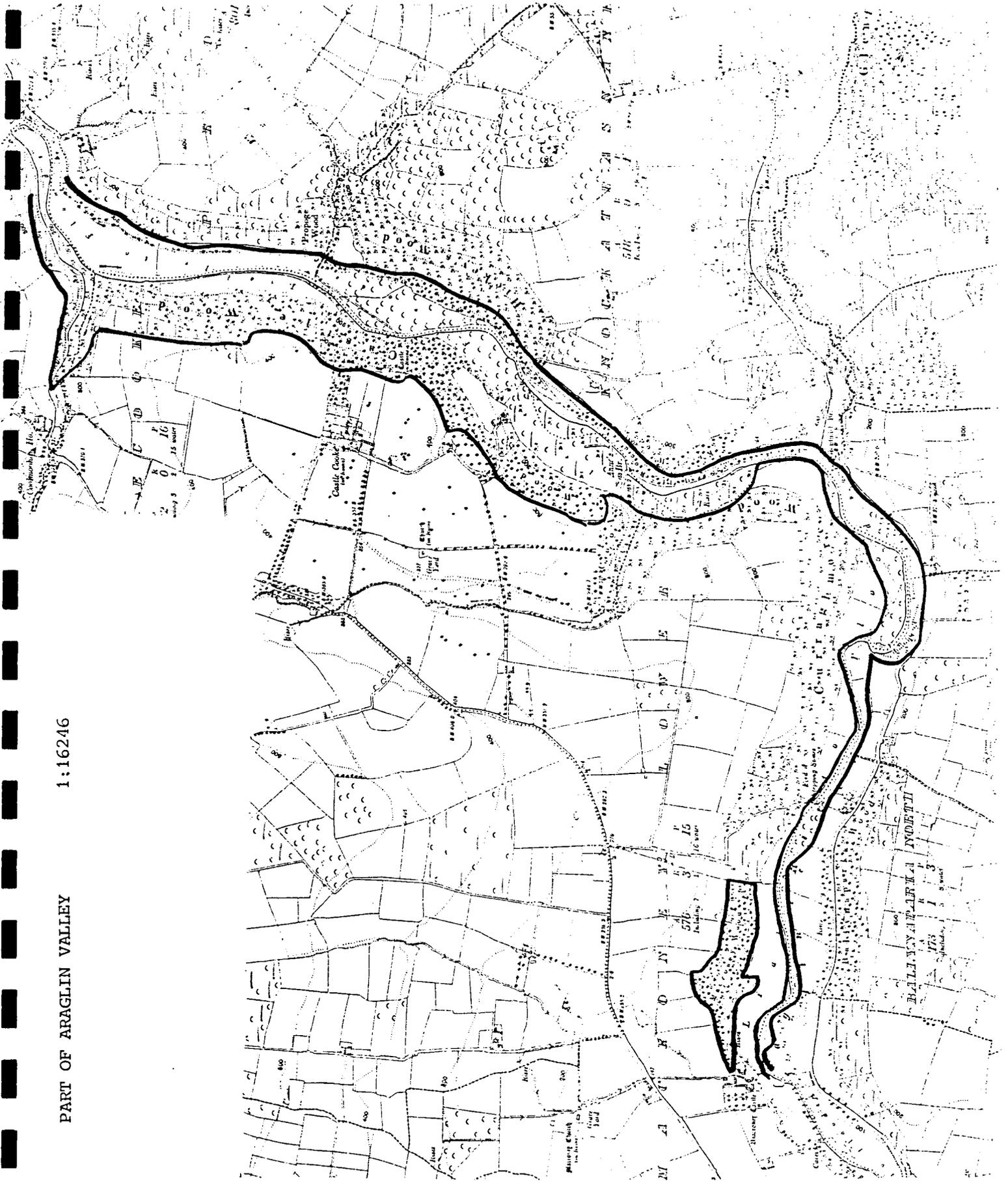
The conditions of shade and dampness promote the growth of mosses and ferns as well as types of fungi that grow on the leaves of other plants. Araglin has produced a wide range of the latter organisms.

Evaluation: The Araglin Valley is both visually attractive and ecologically interesting though it has by no means been fully explored. Invertebrate life has scarcely been examined at all as is so often the case.

Vulnerability & Recommendations: The relatively small scale of this valley means that tree-felling would have a considerable adverse effect and efforts should be made to promote the proper management of broad-leaved woods rather than their replacement by conifers.

PART OF ARAGLIN VALLEY

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22) AWBEG VALLEY

R 68 05

Length: 25 km

Interest: Ecological, geological

Rating: Regional Importance

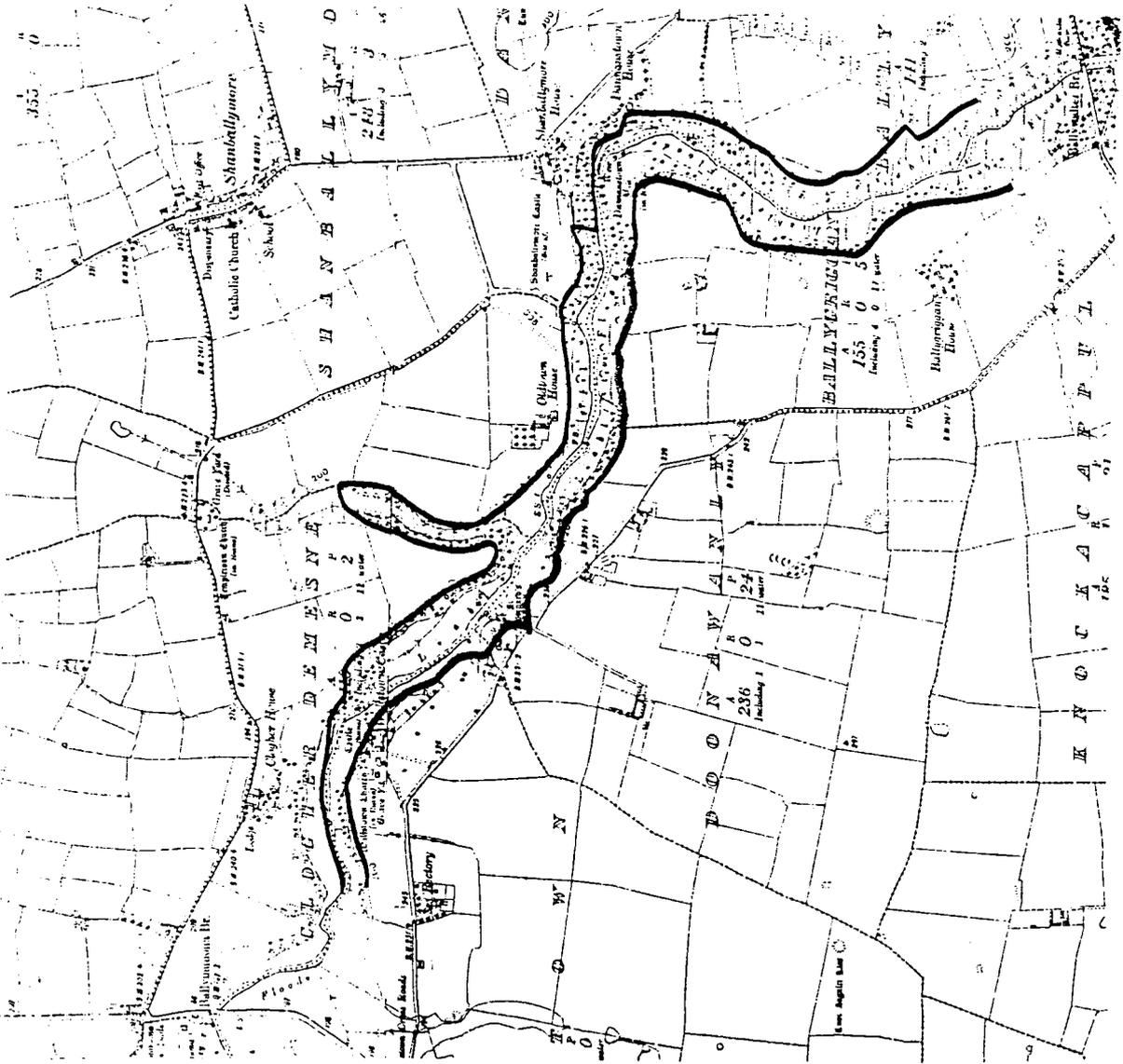
The Awbeg River links the Blackwater system to the lowlands of south Limerick by flowing around the Ballyhoura Hills from their northern slopes. For the most part it runs over limestone and the plants it contains are those found in the Central Plain. Berula erecta (water parsnip), Oenanthe aquatica (water dropwort) and Potamogeton natans (pondweed) are common with the two large sedges Carex riparia and C. vesicaria and Rumex hydrolapathum (great water dock) in marshes nearby. The woodlands are small but the trees planted at Anne's Grove and Doneraile still retain considerable interest. Two less common plants associated with the woodlands are Lathraea squamaria (toothwort) and Orobanche hederarum (ivy broomrape). At the edges of the valley the thin soils above limestone support an interesting community including herbs such as Origanum vulgare (majoram) and Calamintha ascendens (calamint). Koeleria cristata, Trisetum flavescens and Aira caryophyllea are three grasses frequently met with. Small caves occur at Connaberry and their excavation has yielded the bones of glacial and postglacial animals, e.g. mammoth, reindeer, giant deer and lemming. (see Castlepook Caves).

Evaluation: The Awbeg is one of the most attractive and interesting river valleys in the county. Being largely on limestone means that it has many communities unusual in the south-west.

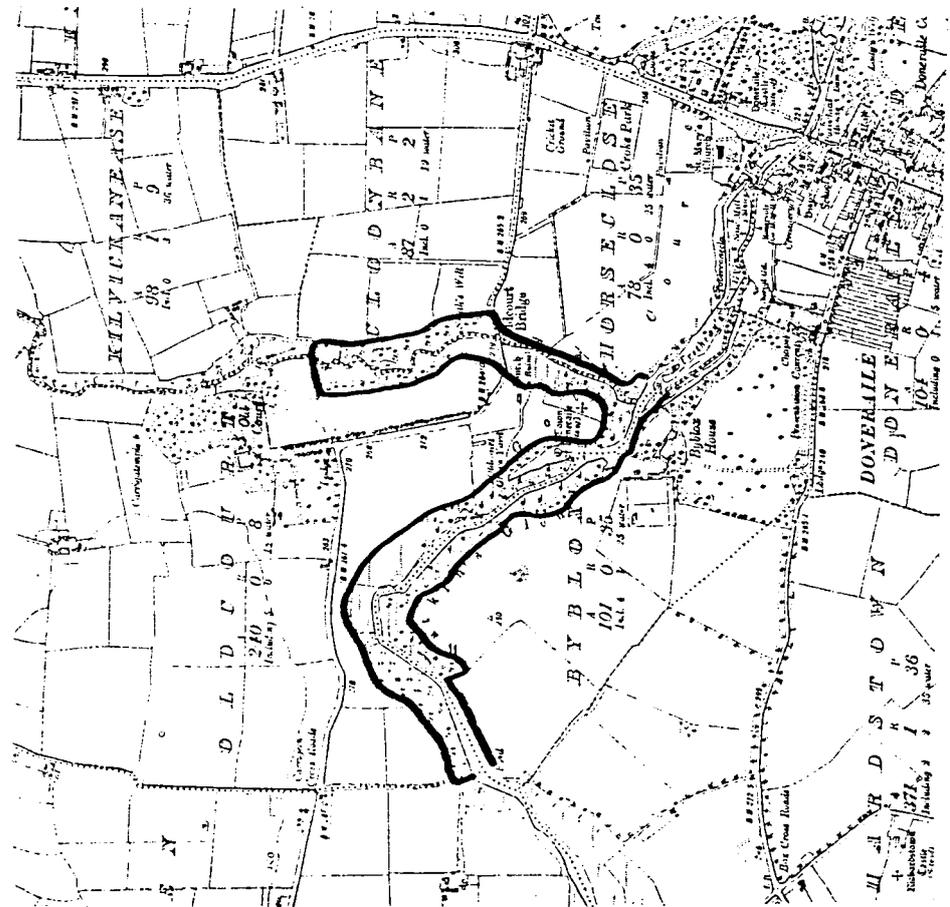
Vulnerability & Recommendations: Scrub and woodland clearance as well as agricultural pollution are the most significant threats to this area. All should be controlled by the Council as much as they can be.

BELOW DONERAILE

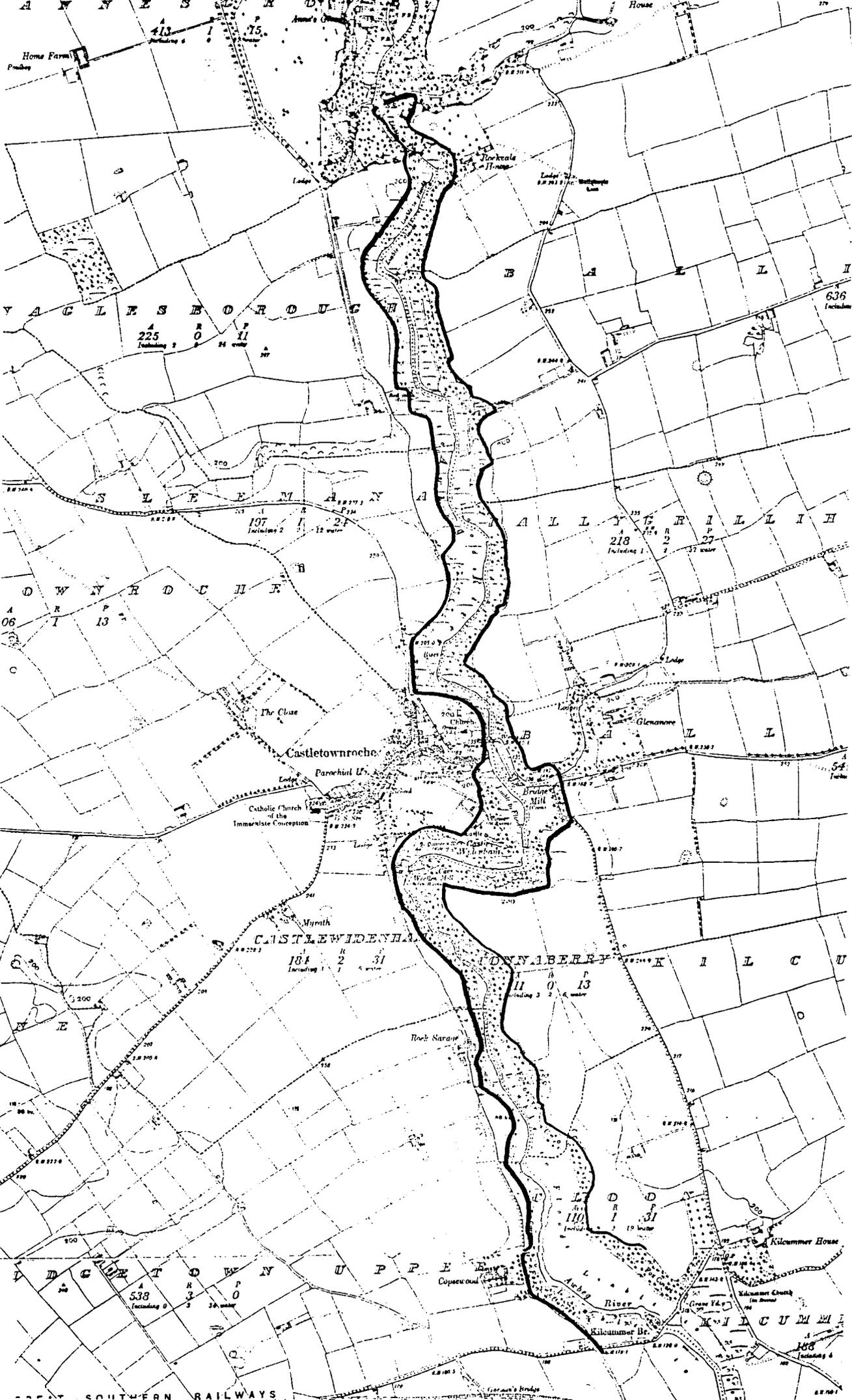
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AWBEG VALLEY ABOVE DONERAILE



A N N E S C Y R O N



Home Farm
 Annals
 YACLESBOROUGH
 SLEEMAN
 DOWNROCHER
 Castlewidening
 DONABERRY
 KILCUMB
 413
 75
 100
 225
 197
 106
 13
 184
 2
 31
 110
 1
 31
 538
 3
 3
 31
 636
 218
 27
 54
 108

23) BALLINCOLLIG CAVE

W 58 69

Length 20 m
Surveyed:
Interest: Geomorphological, ecological (botanical)
Rating: Regional Importance

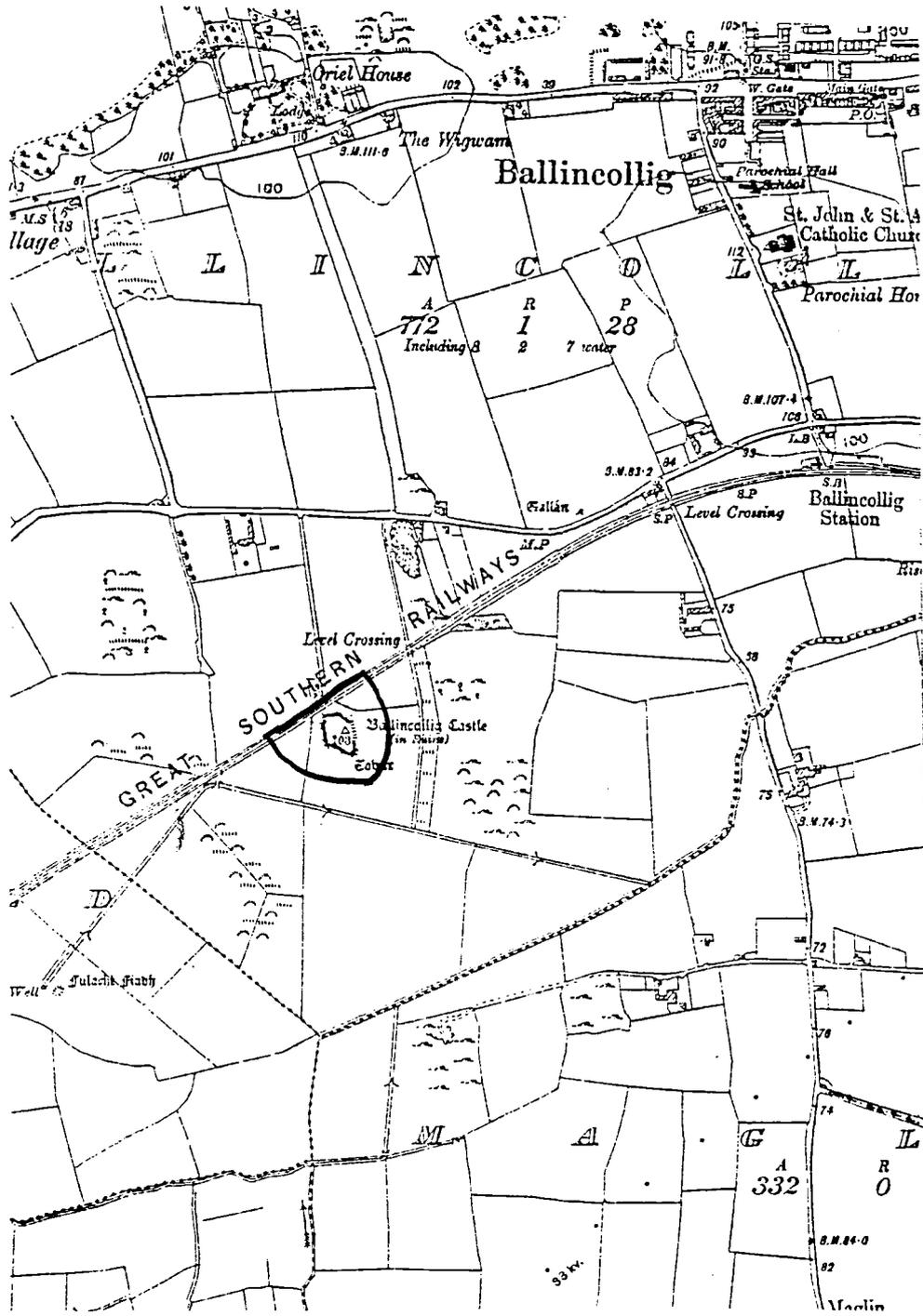
Ballincollig lies in the limestone valley of the Bride River which runs parallel to the Lee. The cave occurs under and beside the castle and is apparently short. However it seems likely to contain some fossil material as it has a natural and accessible opening. Above ground there are several interesting features in the grassland vegetation. The occurrence of Chelidonium majus (greater celandine), Veronica agrestis (a speedwell) and Silybum marianum (milk thistle) show the long habitation of the site while, of the native species, Calamintha ascendens (calamint) grows near the rock outcrops, Orobancha hederæ (ivy broomrape) on ivy roots and Spiranthes spiralis (lady's tresses) amongst the short grasses.

Evaluation: The cave is thought to contain deposits of scientific interest though as far as is known it has not yet been excavated. The flora is also well developed though over quite a small area.

Vulnerability & Recommendations: Cave exploration except by specialists should not be encouraged in this area as this could damage any remaining scientific interest.

1:10560

BALLINCOLLIG CAVE



24) BALLYVERGAN MARSH *

X 09 76

Area: 158 ha

Interest: Ecological (botanical, ornithological)

Rating: Regional Importance

This area includes an extensive area of reedswamp with some marshy land around its edges. Phragmites australis (reed) covers the largest area but a great variety of the larger sedges also occur, including Carex riparia, C. acuta, C. pseudo-cyperus, and C. acutiformis. Rumex hydrolapathum (great water dock), Lythrum salicaria (purple loosestrife) and Sparganium ramosum (bur-reed) grow interspersed among the sedges while on muddier ground which is flooded only in winter Ranunculus sceleratus (celery-leaved buttercup) and Bidens cernua (bur-marigold) occur.

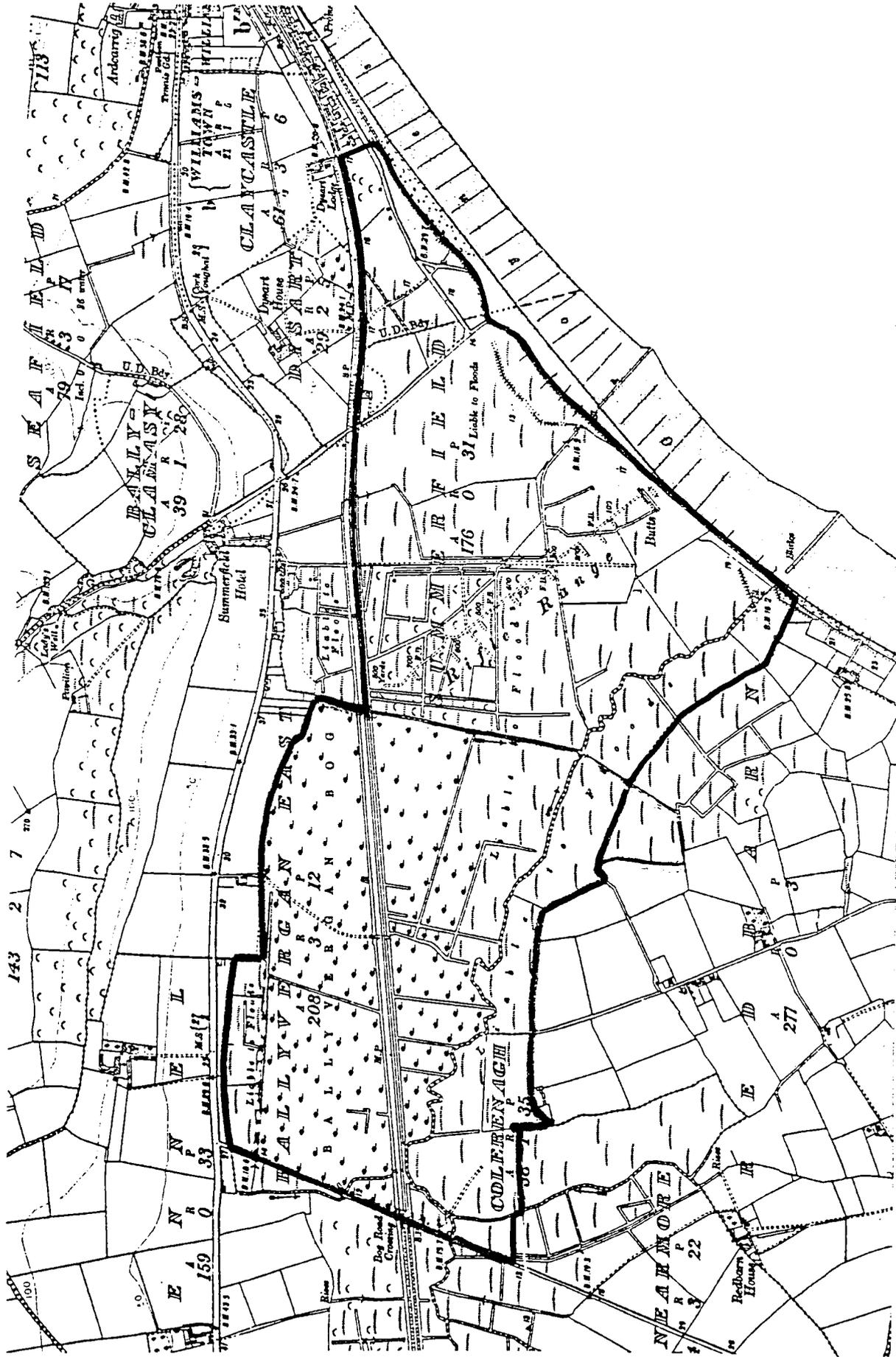
All the reedbeds have a rich bird fauna: sedge warblers and reed buntings nest commonly and there is a variety of other species of more restricted range. The density of the vegetation prohibits a large wildfowl population but mallard are fairly frequent along with moorhen, coot and water rail. The marsh is separated from the open sea by a shingle bank with sand hills. In the vicinity of Clay Castle much Salvia horminoides (clary) grows with other plants of dry soils, e.g. Erodium moschatum (musk storks-bill), Centaureum pulchellum (centaury) and various Trifolium species (clovers).

Evaluation: Ballyvergan is the largest freshwater coastal marsh in Cork and shows fine development of many different communities. With the adjacent coastal region which contains one of the protected plant species, it is at least of regional importance.

Vulnerability & Recommendations: Rich coastal marshes such as this are potential farmland, especially if there is little salt influence.

Attempts have been made to reduce water levels here but they have been interfered with by the sea blocking the outflow. If a major investment in new works is planned an effort must be made to set a minimum level below which the marsh water-table will not fall. The prevention of flooding on surrounding farmland should be the main objective, not the reclamation of marsh.

* See Appendix



25) BRIDE VALLEY AND BUNAGLANNA

W 68 90

Length: 28 km

Interest: Ecological

Rating: Regional Importance

The Bride River parallels the Blackwater in its E-W section before joining its estuary above Youghal. It rises on the Nagles Mountains and in the upper part of its course it runs on sandstone rocks falling some 220 m in its first 5 km. Scrubby woodland of willow, oak and rowan occurs in several places and contains much Luzula sylvatica with a little L. pilosa (woodrushes), Crepis paludosa (marsh hawksbeard), Geum rivale (water avens), Melampyrum pratense (cow wheat) and Chrysosplenium oppositifolium (golden saxifrage).

The Bunnaglanna Valley is if anything steeper as it descends from Knocknaskagh first through blanket bog and heath and later through scattered woodland. The moisture favours mosses and ferns here and also the growth of epiphytes (plants on plants).

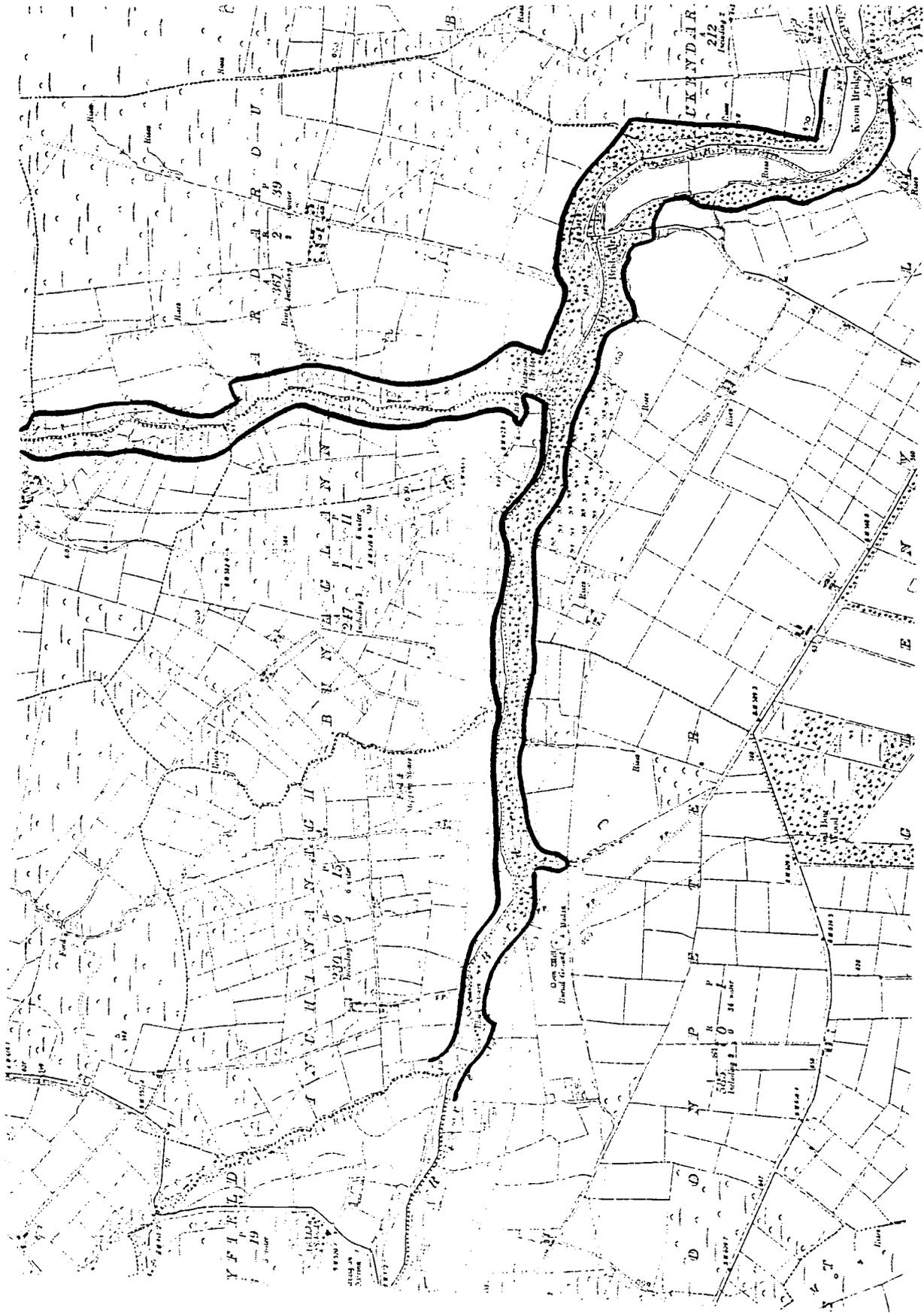
The river meets limestone above Glenville and the flora changes abruptly. Hazel and ash come into the woodland and there is also an influx of introduced plants such as Lysimachia nummularia (creeping jenny), Heracleum mantegazzianum (giant hogweed). The diversity of species is thus increased and the river becomes a lowland stream, meandering to Kilshannig and beyond.

Evaluation: The upper part of the Bride Valley is a region of high floristic interest with natural communities in the river itself and in its immediate vicinity. Some of the microfungi have not been recorded elsewhere.

Vulnerability & Recommendations: Afforestation may have a significant effect on water quality in this area and thus on river life. It does this by acidification of the drainage water and it is important to keep planting well back from the watercourses.

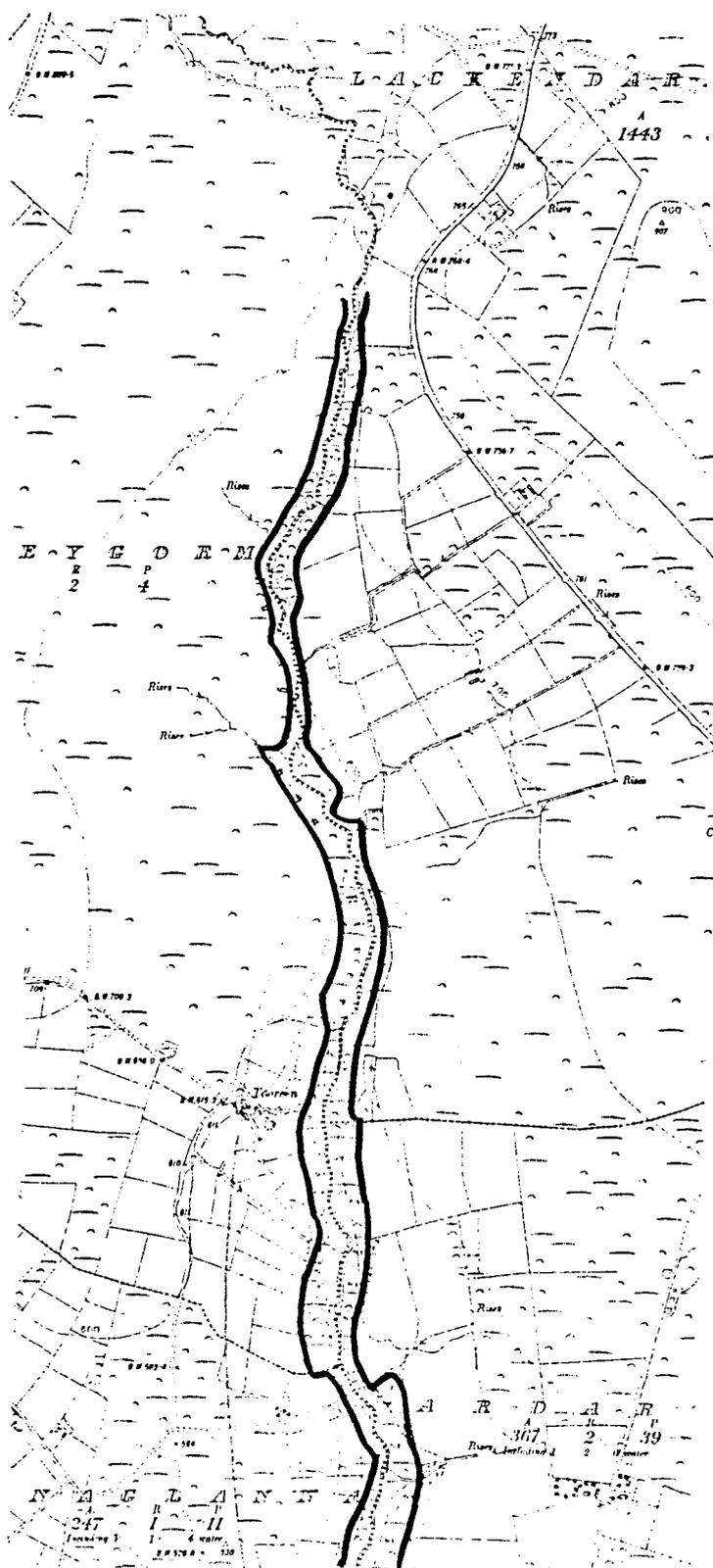
BRIDE VALLEY AND BUNAGLANNA (LOWER)

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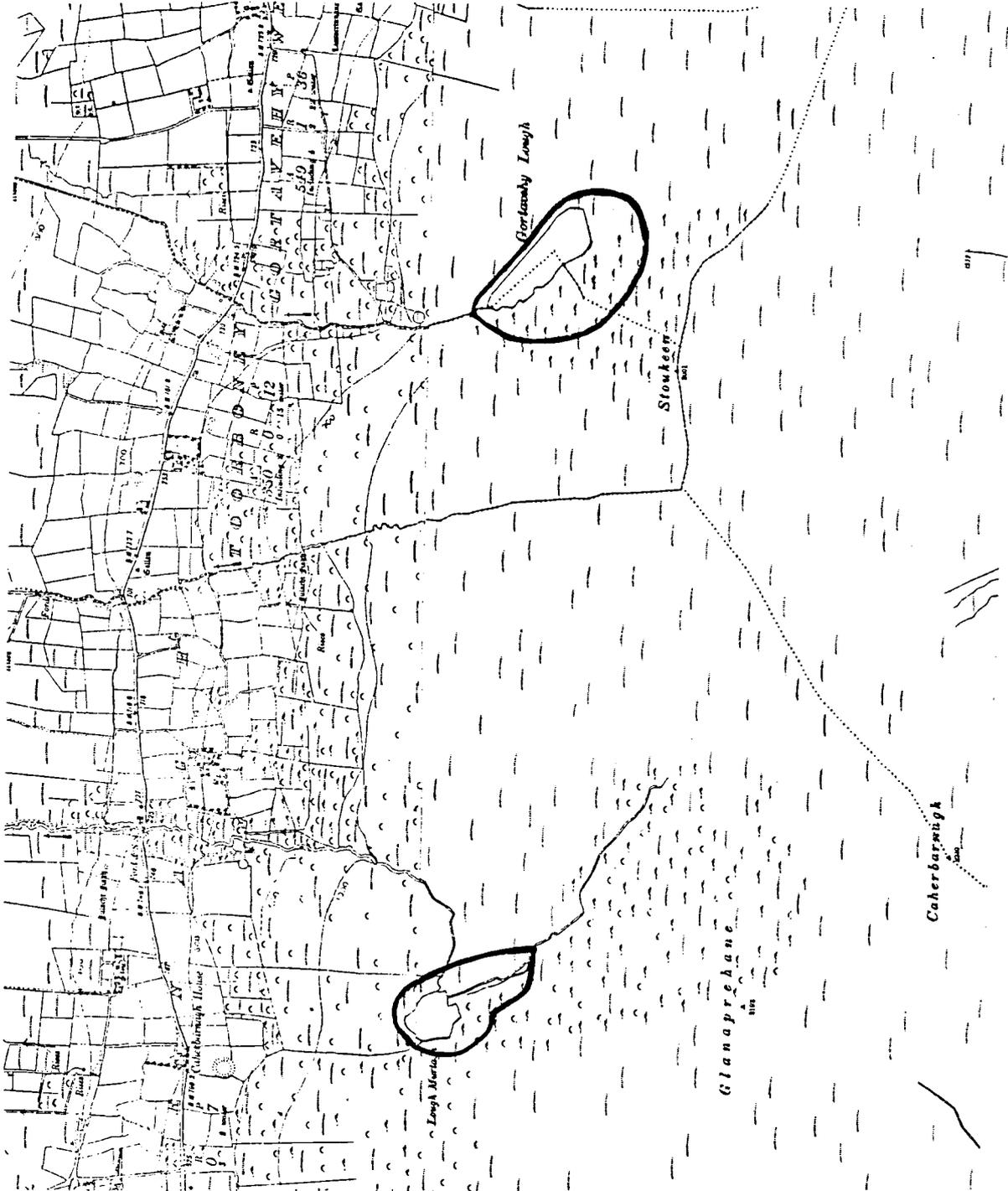
BRIDE VALLEY AND BUNAGLANNA

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1:16246

CAHERBARNAGH (L. MURTAGH & GORTAVEHY)



26) CAHERBARNAGH (L. MURTAGH & GORTAVEHY)

W 19 88

Area: 18 ha

Interest: Ecological (botanical, ornithological)

Rating: Regional Importance

The interest of this mountain is confined to the two lakes on its northern flanks, L. Murtagh and L. Gortavehy, which are corrie lakes backed by cliffs. The lakes themselves are acidic and poor in nutrients. Lobelia dortmanna (water lobelia), Littorella uniflora (shoreweed) and Isoetes sp. (quillwort) grow in the water, Carex rostrata (sedge) and Equisetum fluviatile (water horsetail) at the edges. At L. Murtagh these are joined by Cladium mariscus (saw sedge) and Carex riparia (pond sedge), both at elevations far above their normal range. The north-facing cliffs behind these lakes hold interesting montane communities. Hieracium (hawkweed) species abound and the ferns Asplenium viride, Cystopteris fragilis, Polystichum aculeatum and Hymenophyllum wilsonii also occur. More colourful plants include Campanula rotundifolia (harebell), Rhodiola rosea (roseroot), Saxifraga spathularis (St Patrick's cabbage) and Listera cordata (twayblade).

The birdlife of the area is of some interest with raven, kestrel and grouse. The merlin has also been seen on the mountain.

Evaluation: The mountain communities found in the vicinity of the two lakes are of local interest representing an attenuation of those found on the higher land of Kerry with the addition of two aquatic species.

Vulnerability & Recommendations: The sites are basically secure because of the nature of the ground. The birdlife however would be subject to disturbance and the development of footpaths or other facilities should be done with this in mind.

27) CASTLEFREKE - DIRK BAY *

W 34 32

Area: 114 ha

Interest: Ecological (botanical, ornithological)

Rating: Regional Importance

This is an extensive coastal area running some 6 km from Dirk Bay to Owenahincha but including land inside the coast road only at Castlefreke. Above Dirk Bay a hillside is covered by blown sand and this has several plant species of interest growing on it, for example Cuscuta epithymum (dodder), Salvia horminoides (sage) and Spiranthes spiralis (lady's tresses). The dune grassland slopes down to a reed swamp and on marshy ground both Trifolium fragiferum (strawberry clover) and Berula erecta (water parsnip) grow.

Galley Head is a sandstone headland with small fields and unenclosed land much used by choughs. On its cliffs are colonies of Inula crithmoides (samphire), Spergularia rupicola (rock spurry) and Armeria maritima (thrift). To the west the Long Strand has impounded two streams to form Kilkeran Lake, a stony lake with thin marginal vegetation of Phragmites australis (reed) and Scirpus maritimus (sea clubrush) and Lough Rahavarrig. The latter is nutritionally rich and is surrounded by fen vegetation, including Carex riparia (pond sedge) and Rumex hydrolapathum (great water dock). There is some colonisation by willows at the edge of the reedbeds where Scutellaria galericulata (skull-cap) also grows. Both lakes are of some attraction to wildfowl especially pochard and tufted duck and there is a sizeable heronry nearby.

The woods behind Lough Rahavarrig are also of importance. Though there has been a lot of afforestation (with maritime pine on the dunes), sufficient deciduous stands remain to support Silene dioica (red campion) and Milium effusum (wood millet grass). In damper parts the sedges Carex remota and C. paniculata both grow and have hybridized. Lysimachia nummularia (creeping jenny) and Allium scorodoprasum (chives) are two species that may have been planted originally.

The Long Strand and its dunes are in good condition except for very local recreational damage. Their flora is rich for such an area in West Cork and includes Elymus pycnanthus (a sea scutch), Calystegia soldanella (sea bindweed), Juncus acutus (sea rush) and Atriplex laciniata (white orach). A few low-lying dune slacks occur.

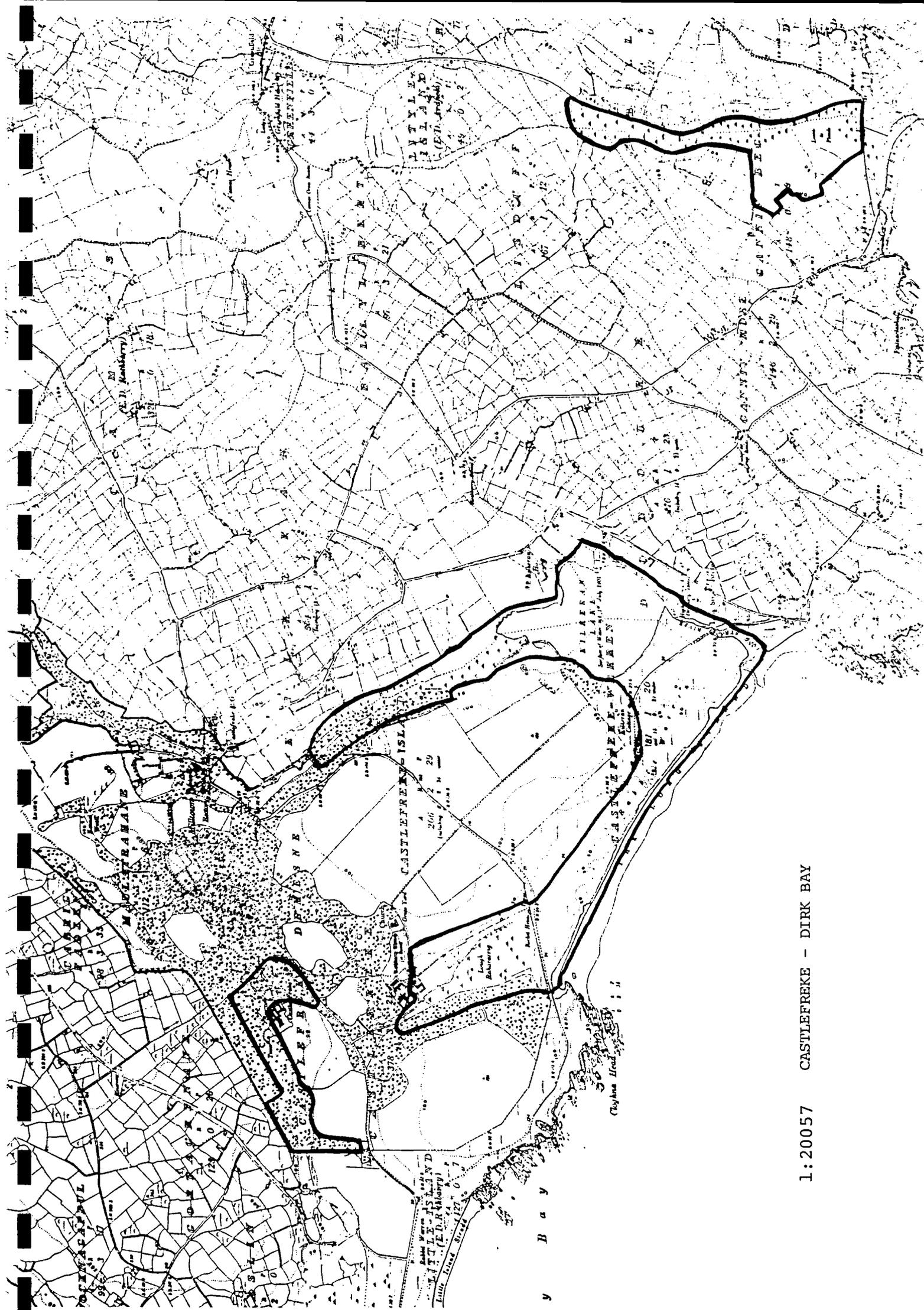
* See Appendix

Evaluation: This is a diverse area with a wide range of habitats from aquatic to terrestrial. The dunes are well-developed - a rarity in this part of the county - and the rest of the coast has many features of interest.

In visual terms also the whole area is of value.

Vulnerability & Recommendations: The beach area is obviously sensitive to damage from trampling but in view of the dangerous nature of the beach is unlikely to experience it. Inland, changes in agricultural use might also affect the wetland.

The Castlefreke area is of visual and ecological interest and could very well be developed in an interpretative role. Because of the absence of recreational pressure on the dunes a nature trail could be laid out (with care) and some interpretation provided.



1:20057 CASTLEFREKE - DIRK BAY

28) CLONAKILTY BAY

W 40 38

Area: 694 ha

Interest: Ecological (botanical, ornithological)

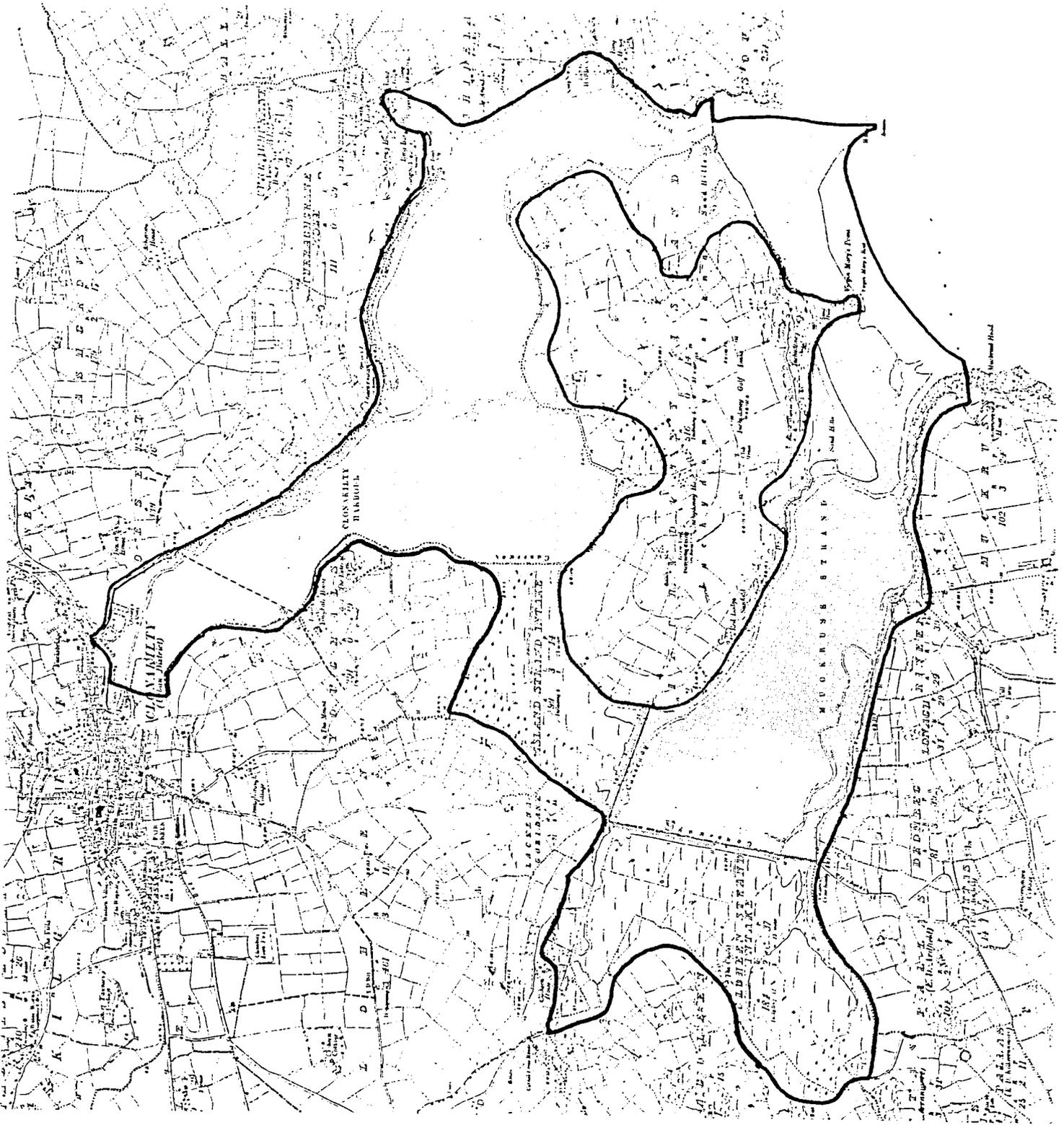
Rating: Regional Importance

Clonakilty Bay has two shallow inlets in its north-western corner which enclose Inchydoney Island. The area thus includes mudflats, saltmarsh, and brackish ponds, as well as a sandy beach and dune system. The mudflats are used by about 600 wildfowl and 5,000 waders though numbers of the latter occasionally reach 10,000. The dabbling duck wigeon, mallard and teal are frequent with plover, dunlin, curlew and both godwits. Two areas of reclaimed land near the west end of Inchydoney offer pools and small reedbeds which attract a more varied bird fauna, especially visiting waders. Herons are always present because there are nesting trees near the town.

Inchydoney beach on the south side of the island is made up of a shell-rich strand backed by low grassy dunes. At the eastern end, the dunes rise much higher on a spit that almost reaches the Ring shore. The strand flora includes Atriplex laciniata (frosted orach) as well as the more usual Honkenya peploides (sandwort) and Cakile maritima (sea rocket). On the dunes many grasses and herbs grow, including several species of orchid. There is an interesting list of introduced plants, Dipsacus fullonum (teasel), Verbascum thapsus (mullein) and Echium vulgare (viper's bugloss) are the most noticeable.

Evaluation: Clonakilty Bay comes third in the list of Cork wetlands for the number of birds present in winter. Its flock of black-tailed godwit is especially important. Inchydoney beach has also a flora of local interest.

Vulnerability & Recommendations: The estuary is in a relatively good state at the moment and the level of pollution not one to cause concern. There is more immediate danger to Inchydoney beach where car parking and uncontrolled access have initiated erosion. Some attention should be given here to designing a better set-up for recreational use.



29) CLOYNE ESKER

W 90 67

Area: 12 ha

Interest: Geomorphological, geological

Rating: Regional Importance

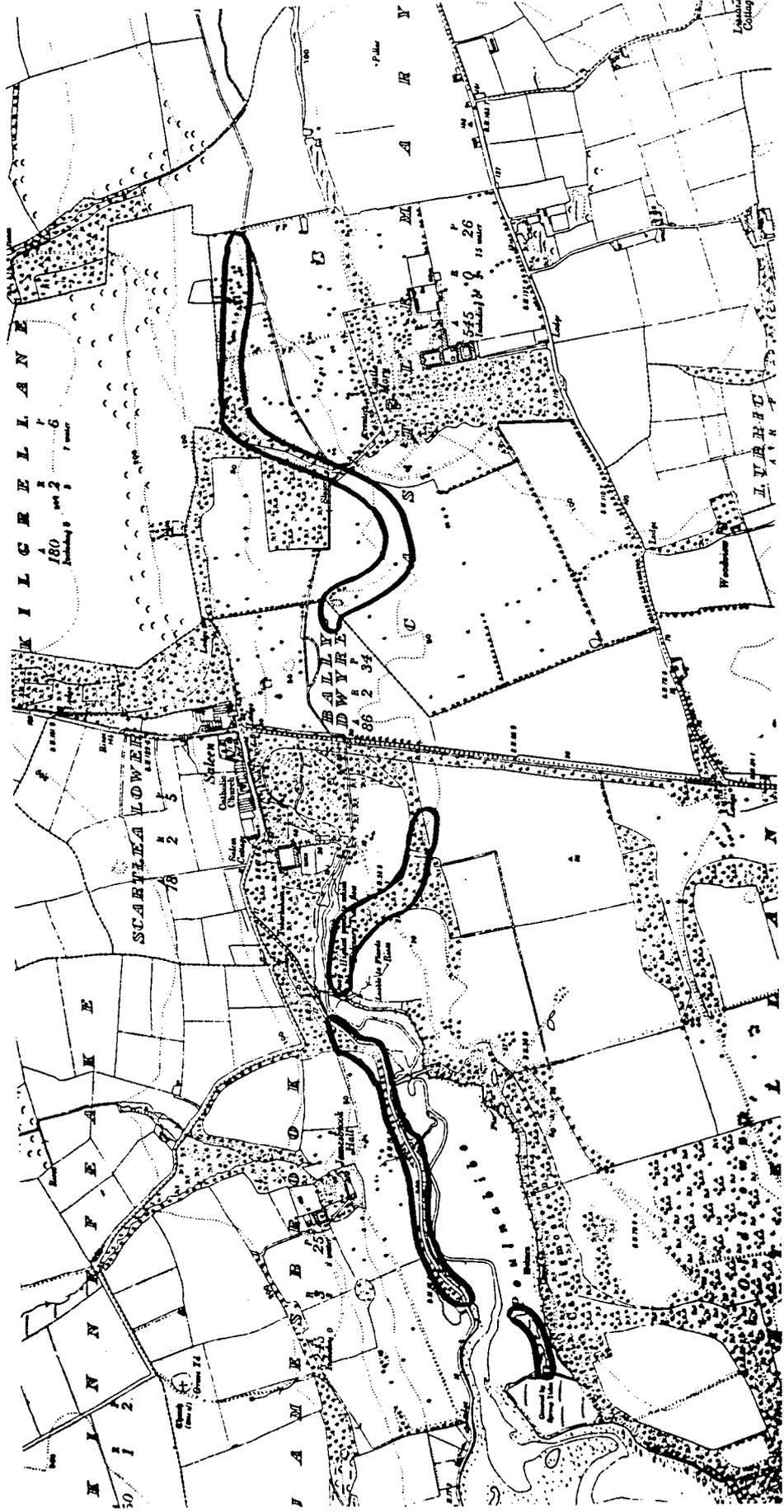
Eskers are formed by rivers flowing through a melting ice-sheet leaving their sand and stones behind. That at Cloyne is of small scale and is mostly covered by agricultural land and trees. It occurs in most noticeable form west of Castle Mary and Saleen and is generally a low mound running E-W.

Evaluation: The Cloyne-Saleen esker seems to be one of the only eskers formed by the local Cork/Kerry icesheet during the glacial period. In age it is older than the eskers of the Midlands and was probably laid down during the early part of the second glaciation (Midlandian) or even during the first one (Munsterian).

Vulnerability & Recommendations: All eskers are endangered by sand quarrying and as the only one listed in Cork it is felt that a substantial part of the Cloyne Esker should be preserved intact for its scientific and educational values.

CLOYNE ESKER

1:16246



30) DURSEY ISLAND & FIRKEEL

V 48 40

Area: 406 ha: 12 ha

Interest: Ecological (ornithological)

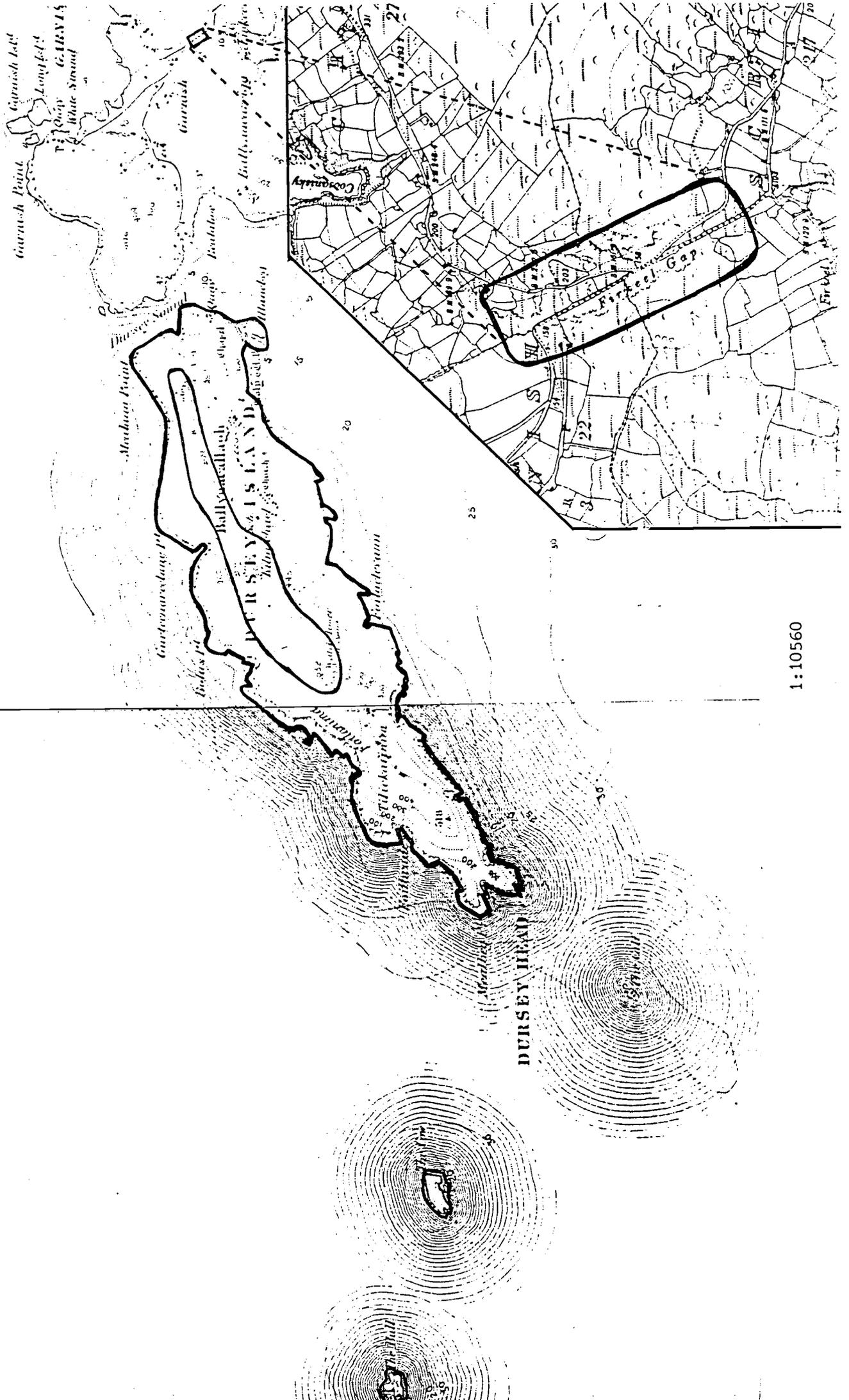
Rating: Regional Importance

A ridge of sandstone recalling the Great Blasket Island, Dursey is separated from the mainland by a narrow gorge. Cliffs surround much of its shore but there is a rim of grassland above them and more widespread fields at the eastern end. Choughs are favoured by the conditions and occur at a high density. The area is extended eastwards to Firkeel on the mainland. Choughs again occur on the cliffs south-west of the village and there is also some scrubby woodland in the valley which, as the only bushy place in this treeless area, attracts a large number of small birds particularly at migration time. Many less common species have been seen here and it is an important place for them to feed.

Evaluation: The high density of choughs gives rise to the listing of this area as of regional importance. It is probably the third most important place for them in the county.

Vulnerability & Recommendations: It is difficult to imagine any threats to the chough population of Dursey I. or the mainland cliffs but development could affect the Firkeel Valley. Whatever happens there the low woody vegetation should be preserved or restored by planting.

DURSEY ISLAND : FIRKEEL GAP & THE BULL & COW ROCKS (see p.36) 1:41143



1:10560

31) GARRYLUCAS MARSH

W 61 43

Area: 31 ha

Interest: Ecological (botanical)

Rating: Regional Importance

Garrylucas is a coastal, lime-rich marsh cut off from the sea by Garristown Beach. There are one or two pools of open water but in many places a rather open stand of Phragmites australis (reed) exists, beneath which Thelypteris palustris (marsh fern) and Equisetum fluviatile (water horsetail) occur commonly. More open places are colonised by Cladium mariscus (saw sedge), Juncus subnodulosus (blunt-flowered rush) or Carex acutiformis (a sedge) while Rumex hydrolapathum (great water dock), Hippuris vulgaris (mare's-tail) and Berula erecta (water parsnip) are scattered throughout.

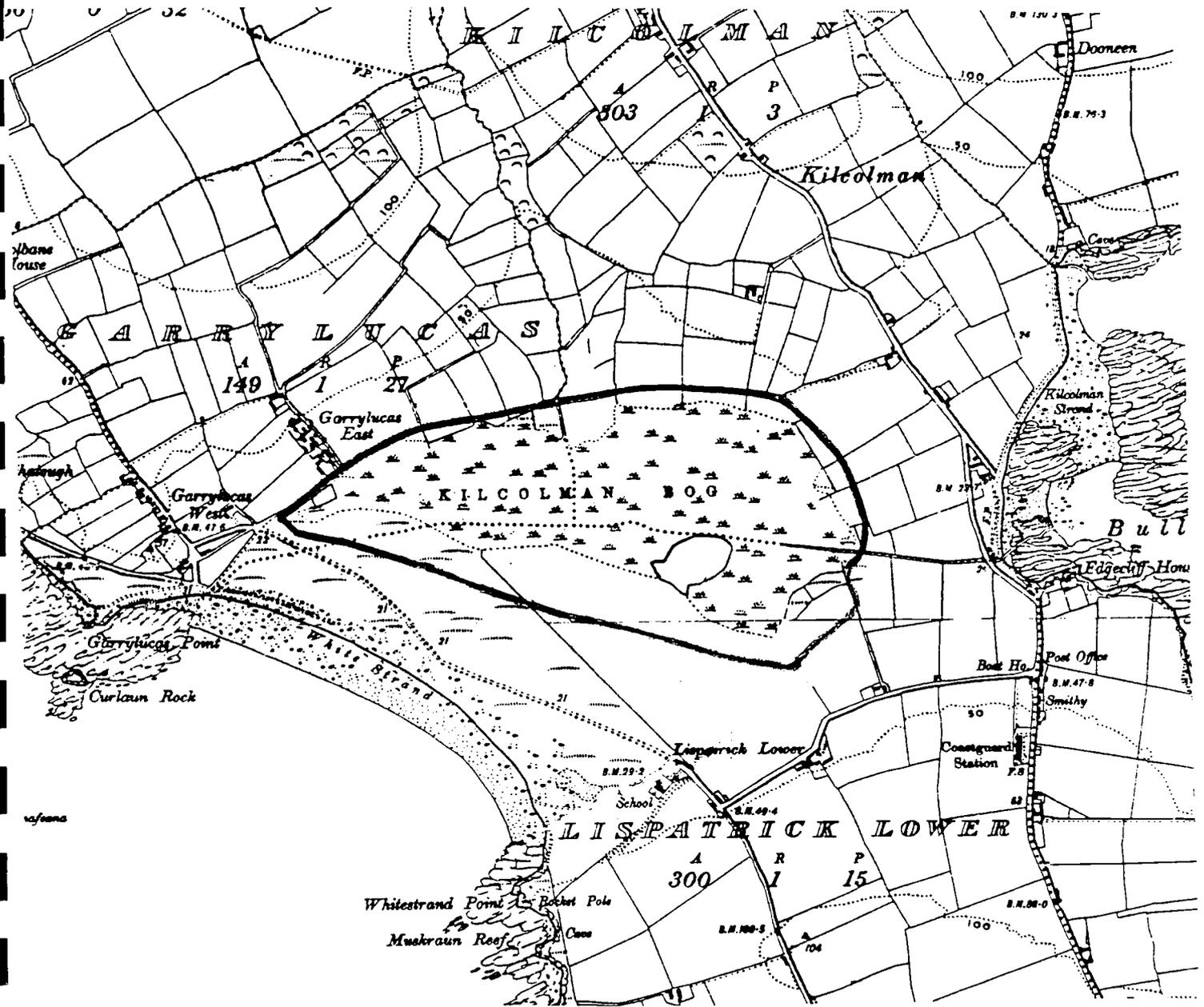
The bird population of the area is not well-known but in view of the relatively small size of the habitat is not likely to be of great interest.

Evaluation: This area is of an unusual type for the Cork coast, probably because of the influence of shell sand, and contains two plants species not known elsewhere in the county.

Vulnerability & Recommendations: Garristown is subject to substantial recreational pressures and the marsh might seem suitable to some for drainage and conversion to a caravan site. Such development should be prevented however.

The possibility of creating access for a modest educational development might be considered.

GARRYLUCAS MARSH 1:10560



32) GOWLANE

V 670 495

Area: 2 ha

Interest: Geomorphological

Rating: Regional Value

The site is a small field by the roadside west of Eagle Hill where long continued turf stacking has produced a change in the soil type. Water draining through the turf has acidified the soil, causing a typical podzol to develop on a site that would generally have a peaty podsolic soil. The difference lies in the degree of development of an iron pan at depth.

Evaluation: There are few examples of a standard soil type being formed by anthropogenic causes and the site gives valuable clues as to the widespread development of the podsolized soils beneath blanket bogs.

Vulnerability & Recommendations: Building or other roadside development could adversely affect the site and should be prevented.

33) KILCOLMAN BOG

R 58 11

Area: 63 ha

Interest: Ecological (ornithological, botanical)

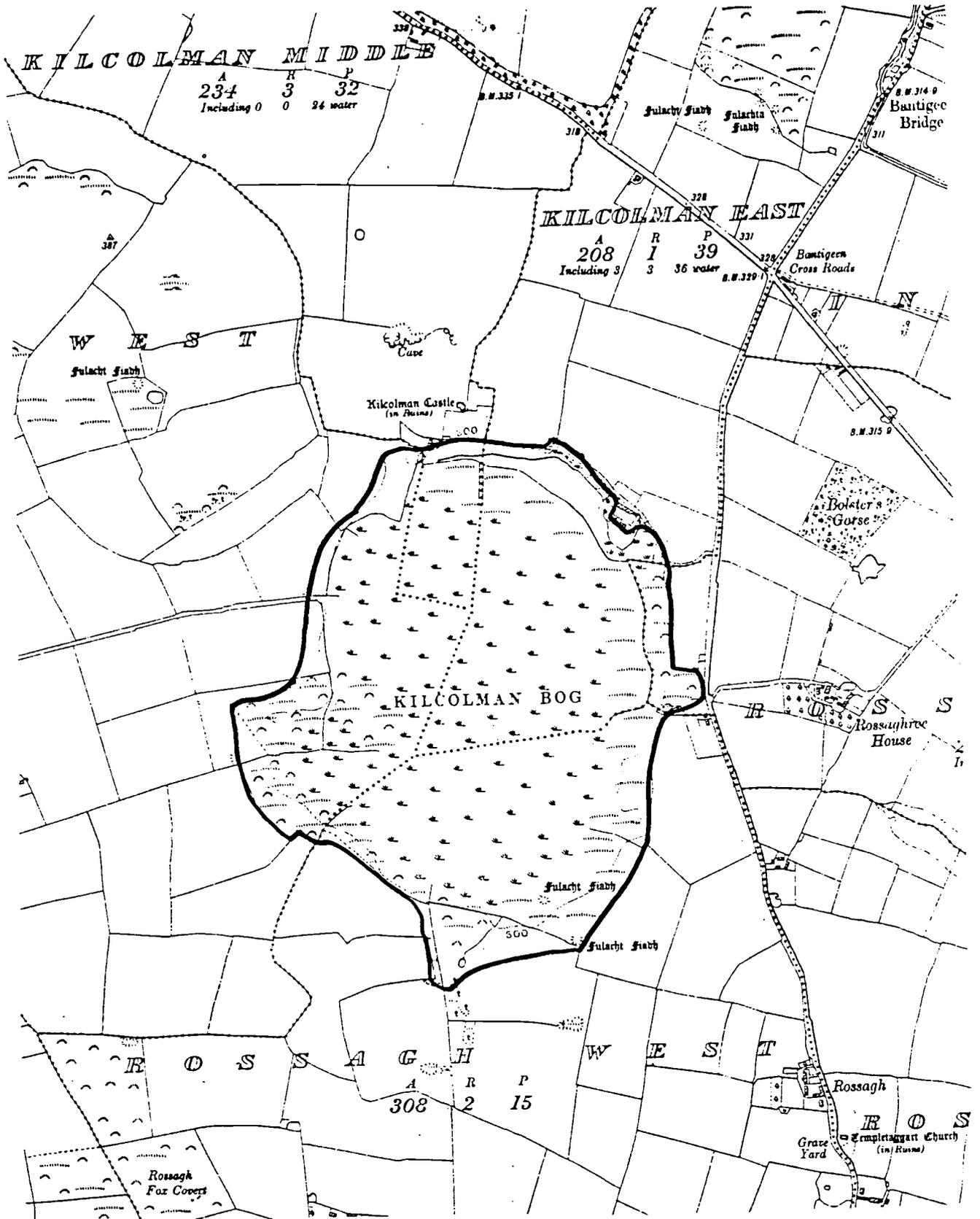
Rating: Regional Importance

Recorded as a swamp or marsh by the OS sheet, Kilcolman Bog has quite an area of open water at least in the winter which attracts a good number of wildfowl for its size. Up to 3,000 wildfowl and 1,000 waders have been counted on exceptional days. These included teal (1,200), mallard (620), wigeon (800) and shoveler (350) with Bewick's (60) and whooper (90) swans. The birds are fed on grain for part of the winter and this undoubtedly attracts some of them. But the natural food in the marsh is also rich because of the calcareous groundwater.

Botanically the marsh consists of reed swamp, floating fen and open water. The reedswamp is made up of Carex rostrata (bottle sedge), Equisetum fluviatile (water horsetail) with some Typha latifolia (bulrush). This grades into stands of Menyanthes trifoliata (bogbean) and Potentilla palustris (marsh cinquefoil) with many associated species, e.g. Lychnis flos-cuculi (ragged robin), Epilobium palustre (marsh willowherb) and Ranunculus lingua (greater spearwort). A fluctuating water level means that the marsh dries out in some summers. This favours two particular plants, Rumex maritimus (golden dock) and Chenopodium rubrum (red goosefoot) which are quite rare since they need unusual habitat conditions.

Evaluation: The large number of birds which winter at Kilcolman are clearly of regional importance and the marsh itself is of value for its plant life. The great majority of similar sites have been drained for agriculture.

Vulnerability & Recommendations: Drainage is a constant threat to such an area and has given cause for concern in recent years. Every effort should be made to prevent such drainage and grants to assist it should not be considered. Management of the greater part of the area as a wildfowl sanctuary has succeeded in building up the numbers of birds to make this the most important inland site in the county. It is important to maintain it both for its heritage and educational value.



34) LEE VALLEY

W 53 71

Length: 11 km

Interest: Ecological (B, Z, O)

Rating: Regional Importance

The lower stretches of the Lee are subject to periodic flooding from the hydroelectric stations and they have also been populated for a long time. These two factors influence the plant communities considerably. They have to withstand the first which goes with silt deposition and a poorly drained soil and they have been modified by the second, so that they now include many introduced species. For example there are several hybrid mints which have been thrown out of gardens. Leucojum aestivum (summer snowflake) and Azolla filiculoides (water fern) also occur.

However there are wild areas too which house a complex mixture of species, mostly those of rich limestone soils. The drier grassy sites have Pimpinella saxifraga (burnet saxifrage), Allium vineale (crow garlic) and Rosa stylosa (a dog rose) and R. arvensis (field rose) while the aquatic flora includes Carex pseudocyperus (a sedge), Lysimachia vulgaris (yellow loosestrife), Bidens tripartitus (bur marigold) and Scutellaria galericulata (skull cap). Scirpus sylvaticus (wood clubrush) occurs amongst the willows.

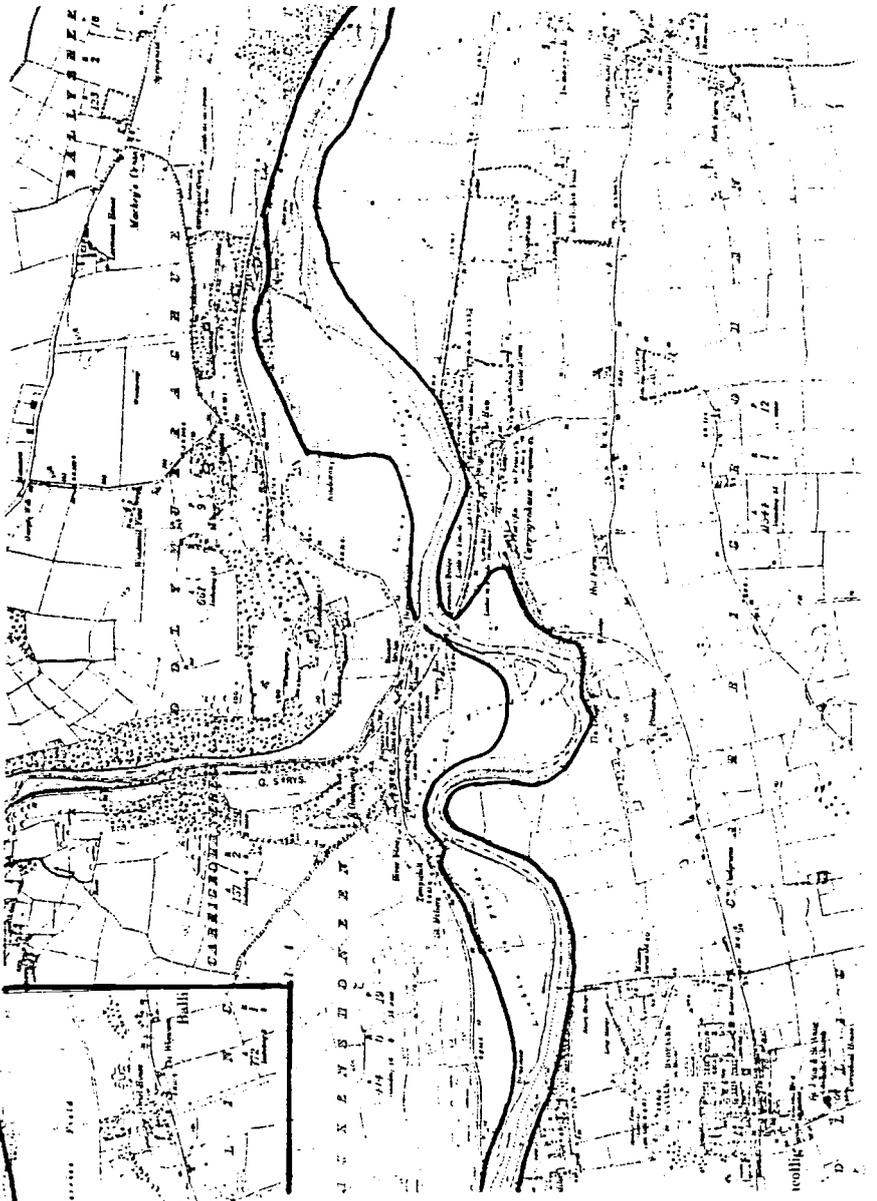
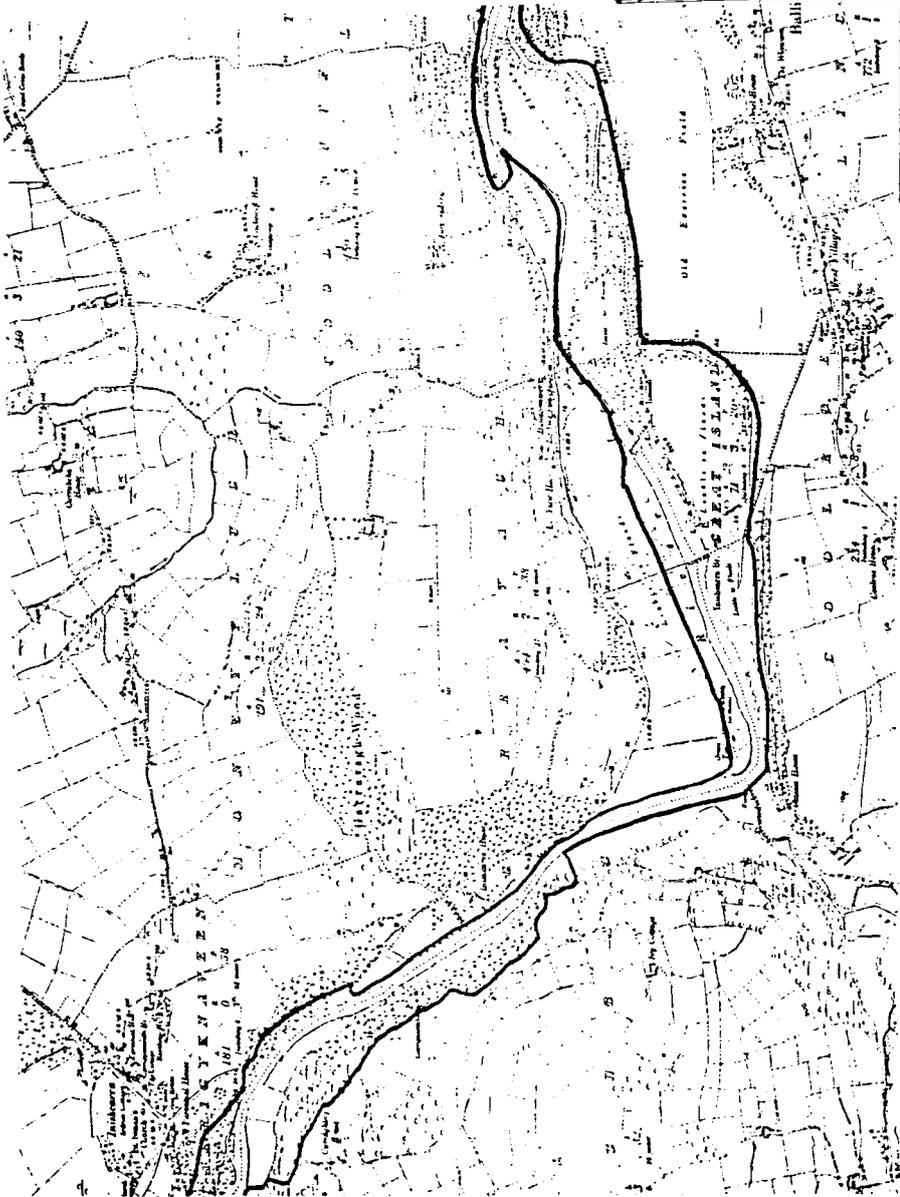
Most of the commoner bird species occur on this stretch of the river: mallard, snipe, reed bunting, grasshopper warbler and sedge warbler nest along with the moorhen, heron and woodcock. Two less frequent butterflies occur, the small blue and the wood white, along with the commoner species.

Evaluation: There are several features of interest in the valley, most notably its rich flora.

Vulnerability & Recommendations: There are few damaging influences likely in this area except pollution from industrial or domestic sources

Scale 1:24994

LEE VALLEY



35) LOUGH ALLUA

W 19 65

Area: 563 ha

Interest: Ecological

Rating: Regional Importance

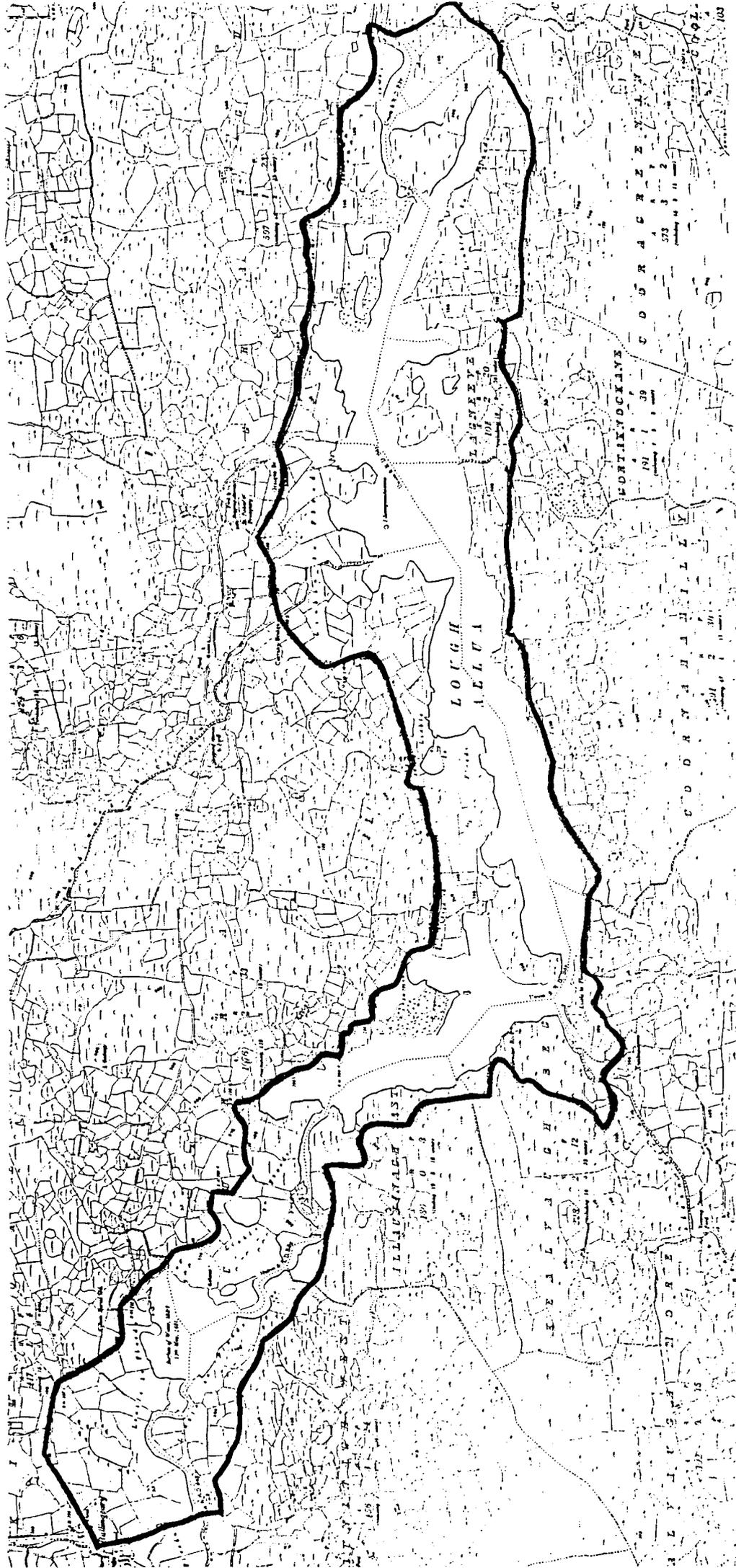
Lough Allua is a natural lake on the River Lee above Inchigeelagh. It is surrounded by poorly drained fields, some blanket bog and reedbeds but there are a few rocky and sandy areas which add to its interest. The lake itself is fairly shallow and its water peat-stained. It is fringed by Equisetum fluviatile (water horsetail), Phragmites australis (reed) and a little Cladium mariscus (saw sedge). Wildfowl sometimes reach reasonable numbers: mallard, tufted duck and teal being the most frequent. The ponds associated with the lake, particularly at its eastern end, are of value to them. Around the lake the rockier places have perhaps the most interesting flora with Hieracium umbellatum (hawkweed), Aquilegia vulgaris (columbine) and Geranium columbinum (cranesbill). Viola lactea (heath violet) and Viola canina (dog violet) also occur.

Evaluation: Lough Allua appears to be a most interesting lake though it is not as well known as it should be. Ecologically the juxta-position of an acidic bedrock and more calcareous glacial debris makes the habitat unusual.

Vulnerability & Recommendations: A change in water levels or in the frequency of flooding would adversely affect the aquatic communities. Afforestation is the chief concern on land, and would have to be done sensitively with visual and scientific amenity in mind.

LOUGH ALLUA

1:24994



36) ROCK FARM QUARRY

W 76 71

Area: 29 ha

Interest: Geological, ecological (botanical)

Rating: Regional Importance

The quarry is divided into two sections (East and West) and lies on the shore of Little Island, west of Clashavodig. It is cut into limestone which is extremely fossiliferous with brachiopods, goniatites and molluscs. The site is of Carboniferous age and was a shell reef rising in a former sea. The range of rock types indicating the habitats that then prevailed include fine-grained crinoidal limestone, pseudobreccia, reef limestone and the Cork red marble (which is a conglomerate).

On the floors of the quarries and around their edges a rich limestone flora has developed which includes many attractive and noticeable species. Galium verum (lady's bedstraw), Lotus corniculatus (birdsfoot trefoil) and Festuca ovina (sheep's fescue) are abundant and many orchids appear during the year. Neotinea maculata (Mediterranean) is the most notable of these. Other species of interest include the rose Rosa micrantha, and the cranesbill (Geranium rotundifolium). Linum bienne (blue flax), Allium vineale (crow garlic) and Calamintha ascendens (calamint) also occur.

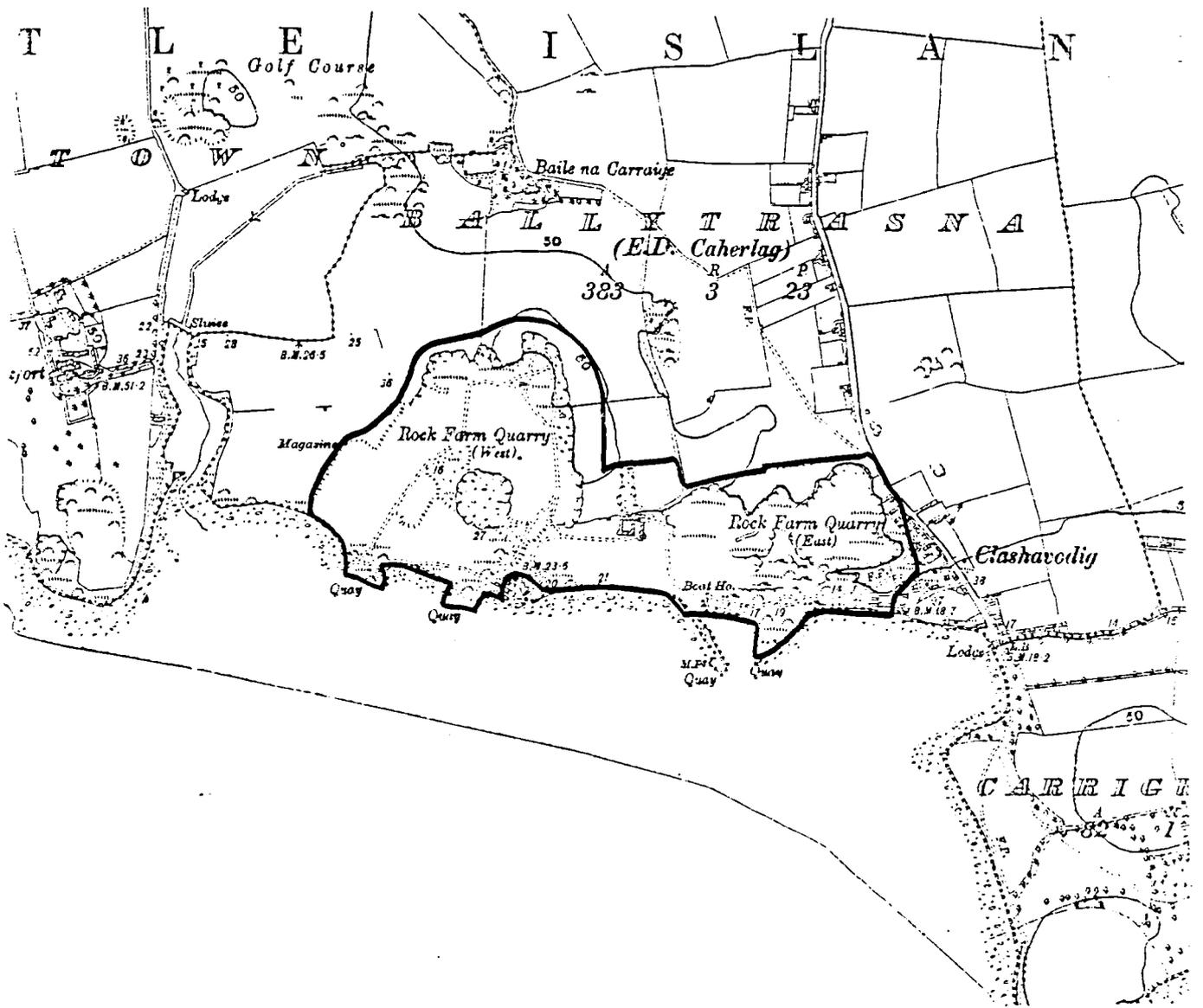
Evaluation: Geologically this is the only exposure of reef limestone facies in Cork and it shows certain differences to the main occurrence of the phenomenon in the North Midlands. It is a fossiliferous site but since each individual fossil is of little value it could well be used in an educational way for the general public.

The flora is also of considerable interest, being the richest limestone flora in the county. It is the only station for Neotinea outside the Burren and Midlands and contains many species in a small area. The naturalisation of some foreign plants such as Cotoneaster horizontalis and the bay tree Laurus nobilis gives added interest.

Vulnerability & Recommendations: The present land use, i.e. a golf course, is ideal to maintain the interest of the site provided no new areas of 'rough' are taken in. Quarrying is unlikely to be restarted but if it does come about, it should be done in consultation with the Geological Survey. Public access might be encouraged if the local population grows in size.

1:10560

ROCK FARM QUARRY



37) SHERKIN ISLAND *

W 02 25

Area: 838 ha

Interest: Ecological (botanical)

Rating: Regional Importance

Sherkin Island consists of a sandstone ridge in line with Baltimore and Cape Clear but also a lower-lying northern section carved by the sea into small bays and headlands and much influenced by its sands. The ecological interest lies on the sandy ground and on the heaths. Such plants as Atriplex laciniata (frosted orach), Raphanus maritimus (radish), Carex muricata (a sedge) and Cuscuta epithymum (dodder) illustrate the richness of the coastal flora. The heaths have Ornithopus perpusillus (hairy birdsfoot), Lotus suaveolens (hairy birdsfoot trefoil) and Trifolium striatum (knotted clover) as well as much Ulex gallii (autumn gorse) and Erica cinerea (bell heather).

Agricultural land in the northern part of the island also contains an interesting selection of plants, some of them species that were formerly cultivated and now have gone wild. Humulus lupulus (hop) and Althaea officinalis (marsh mallow) are two in this category. Chenopodium rubrum (red goosefoot) and Chrysanthemum segetum (corn marigold) are also conspicuous.

The marine flora and fauna are both becoming well known because of the activities of the field centre. They contain a diversity of species including many southern forms because of the high mean sea temperature and the habitat variation. There are examples of all groups that appear, so far, to be restricted to Sherkin.

Evaluation: Sherkin is unusual in the south-west for its sandy habitats. These allow traditional forms of agriculture to be relatively successful and consequently a great range of plant species to persist. The pastures and beaches are 'uncommonly floriferous' and the seashore life rich. The lack of an overall knowledge of intertidal life in the south-west makes it impossible to grade this island relative to other places. It does seem, however, to be an excellent shoreline unaffected by pollution.

Vulnerability & Recommendations: The continuation of present forms of land use on the island will do much to preserve its scientific interest. Any largescale development should however be assessed for its environmental impact, particularly on the marine life. In the event of oil spillage this island should be a detergent-free zone.

38) SHOURNACH VALLEY

W 53 79

Length: 22 km

Interest: Ecological

Rating: Regional Importance

The Shournach slices south-eastwards across the county to join the Blarney River close to that town. It is largely a turbulent stream flowing through the foothills of the Boggeragh Mountains and followed for the most part by a road and a disused railway line. The vegetation is generally upland in character, heath and oak woodland being fairly frequent. Here the ferns include Dryopteris aemula (hay-scented buckler fern) as well as Blechnum spicant (hard fern) and D. pseudomas (male fern). Equisetum hyemale (Dutch rush) and its hybrid E. x trachyodon are both recorded and in clearings Agrimonia odorata (agrimony), Crepis paludosa (marsh hawksbeard) and Rosa sherardii (dog rose) grow. A small amount of marsh also occurs and where the groundwater is rich in nutrients certain more specialized plants grow, for example Dactylorhiza traunsteineri (a marsh orchid), Carex diandra (a sedge) and Festuca arundinacea (reed fescue). The bird fauna of the valley is characteristically upland with dipper and grey wagtail around the river and willow warbler and redpoll higher up.

Evaluation: An interesting area particularly for its unexpected marsh communities, the Shournach is a good, unpolluted example of a turbulent river.

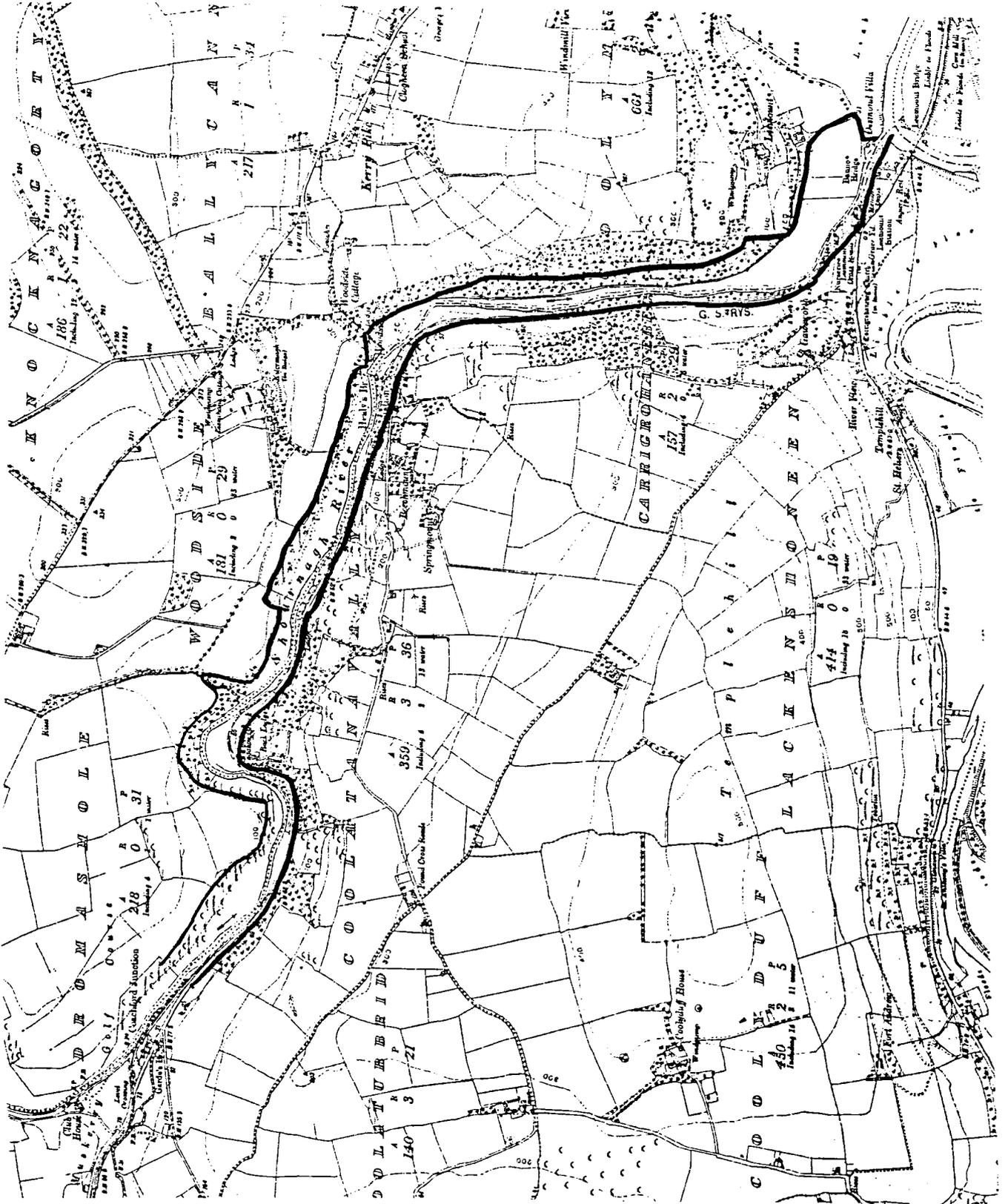
Vulnerability & Recommendations: The area is probably secure from most developments but illegal tree felling and scrub clearance affect some places. The use of Tree Preservation Orders should be considered where necessary.

Map:

Two interesting sections of the Lower Shournach are shown overleaf.

SHOURNACH VALLEY nr Ballincollig

1:16246



39) THREE CASTLES - MIZEN HEAD

V 73 25

Area: 254 ha

Interest: Ecological (ornithological, botanical) geological

Rating: Regional Importance

The wild coast that faces the Atlantic at the end of the Mizen Peninsula is backed by sheep pasture and heath and has several features of interest. It is a sandstone coast with hills in the north and south and Dunlough Bay in between. At Mizen Head hundreds of metres of closely bedded sandstones and shales occur and erosion of their joints has produced a spectacular array of red-brown and pink cliffs. The cliffs are used by choughs and rock doves and the fields to the north are an important feeding ground for them. The largest flocks (33) of feeding choughs in Cork were seen here on the 1982 survey.

The ground rises again for Three Castles Head and the interesting heathland, containing Helianthemum guttatum (spotted rock rose) and a prostrate variety of Cytisus scoparius (broom), occurs where ridges of rock break through the peaty covering. Other characteristic plants are Sedum anglicum (white stonecrop), Jasione montana (sheepsbit) and Erica cinerea (bell heather).

Evaluation: This largely natural coast contains the communities characteristic of West Cork and in regional terms is significant for its numbers of choughs and its plant life. The rock rose occurs in about three sites in Cork.

Vulnerability & Recommendations: No development is likely that would affect the scientific interest of the southern part of the area but the site for any buildings on Three Castle Head should be checked to see that it does not damage the heathland of value.

40) TOON BRIDGE WOODLAND

W 29 70

Area: 24 ha

Interest: Ecological (botanical)

Rating: Regional Importance

Although wooded from ancient times, the site at Toon Bridge now consists of relatively young oak trees growing on a southerly slope overlooking the Lee Valley. Ribs of slaty rock break through the surface at intervals giving a stepped profile to the hillside and producing alternately wet and dry places in the woodland. A major cliffline occurs at 120 m and here the oldest trees occur, much encrusted with lichens and mosses. The lichens include Sticta and Sphaerophorus species.

As well as oak, birch and holly are widespread with a little hazel and ash. The ground flora is characteristic of such woodland and is relatively rich, partly because of water movement down the slope. Vaccinium myrtillus (frochan), Luzula sylvatica (woodrush), Blechnum spicant (hard fern), Dryopteris aemula (hay-scented buckler fern) and Hedera helix (ivy) occur, together with small amounts of Galium odoratum (woodrush), Melampyrum pratense (cow-wheat), Melica uniflora (wood melick grass), Luzula pilosa (woodrush) and Orchis mascula (early purple orchid).

At the top of the slope gorse and heather appear on the thin soils with Umbillicus rupestris (pennywort), Sedum anglicum (stonecrop) and Corydalis claviculata (yellow fumitory). The woodland becomes open, with heathy and boggy communities interspersed with patches of birch and oak. Pteridium aquilinum (bracken), Solidago virgaurea (golden rod) and Digitalis purpurea (foxglove) grow on the rocky sites with Molinia caerulea (moor grass), Narthecium ossifragum (bog asphodel) and Sphagnum rubellum (moss) in the wetter hollows.

The wood contains a full selection of mammals (including badger and fox) and birds. In winter it is used by wintering woodcock.

Evaluation: The site is a good example of western oakwood with a wider variety of species in it than many others. Because of its unmodified character it can be considered of regional value. It offers a good contrast to the adjacent Gearagh woodland (q.v.).

Vulnerability & Recommendations: The wood is lightly grazed at the moment but this does not damage its structure nor the regeneration of trees. Its position and character make it unlikely to be cleared for agriculture though further housing might be considered in places.

No clearance of trees should be allowed apart from the cutting of individual trees for fuel by the landowner. A Management Agreement under Section 38 of the Local Government (Planning and Development) Act, 1963 between the Council and the owner might be considered to control land use in the long term.

Map: see page 21, Gearagh

41) ADRIGOLE HARBOUR*

V 80 49

Area: 5 ha

Interest: Ecological (ornithological, botanical)

Rating: Local Importance

Several small islands in the inner part of the bay have been used by nesting terns and in 1984, 40 pairs of arctic terns were found. Formerly these birds were associated with Roancarrigbeg, east of Bear Island, but none have nested there in the recent past. The rocky shore at Reen overlooking the harbour has patches of low woodland on it, including some Arbutus (strawberry tree) and other characteristic species.

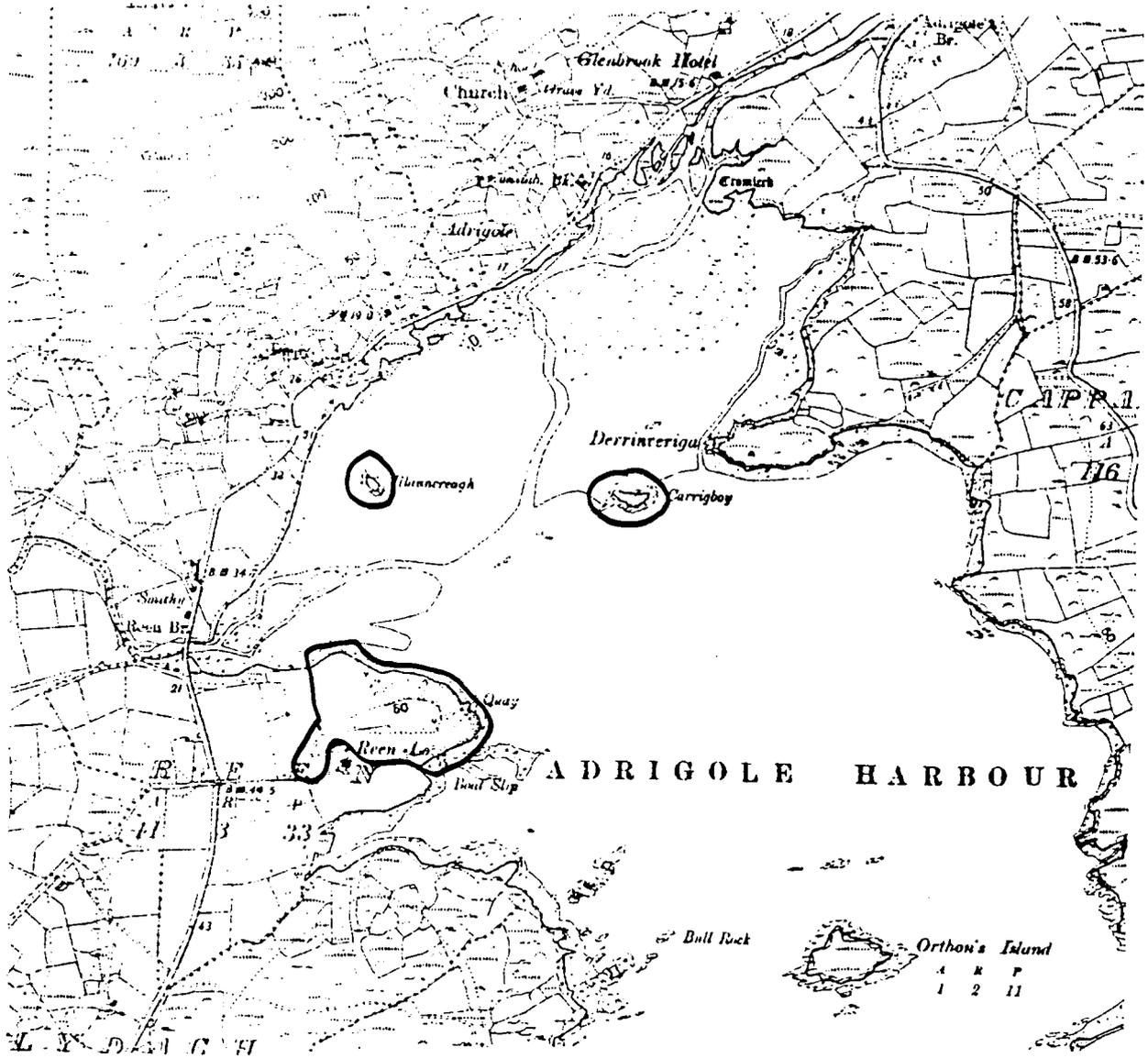
Evaluation: The tern colony represents 20 per cent of those still nesting in the county so is important locally. The woodland too is one of few such patches on the Beara Peninsula away from Glengarriff.

Vulnerability & Recommendations: Terns are very sensitive to disturbance and efforts should be made locally to prevent people landing on their nesting islands.

* See Appendix

ADRIGOLE HARBOUR

1:10560



6"
116

42) BALLYBUTLER L. & L. ADERRY

W 92 73

Area: 47 ha

Interest: Ecological (botanical, ornithological)

Rating: Local Importance

Lying east of Midleton in a limestone valley, these water-bodies are rich lowland lakes surrounded by farmland. Marginal vegetation is best developed at Ballybutler L. though aquatic plants occur in both and are a source of food for dabbling ducks.

Ballybutler L. once had a larger area of water than today but floating fen invaded from both the north-west and south-east sides. Some of this has now evolved into bog but there is a substantial area still of Menyanthes trifoliata (bog bean) with reeds and sedges, including Carex pseudo-cyperus. The muddier shores of L. Aderry have much Apium inundatum (marshwort) suggesting that water levels fluctuate over the year.

Both lakes support Potamogeton species (pondweeds) with some Nuphar luteum (yellow waterlily) and Ceratophyllum demersum (hornwort). These must provide some of the food for the wildfowl among which pochard and gadwall are notable species.

Evaluation: Floristically there are rich lakes because of their eutrophic nature and they contain several unusual species not widely found in Cork. Ballybutler Lake is probably the more interesting from this aspect but both lakes are used by a variety of wildfowl, both in summer and winter.

Vulnerability & Recommendations: Ballybutler Lake is now a statutory nature reserve and with a sympathetic landowner it will probably retain its interest. Drainage work currently going on at Lough Aderry is a cause for concern. It is not known if it is affecting an ecologically interesting part of the shore though it will probably not change the water level. This lake is so close to a main road that it is an important amenity that would benefit from a visual display.

Both lakes would be susceptible to some forms of water pollution and attention should be given to prevent silage effluent or animal slurry from reaching them.

43) BALTIMORE CLIFFS

W 04 24

Area: 44 ha

Interest: Ecological (ornithological)

Rating: Local Importance

The rocky coast south of Baltimore is covered by a heath of gorse and heather backed by permanent pasture which is grazed by sheep. Such a habitat suits the chough very well and there is a concentration of both nesting birds and feeding flocks in this area.

Evaluation: This area had one of the highest densities of nesting choughs recorded on the Cork coast during a survey of the species in 1982.

Vulnerability & Recommendations: The nesting sites of choughs, i.e. sea cliffs, are unlikely to be affected by development and it is chiefly the feeding grounds that should be considered. The birds require permanent pastures with very short grass: therefore sheep grazing at quite a high density is the best form of land use. Efforts should be made to maintain this.

44) BANTEER PONDS

W 37 97

Area: 22 ha

Interest: Ecological

Rating: Local Importance

The series of semi-permanent ponds and marshes that occurs on poorly-drained soils in the Blackwater Valley west of Banteer presents a sequence of vegetation types from open water to fen. The most easterly one is simply open water in the midst of fields of pasture. To the west tree growth surrounds most of the wetlands with lichen-covered willows (Salix atrocinnerea) and some birch growing in soil subject to winter floods. Interspersed are a few tussocks of Carex paniculata (sedge) and Osmunda regalis (royal fern). These waters are well suited to mallard, coot, moorhen and dabchick which occur in relatively large numbers. Swans frequent the more open areas.

Close to the railway a former pond has now become overgrown with vegetation, producing a floating or quaking fen. A mat of Carex rostrata (sedge), Typha latifolia (bulrush), Potentilla palustris (marsh cinquefoil) and Menyanthes trifoliata (bog bean) floats on water beneath, with some Osmunda, Hypericum tetrapterum (St John's wort), Juncus spp (rushes) and Ranunculus flammula (spearwort). Little open water exists so that aquatic birds are replaced by such marsh species as snipe and water rail. The insect fauna also appears rich and should be investigated.

The low-lying fields around this area support populations of curlew and lapwing in winter, sometimes with golden plover. They appear suitable also for geese but may be subject to too much disturbance.

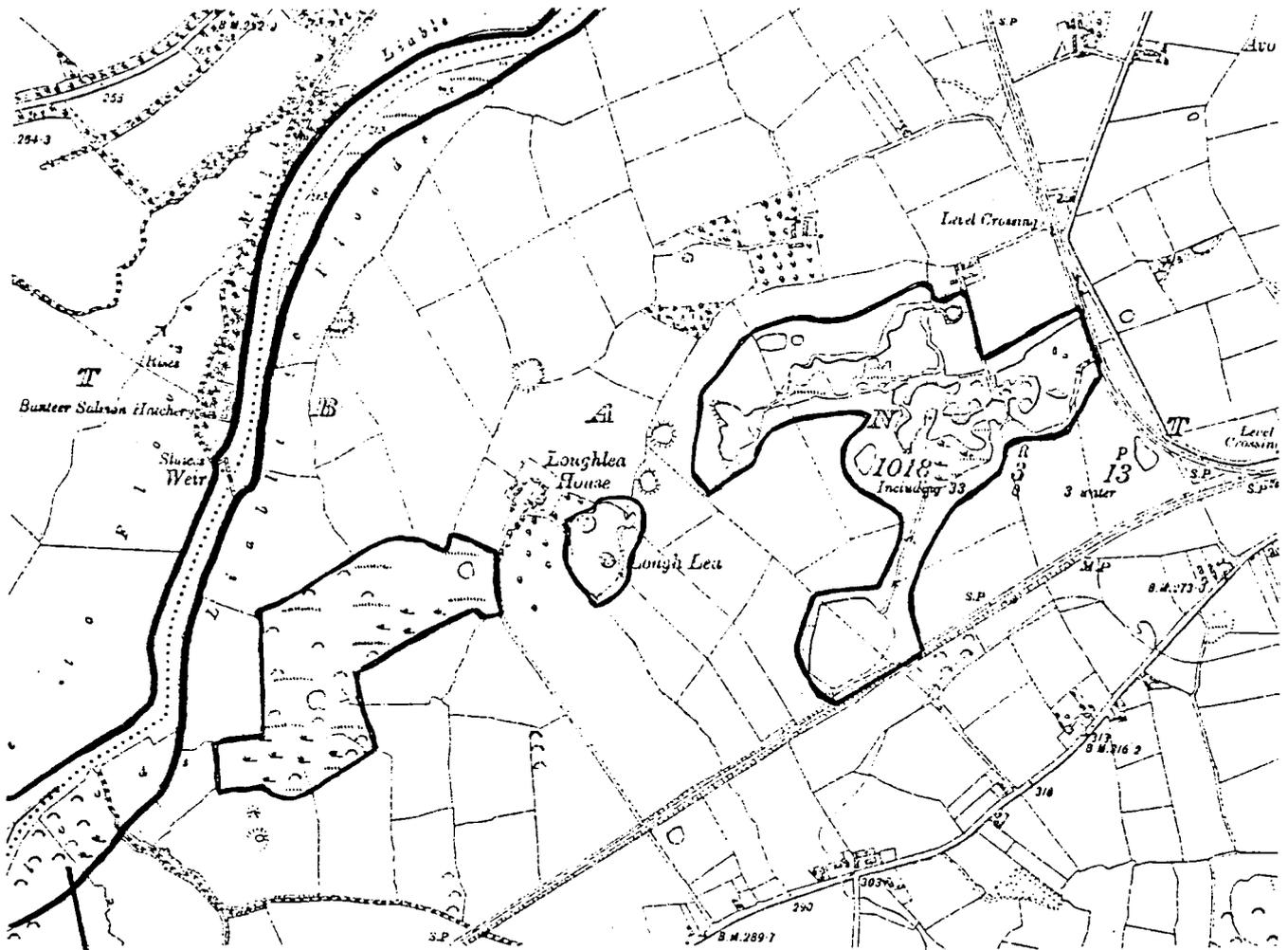
Evaluation: The value of this area derives from the series of wetlands it contains. All are represented individually elsewhere in the county but not with the same variation. Many similar sites have also been drained.

Vulnerability & Recommendations: Being in the middle of a farming area the wetlands are susceptible to three adverse factors - drainage, pollution from field run-off, and infill with old hedges, tree stumps, etc. As yet they seem to have escaped most of these.

Land improvement grants should not be given for any development that would adversely affect this site. Controlled shooting or other compatible use should be encouraged. The area could have a role in local outdoor education.

BANTEER PONDS

1:10560



BLACKWATER VALLEY (see p.24)

45) BARLEY LAKE

V 88 57

Area: 125 ha

Interest: Geomorphological

Rating: Local Importance

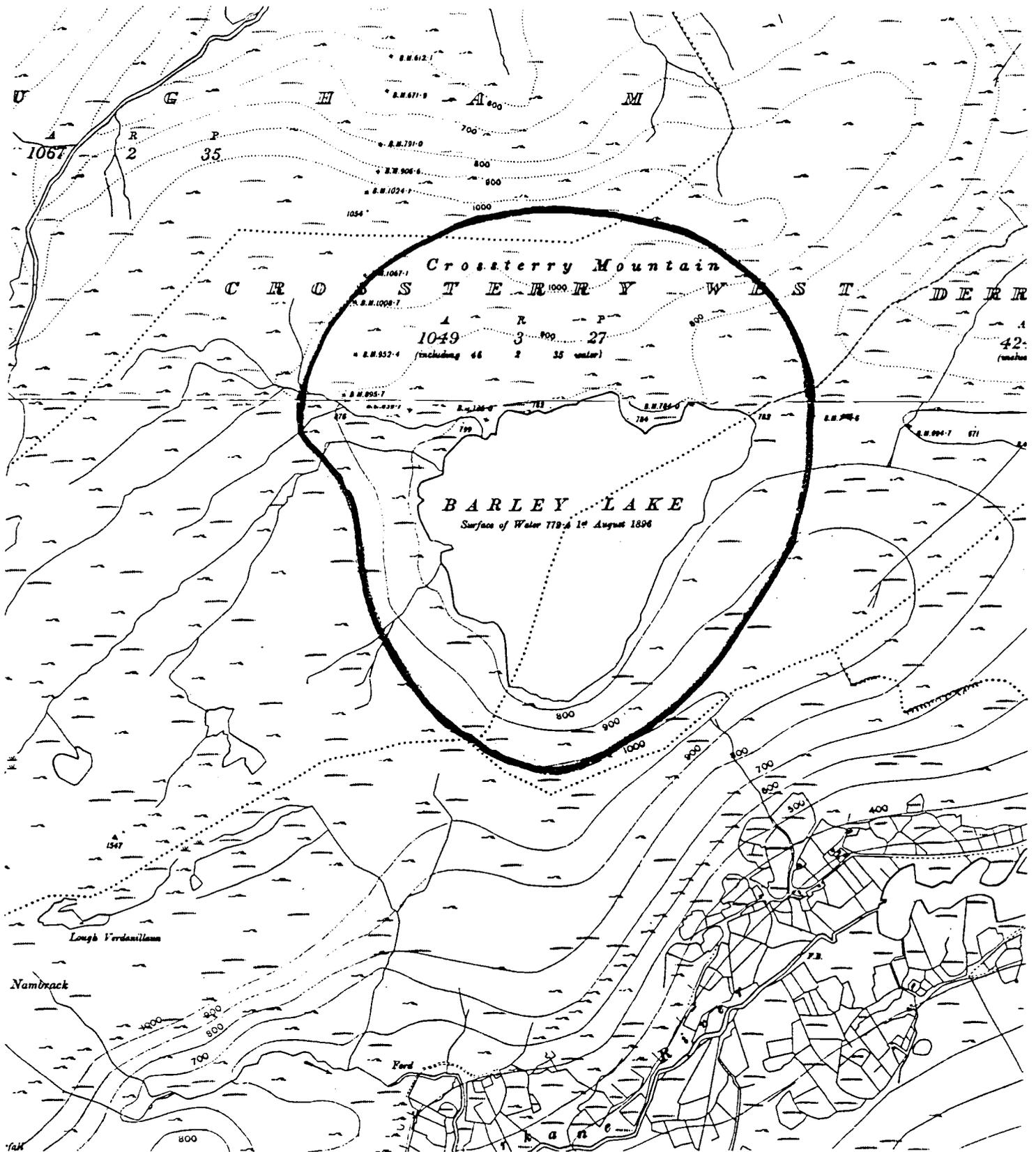
A large corrie lake, Barley Lake, lies in the mountains west of Glengarriff. Though its bed was cut by ice there are no real cliffs around the lake but it is nevertheless of great attraction. It empties from the north-east corner down the valley of the glacier that formerly existed. Along the valley sides is some morainic material left by the melting ice, perhaps 12,000 years ago.

Evaluation: Barley Lake is a good example of a glacial corrie and it is quite likely to have a population of char - a northern fish found in many similar lakes as a relict from the Ice Age.

Vulnerability & Recommendations: The only possible adverse influence at Barley Lake is afforestation which might mask the landform if it approached the margins of the lake.

1:12878

BARLEY LAKE



46) BATEMAN'S LOUGH

W 40 45

Area: 9 ha

Interest: Ecological (ornithological)

Rating: Local Importance

This is a small fluctuating lake close to Gallanes L. but very different in character. It has a firm shoreline, mostly of grassland, and little marginal vegetation except for some Equisetum sp (horsetails) and Juncus (rushes). Much Apium inundatum (marshwort) grows on temporarily flooded ground, however, and this provides a food source either directly or indirectly for wildfowl and invertebrates.

Wildfowl sometimes number 200 here and include mallard, wigeon, teal, pochard, tufted duck and whooper swan. Cormorants also sometimes fly in from the coast to fish. In the fields nearby, curlew, lapwing and golden plover occur regularly and black-tailed godwits at certain times of the year.

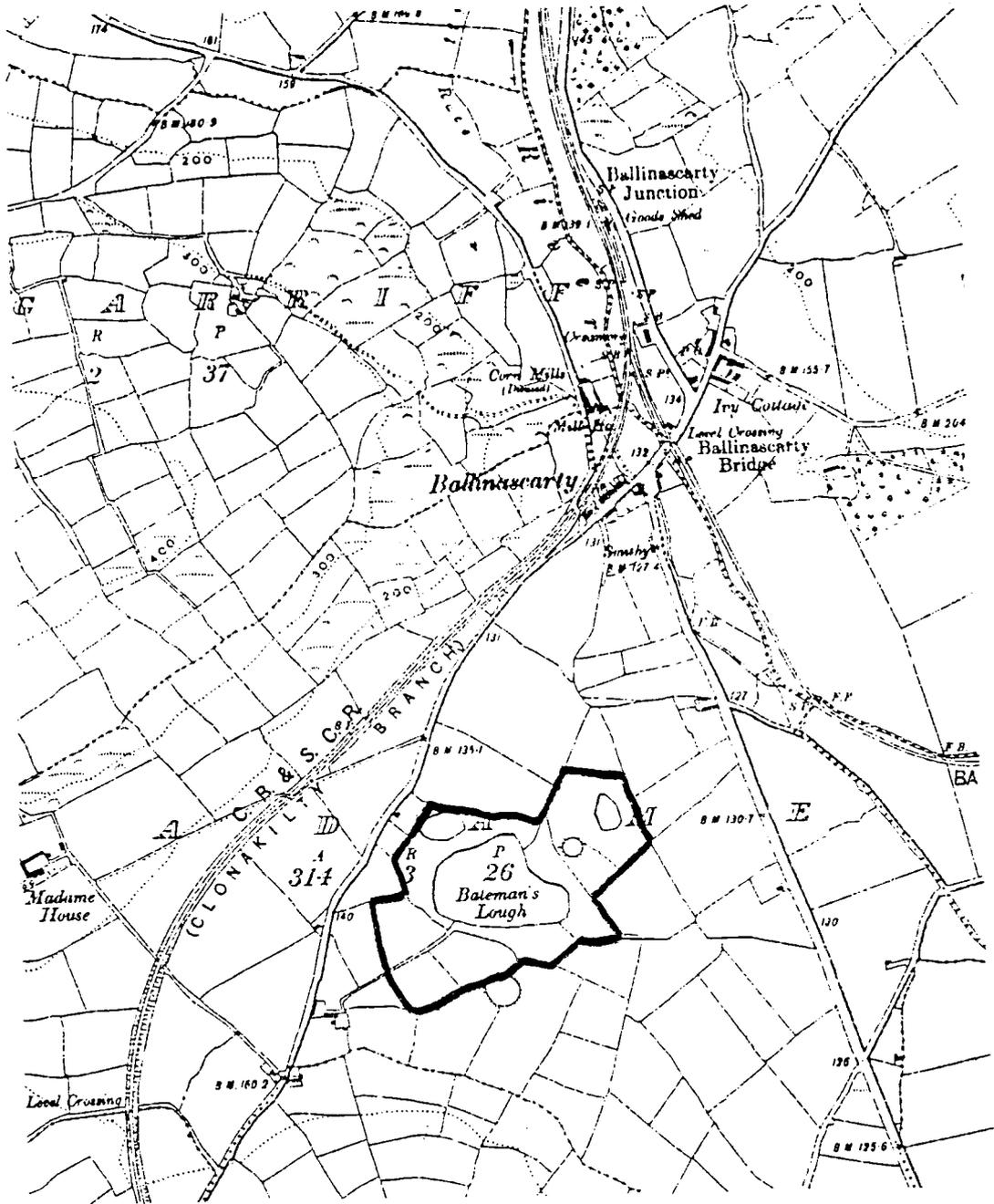
Evaluation: The lake has a suprisingly varied bird fauna in winter and is locally important for this reason. There are few sites inland in Cork with any numbers of wildfowl.

Vulnerability & Recommendations: Because of the absence of marginal cover, the bird life at Bateman's Lough is very susceptible to disturbance. Any increase in the numbers of people or dogs in the area should not be permitted.

The lake would be more resistant than most to a lowered water level but, in view of its small size, this also should be prevented.

1:10560

BATEMAN'S LOUGH



47) BLARNEY

W 61 74

Area: 53 ha

Interest: Ecological (botanical)

Rating: Local Importance

The influence of nearby limestone gives the woodland at Blarney a rich soil able to support a wide variety of plants and animals. The site is made up of old estate woodland with oak, ash, sycamore and beech, a patch of scrub with hazel and ash and a linear oak and birch wood stretching northwards along the Martin river towards Waterloo. In addition it includes the Blarney River and the artificial lake near the castle.

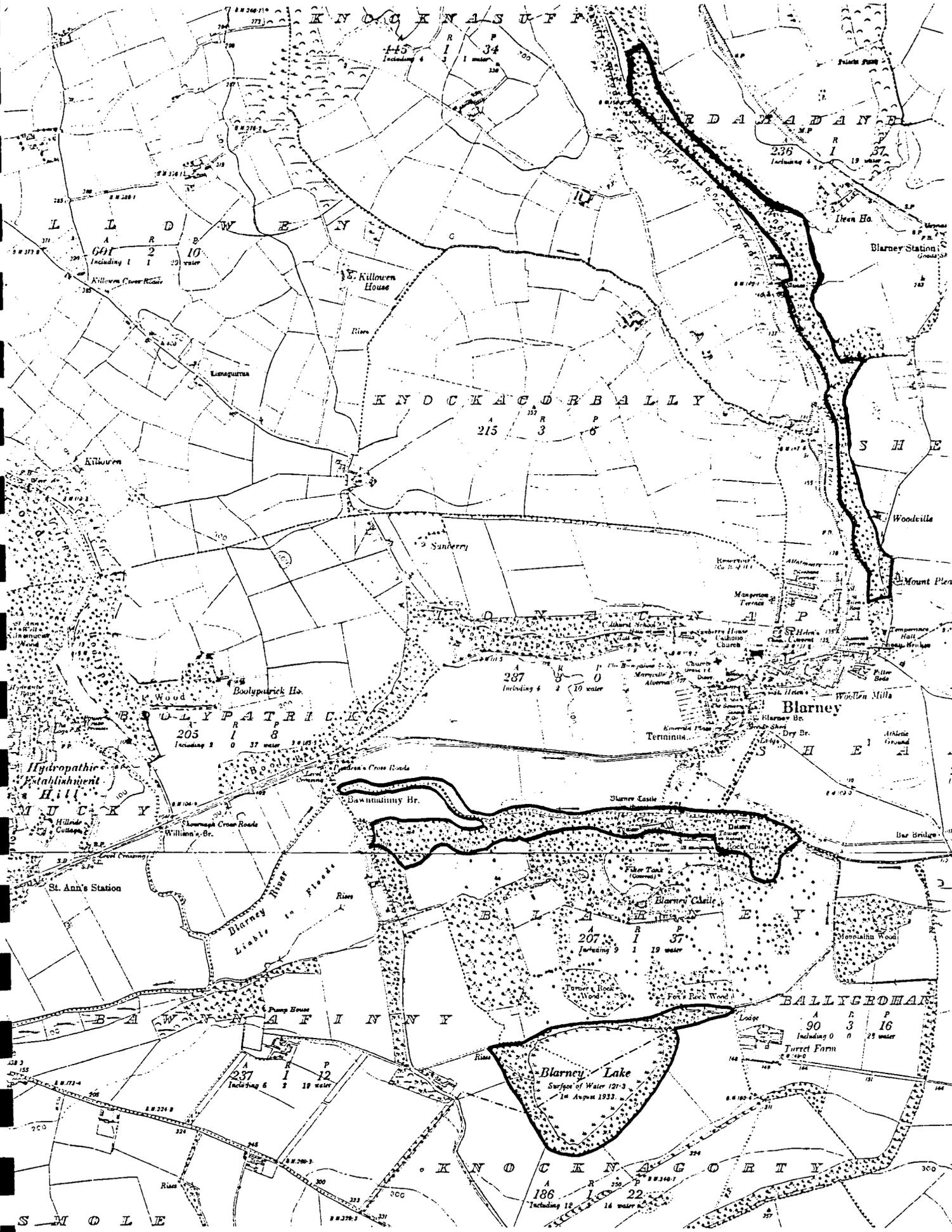
The base-rich woodland is probably the most interesting section. The ground vegetation here is of many species, for example Conopodium majus (pignut), Sanicula europaea (wood sanicle), Alliaria petiolata (garlic mustard), Ranunculus auricomus (goldilocks) and the violets, Viola riviniana and V. reichenbachiana. The two parasites Orobanche hederæ (ivy broomrape) and Lathraea squamaria (toothwort) occur in places, usually on deep soils, while Melica uniflora (wood melick) and Agropyron caninum (wood scutch) grow in rocky sites. The flora of the Waterloo Wood is more limited in character with some acid-loving species like Luzula sylvestris (woodrush). Like the rest of the area it is of some importance to birdlife with woodcock in winter and a varied list of breeding species.

Aquatic communities near the river and lake include beds of sedges (e.g. Carex riparia, C. vesicaria, C. laevigata and Cladium mariscus), tall herb stands of Filipendula ulmaria (meadowsweet), Epilobium hirsutum (willowherb) and Eupatorium cannabinum (hemp agrimony) and river edge groups of Bidens cernua (bur marigold), Veronica anagallis-aquatica (water speedwell) and Mentha spp. (mints). Ceratophyllum demersum (hornwort) grows in Blarney Lake.

Evaluation: This is a very varied area which includes interesting aquatic and terrestrial communities. The base-rich woodland is an example of a type not widely found in Cork where acid upland woods are the rule. The accessibility of the site and its nearness to the city give it considerable educational value.

Vulnerability & Recommendations: The woodland communities could be severely damaged by the spread of conifer planting or by the encroachment of agricultural activity. It would seem useful to enter into a management agreement with the owner to define the sort of changes he can make in the future.

Some attention should be given to the possibility of developing an interpretational facility for the large number of people who visit the area.



48) CAPE CLEAR ISLAND*

V 96 22

Area: 298 ha

Interest: Ecological (ornithological, botanical)

Rating: Local Importance

Cape Clear is an offshore island that, apart from the Fastnet Rock, is the culmination of the most southerly sandstone fold in the country. It is a hilly island almost cut in two by North and South Harbours and indented also at its south-western end by wave erosion. Cliffs occur in several places along the shore and house a small number of seabirds: fulmar (130), lesser blackbacked gull (50) and black guillemot (40) are the most interesting species.

The vegetation over most of the island is an acid heath with much bracken and gorse: there are patches of cultivation but also flat areas of bog and marsh. The bogs in Ballyieragh are one of the most interesting areas. Substantial areas of Sphagnum squarrosum (a moss) and sedges occur with Parentucellia viscosa (yellow bartsia) at the margins. There are patches of shallow soil plants on cliff tops and elsewhere that include Anagallis minima (chaffweed), Cicendia filiformis (yellow centaury) and Lotus suaveolens (hairy birdsfoot trefoil).

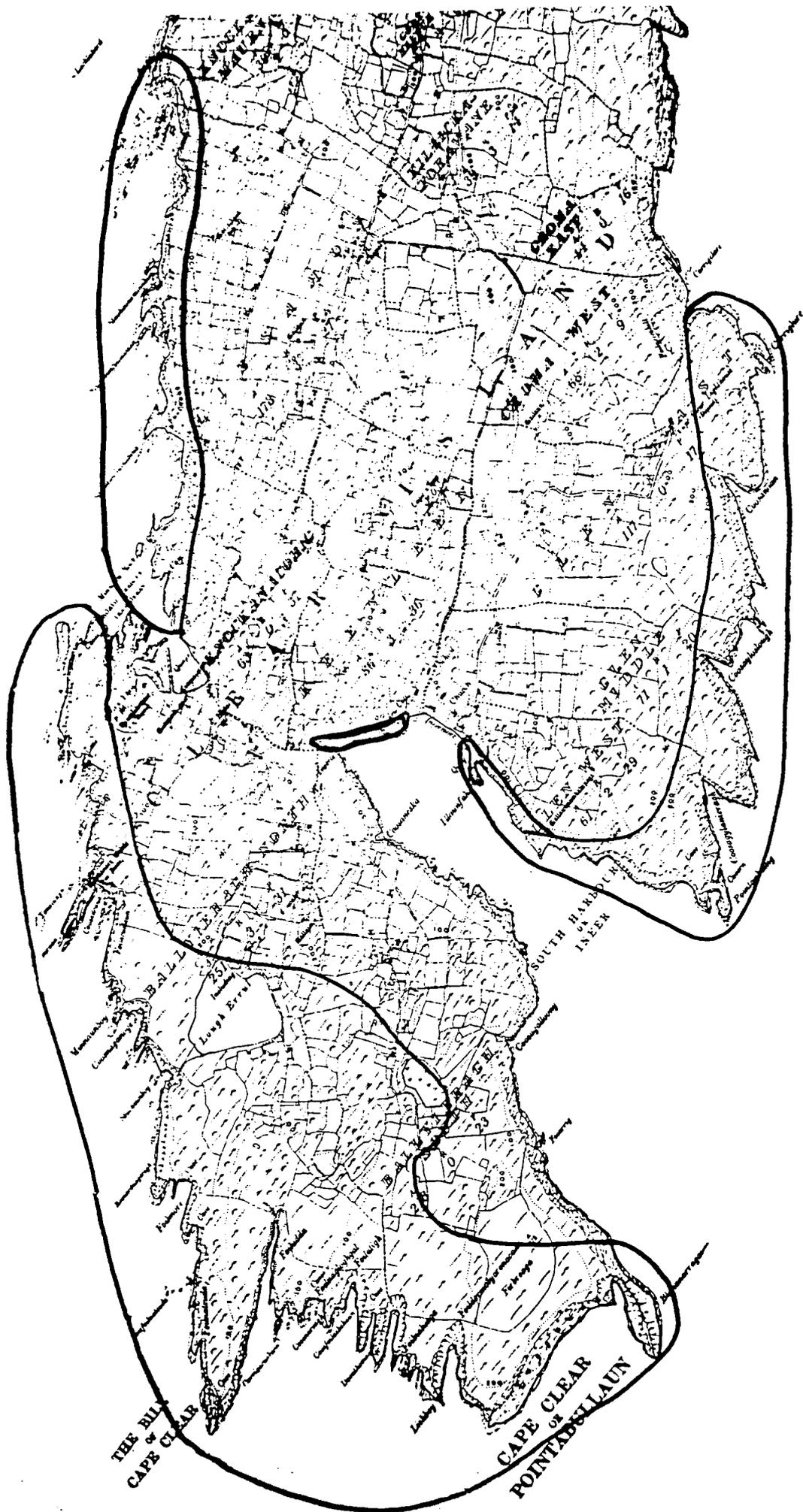
Evaluation: The intrinsic values of Cape Clear I. are its breeding seabirds and the Mediterranean components of its flora. It holds the largest colonies of fulmar, lesser-blackbacked and herring gull and black guillemot in Cork. Its plant life includes three of the Cork specialities including the Lotus, a protected species.

A bird observatory on the island has done a great deal to elucidate patterns of seabird movements in the North Atlantic and to draw attention to the annual occurrence of American and other land birds formerly thought not to visit Ireland.

Vulnerability & Recommendations

Only the bogs in Ballyieragh are susceptible to development (drainage) and this should be prevented. The bird observatory has done much to raise local awareness of the environment and has played a part in training a large number of young bird watchers. Efforts should be made to retain it for these reasons.

* See Appendix



49) CARRICKSHANE HILL

W 90 73

Area: 6 ha

Interest: Ecological (botanical)

Rating: Local Importance

Limestone outcrops on this hill south-east of Midleton hold an interesting flora including much Festuca ovina (sheep's fescue) and Lotus corniculatus (birdsfoot trefoil), with Sedum dasyphyllum (stonecrop), Origanum vulgare (marjoram), and the cranesbills Geranium lucidum and G. columbinum. Around walls and cultivated patches, Foeniculum vulgare (fennel) and Euphorbia exigua (dwarf spurge) are found amidst a large group of alien plants

Evaluation: Patches of exposed limestone in the Midleton area are progressively being quarried away and Carrickshane is no exception, its remnant is important as a representative of this herb-rich community and also because of the presence of the Sedum, one of the only places in the country where it appears native.

Vulnerability and Recommendations: Applications for further quarrying on this hill should be resisted because of its scientific interest.

50) CARRIGACRUMP CAVES

W 903 653

Length

Surveyed: 420 m Area above ground: 8 ha

Interest: Geological, ecological (botanical)

Rating: Local Importance

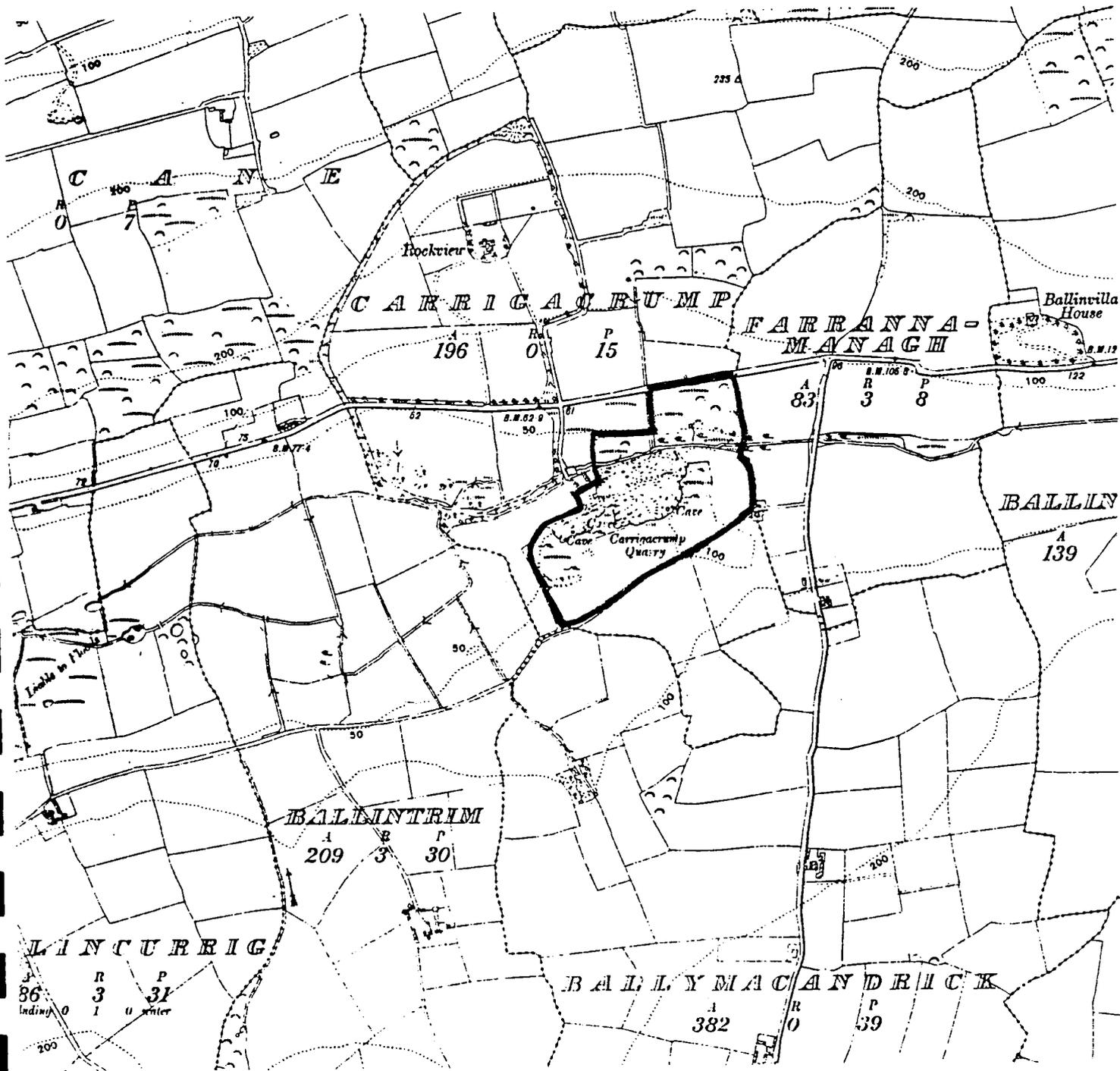
Both the caves and the limestone quarry from which they run are of interest. The cave system has eight entrances and most of the passages are of the canyon type and water-floored. The quarry has some undisturbed limestone grassland that includes some locally rare plants, e.g. Carlina vulgaris (carline thistle) and Geranium columbinum (long-stalked cranesbill). In addition the naturalised flora is unusual.

Evaluation: This cave was discovered during quarrying and together with disused parts of the quarry has local scientific importance.

Vulnerability & Recommendations: This appears to be a short cave system and is probably not suitable for public display. Its entrances and the surrounding vegetation which make it an attractive site should be retained intact without dumping. Applications for further quarrying should be considered in consultation with An Foras Forbartha.

CARRIGACRUMP CAVES

1:10560



51) CARRIGTWOHILL CAVES

W 810 730

Length

Surveyed: 300 m

Interest: Geological

Rating: Local Importance

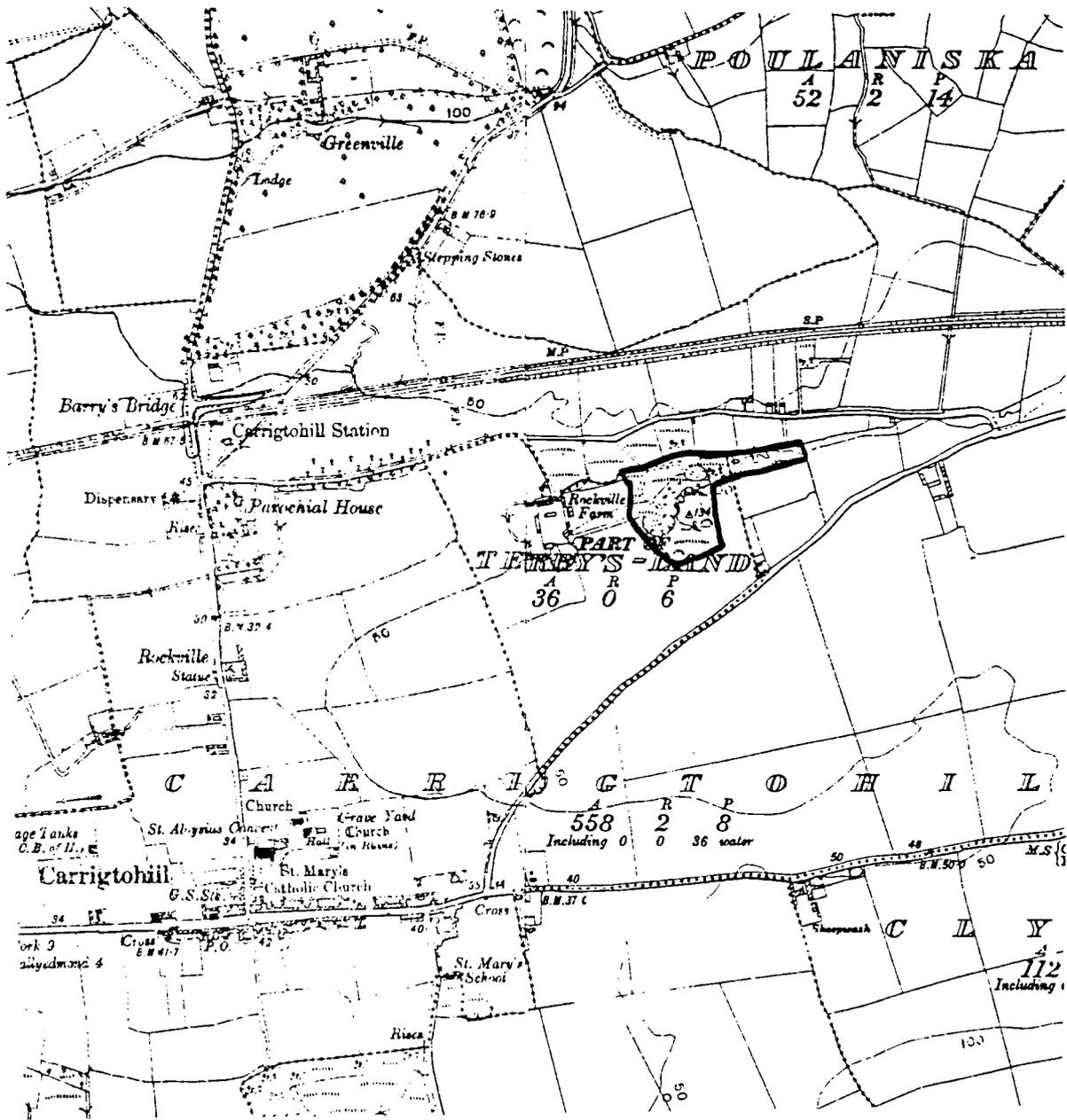
North-east of Carrigtwohill quarrying in a limestone knoll in 1933 broke into a cave unknown until then. It proved to contain some of the finest stalactites and stalagmites in any Irish cave but they have been partially destroyed since then. Animal remains were few but included a wolf/dog skull found in an inner section of the cave. Other small caves are found near the graveyard and in the bed of a stream near the quarry.

Evaluation: The cave had considerable interest before it was damaged but it retains good examples of dripstone.

Vulnerability & Recommendations: There are few threats to small caves such as this apart from the blocking of the entrance by dumping or quarrying. The site does not seem valuable enough to merit the curtailments of quarrying.

CARRIGTWOHILL CAVES

1:10560



52) CLEANDERRY WOOD

V 67 55

Area: 19 ha

Interest: Ecological

Rating: Local Importance

Cleanderry is a small oak wood occurring on a steep slope above the sea west of Ardgroom. It lies in a sheltered hollow facing north-west and is crossed by several cascading streams. There has been some clearance in the past but the trees are reinvading the traces of old fields.

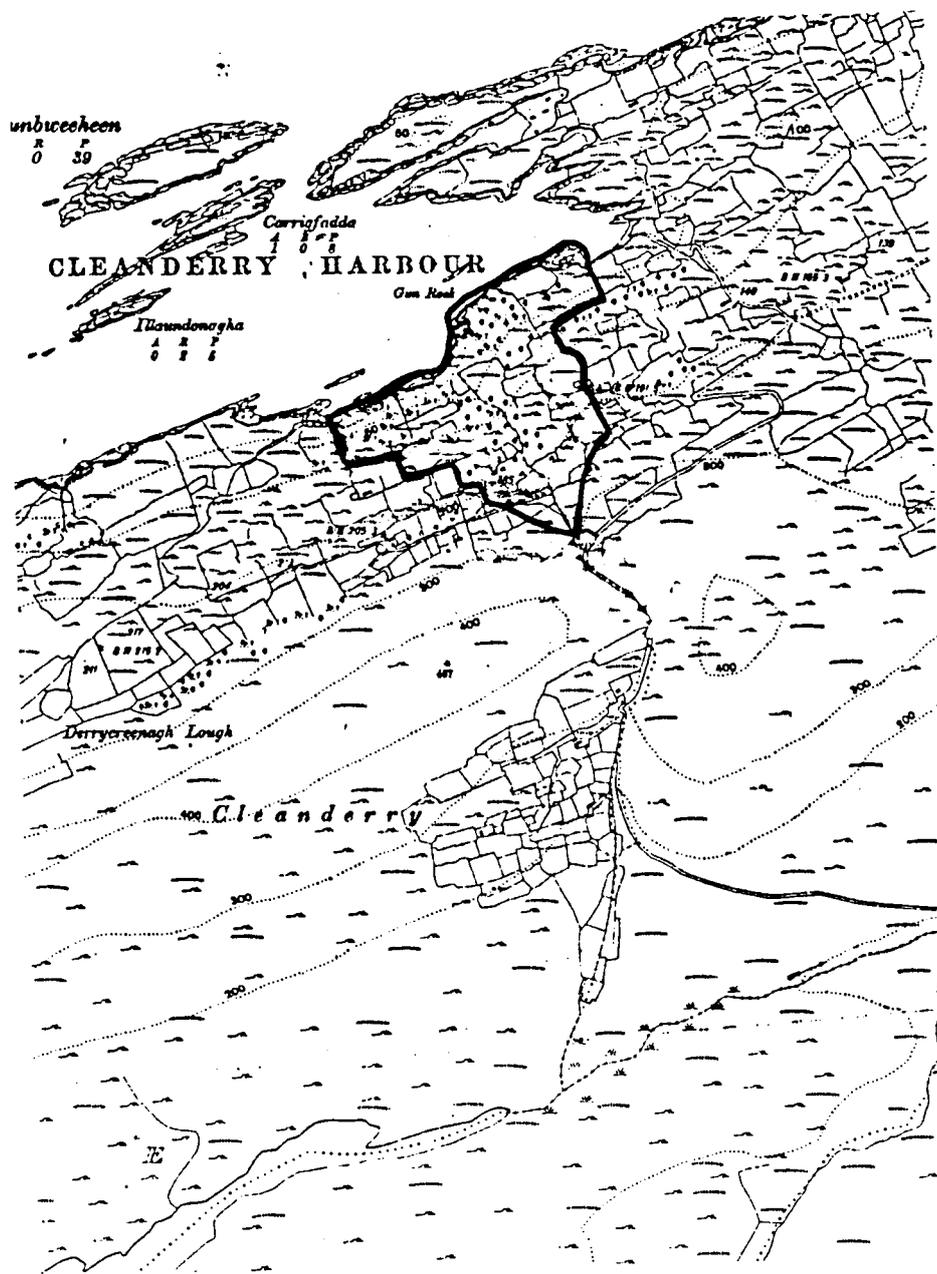
Oak (Quercus petraea) and hazel are the dominant trees with much holly and birch besides. In general the ground vegetation is well grown because there is little grazing pressure. Vaccinium myrtillus (frochan), Hedera helix (ivy) and Lonicera periclymenum (honeysuckle) are frequent with Agrostis canina (brown bent grass), Melampyrum pratense (cow-wheat), Blechnum spicant (hard fern) and Dryopteris aemula (hay-scented buckler fern). The western position of the wood is shown by the abundance of Saxifraga hirsuta (kidney saxifrage), Euphorbia hyberna (Irish spurge) and Hymenophyllum wilsonii (filmy fern).

In all the plant species list runs to over 150, including lower plants. Comparable information about other groups is not available.

Evaluation: Although very small, this woodland is important for its purity (it contains no introduced species) and the luxuriance of moisture-loving plants. Few of the other woods in Cork and Kerry occur so close to the sea.

Vulnerability & Recommendations: The wood would be much altered by grazing and efforts should be made to keep the boundary fence intact. Also any attempts at tree-felling should be resisted at this stage.

1:16246 CLEANDERRY WOOD.



54) CLOONTIES LOUGH

W 23 36

Area: 5 ha

Interest: Ecological (botanical)

Rating: Local Importance

Cloonties Lough is an acidic hill lake, mostly with a stony bed and margin. At its upper end a muddy shelf occurs with shallow water, and the aquatic vegetation is probably best developed here. Nymphaea alba (white water-lily) is frequent and on the landward side a fringe of Carex rostrata (bottle sedge) and Eleocharis palustris (spike rush) is characteristic. Rushes (Juncus bulbosus, J. acutiflorus) are frequent, with Menyanthes trifoliata (bogbean), Potentilla palustris (marsh cinquefoil), Myosotis laxa (forget-me-not) and Stellaria alsine (chickweed). The shallow water also contains water plantains (Alisma plantago-aquatica and Baldellia ranunculoides) and when it dries out in summer weather it creates suitable conditions for Elatine hexandra (waterwort) and other species.

The adjacent acid grassland is of some interest with shallow blanket peat at the western end.

The lake has a few teal and mallard on it in winter with waterhen and coot more permanently resident.

Evaluation: Cloonties is included as an example of an upland lake with the added distinction of having Elatine which is a rare waterplant.

Vulnerability & Recommendations: The farm on the north side of the lake poses the threat of eutrophication and the lake may be somewhat enriched even now. Extreme care should be taken with slurry storage and spreading so as to avoid changes in flora and fauna.

55) COURTMACSHERRY ESTUARY *

W 51 42

Area: 619 ha

Interest: Ecological (botanical, ornithological)

Rating: Local Importance

Courtmacsherry Bay is a sizeable area running westwards some 4 km to Timoleague with a small northern extension to Kilbrittain. It is the drowned estuary of the Argideen River now filled with sediments from both the land and the sea. Small patches of saltmarsh occur at the head of the estuary and at Flaxford House but mudflats predominate, becoming sandier as the sea is approached.

The mudflats are the feeding grounds for wildfowl (up to 200) and waders (up to 4,000) in autumn and winter. Mallard, wigeon and shelduck are the main species with some pintail and red-breasted merganser. Divers occur in the deeper water. The waders include golden plover, lapwing, bar-tailed godwit and oystercatcher in rough order of abundance.

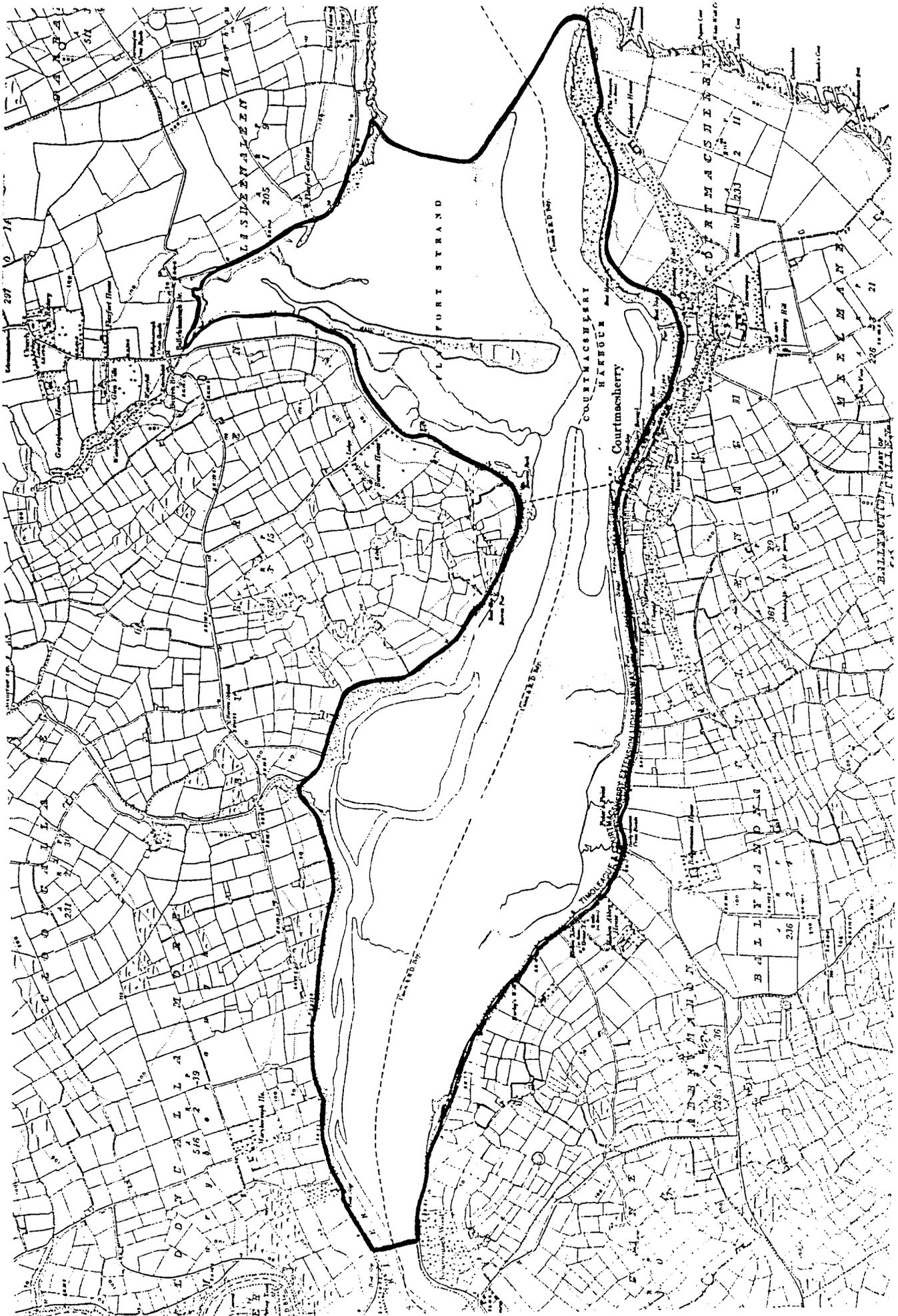
Three sections of coastline near Courtmacsherry hold interesting plant communities. The first is part of the cliffs east of the town where the grass Brachypodium pinnatum grows: the second the boulder beach at Broad Strand. Crambe maritima (sea kale), Glaucium flavum (yellow horned poppy) and Atriplex spp (oraches) occur here with Elymus pycnanthum and E. junceiforme (sand scutches) and Carex otrubae and C. arenaria (sedges). Harbour View, near the mouth of the estuary, is notable also for its maritime plants.

Evaluation: The total numbers of birds on this estuary is relatively low for the size of its area. Nevertheless it lies about fifth in the county table. As regards the plant life of the area, the Brachypodium is relatively rare as a native species (it occurs also on railway lines) and Crambe is so rare that it is scheduled under the Wildlife Act. Its persistence at Broad Strand is notable.

Vulnerability & Recommendations: The mudflat area in the bay is threatened by the spread of Spartina grass which occurs on the south side. Its large size however makes this a long-term problem and the small size of its bird population, a minor one.

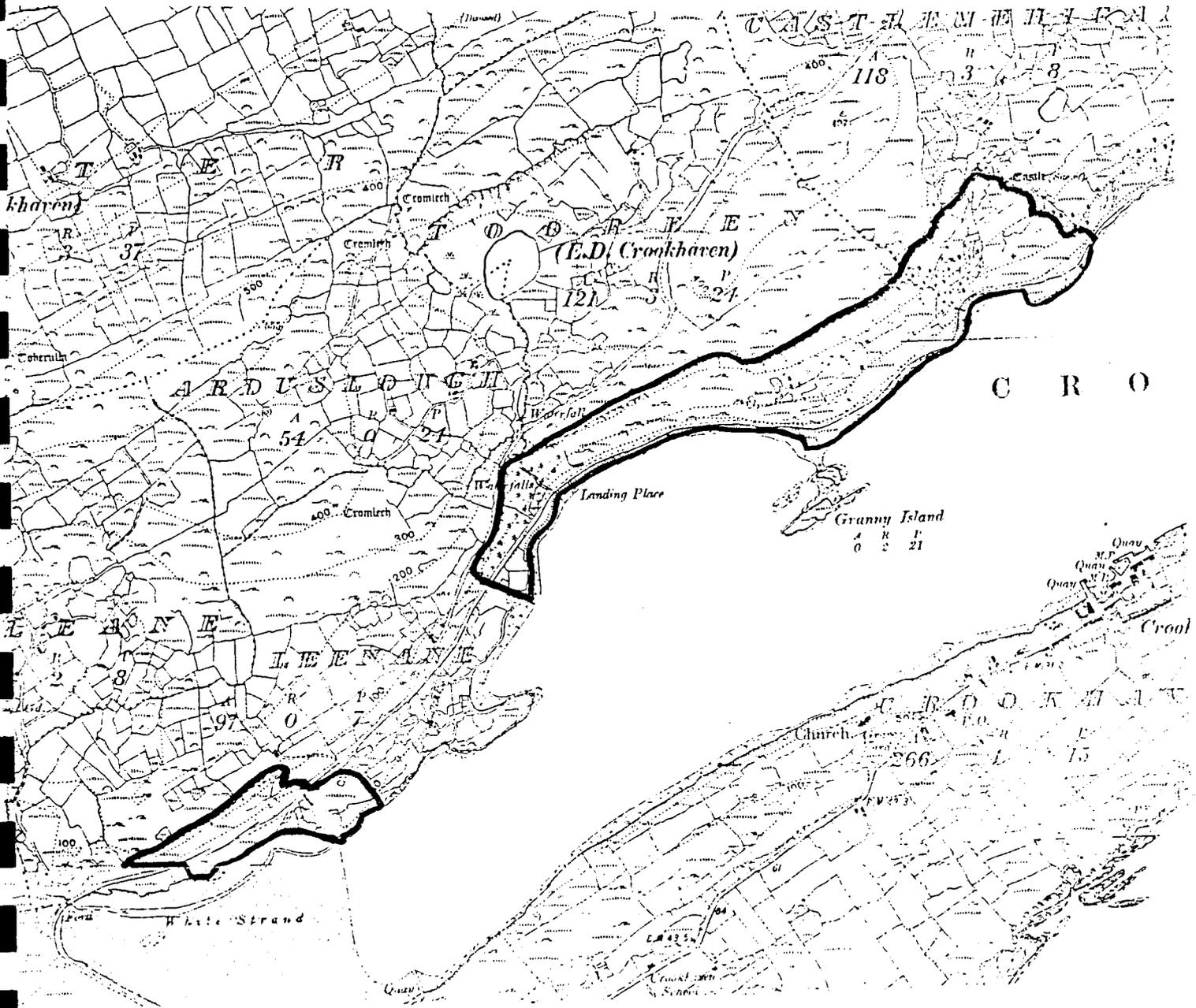
The Broad Strand site could be vulnerable to foot traffic and developments at the beach should be carried out with this in mind.

* See Appendix



CROOKHAVEN

1:10560



57) EAGLE LOUGH

R 55 10

Area: 13 ha

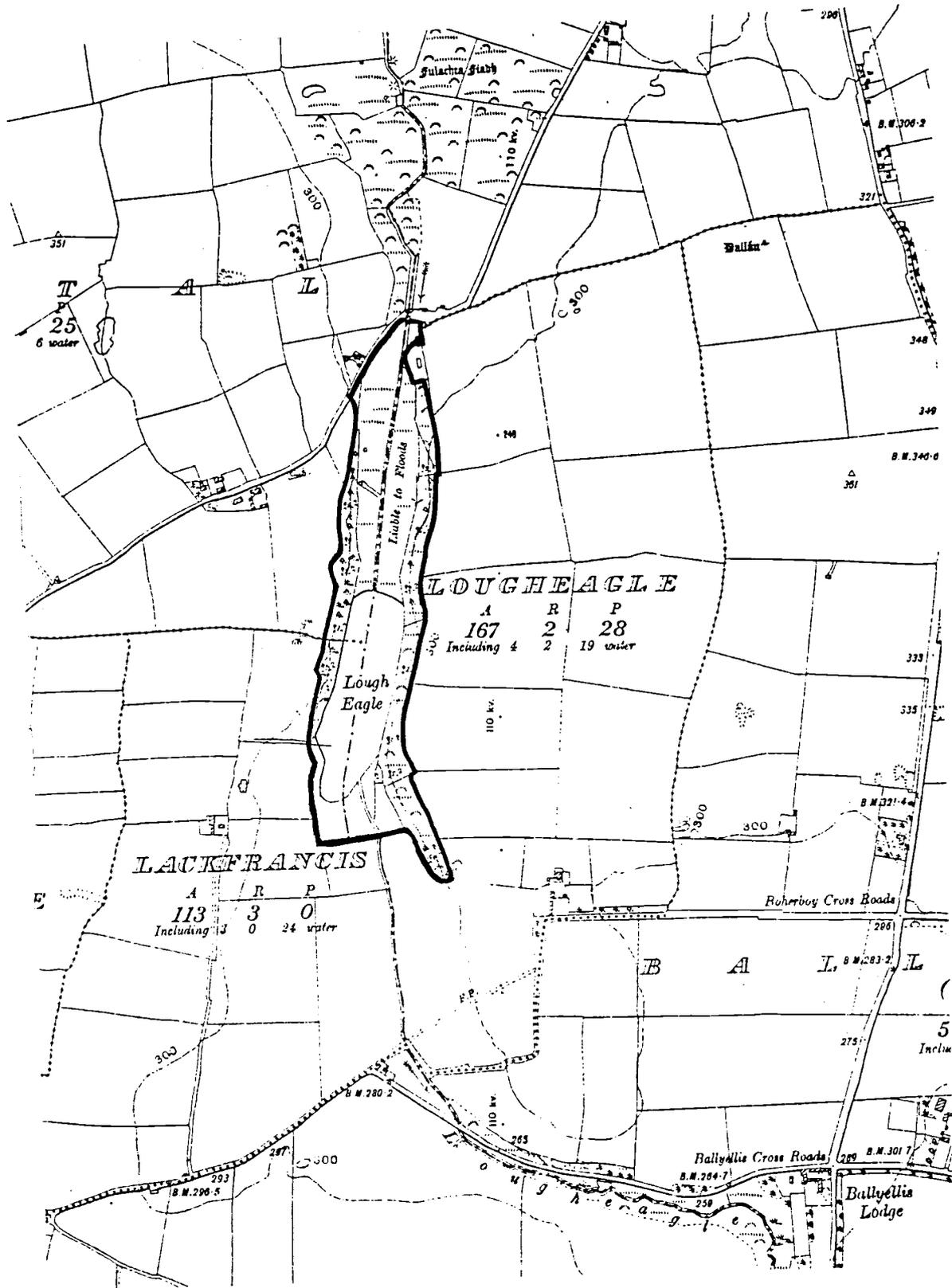
Interest: Ecological

Rating: Local Importance

Eagle Lough is a fluctuating lake with many of the features of a turlough. It lies in limestone country east of Buttevant and is surrounded by farmland with one small wood. As the water is approached sedges become common with much Carex hirta, as well as C. panicea and C. otrubae. The edges of the lake are much trampled by cattle but Apium inundatum (marshwort) thrives in this habitat with Oenanthe aquatica (a water dropwort), Veronica catenata (pink water speedwell) and Baldellia ranunculoides (lesser water plantain).

Evaluation: The primary interest of this area would seem to be its physiography and vegetation. Turloughs are virtually unknown in the county and this may be the only one in existence. The site is not well known and it may have a local value also for bird life.

Vulnerability & Recommendations: Eagle Lough is vulnerable to drainage.



58) GALLANES LOUGH

W 39 43

Area: 9 ha

Interest: Ecological (ornithological)

Rating: Local Importance

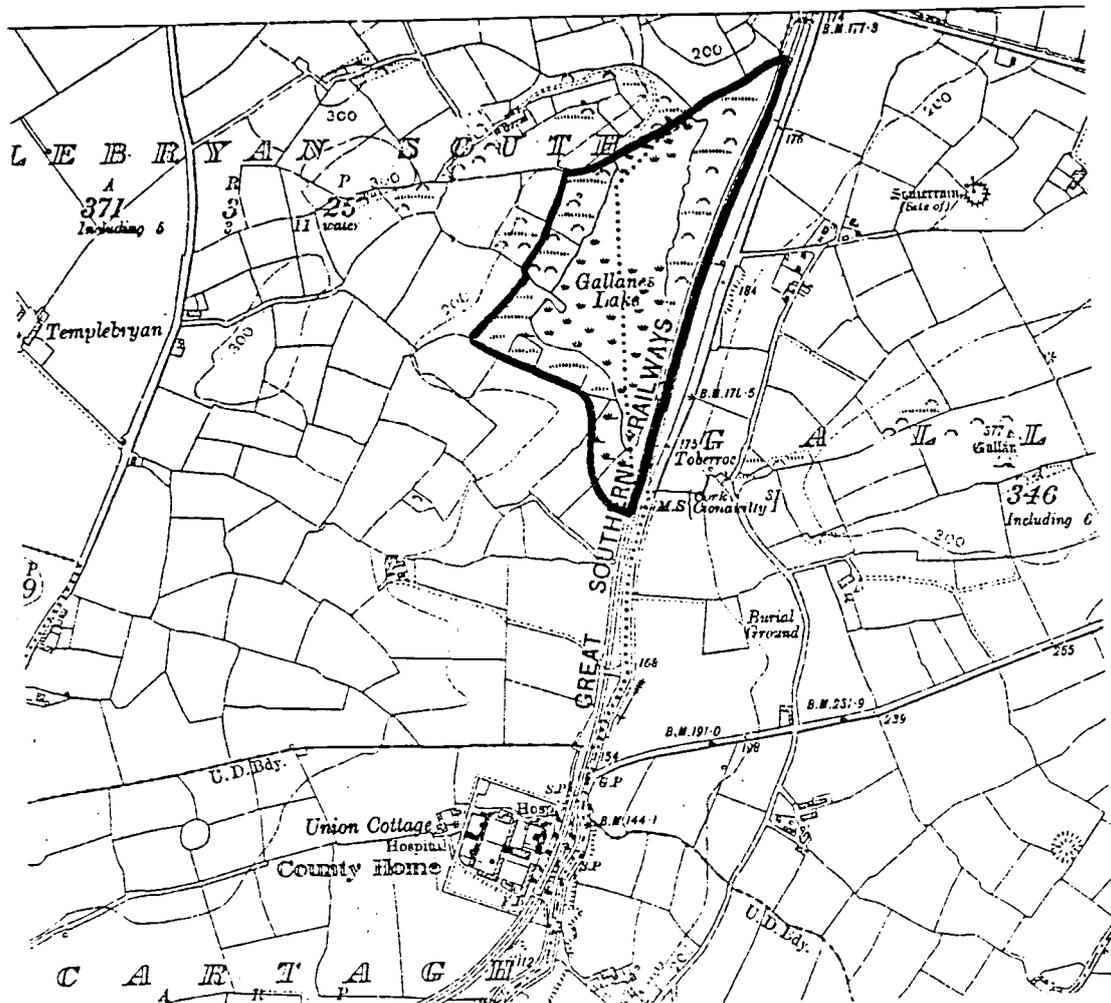
Gallanes Lough is a small waterbody beside the Clonakilty-Ballinascarty Road that occurs in a flat part of a stream valley. It is fringed by reedswamp with much Typha latifolia (bulrush), Equisetum fluviatile (water horsetail), Potentilla palustris (marsh cinquefoil) and Carex rostrata (a sedge). Much of this vegetation is in the form of a floating mat which is being colonised by wet grassland on its landward side. It is slightly acid and Osmunda regalis (royal fern), Rumex acetosa (sorrel), Lychnis flos-cuculi (ragged robin) were noted along with rushes and the grass Agrostis stolonifera. There is a limited amount of willow (Salix aurita) colonisation.

Aquatic bird species find this lake attractive and lapwing, curlew, snipe and mallard were present in spring. Up to 500 wildfowl occur at times, including mallard, widgeon and sometimes whooper swans. They are thought to have introduced a small water boatman of interest Microvelia pygmaea.

Evaluation: The bird populations occurring at this site are high for such a small area and, in addition, are easily visible to people on the road.

Vulnerability & Recommendations: Some infilling of the lake margin has taken place beside the road and since it covers feeding grounds it should not be allowed elsewhere. As with most wetlands, drainage would be very detrimental and would alter both plant and bird communities.

GALLANES LOUGH 1:10560



59) GLANMIRE WOOD

W 72 73

Area: 10 ha

Interest: Ecological (botanical)

Rating: Local Importance

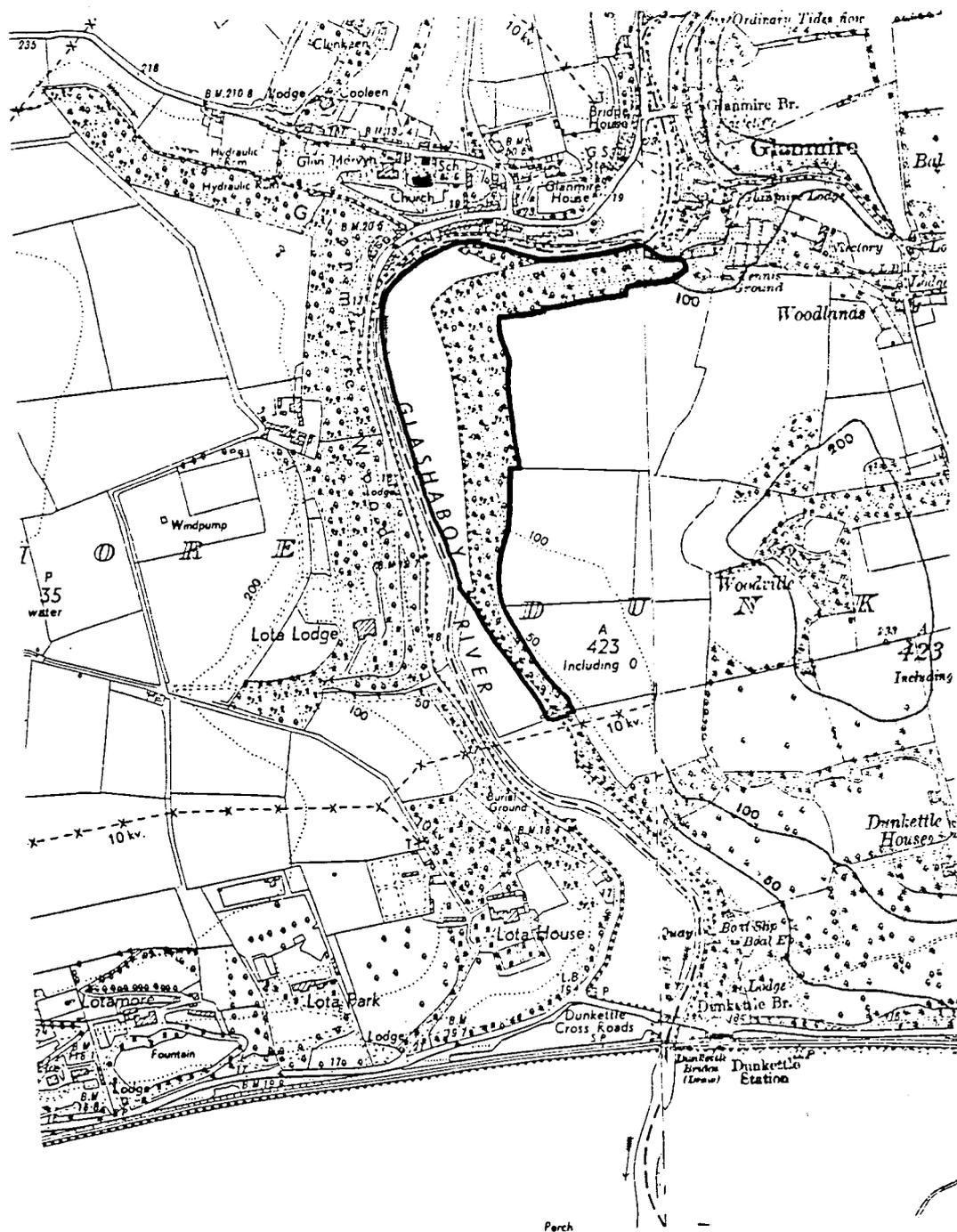
Glanmire Wood occurs on the east bank of the Glashaboy River south of the village. Though it has been much modified by man, by planting, selection and felling, it is likely that there has always been woodland here of one sort or another. The ground flora is particularly rich and includes two grasses thought to indicate ancient woodland, i.e. Festuca altissima (wood fescue) and Milium effusum (wood millet grass). In addition the more frequent species like primroses, violets (Viola riviniana, V. reichenbachiana), wood anemones and cuckoo pint (Arum maculatum) occur in many places. The trees forming the canopy are largely oaks with some beech and sycamore and a few conifers, especially silver firs (Abies alba). Below the wood the tidal riverbank has a saltmarsh vegetation including Elymus pycnanthum (sea couch) and in grassy places Allium vineale (crow garlic).

Evaluation: This is an attractive area with a varied flora including several unusual species.

Vulnerability & Recommendations: Like all broad-leaved woodlands, Glanmire Wood may be clear felled and replanted with conifers to give an economic return. It is however of considerable amenity interest and, occurring beside a rapidly growing centre of population, it would be ideal if a path system could be laid out inside and the area used for recreation and education. The possibility of working out a Management Agreement under Section 38 of the Local Government (Planning and Development) Act, 1963 should be investigated with the owner.

1:10560

GLANMIRE WOOD



52) GLASHGARRIFF R. & LOUGH GAL

W 42 75

Area: 53 ha

Interest: Ecological

Rating: Local Importance

A small stream descending from the Boggeragh Mountains to the Lee Reservoir, the Glashgarriff has a notable waterfall and several series of rapids. The wooded, humid valley has regions of seepage and exposed rock. Carex laevigata (a sedge) is characteristic of the former with the willow Salix aurita while the rocks are generally covered by mosses or, in the shaded places, Hymenophyllum sp (filmy ferns). The waterfall was the site of a colony of Trichomanes speciosum (Killarney fern) in the last century but it has now disappeared.

The ground flora of the woodlands is moderately rich for the upland situation. Anemone nemorosa (wood anemone), Primula vulgaris (primrose), Hyacinthoides non-scriptus (bluebell) and the bulbous form of Ranunculus ficaria (celandine) occur.

Lough Gal is a little known lake now largely grown over by the fen of Curraghindaveagh. The plant communities include floating fen with some peat development especially in the SW corner. Apium inundatum (marshwort) and several Potamogeton sp (pondweeds) are recorded from the lake.

Evaluation: The site includes one of the few waterfalls in the county and a natural small lake and fen. It thus has habitat conditions not widely found elsewhere. The flora of ferns and other non-flowering plants in the glen and of aquatic plants at L. Gal appears to be of interest.

Vulnerability & Recommendations: The site is relatively secure because of its steepness and is unlikely to be much modified. Developments to further open it up to the public should be done so as to be in sympathy with its scientific interest.

60) GLENBOWER WOOD *

W 99 78

Area: 7 ha

Interest: Ecological

Rating: Local Importance

The Dissour River has cut a winding valley above Killeagh in which it falls at a rate of 1:100 over rapids and waterfalls. The valley is mostly tree-covered and the lower section is called Glenbower Wood. The original oakwood has been much modified by planting and the layout of paths so that the sites of ecological interest are restricted. Interest centres on the riverbanks where the moist conditions enable many specialized ferns and mosses to grow. These are old records for Trichomanes speciosum (Killarney fern) and Hymenophyllum tunbrigense (filmy fern).

The flatter ground around the artificial lake has been enriched with a silty soil and the ground flora beneath deciduous trees is varied. Spring flowers like Anemone nemorosa (wood anemone), Allium ursinum (wild garlic) and Galium odoratum (woodruff) are noticeable. This area especially has a rich bird life with woodcock at least in winter, sparrowhawk and long-eared owl. Most of the smaller species that would be expected occur also though their variety declines in the coniferous stands. Here goldcrests are one of the most frequent birds.

Evaluation: This is an attractive area with several features of ecological interest scattered through it. The small scale of the natural habitats makes them of limited value but this is balanced by their ready accessibility.

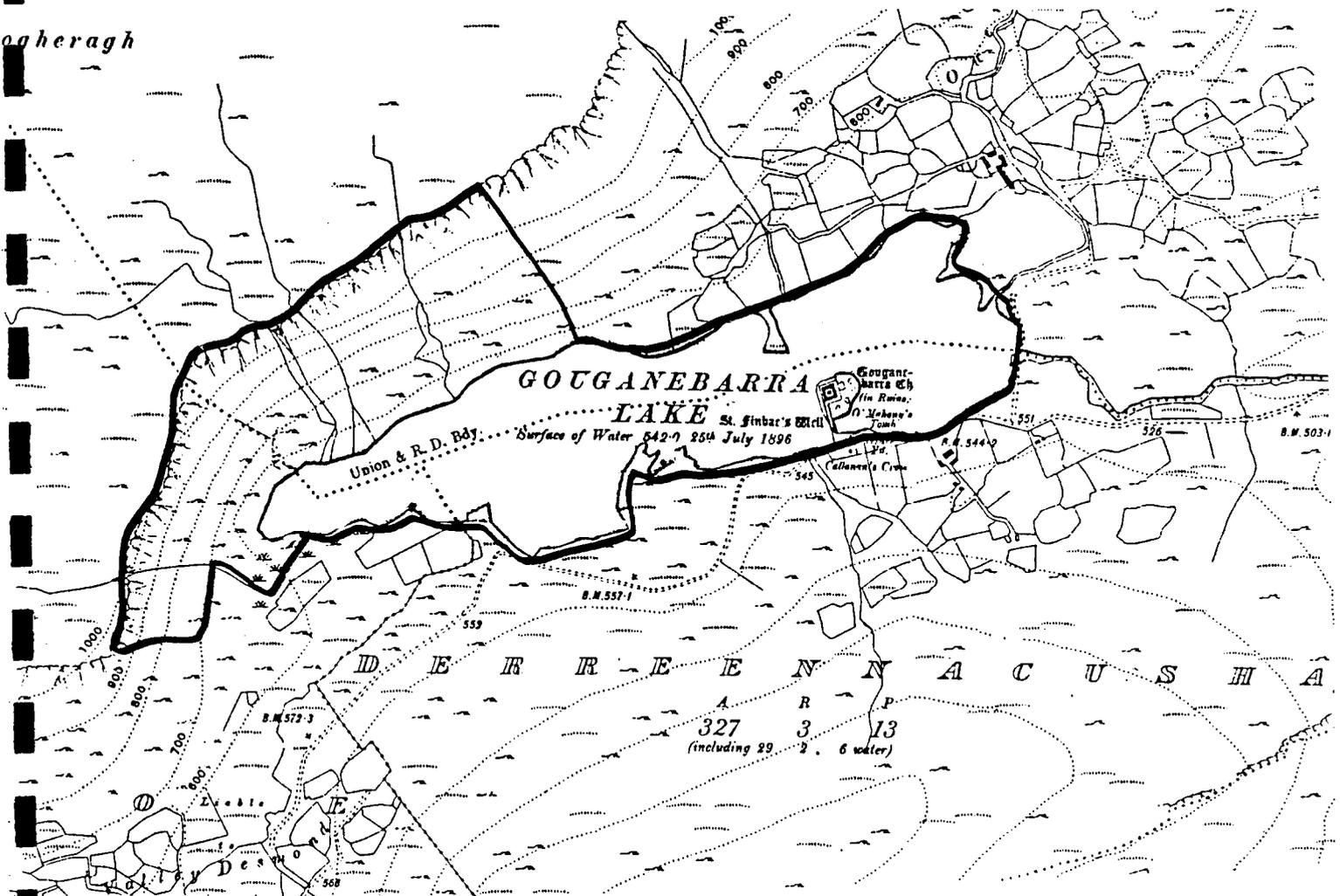
Vulnerability & Recommendations: The area has been developed as an open forest so is already used by the public. Forestry activities do pose a potential threat to the survival of broad-leaved trees and their attendant herbaceous plants so the value of the latter sites should be emphasized to the Forest and Wildlife Service.

* See Appendix

1:10560

GOUGANEBARRA LAKE

ogheragh



62) HUNGRY HILL

V 76 49

Area: 82 ha

Interest: Ecological (botanical)

Rating: Local Importance

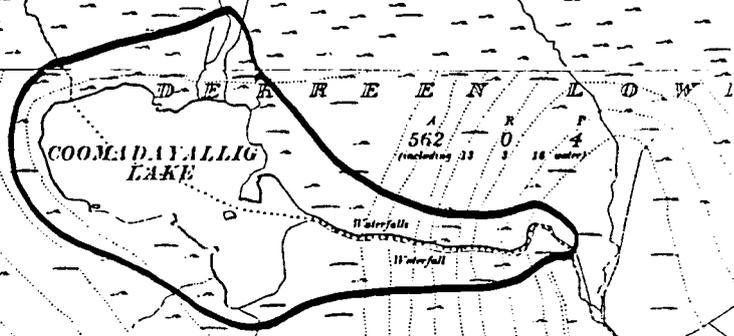
Hungry Hill is the most westerly of the Caha Mountains on the Beara Peninsula. It is conical with lakes on its eastern side. The cliffs around these lakes and the higher regions of the mountain have an interesting vegetation developed in crevices and on peat lying on the rock. Here may be found Rhodiola rosea (roseroot), Asplenium viride (green spleenwort) and Phegopteris connectilis while a community containing Antennaria dioica (catsfoot), Solidago virgaurea (golden rod), Melampyrum pratense (cow wheat) and Campanula rotundifolia (harebell) is more widespread. Saxifraga stellaris (starry saxifrage) occurs frequently: it is unknown elsewhere in the county.

The flora of the lakes is typical of many mountain areas. Littorella uniflora (shoreweed) grows around the edge with Lobelia dortmanna (water lobelia) and Isoetes lacustris (quillwort) in deeper water.

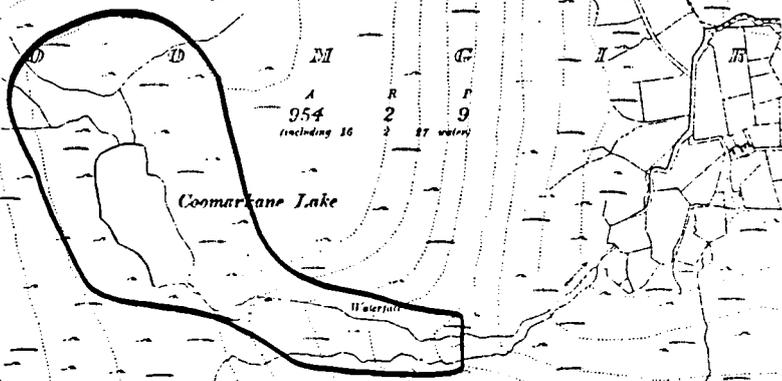
Evaluation: The bare sandstone mountains of west Cork offer few niches to interesting plants and Hungry Hill is only one of three areas listed.

Vulnerability & Recommendations: The site has survived sheep grazing and other influences for many hundreds of years and is not threatened by any development as far as is known. Land use should remain in its present form.

KERRY



KNOCKDAY OR HUNGRY HILL 2200 2251



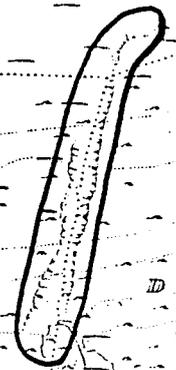
D M M D N S

G o r t u a r e a

BRIDGE

15 17

13 3 3



63) JAMES FORT/SANDY COVE *

W 63 48

Area: 24 ha

Interest: Ecological (botanical)

Rating: Local Importance

James Fort occurs directly south of Kinsale across the estuary and is constructed of earthen banks and walls, now largely under grassland. Several plant species give interest to the area and to Sandy Cove, further south: Allium vineale (crow garlic) and Trifolium ornithopodioides (fenugreek) grow in open surroundings, Brassica nigra (black mustard), Foeniculum vulgare (fennel) and Lepidium latifolium (pepperwort) in bushier places. The two toadflaxes, Linaria purpurea and Kickxia elatine occur, the former on walls where there is a record too of Asplenium bilotii (lanceolate spleenwort).

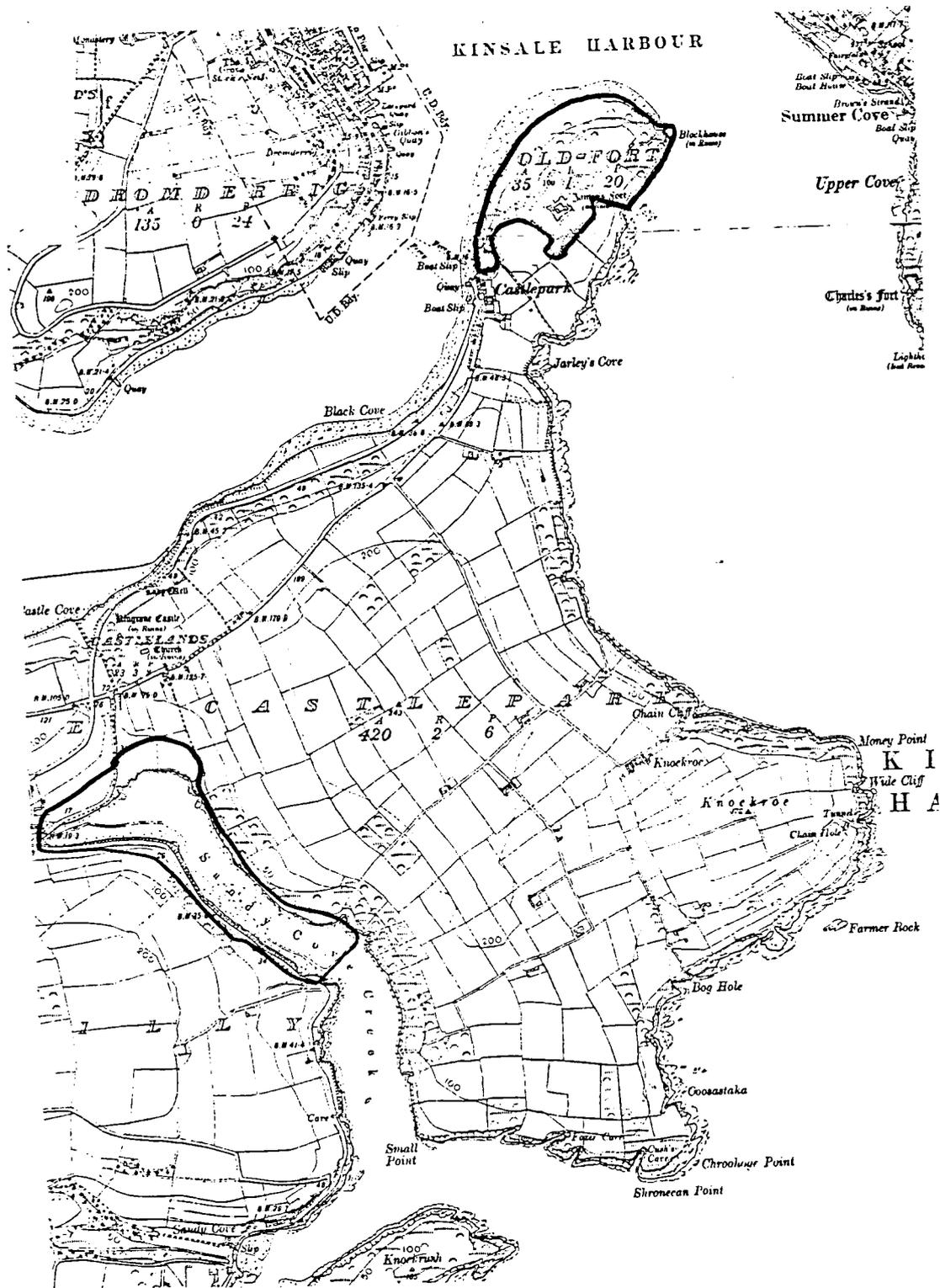
Evaluation: The plant communities are of local value resembling those in much of the settled Cork coastline but being somewhat richer in species.

Vulnerability & Recommendations: The interest of the area will persist unless gross habitat changes occur. Few of the plants are conspicuous enough to merit any display or interpretive facility.

* See Appendix

1:16246

JAMES FORT/SANDY COVE



64) KILLANEER HOUSE GLEN

W 37 56

Area: 7 ha

Interest: Ecological

Rating: Local Importance

This is one of several steep-sided valleys cut by tributaries of the Bandon River. On the west side of the stream a hazel/ash wood has developed on a steep slope. Holly is frequent and the acidic nature of the soil is shown by Vaccinium myrtillus (fraochan), a little Luzula sylvestris (woodrush) and the ferns Blechnum spicant, Dryopteris dilatata, D. pseudomes and D. filix-mas. Silt derived from winter flooding occurs close to the stream and on this Oenanthe crocata (water dropwort), Conopodium majus (pignut) and Ranunculus ficaria (celandine) are conspicuous with the mosses Mnium undulatum and Hookeria lucens.

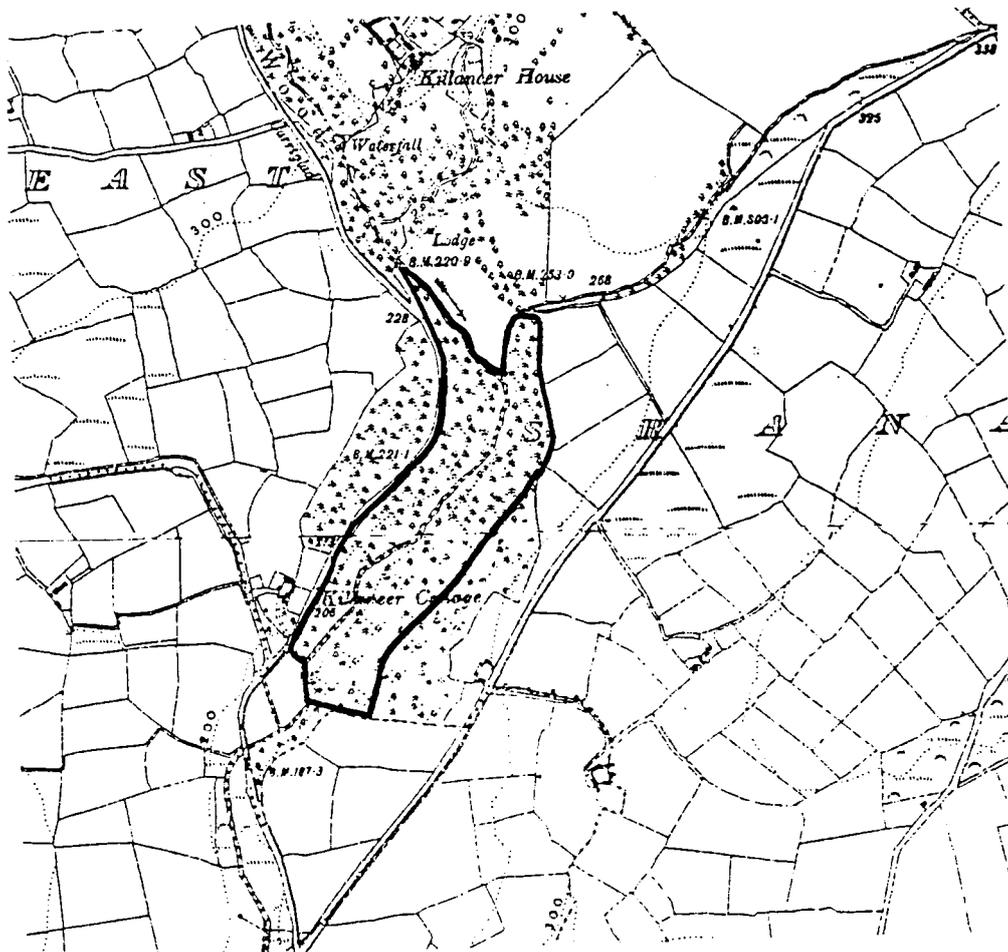
To the east of the stream oak trees replace the other types and Dryopteris aemula (hay-scented buckler fern) and Polystichum setiferum (shield fern) become frequent. A small cliff above the stream supports Hymenophyllum wilsonii (filmy fern).

The bird population in such a varied wood is quite rich and would include about twenty regular species.

Evaluation: This is a relatively natural wood in an agricultural area and is of local value for this reason. Nearby woods have, in many cases, been planted with conifers.

Vulnerability & Recommendations: Much refuse dumping has occurred beside the road and this makes the area unattractive and therefore unappreciated. It should, however, be retained as deciduous woodland perhaps through a Management Agreement with the owner under Section 38 of the 1963 Act. Occasional felling of trees could be allowed.

1:10560 KILLANEER HOUSE GLEN



65) LEAMLARA WOOD

W 83 77

Area: 11 ha

Interest: Ecological

Rating: Local Importance

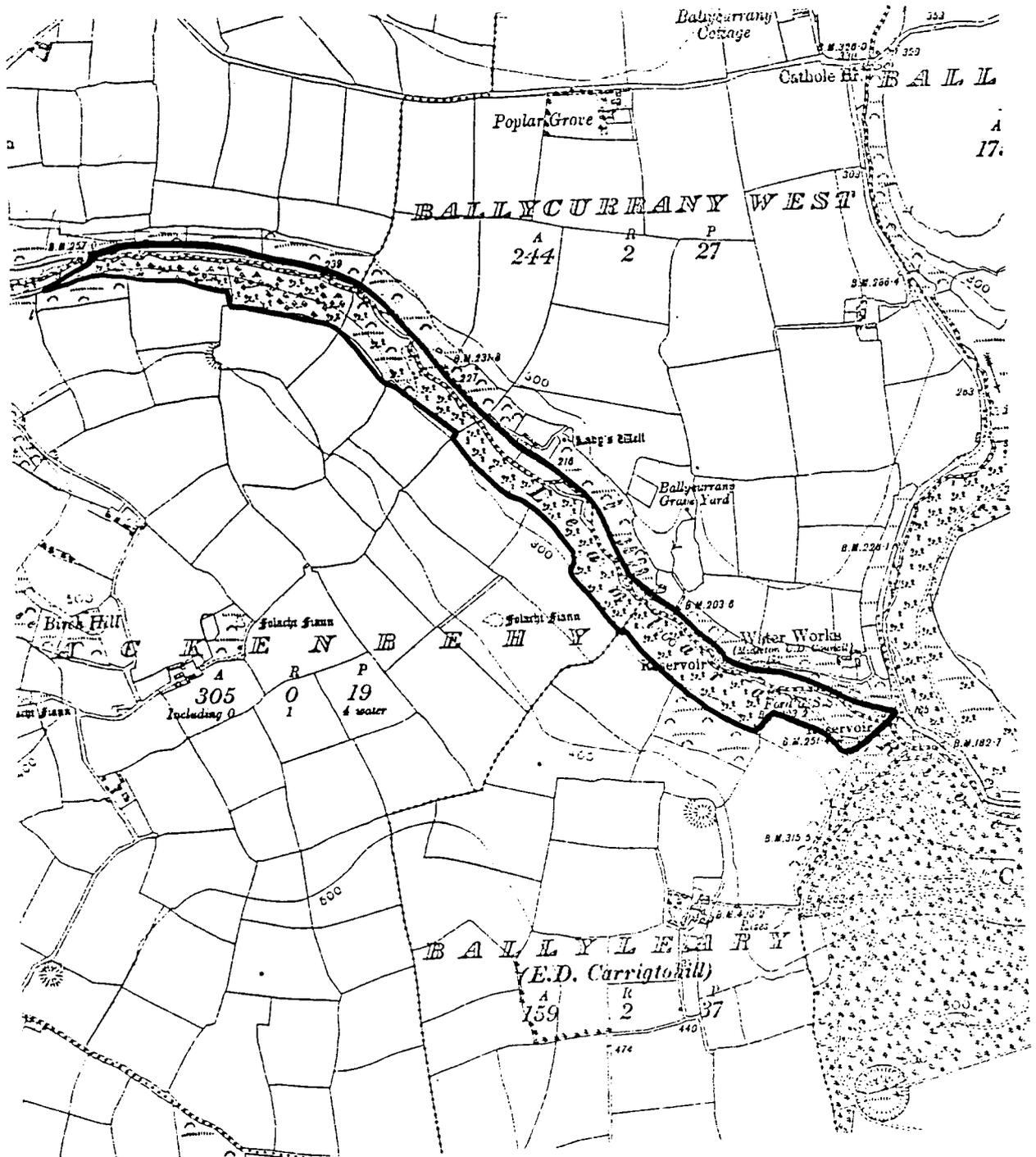
A patch of oakwood in east Cork, Leamlara Wood lies in a steep sided valley surrounded by extensive coniferous forests. The trees are well grown and some of the oaks reach 20-24 m. While oak is the major canopy species, there are quite large areas also of hazel, birch and willow especially on the richer ground towards the river. These trees also form an understorey with holly beneath the oaks. The ground flora consists of Rubus fruticosus (bramble), Luzula sylvatica (woodrush) and a number of ferns, including Dryopteris dilatata, D. aemula (buckler ferns) and Blechnum spicant (hard fern).

Evaluation: This is one of few semi-natural oakwoods in east Cork and is a good example of this community. The abundance of Dryopteris aemula is noteworthy.

Vulnerability & Recommendations: The wood is part of a Forest and Wildlife forest and may be threatened by conifer planting. It is valuable as an educational area, however, and might well be developed by extending the existing paths upstream. As far as is known, there is nothing in the area that would be damaged by greater public access.

1:10560

LEAMLARA WOOD



66) LISSAGRIFFIN LAKE & BARLEY COVE

V 77 27

Area: 113 ha

Interest: Ecological (botanical, ornithological)

Rating: Local Importance

Lissagriffin Lake has been ponded by the development of the sandhills behind Barley Cove. It is shallow and sandy with some marginal growth of reeds and sedges. The lower section fluctuates slightly with the tide but above the causeway the water level remains stable. Plant life responds to these differences and a few saltmarsh species are scattered around the lower lake. The north-eastern end has a more varied flora with small fenny patches in it. The Barley Cove sand dunes are in two sections, the outer one being a low spit much modified by a golf course. The higher dunes inside have a grassland vegetation of Festuca rubra (red fescue), Trifolium repens (white clover), Thymus praecox (wild thyme), Anacamptis pyramidalis (pyramidal orchid), etc. There is some colonisation by Rosa spinosissima (burnet rose) while Anthyllis vulneraria (kidney vetch) occurs in its reddish form.

The primary interest of the area is probably its birdlife for the lake provides feeding for wildfowl and waders through much of the year. In winter mallard, teal, tufted duck and wild swans generally occur while in summer mute swans gather in some numbers to moult. In autumn Lissagriffin is also a locality which attracts American waders which are carried over the Atlantic. The dune grassland is an important feeding area for choughs in winter.

Evaluation: Lissagriffin is an example of a type of lagoonal lake relatively frequent in the country but rare in west Cork because of its rocky shores. It is locally important to wildfowl and wader populations and becomes especially valuable in cold winter weather.

Vulnerability & Recommendations: Increased disturbance around the lake could be caused by shooting but summer visitors are unlikely to be a problem unless they become common in May and June and take to walking the lakeshore. The grassland vegetation suffers locally from trampling but sand removal working from the landward side and river erosion from the sea side are both whittling away the more natural areas and are greater threats. The bare sand after excavation is colonised quickly by plants but the vegetation cover remains thin and vulnerable for several years afterwards. If recreation is to be encouraged on these old dune areas, the sand removal should be phased out.



67) LOUGHS NAMADDRA & WEST

V 950 603

Area: 1 ha

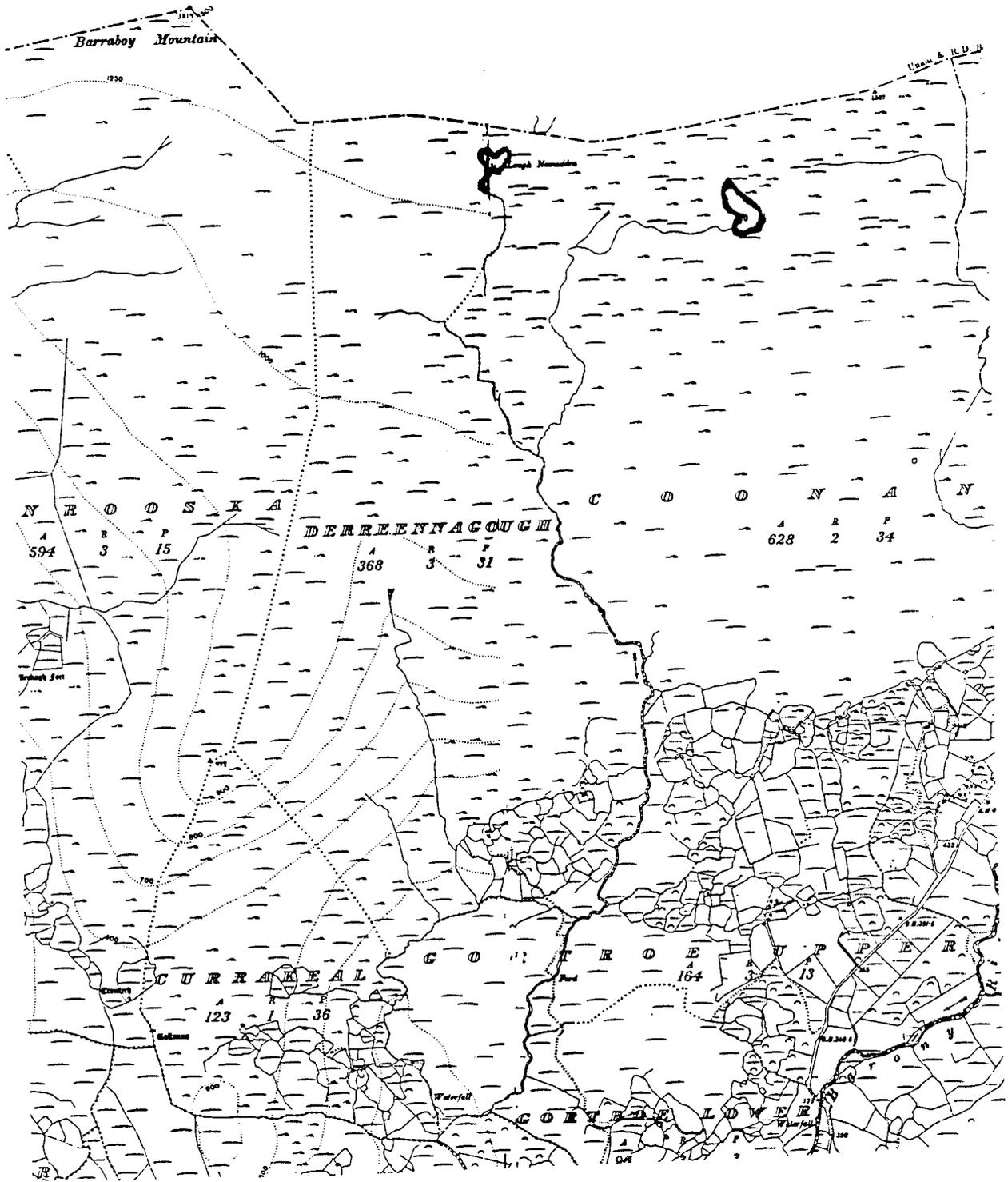
Interest: Ecological (zoological)

Rating: Local Importance

Three small lakes occur close to the summit of Barraboy Mountain at about 360 m. Lough Nagarriva lies in Kerry but Namaddra and West are in Cork. Both lakes are shallow and peaty and are surrounded by a thin band of vegetation. They are of interest because of the presence of an unusual form of the mollusc - Pisidium hibernicum (pea mussel). In addition the lakes deserve listing as some of the few high level lakes in Cork. It is possible that other unusual species of invertebrates occur there also.

Vulnerability & Recommendations: The lakes appear secure from all developments but would be especially vulnerable to enrichment, for example by fertilizers spread for forest crops.

LOUGHS NAMADDRA & WEST 1:16246



68) MYROSS WOOD *

W 20 36

Area: 11 ha

Interest: Ecological (botanical)

Rating: Local Importance

Myross Wood probably contains a fragment of native woodland on the cliffs and rocky ground north of the house but the rest of the area has been affected by long-continued planting both of deciduous and coniferous species. Latterly the flatter sections of the wood have been planted with forest crops of spruce. The result is a mixed wood with locally some ecological interest. The site overlooks the head of Glandore Harbour and fringing the crack is a narrow band of maritime vegetation including the sedge Carex punctata. The woodland is of oak, and birch with sycamore, beech, hazel and holly. Occasional clumps of silver fir (Abies alba) overtop the deciduous trees. On the ground the herbs are varied with ferns (Dryopteris aemula, D. pseudomas), sedges, including C. laevigata, and Silene dioica (red campion). In wetter places the moss and fern flora becomes particularly rich and filmly ferns occur.

Evaluation: Though much modified by tree planting Myross Wood still contains interesting patches of vegetation with several unusual plant species. The whole area is mapped because these patches cannot be accurately denoted.

Vulnerability & Recommendations: The sites of interest could be endangered by too many visitors but this seems unlikely at the moment because it is owned by a religious order. Felling of the remaining deciduous trees may be considered and if it is, a management plan should be evolved to maintain oak and other native species and also to retain visual appeal of the woodland.

* See Appendix

69) OVENS CAVES

W 551 697

Length
Surveyed: 600 m

Interest: Geological

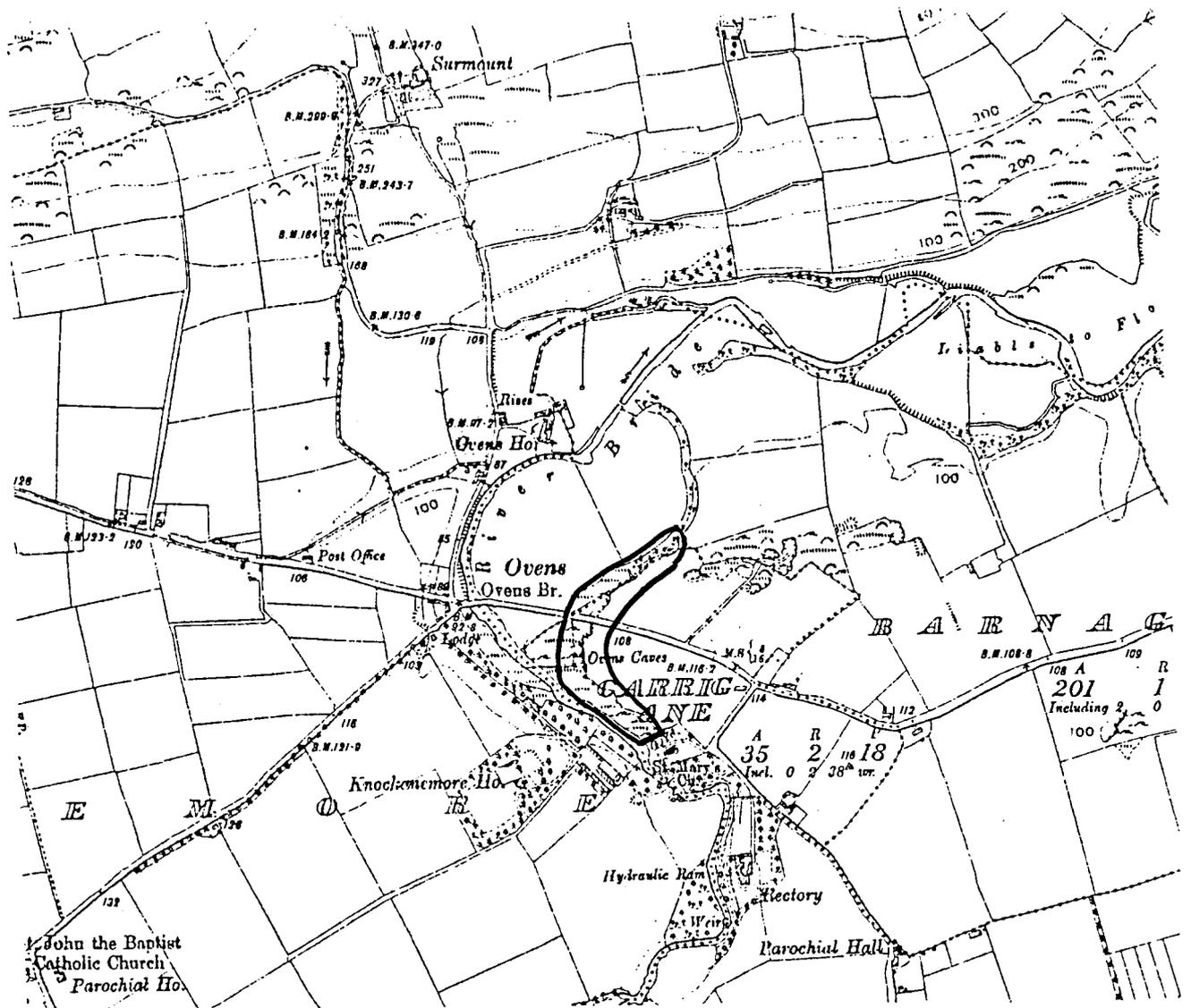
Rating: Local Importance

Ovens Cave opens in a low cliff near Ovens Bridge, about 13 km west of Cork City. It is a large cave and easy to explore and was probably formed by a tributary of the Bride River or by the river itself before the Ice Age. 600 m of passages have been surveyed and they are generally broad and dry. There is very good scalloping on the walls showing that the movement of water was to the north. No animal bones or human artefacts have been found in the cave.

Evaluation: This is one of the largest caves in Cork both in terms of its total length and the size of its internal passages.

Vulnerability & Recommendations: The cave is well known and because of the absence of valuable dripstone and fossil deposits is most suitable to be developed as an amenity.

OVENS CAVES 1:10560



70) OWENS ISLAND

V 871 394

Area: 100 m²

Interest: Ecological (ornithological)

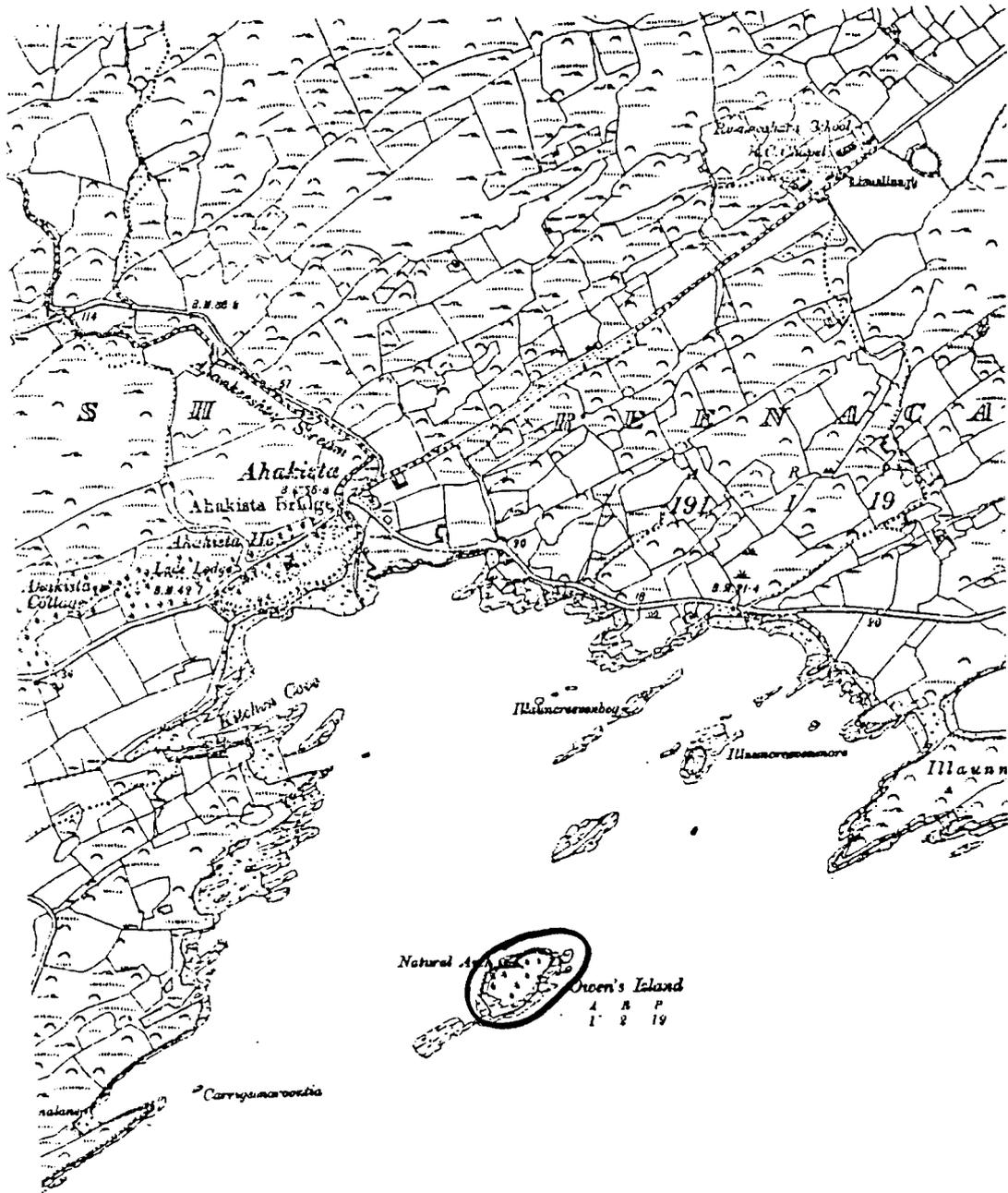
Rating: Local Importance

The site of interest is a tiny islet off the east coast of Owens Island on which terns nest. In 1984, 41 pairs of common/arctic terns were recorded which is 12 per cent of the entire Cork population of these birds.

Evaluation: The rock in question is only of importance if it continues to be used by terns. At the moment it holds a significant fraction of the total population which has declined by 53 per cent in the county since 1970.

Vulnerability & Recommendations: Disturbance is the major threat to a tern colony and the development and use of Owens Island should be very limited while the rock remains suitable for the birds.

OWENS ISLAND 1:10560



Natural Area
Owen's Island
A R P
1 2 19

71) PRIORY WOOD, LISMIRE

R 34 08

Area: 34 ha

Interest: Ecological

Rating: Local Importance

Priory Wood covers the valley sides of the Owenanare River east of Newmarket. South of the bridge it is a young, open wood with coppice oak regrowing from former felling. Holly is quite frequent also, with rowan, birch, hazel and some gorse (Ulex europaeus), now weak through shading. The ground vegetation is heathy in character: Vaccinium myrtillus (fraochan), Calluna vulgaris (heather), Luzula sylvatica (woodrush) and Potentilla erecta (tormentil) occur with Pteridium aquilinum (bracken), Teucrium scorodonia (wood sage) and Molinia caerulea (moor grass).

Springs emerge in places on the slope and with the valley floor do much to increase the habitat diversity and the number of species that are found. Carex flacca, C. cf laevigata (sedges), Viola palustris (bog violet), Euphorbia hyberna (Irish spurge), Rubus saxatilis (stone bramble), Equisetum sylvaticum (horsetail), Holcus mollis (creeping soft-grass) give some indication of community types.

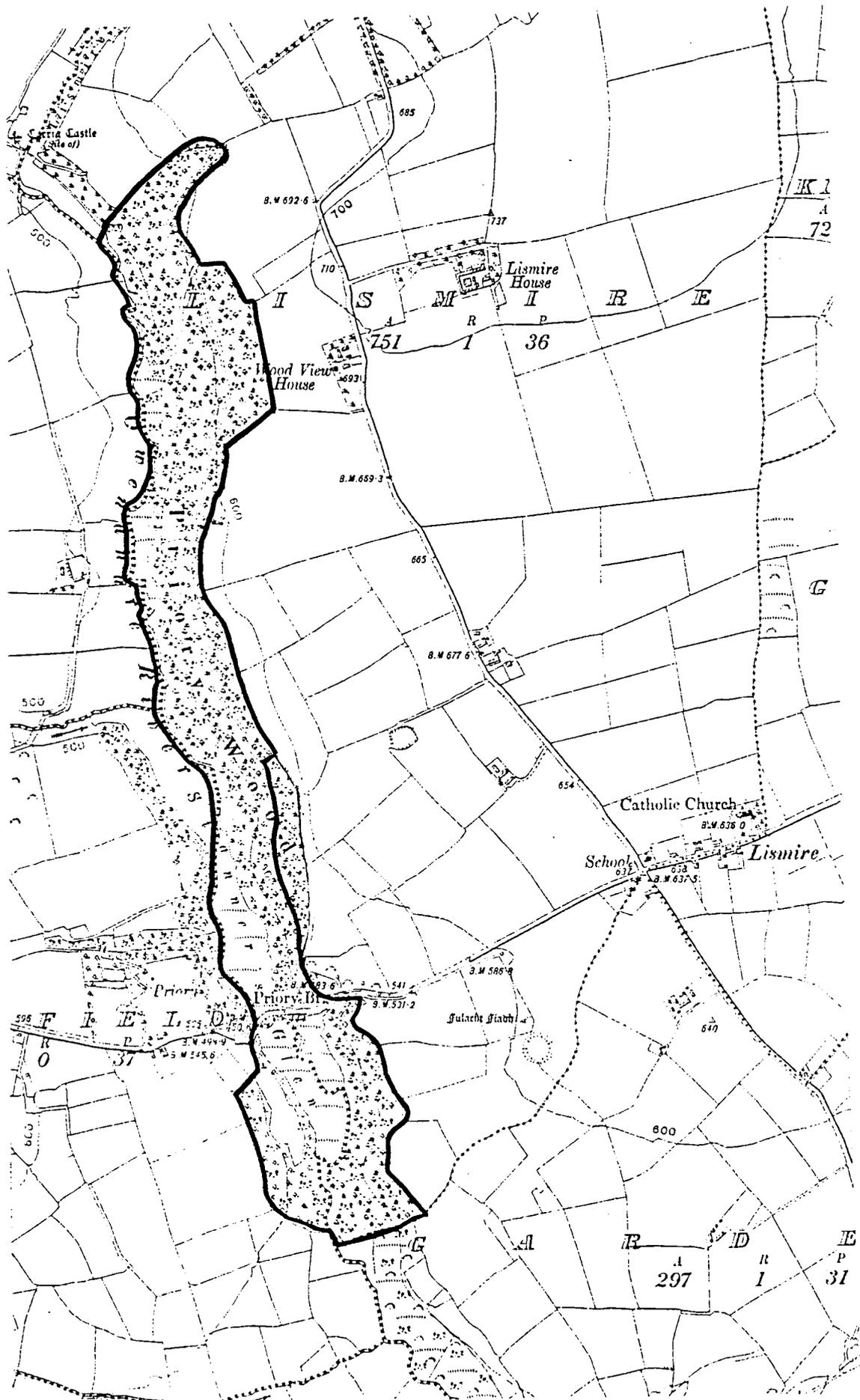
North of the bridge conifers have been planted in places on both sides of the valley but enough deciduous woodland remains to have ecological value. Here taller oaks prevail above a more uniform ground flora of fraochan and heather. The mosses Dicranum scoparium, D. majus, Thuidium tamariscinum and Diplophyllum albicans occur and there are clearings on the valley bottom with Carex remota (sedge), Chrysosplenium oppositifolium (golden saxifrage), Oenanthe crocata (water dropwort) and Marchantia polymorpha (a liverwort).

Evaluation: In all, Priory Wood has a large species list for such a small area and together with oak woodland at various stages of growth has sufficient interest to be of local importance. Non-native species like sycamore and beech are rare and there is a moderate amount of regeneration.

Vulnerability & Recommendations: There has been an amount of recent felling which, judging from the notices displayed, has been done without the owner's permission. To counteract this and also to limit the spread of conifers the Council might consider protecting the wood with a Tree Preservation Order under Section 45 of the 1963 Act. The maximum penalty for illegal felling in this legislation is now £800.

1:10560

PRIORY WOOD, LISMIRE



72) PROHUS WOOD

W 26 73

Area: 16 ha

Interest: Ecological

Rating: Local Importance

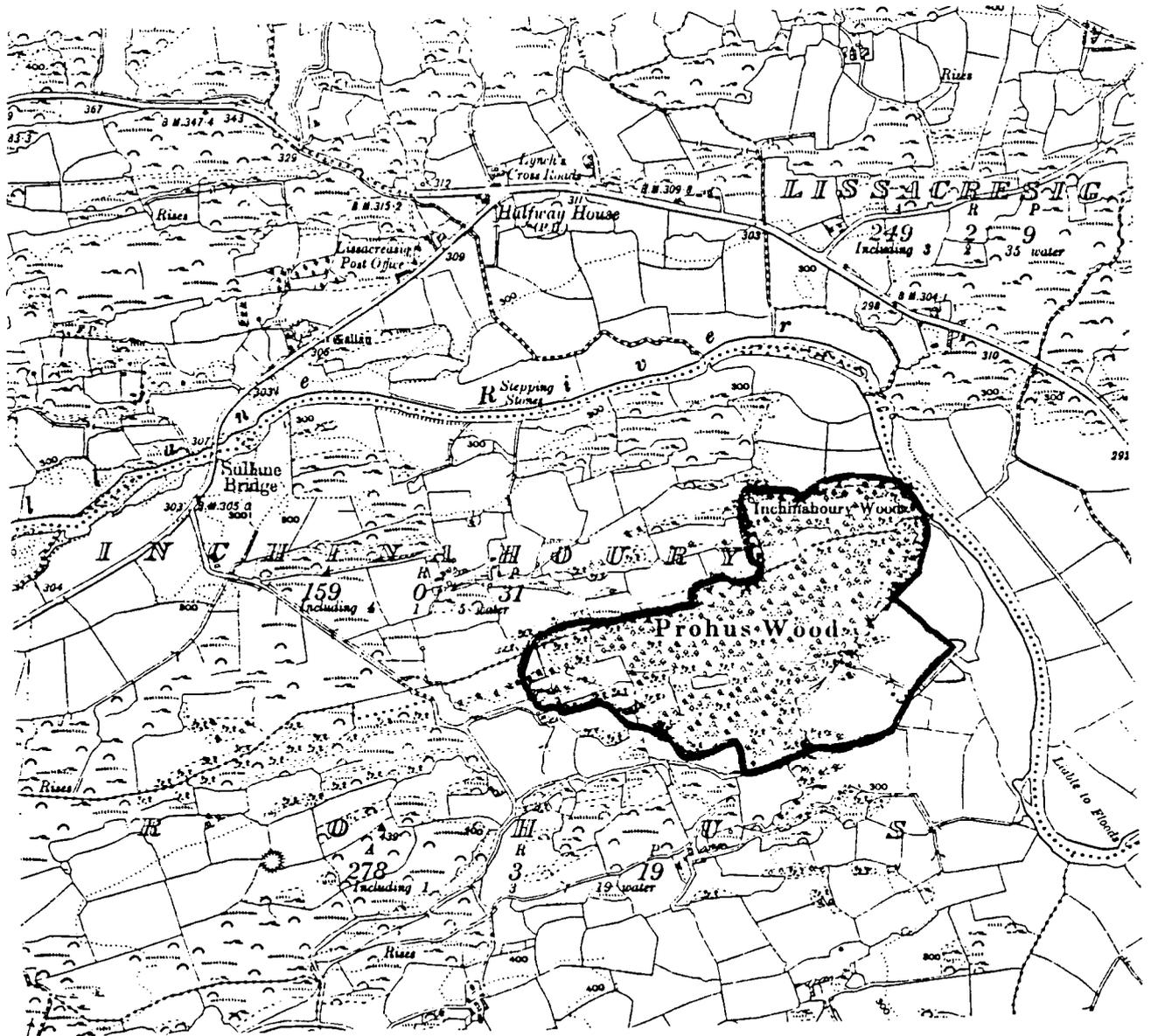
Prohus Wood occupies unenclosed land on the border of the townland east of Sullane Bridge. It is now a wood of young trees, partly coppiced, growing on rocky ground which slopes to the east. Birch, oak and holly are frequent, with some willows and alder beside streams. At the lower edge, thickets of blackthorn and hawthorn occur with some hazel.

The trees are quite closely spread and in the shade only mosses grow on their trunks. In between pockets of clayey soil alternate with mossy boulders and support such plants as Viola riviniana (violet), Stellaria holostea (stitchwort), Ajuga reptans (bugle) and Sanicula europaea (wood sanicle). In wetter places Chrysosplenium oppositifolium (golden saxifrage) and the moss Mnium punctatum are characteristic.

Evaluation: This is a relatively young and even-aged woodland derived from widespread clearance about forty years ago. It has yet to develop much habitat diversity so its species list is limited. The wood is surrounded by farmland and cattle grazing is fairly frequent. Despite this the community is developing quite naturally and is of local importance.

Vulnerability & Recommendations: Overgrazing is the most likely influence to affect this area and the adjacent landowners should be notified of this fact. An agreement under Section 38 of the 1963 Act could formalize this if necessary.

PROHUS WOOD 1:10560



73) ROARINGWATER BAY (CALF IS.)

V 96 26

Area: 3,457 ha

Interest: Ecological (botanical, ornithological)

Rating: Local Importance

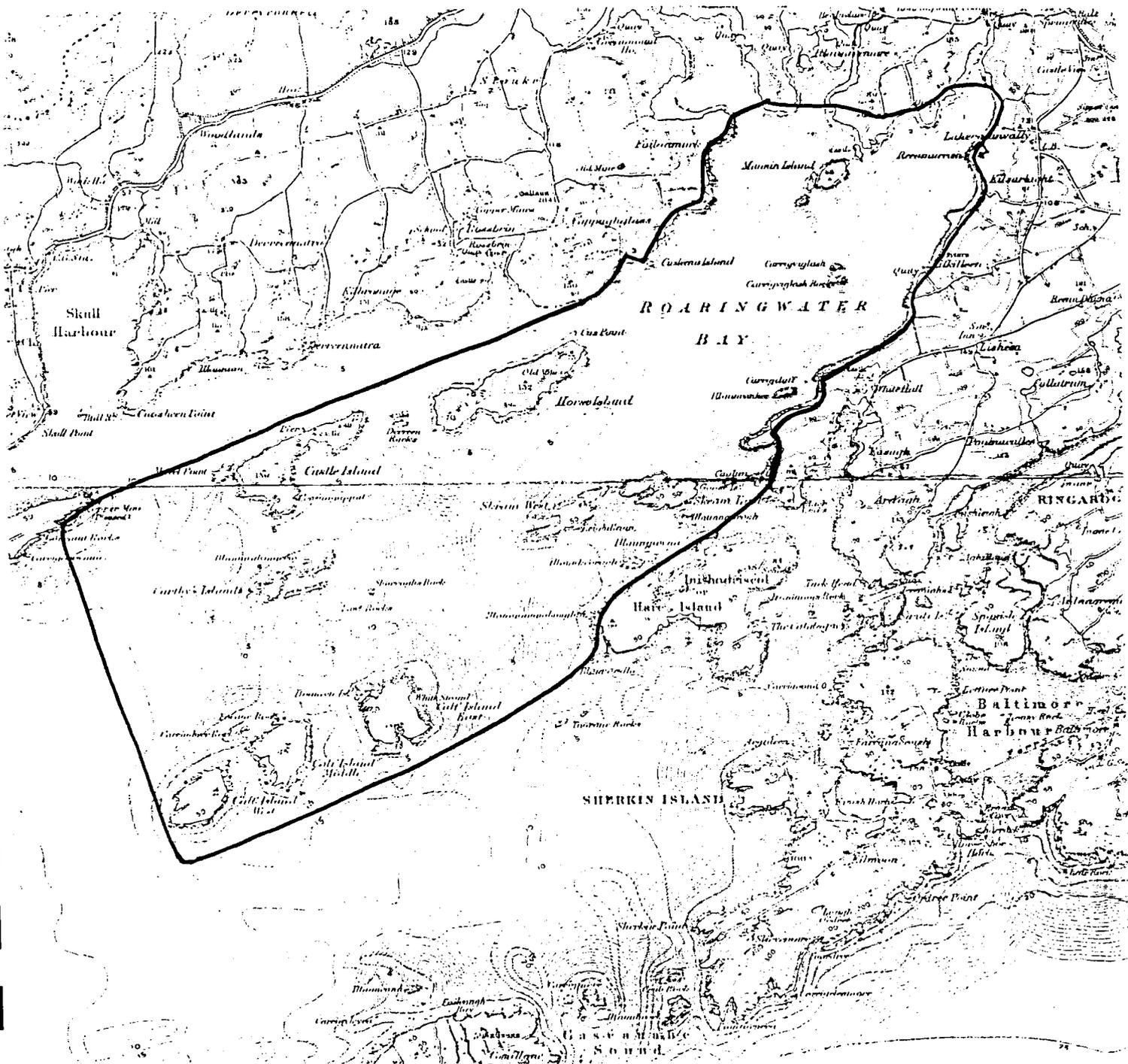
Many low islands occur in Roaringwater Bay covered by derelict fields, heaths and rocky outcrops. The Calf Islands have long been known for the occurrence of Tuberaria guttata (spotted rock rose), a plant confined to a very few stations in Cork, Galway and Mayo. It grows in rocky places with a very thin cover of peaty soil and in company with Sedum anglicum (stonecrop) and Jasione montana (sheepsbit). The islands also form the breeding places of terns, especially the arctic tern. A recent survey recorded 124 pairs. Marine life is being systematically studied in this area and there have been many discoveries of interest. The number of otters is one notable feature.

Evaluation: The ecological interest of Roaringwater Bay is very varied including breeding seabirds, southern species of plant and animal and native mammals.

Vulnerability & Recommendations: The general withdrawal of human activity from the islands has favoured all forms of wildlife so the development of holiday homes is a potential threat. Marine pollution would be significant especially for the shore life and the use of detergents for cleaning any oil spillages should be prevented.

ROARINGWATER BAY (CALF IS.)

1:63360



74) ST GOBNET'S WOOD

W 19 77

Area: 29 ha

Interest: Ecological (botanical, ornithological)

Rating: Local Importance

St Gobnet's Wood was originally an oakwood but sections of it have been planted extensively with beech and a little pine and Rhododendron. The species are therefore now somewhat mixed. It occurs on a north-facing slope overlooking Ballyvourney and is crossed by several streams from the hillside above. In the upper part, much of the soil is fine-grained and rich and it seems to give a weak foundation to the trees, a proportion of which have suffered windthrow. The ground flora is more varied than in many oakwoods with much Ranunculus ficaria (celandine), Chrysosplenium oppositifolium (golden saxifrage), and Dryopteris spp (buckler ferns). Hypericum androsaemum (tutsan), Potentilla sterilis (barren strawberry) and Geum urbanum (wood avens) also occur.

The north-western part of the area is rockier with an appearance more characteristic of a mountain oak wood. It is traversed by an old pilgrimage path and a forest trail open to the public. Luzula sylvestris (woodrush) is very common and on outcrops of the sandstone Saxifraga spathularis (St Patrick's cabbage) grows.

The relatively large size of the wood and its position beside forestry plantations means that birds like the raven, hooded crow, sparrowhawk, woodcock and tree creeper are found along with the more usual smaller species.

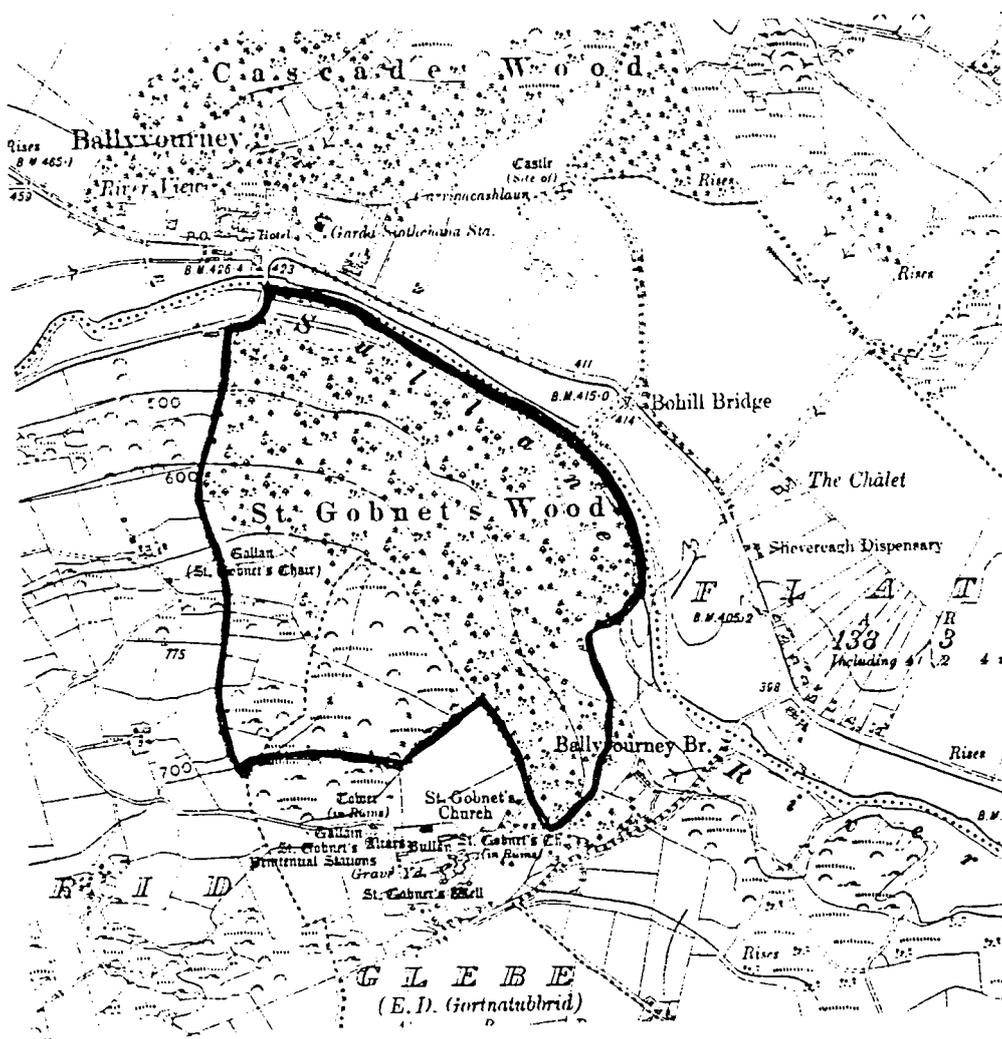
Evaluation: The presence of so many planted trees which are themselves regenerating reduces the ecological value of St Gobnet's Wood. It has exceptional amenity value, however, because of its proximity to Ballyvourney and the existence of pathways within it.

Vulnerability & Recommendations: The spread of introduced species will continue to devalue the woodland and Rhododendron, in particular, should be removed if it shows signs of spreading at the SE end of the area.

If planting is done to fill gaps in the canopy it should be with oak rather than other species.

1:10560

ST. GOBNET'S WOOD



75) SEVEN HEADS COASTLINE

W 48 36

Area: 203 ha

Interest: Ecological (ornithological), geological

Rating: Local Importance

The Seven Heads is a broad sandstone promontory east of Clonakilty with sloping cliffs topped by grassland and grazed by sheep. The density of choughs here reaches a high level but there are few seabirds as such.

Rocks outcropping on the shore at the Lions Cave and in Dunworley Bay are of interest also. They are a quartz conglomerate (a coarse sandstone) and seem to mark the base of the Carboniferous rocks of southern Ireland.

Evaluation: Both the geological and ornithological features of the site entitle it to local importance. The importance of the rock strata is increased by the general lack of fossils in the rocks of this period which could otherwise be used as markers.

Vulnerability & Recommendations: The site is in little danger and will persist without human interference. Grazing of the cliff tops and the fields behind is probably an important factor for the chough population.

76) SHEEP'S HEAD

V 72 33

Area: 364 ha

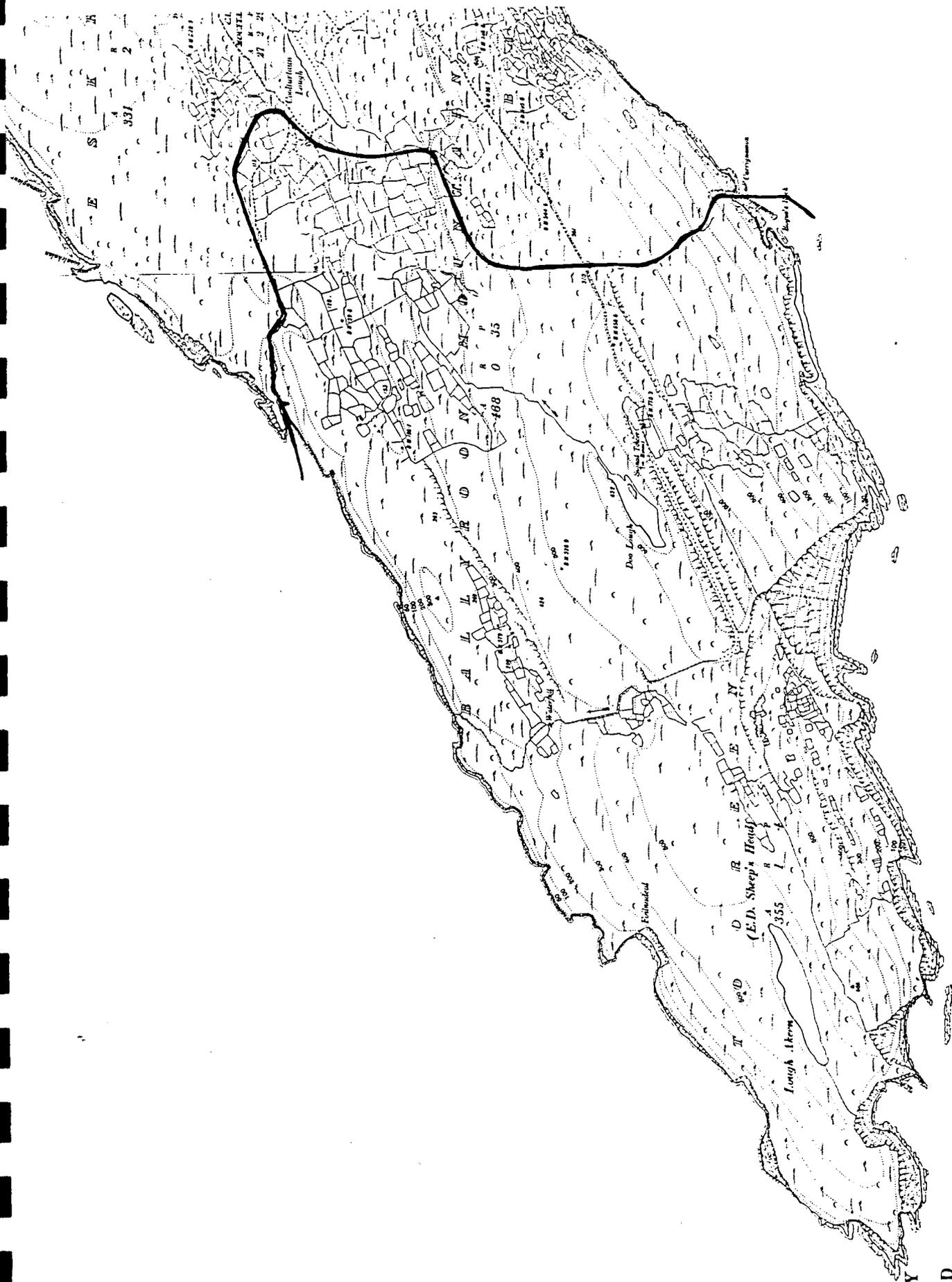
Interest: Ecological (botanical, ornithological)

Rating: Local Importance

The narrow peninsula between Mizen Head and the Beara Peninsula terminates in Sheep's Head, a lonely sandstone headland with exposed rocky ridges and small fields. The density of choughs is notable here and also the occurrence of Tuberaria guttata (spotted rock rose).

Evaluation: The site is listed for its maritime communities of pasture and heath.

Vulnerability & Recommendations: The area is not threatened in any specific way and it is difficult to see any developments occurring. Land use should remain in its present form to preserve the interest.



MUNTERVARY
OR
SHEEP'S HEAD

77) WHIDDY ISLAND

V 967 487

Area: 39 ha

Interest: Ecological (ornithological)

Rating: Local Importance

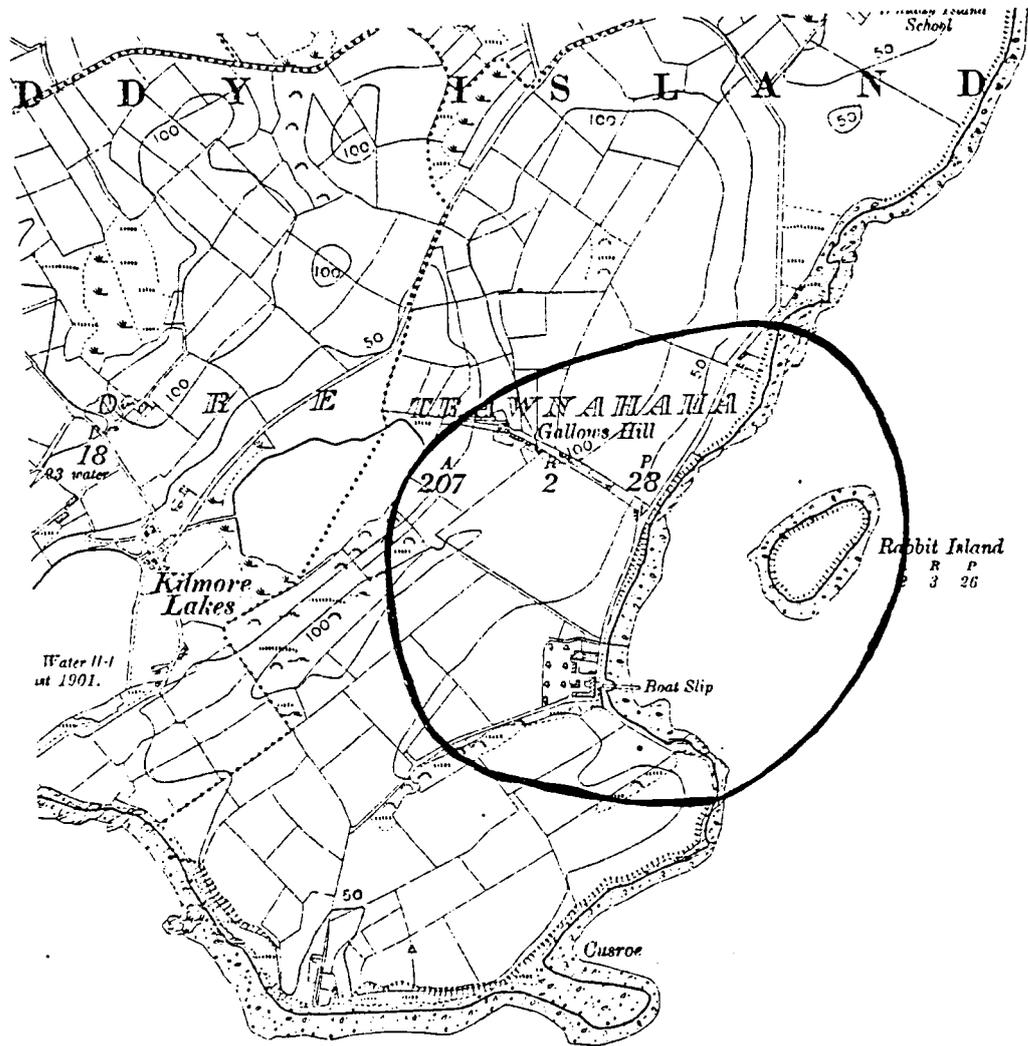
A small tern colony has established itself on shingle at the south-east corner of the island and in 1984, it contained 56 pairs of arctic terns. These birds fish all around Bantry Bay but favour the shallower sheltered shores.

Evaluation: It is not known how permanent this colony is: all that can be said is that it contained 28 per cent of all arctic terns in Cork in 1984 and as such deserves recognition as an area of local importance.

Vulnerability & Recommendations: As long as the nesting terns remain on Whiddy Island they should be protected from all nearby development and disturbance. They would naturally be vulnerable to oil slicks as they dive into the sea to catch their prey. Rat predation may also become a problem on a large island such as this and it is not unlikely that the colony will shift to another site in the future.

WHIDDY ISLAND

1:10560



APPENDIX

Forest & Wildlife Service - Protected Species in Co. Cork

<u>TAXON</u>	<u>LOCATION</u>	<u>GRID REF</u>	<u>SIX INCH</u>
Asplenium billotii	Ballingeary	W150675	92
Asplenium billotii	Near Adrigole	V810505	116
Asplenium billotii	Cape Clear	V955210	153
Asplenium billotii	Kinsale	V655500	125
Asplenium billotii	Coachford Macroom	W455732	72
Asplenium billotii	West of Bandon	W480550	110
Crambe maritima	Harpur's Island	W780728	15
Crambe maritima	Douglas - W of Passage West	W710795	75
Crambe maritima	Rosscarbery Bay	W31 35	143
Crambe maritima	Dunkettle-Tivoli	W72 73	75
Crambe maritima	Beach W of Cork	W8 6	87
Crambe maritima	Ballycotton	W985648	89
Crambe maritima	Strand near Bantry	V95 45	105
Crambe maritima	Sweeney's Cove - Toe Head	W15 27	151
Crambe maritima	Courtmacsherry	W515405	136
Crambe maritima	Garryvoe Strand	X010680	75/89A
Geranium purpureum	Cork City	W68 70	74
Geranium purpureum	Cork City	W72 71	74
Geranium purpureum	Cork City	W66 71	74
Geranium purpureum	Cork City	W71 71	74
Geranium purpureum	Cork City	W72 70	74
Geranium purpureum	Ballyphehane, Cork	W66 70	74
Geranium purpureum	Cork	W72 71	74

<i>Geranium purpureum</i>	Cork City	W68 70	74
<i>Geranium purpureum</i>	Near Glanmire Village	W72 74	74
<i>Geranium purpureum</i>	Cork City	W70 72	74
<i>Hypericum canadense</i>	Glengarriff	V94 57	104
<i>Lotus subbiflorus</i>	Crookhaven	V800260	147/152
<i>Lotus subbiflorus</i>	Cape Clear	V955215	153
<i>Lotus subbiflorus</i>	Sherkin Island	W000200	149/153
<i>Malaxis paludosa</i>	Between Inchigeela & Macroom	W200600	59/60
<i>Mentha pulegium</i>	Cork	W700600	75/87
<i>Mentha pulegium</i>	Near Kinsale	W635480	124/123
<i>Mentha pulegium</i>	Youghal	W070800	67
<i>Mentha pulegium</i>	Goleen	V815250	147
<i>Mentha pulegium</i>	Near Mallow	W500900	124/125
<i>Mentha pulegium</i>	Ballycotton	W99 64	89
<i>Mentha pulegium</i>	Between Bandon & Ballinadee	W520515	110/111
<i>Mentha pulegium</i>	Skull Bay	V9 2	148/149
<i>Minuartia recurva</i>	Knockowen	V813554	90/103
<i>Orobanche rapum-genistae</i>	Dunmanway	W230528	107
<i>Orobanche rapum-genistae</i>	Lough Hyne	W100250	150
<i>Orobanche rapum-genistae</i>	Currabinny	W805615	87/99
<i>Orobanche rapum-genistae</i>	Castlemartyr	W965735	77
<i>Orobanche rapum-genistae</i>	Dunbulloge	W682804	63
<i>Orobanche rapum-genistae</i>	Inch Castle near Killeagh	X01 82	66
<i>Orobanche rapum-genistae</i>	Broom Hill	W605720	73
<i>Orobanche rapum-genistae</i>	Near Manch Station	W308530	108
<i>Ranunculus tripartitus</i>	Adrigole	V079054	103
<i>Ranunculus tripartitus</i>	Baltimore	W045250	150
<i>Salvia verbenaca</i>	Clonakilty	W370350	144

<i>Salvia verbenaca</i>	Ballinacurra	W880720	76
<i>Salvia verbenaca</i>	Youghal	X100760	67
<i>Salvia verbenaca</i>	Dirk Bay, Clonakilty	W360332	144
<i>Salvia verbenaca</i>	Baltimore	W047263	150
<i>Spiranthes romanzoffiana</i>	Castletown Bearahaven	V640460	115
<i>Spiranthes romanzoffiana</i>	Enniskeane	W360540	109
<i>Spiranthes romanzoffiana</i>	North west of Glengarriff	V90 55	104
<i>Spiranthes romanzoffiana</i>	Timoleague	W450350	136/145
<i>Spiranthes romanzoffiana</i>	East of Dunmanway	W200500	107/108
<i>Spiranthes romanzoffiana</i>	West of Castletown Bearahaven	V6 4	Unknown
<i>Spiranthes romanzoffiana</i>	Lough Gougane Barra	W080660	80
<i>Trichomanes speciosum</i>	Near Kildorrery	R695155	9
<i>Trichomanes speciosum</i>	Coachford	W430750	71
<i>Trichomanes speciosum</i>	Near Adrigole	V715470	115
<i>Trichomanes speciosum</i>	Glenbeg Lough SE of Ardgroom, Beara	V715520	102
<i>Trichomanes speciosum</i>	Killeagh	W950780	66
<i>Trichomanes speciosum</i>	Keim-An-Eigh Pass - SW of Ballingeary	W105640	80
<i>Trichomanes speciosum</i>	Lough Inch	Unknown	Unknown
<i>Trichomanes speciosum</i>	Castletownsend	W180315	151
<i>Trichomanes speciosum</i>	Gouganebarra	W080650	80
<i>Trichomanes speciosum</i>	Caha Mtn. near Glengarriff	V852588	90