

Dundee Naturalists' Society

University of Dundee
Natural History Survey of Property

2001

by Members of DNS

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1 Summary

The main areas of the grounds of the University of Dundee, including the main campus, most of the other University buildings in Dundee, the playing fields and the outstations in Newport and Kirkcaldy, were surveyed by members of Dundee Naturalists' Society during the spring and summer of 2001. The aim was to record the biodiversity of the site and attempt to gauge the significance of the wildlife.

A wide variety of plants and animals were recorded during the survey work but none are of especial wildlife significance. The most interesting include such plants as deadly nightshade, barren fescue and hart's-tongue fern, several breeding birds, for example goldfinch, common thrush and mute swan, and a variety of bumblebees and hoverflies. A range of small annual plants and other ruderal species were recorded.

The variety of planted trees are of arboricultural value but, apart from harbouring a variety of typical lichens and providing cover for breeding birds, provide little interest for natural historians.

As expected, few habitats are of much wildlife interest either. They are dominated by expanses of short-mown grass with a number of tended beds. Most are well maintained by the gardening staff and contain little of wildlife value.

However a few wild areas were found. The principle one is to the south of the Careers' Service and Department of Geography buildings along the Perth Road opposite the Tower Block. The area of the Newport Ferry Pier also proved to be of wildlife interest and potential value.

These sites could prove to be a wildlife asset and their relative lack of disturbance may encourage several interesting species. A variety of suggestions are proposed that may help to increase the diversity and abundance of wildlife.

2 Introduction

- 2.1 Members of Dundee Naturalists' Society were approached in the early spring of 2001 by Professor Colin T Reid on behalf of the Environmental Group of the University of Dundee. The Society was asked to carry out a survey of the main features of the wildlife of the grounds of the University. After discussions among the members of the Council of Dundee Naturalists' Society, it was agreed that this would form a suitable project for Society members and that we would be able and happy to carry out the required survey work.
- 2.2 The principle objective was to record as much as possible of the wild (and 'native') plants and animals and their habitats in the University's extensive grounds to gain an impression of the areas' biodiversity. The main groups recorded would be flowering plants and birds. The Society would also record wildlife of especial interest and value and attempt to estimate its significance, if any.
- 2.3 A report would be produced by members of the survey team detailing the organisms recorded and their distribution, plus identifying the main habitats of wildlife interest. The Society would also make a variety of suggestions of ways by which the wildlife interest and value of selected areas could be improved.

3 Basis for Survey

- 3.1 Professor Reid provided a series of maps of the grounds of the University of Dundee. The areas to be surveyed were agreed. (See the maps in appendix I.) The survey areas were as follows.
 - i) The main campus area to north of the Perth Road, Dundee, including the grounds of the Scrymgeour Building, Bonar Hall, Tower Building, Carnalley Building, Frankland and Ewing Buildings, Fulton Building, Harris and Carnegie Buildings and associated quadrangles, the Library, Computing and TA Centres, the Students' Association, Belmont Hall, the Crawford Building, Duncan of Jordanstone College of Art, the Sports Centre, the Welcome Trust Complex, Medical Science Institute, the Biological Science Institute and the associated car parks.
 - ii) The 'wild area' to the south of the Careers' Service and Department of Geography annexe buildings on the south side of Perth Road opposite the main campus.
 - iii) The grounds of the Seabraes buildings.
 - iv) The grounds of Peterson House and the White Top Centre.
 - v) The grounds of Westpark.
 - vi) The Riverside Sports Ground.
 - vii) The grounds of the Ninewells Students' Residences.
 - viii) The Newport Ferry Buildings grounds and Pier.
 - ix) The Kirkcaldy Campus of the College of Health Studies.

- 3.2 The grounds of the Botanic Garden of the University of Dundee, between Riverside Drive and the Perth Road, were not included in the survey. With their very wide range of introduced plants, some of which are of considerable natural history interest, they provide a completely different survey problem. The Botanic Garden merits its own separate Natural History survey.
- 3.3 The main activities to be carried out by Society members were to record as much of the variety of species, particularly flowering plants and birds, as possible and their distribution. Other species would be recorded as far as identification expertise allows. The abundance of species would not be recorded and could, perhaps, provide opportunities for further project work.
- 3.4 Professor Reid also provided a covering letter for DNS members to use when contacting janitorial and other staff to help explain the survey activities and to arrange access. (See appendix II.)

4 Period of Survey

- 4.1 It was agreed that the survey would take place during the late spring and summer of 2001. It was considered that some of the areas may be surveyed again in the autumn, particularly for fungi. In the event, the dry weather and then time constraints prevented anything more than a cursory look at selected areas in the autumn.
- 4.2 Most of the survey time was devoted to the complexities of the grounds of the Main Campus and the Perth Road buildings. The Riverside Grounds and Newport Pier received two visits. Seabraes, Westhall and the Ninewells residences were visited only once each. The Kirkcaldy campus was not found to be of great interest and received only one visit.

5 Membership

- 5.1 It was agreed that the survey work would be carried out by members of Dundee Naturalists' Society. A reasonable range of expertise was present across the range of members, particularly in native wild plants (spermaphytes and pteridophytes) and native wild birds, and to a much lesser extent in insects, lichens, mosses and liverworts.
- 5.2 A total of 16 DNS members took part or contributed information. (See Appendix III)
- 5.3 An invitation was extended to any students in Biological Sciences or other departments who may have been interested to join DNS members during the surveys. In the event, due to the difficulties with communication and the advent of the summer holidays, no people other than DNS members took part.
- 5.4 An invitation was extended, through the University's regular newsletter, for any student or member of staff to contribute information or advice on the natural history of the grounds. To our knowledge, no such information was obtained.

6 Access

- 6.1 Access to most of the grounds was easy. However, some of the smaller areas, particularly around individual buildings, proved difficult to enter.
- 6.2 Due to a lack of detailed knowledge of the ownership of individual buildings on Springfield, and lack of responses to visits by surveyors, no entry was gained into their grounds. However, it was considered that they were unlikely to be of much wildlife interest.
- 6.3 The grounds of some buildings in places along the Perth Road also were not visited due to difficulties of access. Parts of the grounds at the backs of the Scrymgeour building and Bonar Hall proved difficult of access as well. Again, it was thought unlikely that the grounds of these buildings would be of high wildlife value. These sites are indicated on the map by the letter X.

7 Limitations

- 7.1 Although members searched much of the University property, it is not claimed that all areas were covered equally thoroughly. As described above, it proved difficult or impossible to gain access to certain areas.
- 7.2 The short time period for the survey and the relative lack of visits to certain sites mean that not all the species present would be recorded. Also, light traps for night-flying insects, pitfall traps for ground-running invertebrates and other specialist techniques were not used but could have improved knowledge of the biodiversity of the site. However, it is unlikely that many large and obvious species of high wildlife value have been missed.
- 7.3 To help overcome some of these limitations, it would have been useful to have received observations and records from people occupying the sites over long periods of time but, in the event, none were received.
- 7.4 Due to lack of expertise, several groups were recorded only incompletely. These include, in particular, lichens, mosses and liverworts, worms and arthropods.

8 Acknowledgements

- 8.1 The Society would like to thank Professor Reid and the members of University Environment Group for their invitation to carry out the survey. All those who took part found it very interesting to be able to explore the University grounds and benefited from the experience.
- 8.2 We would also like to extend our sincere thanks to members of the University's janitorial staff and other members of the teaching and research staff who provided advice and help in gaining access to various parts of the grounds.

9 Survey Results

- 9.1 Bearing in mind the stated limitations, the information gathered is considered to be reasonably reliable. Specimens that could not be identified reliably, usually due to their age or condition, were not recorded. In many cases, however, a better specimen, that allowed for easier identification, turned up later.
- 9.2 The results are not and cannot, of course, be fully comprehensive but at least in some groups they provide an indication of the biodiversity, or lack of biodiversity, of the various localities. The records of flowering plants and birds are the most comprehensive and considered the most reliable.

Details of Results

For further details on all the species and groups discussed below, please refer to Appendix IV which provides complete lists of all the plants and animals recorded and their locations.

9.3 Habitats

As expected, most habitats were artificial or, at least, greatly influenced by human activities. No attempt was made to carry out a full JVC habitat survey although 'Phase 1' habitats were recorded.

The principle habitats, in approximate order of area, were:

- i) mown grass, mostly short mown but including small areas of unkempt long grass,
 - ii) tarmacadam and concreted areas around buildings and in carparks,
 - iii) flower beds, both carefully cultivated and neglected and a range in between,
 - iv) 'scrub' and 'woodland' based on planted bushes and trees,
 - v) mixed woodland ('gone wild' from originally planted and managed woodlands),
 - vi) totally overgrown and neglected ruderal vegetation,
 - vii) a variety of others, all of tiny area, including a small area of shoreline and a few small damp patches.
- 9.4 No attempts were made to estimate the areas of these habitats, but 'short mown grass' must occupy by far the largest area.

9.5 Lichens

No lichens of great interest were recorded. Only those species typical of moderate urban conditions were found, as expected from the recent 'Wildlife Stocktake' survey undertaken by staff and helpers based at Dundee Museum.

Species noted include *Lepraria incana*, *Lecanora conizaeoides*, *Parmelia saxatilis* and *Hypogymnia physodes*. Only a few small tufts of *Usnea* sp. (probably *U. hirta*) were seen. These are encouraging as they indicate relative cleanliness of the air, particularly the much improved sulphur dioxide levels in the air of recent years, as compared to the conditions recorded in the late 1970s by a survey carried out by DNS members.

Almost certainly, a number of the smaller and less obvious bark-living species were missed because no specialist lichen recorder came on any of the survey outings.

9.6 Fungi

Only a very few species were recorded. (See the species lists in the appendix.) Spring and summer are not the best times to find and identify these species and it is not surprising that so few were found. The few records at this time of the year indicate, however, that in some areas of the grounds the mycological flora may be reasonably rich and would be worth further study in the autumn.

A series of autumn visits were planned but a combination of the weather, lack of time and the short evenings prevented this work.

9.7 Mosses and Liverworts

Again, no bryophytes of great interest were found. In places around the main campus and in one or two locations at the other sites, relatively large (4 - 5 square metre) and fertile patches of the common liverwort *Marchantia polymorpha* were found, with numerous 'miniature palm tree' male structures and a few small 'stool-like' female structures.

A small range of characteristic mosses were noted growing on a number of walls, particularly the older sandstone walls that occur in and around the main campus and the other older localities.

In our climate it is not surprising that we noted large quantities of mosses in among the grasses of many of the lawns of the University. Perhaps the most common was the large and striking species *Rhytidiadelphus squarrosus*. A small number of other species characteristic of damp grass were recorded. None of these are unusual.

9.8 Ferns and their allies

A small variety of pteridophytes were recorded, none of any great significance in Dundee and Angus. Perhaps the most interesting were 'stands' of Hart's-tongue fern (*Phyllitis scolopendrium*) growing out of brickwork or even tiled walls. (See map.)

A few of the older walls support small colonies of wall rue (*Asplenium ruta-muraria*) and black spleenwort (*Asplenium adiantum-nigrum*) and clumps of common male fern (*Dryopteris felix-mas*) were found scattered in a number of localities.

Common horsetails (*Equisetum arvense*) were located growing places as well, although the horticulture staff probably would not be pleased to find this highly invasive weed.

9.9 Conifers

A number of exotic conifers were noted, although the identifications of them are rather suspect. No doubt the species are of interest of arboriculturalists. However, few native species and no wild-grown trees were located. It is considered that they have little wildlife value, apart from supporting a range of lichens and a few mosses and providing shelter for nesting birds. In this respect the very much-maligned 'cypress' (*Chamaecyparis lawsoniana*) plays a valuable role and, in suitable locations, is even to be encouraged.

9.10 Flowering Plants

The greatest measure of biodiversity of the University's grounds is to be found in the angiosperms, as expected. This was the group in which DNS members have the most expertise. The flowering plant records also allows the University grounds to be compared with local wildlife sites accepted and listed by the survey assessment sub-committee of the Dundee and Angus branch of the Scottish Wildlife Trust.

One of the biggest problems, however, is determining which species are 'native and wild' and which are planted or introduced in some way. The large native broad-leaved trees were recorded as if natural members of the flora since they obviously long predate the inception of the University and could possibly be self-sown. In the case of ash and sycamore small self-seeded trees also were found growing in out of the way parts of the main campus. Beech trees were noted in a number of locations but not recorded as all the specimens had obviously been planted and the species is not native to this part of Scotland. No field maples nor Norway maples were recorded in the main campus as all specimens were planted specimen trees. Small trees of both these species, however, presumably self-sown, were found in the area to the south of the Geography department / Careers Service buildings along the Perth Road opposite the main campus and thus have been recorded for that site.

Another potentially difficult species to group as planted was clumps of pendulous sedge. These were growing in a bed, obviously planted, and therefore were not recorded.

The lists consist largely of known native plants that could be expected to occur naturally in a variety of grassy and rough land habitats. Certainly, several of these, such as Buddlea, cotoneasters, Spanish bluebell, purple toadflax and slender speedwell, are not native but are thoroughly naturalised and now are considered to add to the biodiversity of many habitats in the British Isles. *Cotula squalida*, a recent introduction from New Zealand which doesn't yet have a common name, is an interesting case. It occurs in a number of gardens in the west end of Dundee and appears to be spreading through the city. The fact that a number of these species are able to resist the full-blown ministrations of the horticulture staff demonstrates their persistence and toughness.

Most species in the garden beds obviously had been planted and were not recorded for this survey. A few others, however, were seen to be starting to spread and become part of the local flora. A judgement was made that they were planted, not naturalised species, and as such were noted but not recorded. These included such species as common barberry, lungwort and several unknown shrubs (perhaps *Hebe* species). For the purposes of this survey they were not considered as contributing significantly to the biodiversity of the grounds.

The species that, perhaps, aroused the most interest and the one with which University staff would probably be most concerned is Deadly Nighshade (*Atropa belladonna*). Its attractive but poisonous purple berries are, deservedly, notorious. Although it occurs in the heart of main campus (See the map) it is well tucked away and the vast majority of students and staff are, almost certainly, not aware of it.

Several other species can, by comparison with records in the Flora of Angus (Ingram and Noltie, 1981), be considered as locally uncommon or rare. This does not necessarily reflect their status nationally. These species recorded in the grounds were:

Deadly nightshade	(<i>Atropa belladonna</i>)
Hart's-tongue fern	(<i>Phyllitis scolopendrium</i>)
Oxford ragwort	(<i>Senecio squalidus</i>)
Eastern rocket	(<i>Sisymbrium orientale</i>)
Barren fescue	(<i>Vulpia bromoides</i>)

This small number of locally uncommon species and the lack of nationally rare species, exactly as expected, indicates the relatively low biodiversity of the University's properties and the relative lack of wildlife interest.

A total of 138 species were recorded. The largest number, 117, was recorded from the main campus. This not only records the greater biodiversity expected from the greater range of habitats present in the largest site, but also indicates the greater recording effort. Other sites worth noting for their biodiversity and degree of interest are the wild area to the south of the Perth Road buildings, with 76 species, but also Newport Pier, with 57 species, and the Riverside sports ground, 54 species.

9.11 Worms

Only a few earthworms of one species (*Lumbricus terrestris*) were noted, although other species could have been present but not recorded due to lack of knowledge.

The infamous New Zealand flatworm () is reported to exist in at least some parts of the University's grounds (private communication) but none were seen.

9.11 Arthropods

Only a very small selection of the total arthropod diversity was recorded. The 'jointed-legged animals' phylum was always likely to be the one with the lowest percentage recorded out of the total diversity likely to be present. Most are small, requiring specialised capture techniques and even more specialised identification methods.

The survey group recorded only a few species, mostly the more obvious and easily-identified specimens. Both woodlouse species are very common in and around Dundee, as are the spiders. Both butterflies are common as well, out of about 4 or 5 species that may reasonably be expected to be recorded from the sites over the course of a year. The single true fly, the green bottle, is obviously a very poor sample of the many species that must occur. The list of hoverflies could surely be easily expanded if a specialist in the group cared to record them. Similarly, the number of hymenopterans, the bees, wasps and ants, recorded could be increased fairly easily by a specialist in the group. The aphids, other small bugs and similar insects would require much more effort, but there must be many species that pass unrecorded.

9.12 Molluscs

For the same reason as with the arthropods, the lack of records do not necessarily indicate the true mollusc diversity of the sites. Perhaps a few more snail species could be recorded after diligent searching but, if normal experience in other parts of the city is anything to go by, slugs of several species abound. It is unlikely that the University grounds are different in this respect.

9.13 Birds

A total of 22 species were recorded from all the sites. This figure is rather low but the recording effort was relatively small and mainly devoted to studying plants, during the day and early evening, not normally the best times for recording birds. The opportunity for recording the calls of breeding birds during the dawn chorus in early spring was missed. Almost certainly a longer list, and a better record of the avian biodiversity, could be obtained.

Most records are typical of urban locations. The less disturbed sites contained species worth noting, such as the wrens in the wild area to the south of the Perth Road buildings and in the area around Newport Pier. The fact that herons, mallards and swans, for example, roost and even nest on the pier, along with a variety of other shore birds is not surprising but indicates the wildlife value of the site.

The sports grounds along riverside are worth noting as well, since the open areas are used for roosting by species such as ducks and oystercatchers. A number of other species also occur in the general area, particularly redshank and skylarks, and could be expected to be found on the site, although none were recorded.

The other feature of note was the records of breeding birds. Several thrushes were seen around the main campus carrying food, obviously in to nestlings. Although thrushes are not rare their numbers are declining and the fact that this behaviour was noted at different parts of the main campus indicates that the area must suit them. There must be a relatively healthy population. Young blue tits were recorded both at Newport Pier and the main campus and young goldfinch were recorded at the main site as well. Goldfinch have increased greatly in numbers in recent years but they nest secretively and it is good to know that they breed in the area around the University. The swan with cygnets at Newport Pier is worth noting, although there is a healthy population in and around the Tay estuary. The presence of breeding birds is recorded with a circle drawn on the maps.

9.14 Mammals

The only wild mammal recorded directly was, not surprisingly, the rabbit. They are both numerous and bold in many of the quieter parts of the city and the University is no exception. No other species was seen. However, what was almost certainly a roe deer was disturbed and heard crashing through the vegetation in the wild area to the south of the Perth Road buildings. Roe deer are known to occur further along the bluff beside the railway line to the west, towards Harris Academy. A number of other species could be expected to occur on University property.

No squirrels, reds or greys, were recorded although they are known to occur occasionally in the same area. Both vole species, wood mice, brown rats and common shrews can be expected in a number of the sites as well. They all occur in and around Dundee. None were recorded as, without specialist traps or night visits with a red torch, they are very difficult to locate. Hedgehogs almost certainly occur, also, although none were recorded. No bats were seen either but pipistrelles at least could be expected to roost in either hollows in trees in the quieter parts of the grounds or, more likely, in some of the buildings themselves.

No signs of foxes, droppings, earths or kills, were seen. This is not unexpected as, although relatively common around Dundee, there are few records from within the city.

For all these species records of chance sightings by staff and students, at odd times of the day and night, could have made a valuable contribution to the biodiversity records.

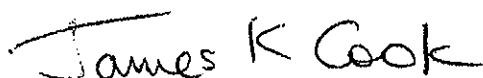
10 Conclusions

The results of the survey work indicate that no areas of the University's properties are of great wildlife interest or significance. In terms of the Scottish Wildlife Trust local wildlife sites surveys, no University locations would merit the status of a wildlife site. In terms of the city, however, several of the locations are of wildlife interest.

The most interesting habitats are the 'wild' and relatively undisturbed mixed woodland, developed from old planted woodland, to the south of the buildings along the Perth Road and damp and rough weedy areas around Newport Pier, plus the pier itself. The open grassland of the sports fields is of some interest for the birds that could and do occur there.

No plants or animals of especial wildlife interest were found in any of the properties. As noted earlier, several are of some significance locally and a few others may occur. Although some tiny organisms of significance may turn up in the future, the chances of this happening are low.

This, however, does not mean that the University's properties are of no wildlife value whatsoever. In the context of their urban locations, the habitats noted above are of interest due to their sizes, habitat types and relative lack of disturbance. There is potential for developing and improving several of the areas for wildlife and this may merit further investigation. Dundee Naturalists' Society looks forward to cooperating with the University's environment group in the future.



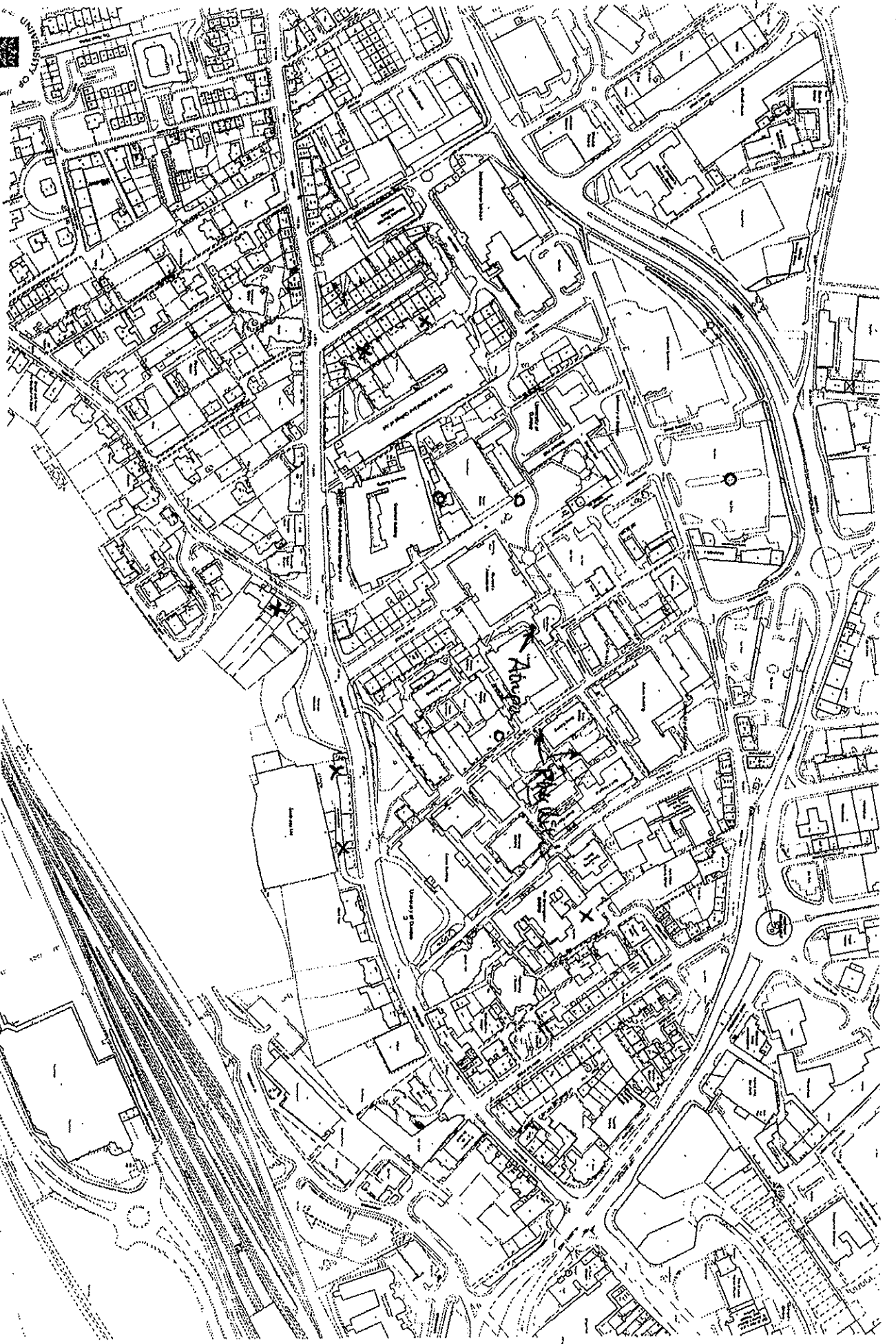
James K Cook, Technical Convenor of Dundee Naturalists' Society

22nd . Feb . 2002

Appendices

I Maps

These are photocopies and reductions to A4 size of the maps of the various buildings and grounds of the University of Dundee, provided by Professor Reid.



DUNDEE



UNIVERSITY OF DUNDEE - CAMPUS DEVELOPMENT PLAN - SPRING 2001

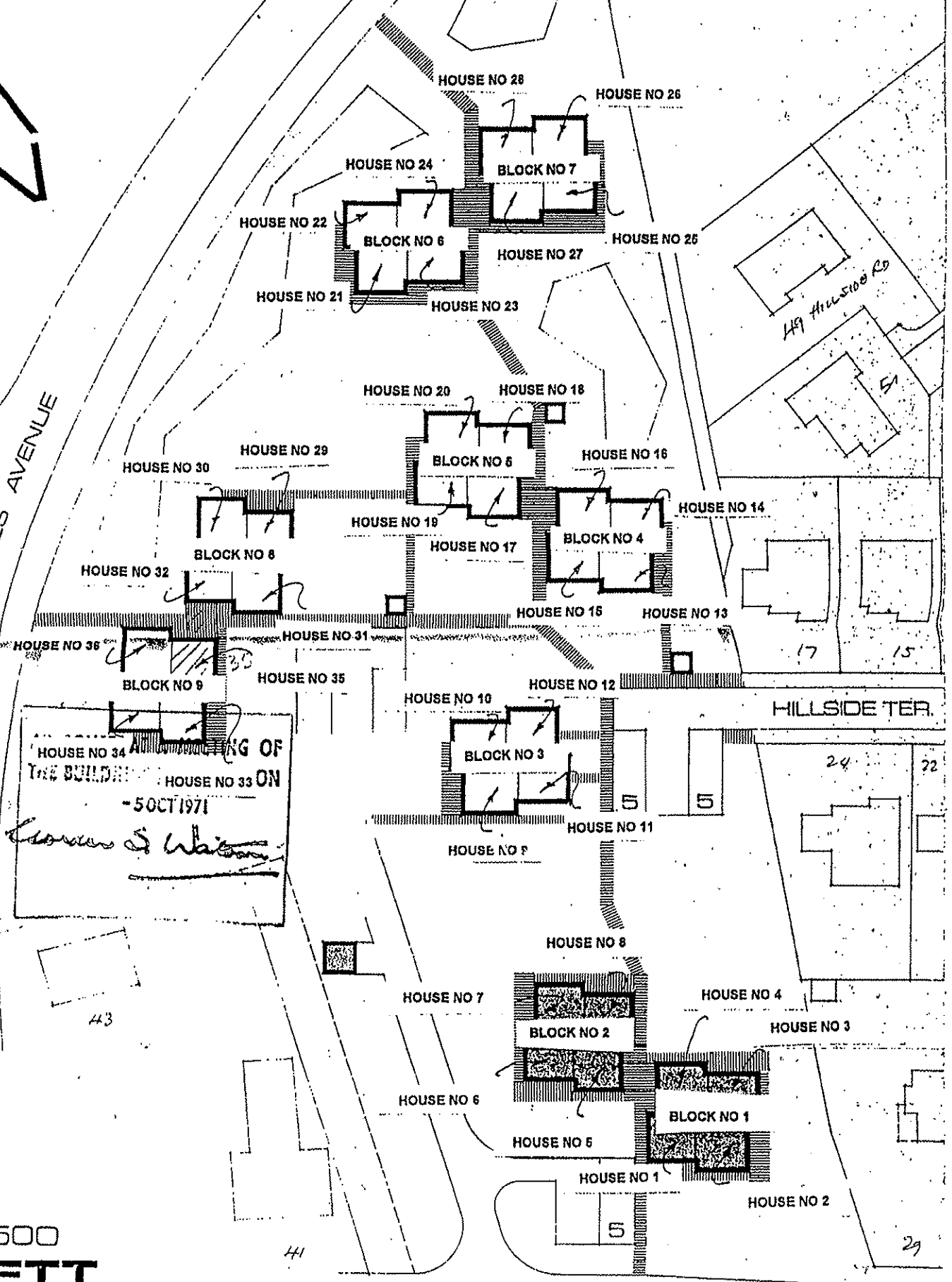
PAGE AND PARK ARCHITECTS

UNIVERSITY OF DUNDEE STUDENTS' RESIDENCES

(Wimberley Houses)



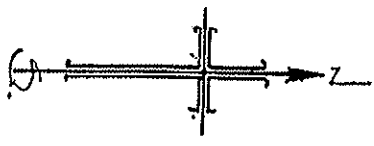
NINEWELLS AVENUE



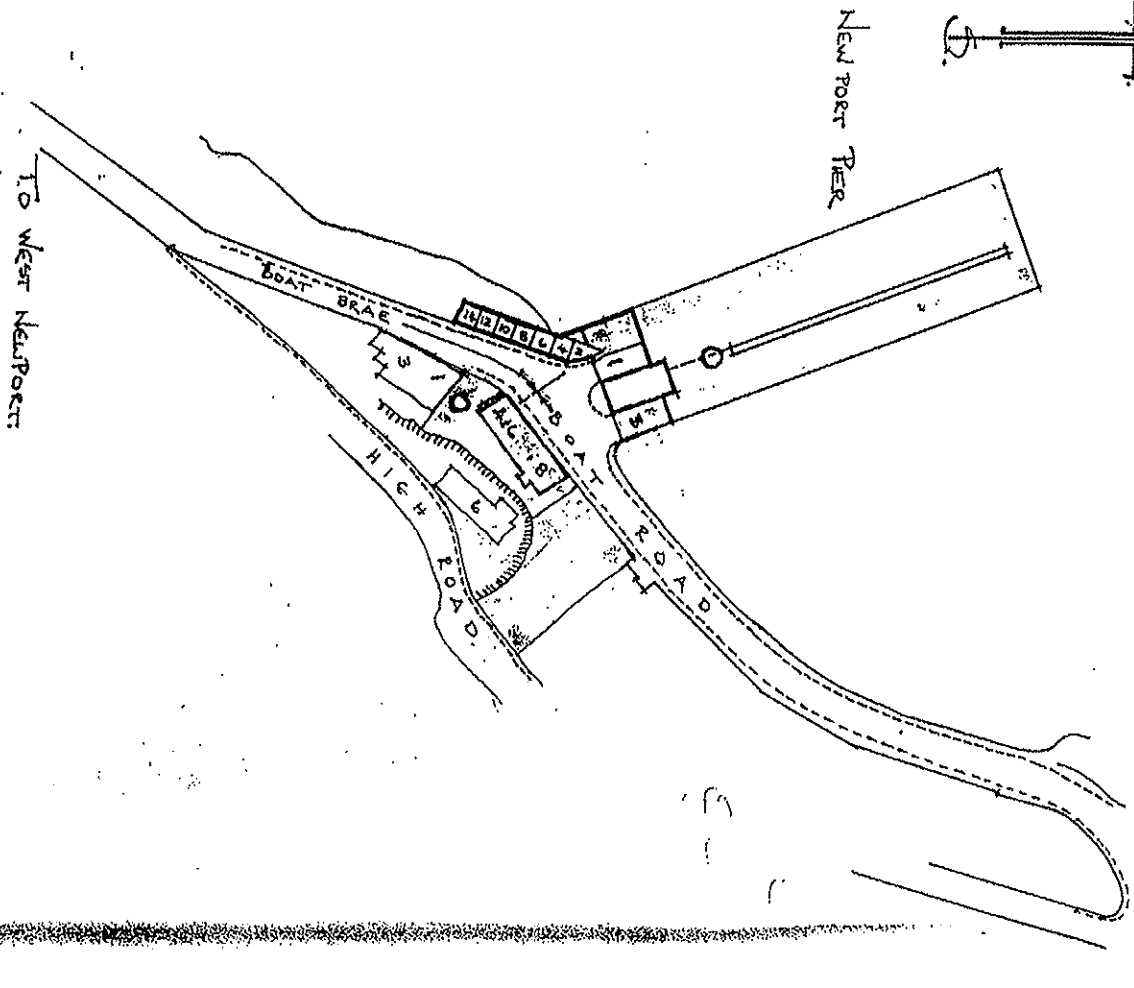
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OF NEWPORT FERRY
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School

Fife College of
Health Studies

FORTH AVENUE

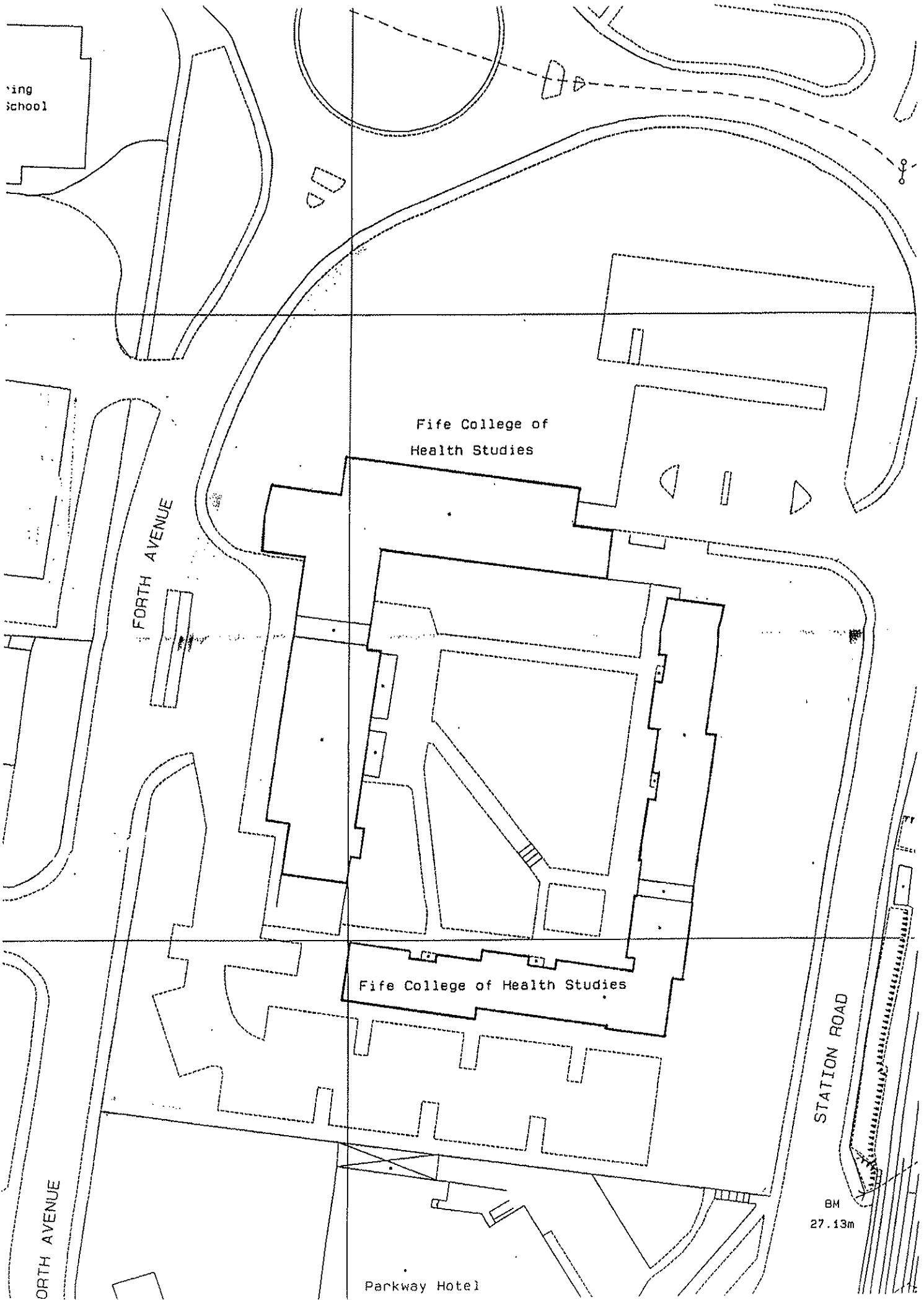
Fife College of Health Studies

STATION ROAD

BM
27.13m

ORTH AVENUE

Parkway Hotel



II Access letter

The following letter was provided by Professor Reid to facilitate access to various parts of the University and to reduce potential problems with security staff.

III DNS members who took part or contributed information:

The following DNS members either provided information or came along on the survey trips at least once. Several contributed a number of times.

Mr Bede Pounder (Pres.)
Mrs Margaret McLaren (Secy.)
Mr J Cook (Tech. Conv.)
Miss Ruth Arnold
Mrs Helen Blackburn
Mr R Brinklow
Mrs Joy Cammack
Mrs Jean Colquhoun
Mrs Margaret Duncan
Mr Alastair Fraser
Mrs Ina Fraser
Mrs Doreen Fraser
Miss Dorothy Fyffe
Miss Doris Malcolm
Mr Gordon Maxwell
Mr Doug Palmer
Mrs Jean Scott

I would like take the opportunity to record the Society's thanks to each of these individuals for their valued contributions and efforts to collect and record information for this survey. Without their willing help, time and expertise this work could not have been carried out.

Mosses and Liverworts

<u>Common name</u>	<u>Scientific name</u>	<u>Localities</u>								
		1	2	3	4	5	6	7	8	9
Liverwort	<i>Marchantia polymorpha</i>	x		x	x	x		x		
Hair-moss	<i>Brachythecium rutabulum</i>			x	x					
	<i>Bryum capillare</i>	x			x			x		
	<i>Eurhynchium praelongum</i>	x	x		x					
	<i>Funaria hygrometrica</i>		x							
	<i>Grimmia pulvinata</i>	x	x							
	<i>Hypnum cupressiforme</i>		x							x
	<i>Mnium hornum</i>		x							
'Star grass'	<i>Pohlia nutans</i>	x	x							x
	<i>Polytrichum</i> (probably <i>juniperum</i>)	x								
	<i>Rhytidiadelphus squarrosus</i>	x	x	x	x		x	x		x
	<i>R. triquetris</i>	x	x							

Ferns and allies

<u>Common name</u>	<u>Scientific name</u>	<u>Localities</u>								
		1	2	3	4	5	6	7	8	9
Black spleenwort	<i>Asplenium adiantum-nigrum</i>	x								
Wall-rue	<i>A. ruta-muraria</i>	x	x							x
Maidenhair spleenwort	<i>A. trichomanes</i>	x	x		x					
Broad buckler-fern	<i>Dryopteris dilatata</i>	x	x							
Common male fern	<i>D. felix-mas</i>	x	x	x						x
Hart's-tongue fern	<i>Phyllitis scolopendrium</i>	x								
Common polypody	<i>Polypodium vulgare</i>	x	x		x					
Common horsetail	<i>Equisetum arvense</i>	x		x						x

Conifers

No native self-grown gymnosperms were recorded.

Angiosperms

<u>Common name</u>	<u>Scientific name</u>	<u>Localities</u>								
		1	2	3	4	5	6	7	8	9
Field maple	<i>Acer campestre</i>		x							
Norway maple	<i>A. platanoides</i>		x							
Sycamore	<i>A. pseudoplatanus</i>	x	x							
Yarrow	<i>Achillea millefolia</i>	x	x			x	x	x		x
Ground elder	<i>Aegopodium podagraria</i>		x							
Common bent-grass	<i>Agrostis capillaris</i>	x	x				x			x
Brown bent-grass	<i>A. canina</i>	x								
Creeping bent-grass	<i>A. stolonifera</i>	x					x			x
Silvery hair-grass	<i>Aira caryophylla</i>				x					
Common Lady's-mantle	<i>Alchemilla glabra</i>		x							
Parsley piert	<i>Aphanes arvensis</i>	x					x			
Thale cress	<i>Arabidopsis thaliana</i>	x	x	x		x	x		x	x
Mugwort	<i>Artemisia vulgaris</i>				x				x	
Common Orache	<i>Atriplex patula</i>	x			x					
Deadly nightshade	<i>Atropa belladonna</i>	x								
Daisy	<i>Bellis perennis</i>	x	x	x	x	x	x	x		x
Silver birch	<i>Betula pendula</i>	x								
Lop grass	<i>Bromus mollis</i>						x			
Barren brome	<i>B. sterilis</i>	x			x		x			x
Buddlea	<i>Buddleya davidii</i>	x	x	x	x					x
Shepherd's purse	<i>Capsella bursa-pastoris</i>	x				x	x	x	x	x
Hairy bitter-cress	<i>Cardamine hirsuta</i>	x	x	x	x		x	x		x
Wood sedge	<i>Carex sylvatica</i>		x							
Sticky mouse-ear										
chickweed	<i>Cerastium glomeratum</i>	x	x	x			x			
Common mouse-ear										
chickweed	<i>C. fontanum</i>	x	x		x		x			x
Rose-bay willow-herb	<i>Chamaerion angustifolium</i>	x	x	x			x			x
Fat hen	<i>Chenopodium album</i>	x					x			x
Feverfew	<i>Chrysanthemum parthenium</i>	x	x		x					
Creeping thistle	<i>Cirsium arvense</i>	x	x	x	x					
Spear thistle	<i>C. vulgare</i>	x	x	x			x			x
Common bindweed	<i>Convolvulus arvensis</i>	x					x			
Cotoneaster	<i>Cotoneaster spp.</i>	x			x	x				
	<i>Cotula squalida</i>		x							
Smooth hawk's-beard	<i>Crepis capillaris</i>	x	x	x			x			x
Hawthorn	<i>Crataegus monogyna</i>									x
Ivy-leaved toadflax	<i>Cymbalaria muralis</i>	x	x							x
Crested dog's-tail	<i>Cynosurus cristatus</i>	x					x			
Cock's-foot grass	<i>Dactylis glomerata</i>	x			x		x	x	x	x
Foxglove	<i>Digitalis purpurea</i>	x	x				x	x		x
Broad-leaved										
willow-herb	<i>Epilobium montanum</i>	x	x	x	x			x	x	x
Lesser hairy w-herb	<i>E. parviflora</i>	x	x							
Square-stemmed w-herb	<i>E. tetragonum</i>	x	x							
Couch grass	<i>Elymus repens</i>	x			x		x			x
Spring whitlow-grass	<i>Erophila verna</i>	x					x			
Sun spurge	<i>Euphorbia helioscopia</i>	x				x				

<u>Common name</u>	<u>Scientific name</u>	<u>Localities</u>								
		1	2	3	4	5	6	7	8	9
Black bindweed	<i>Fallopia (=Polygonum) convolvulus</i>	x								
Red Fescue	<i>Festuca rubra</i>	x		x	x		x	x	x	x
Chewing's fescue	<i>F. ovina ssp. commutata</i>	x	x	x				x		x
Meadowsweet	<i>Filipendula ulmaria</i>								x	
Ash	<i>Fraxinus excelsior</i>	x	x						x	
Common fumitory	<i>Fumaria officinalis</i>	x			x		x		x	
Fumitory	<i>F. muralis</i>	x								
Sticky willy	<i>Galium aparine</i>	x	x	x	x	x	x	x	x	
Dove's-foot crane's-bill	<i>Geranium molle</i>	x	x			x	x			x
Herb robert	<i>G. robertianum</i>									x
Herb bennet	<i>Geum urbanum</i>	x								x
Ivy	<i>Hedera helix</i>	x	x	x						x
Yorkshire fog grass	<i>Holcus lanatus</i>	x		x	x		x	x	x	x
Spanish bluebell	<i>Hyacinthoides (=Endymion) hispanicus</i>	x	x							
Tutsan	<i>Hypericum androsaemum</i>	x								
Common St John's wort	<i>H. perforatum</i>	x		x			x			
Common cat's ear	<i>Hypochaeris radicata</i>	x		x			x	x		x
Holly	<i>Ilex aquifolia</i>	x	x							x
Field scabious	<i>Knautia arvensis</i>	x								
Red dead-nettle	<i>Lamium purpureum</i>	x	x	x		x				x
Nipplewort	<i>Lapsana communis</i>			x	x					
Purple toadflax	<i>Linaria purpurea</i>	x	x	x	x					x
Rye-grass	<i>Lolium perenne</i>	x	x	x			x	x		x
Honeysuckle	<i>Lonicera periclymenum</i>	x	x							
Field woodrush	<i>Luzula campestris</i>		x				x			
Many-headed woodrush	<i>L. multiflora</i>	x								
Black medick	<i>Medicago lupulina</i>	x		x			x			x
Pineapple weed	<i>Matricaria matricarioides</i>	x	x				x	x	x	x
Wall lettuce	<i>Mycelis muralis</i>	x								
Common forget-me-not	<i>Myosotis arvensis</i>	x	x				x	x		
Changing forget-me-not	<i>M. discolor</i>		x							
Narrow-headed poppy	<i>Papaver dubium</i>	x						x	x	
Opium poppy	<i>P. somniferum</i>	x	x							
Colt's-foot	<i>Petasites hybridus</i>	x								
Ribwort plantain	<i>Plantago lanceolata</i>	x	x	x	x		x	x		x
Broad-leaved plantain	<i>P. major</i>	x	x	x	x		x	x	x	x
Annual meadow-grass	<i>Poa annua</i>	x	x	x	x	x	x	x	x	
Smooth-stalked m-grass	<i>P. pratensis</i>	x	x	x	x	x	x	x	x	x
Rough-stalked m-grass	<i>P. trivialis</i>	x								x
Knotgrass	<i>Polygonum aviculare</i>	x		x			x	x	x	
Barren strawberry	<i>Potentilla sterilis</i>		x							
Self heal	<i>Prunella vulgaris</i>	x	x		x	x	x	x	x	x

Common name	Scientific name	Localities								
		1	2	3	4	5	6	7	8	9
Creeping buttercup	<i>Ranunculus repens</i>	x	x	x	x		x	x	x	x
Gooseberry	<i>Ribes uva-crispa</i>	x								x
Downy Rose	<i>Rosa villosa</i>									x
One-rowed water-cress	<i>Rorippa microphylla</i>									x
Sorrel	<i>Rumex acetosa</i>		x				x			
Sheep's sorrel	<i>R. acetosella</i>	x						x		
Broad-leaved dock	<i>R. obtusifolius</i>	x	x	x		x		x	x	x
Bramble	<i>Rubus fruticosus</i> agg.	x	x							x
Raspberry	<i>R. idaeus</i>	x								
Annual pearlwort	<i>Sagina apetala</i>	x								x
Knotted pearlwort	<i>S. procumbens</i>	x	x		x	x	x	x	x	x
Heath pearlwort	<i>S. subulata</i>				x	x				
Goat willow	<i>Salix capraea</i>	x								
Elder	<i>Sambucus nigra</i>	x	x		x					x
Biting stonecrop	<i>Sedum acre</i>	x	x							x
Ragwort	<i>Senecio jacobaea</i>	x	x	x	x		x	x	x	
Oxford ragwort	<i>S. squalidus</i>	x								
Sticky groundsel	<i>S. viscosa</i>	x	x							
Common groundsel	<i>S. vulgaris</i>	x	x	x				x		x
Red campion	<i>Silene dioica</i>		x							x
Charlock	<i>Sinapsis arvensis</i>	x					x			
Hedge mustard	<i>Sisymbrium officinale</i>	x	x	x		x	x	x	x	
Eastern rocket	<i>S. orientale</i>	x								
Field sowthistle	<i>Sonchus arvensis</i>	x	x	x						
Prickly sowthistle	<i>S. asper</i>	x	x	x			x	x		
Grey sowthistle	<i>S. oleracea</i>	x	x	x						x
Rowan	<i>Sorbus aucuparia</i>	x	x							
Lesser Stitchwort	<i>Stellaria graminea</i>		x							
Common chickweed	<i>Stellaria media</i>	x	x		x		x	x		x
Comfrey	<i>Symphytum x uplandicum</i>	x								x
Dandelion	<i>Taraxacum officinale</i>	x	x	x	x	x			x	x
Upright hedge-parsley	<i>Torilis japonica</i>	x	x					x		
Lesser hop trefoil	<i>Trifolium dubium</i>	x		x	x		x		x	
White clover	<i>T. repens</i>	x	x	x	x		x	x		x
Scentless mayweed	<i>Tripleurospermum inodorum</i>	x	x	x			x	x		x
Coltsfoot	<i>Tussilago farfara</i>	x		x						
Wych elm	<i>Ulmus glabra</i>	x	x	x						x
Stinging nettle	<i>Urtica dioica</i>	x	x	x		x		x	x	
Small nettle	<i>U. urens</i>	x	x							
Wall speedwell	<i>Veronica arvensis</i>	x		x				x	x	x
Germander speedwell	<i>V. chamaedrys</i>	x		x						x
Slender speedwell	<i>V. filiformis</i>	x		x				x		x
Common speedwell	<i>V. officinalis</i>			x	x	x		x		
Large field speedwell	<i>V. persica</i>	x	x							
Grey speedwell	<i>V. polita</i>	x								
Tufted vetch	<i>Vicia cracca</i>	x					x			
Hairy tare	<i>V. hirsuta</i>	x		x						
Common vetch	<i>V. sativa</i>	x								
Bush vetch	<i>V. sepium</i>	x					x		x	
Field pansy	<i>Viola arvensis</i>	x	x				x			
Barren fescue	<i>Vulpia bromoides</i>		x							

Animals**Annelid worms**

<u>Common name</u>	<u>Scientific name</u>	<u>Localities</u>								
		1	2	3	4	5	6	7	8	9
Common earthworm	<i>Lumbricus terrestris</i>	x	x				x			

Arthropods

<u>Common name</u>	<u>Scientific name</u>	<u>Localities</u>								
		1	2	3	4	5	6	7	8	9
<u>Insects</u>										
Small tortoiseshell butterfly	<i>Aglais urticae</i>	x								
Red-tailed bumble-bee	<i>Bombus lepidarius</i>	x	x	x						
White-tailed bumble-bee	<i>B. lucorum</i>	x	x						x	
Common lacewing	<i>Chrysoperla</i> (prob. <i>carnea</i>)	x								
7-spot ladybird	<i>Coccinella septempunctata</i>	x		x						
Common black ant	<i>Lasius niger</i>	x	x	x				x		
Green bottle fly	<i>Lucilia caesar</i>		x							
Large white butterfly	<i>Pieris brassicae</i>	x								
Common wasp	<i>Vespula vulgaris</i>	x		x						

Specimens not identified to species, but recognised as one of a group:

Aphid spp.		x	x							
Crane fly	<i>Tipula</i> sp.	x								
Holly leaf miner		x								
Hoverflies	<i>Syrphus</i> spp.	x								
Owl midge	(possibly <i>Psychoda</i> sp.)	x								
'Plant bug'		x								
Psocid 'bug'		x								

Crustaceans

Shiny woodlouse	<i>Oniscus asellus</i>		x							
Rough woodlouse	<i>Porcellio scaber</i>	x	x							

Arachnids

Garden spider	<i>Aranea diadema</i>		x							
Zebra spider	<i>Salticus scenicus</i>		x							
Crab spider	(of unknown species)		x							

Millipedes

Common millipede	<i>Cylindroiulus punctatus</i>		x							
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Molluscs

<u>Common name</u>	<u>Scientific name</u>	<u>Localities</u>								
		1	2	3	4	5	6	7	8	9
White-lipped snail	<i>Cepaea hortensis</i>		x							
Garden slug	<i>Arion hortensis</i>			x						

Birds

The species recorded here were seen on the ground, in a tree or on a building in University grounds, not just flying over.

Species seen either feeding or as young - thus indicating breeding - are indicated by *. All of these, except one, were in and around the main campus. Young blue tits and cygnets were also seen at the Newport Pier site.

<u>Common name</u>	<u>Scientific name</u>	<u>Localities</u>								
		1	2	3	4	5	6	7	8	9
Mallard	<i>Anas platyrhynchos</i>						x		x	
Grey Heron	<i>Ardea cinerea</i>								x	
Goldfinch*	<i>Carduelis carduelis</i>	x			x					
Greenfinch	<i>C. chloris</i>	x	x							x
Feral Pigeon	<i>Columba livia</i>	x								
Wood Pigeon	<i>C. palumbus</i>	x	x		x			x		
Carriion Crow	<i>Corvus corone corone</i>	x					x			
Rook	<i>C. frugilegus</i>						x			
Mute Swan*	<i>Cygnus olor</i>									x
Robin	<i>Erithacus rubecula</i>	x	x			x				
Chaffinch	<i>Fringilla coelebs</i>	x	x		x					x
Oystercatcher	<i>Haematopus ostralegus</i>						x			x
Black-headed Gull	<i>Larus ridibundus</i>	x					x			
Herring Gull	<i>L. argentatus</i>	x			x		x			x
Blue tit*	<i>Parus caeruleus</i>	x								x
House Sparrow	<i>Passer domesticus</i>	x				x		x		x
Dunnock	<i>Prunella modularis</i>	x								x
Starling	<i>Sternus vulgaris</i>	x	x			x	x		x	x
Collared Dove	<i>Streptopelia decaocto</i>	x	x	x	x			x		x
Wren	<i>Troglodytes troglodytes</i>		x							x
Blackbird	<i>Turdus merula</i>	x	x	x		x	x	x		
Common Thrush*	<i>Turdus philomelus</i>	x							x	
Pheasant?	<i>?Phasianus colchicus</i>									x

(only a dropping was seen but its size, shape and texture strongly suggested pheasant)

Mammals

<u>Common name</u>	<u>Scientific name</u>	<u>Localities</u>								
		1	2	3	4	5	6	7	8	9
Rabbits	<i>Oryctolagus cuniculus</i>	x	x			x	x			
Roe Deer?	<i>?Capreolus capreolus</i>									x

(possible, as a loud crashing through the vegetation was heard and it was certainly not a dog.)

No hedgehogs, shrews, rodents nor bats were recorded but almost certainly exist in the more overgrown and open sites.

Dogs and cats, of course, were seen or their signs were noted but, as domestic species, their presence was not recorded.

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