

THE COMMON LANDS OF GREATER LONDON

A BIOLOGICAL SURVEY

1. Introduction

This report presents the results of a biological survey of registered common lands in the county of Greater London. It is one of a set of county reports that have been compiled over a twelve-year period by the Rural Surveys Research Unit (University of Wales, Aberystwyth), and forms part of a wider study and inventory of commons in England and Wales (Aitchison, 1998; Aitchison, *et al*, 2000).

The central objective of the national survey of commons has been to draw together an array of biological data from a variety of sources, including Phase 1 mapping of vegetation and habitat types. Such data are potentially of value not only to those with a specialist concern for the identification and conservation of biodiversity, but also to those with a broader interest in the use and effective management of commons - policy makers, stakeholders and other parties. While the databases produced as a result of the national survey focus on biological attributes (flora, fauna and habitats), they also include reference to the location and extent of commons, the nature of rights of common (if any) and details concerning ownership. Also recorded is the association of commons with various protected area networks (e.g. national parks, SSSIs). Where available, and mainly through field observations, information has been gathered on the use and management of individual commons, including reference to particular problems that appear to exist (e.g. over- or under-grazing, encroachment). These various facets of the survey, and the precise nature of the data that have been collated, are considered in detail.

While the national survey of commons is relatively broad in compass, its main aim, as noted above, is to determine the biological characteristics of common land and to assess the value of these highly distinctive areas in terms of their contribution to the conservation of biodiversity. Before considering the situation as it applies in the county of Greater London, however, it is appropriate to provide a general

introduction, focussing briefly on the common land debate, as it has evolved over the years, but with a particular emphasis on the conservation interest in such areas and on broader policy issues.

2. Background : Reports, Legislation and Policies

In presenting evidence to the Royal Commission on Common Land in 1956, the Nature Conservancy (as it then was) stressed that in many regions of England and Wales commons were “wildlife sanctuaries”, “reservoirs for species”, and “disproportionately rich in examples of plant and animal communities which have largely been eliminated from surrounding localities”. The Royal Commission itself noted that, protected by statutes from many of the pressures that had so markedly impacted upon the countryside at large, commons were often “islands of semi-natural vegetation” and “refuges” for rare and interesting wildlife.

Given the significance of common land as a national resource, the Scott Report of 1942, in considering the "well-being of rural communities and the preservation of rural amenities", called for steps to be taken "to record details of common lands, to safeguard any rights of public rights of access or use, and otherwise to ascertain the position of commoners" (Cmnd 6378, 1942, p59). It was not until 1955, however, with the setting up of a Royal Commission on Common Land, that these matters were pursued further. Following a detailed and broadly-based investigation, the Royal Commission reported in 1958 and made a host of recommendations concerning the protection and management of "these last uncommitted reserves of land". The then Government did not respond to the Commission's main recommendations, but local authorities were subsequently charged with compiling and maintaining registers of land, ownership and rights of common (Commons Registration Act, 1965). The 1965 Act applies to those tracts of land subject to rights of common, together with wastes of manors not subject to rights of common. The process of common land registration was completed in 1972, but numerous disputes concerning ownership and rights of common had to be resolved by Commons Commissioners (Gadsden, 1988; Aitchison and Gadsden, 1992).

The problems associated with the registration process thwarted efforts to promote further legislation, but the common land question continued to be a focus of attention. In 1976 an inter-departmental working party (*Common Land : Preparations for Comprehensive Legislation*, DOE, 1976) reaffirmed the main conclusions of the Royal Commission, while the Common Land Forum (established in 1983) put forward detailed proposals concerning public access and the establishment of management associations/schemes for areas of common (Common Land. Report of the Common Land Forum, Countryside Commission, CCP215, 1986). Despite widespread agreement and a series of positive pronouncements, the recommendations of the Common Land Forum were not acted upon. Thus, in the White paper *Rural England : A Nation Committed to a Living Countryside*, (DOE and MAFF, 1995) it was stated that, while :

“We remain committed to maintaining the status of common land, to protecting the rights of commoners and to encouraging proper management.....

We do not now believe that comprehensive legislation, along the lines of that proposed in 1986 by the Common Land Forum, is feasible or practical”.

At the time of writing, and of particular relevance to common lands, a draft Bill has been published (The Countryside and Rights of Way Bill) which, if enacted as drafted, would grant access to specified categories of open land. One of these categories is registered common land; the others include mountain moor, heath and down. It should be added that the draft Bill makes no reference to a 'universal' right of access, nor is the phrase a 'right to roam' adopted. Two other publications of importance to the future governance and management of commons are a “*Good Practice Guide on Managing The Use of Common Land*”, (DETR, 1998) and "*Greater Protection and Better Management of Common Land in England and Wales*" (DETR, 2000).

On the ecological front, a number of studies have sought to quantify the conservation significance of common land in England and Wales. These include the reports prepared for the Royal Society for Nature Conservation by Palmer (A

Future for Wildlife on Commons, Parts 1 and 2, 1989) and by Bruce (*Wildlife Importance of Common Land*, 1989). A preliminary overview of results generated by the Rural Surveys Research Unit (University of Wales, Aberystwyth) for 18 regions in England and Wales - *Common Land and Conservation : A Synthesis* (Aitchison and Medcalf, 1994) - also shed light on the diversity of flora and fauna that are to be found on commons and wastes. Subsequently, Aitchison also summarised the findings of the biological survey of commons for the whole of Wales (Countryside Council for Wales, 1997). This latter study is highlighted in a recent report by RSPB Cymru entitled '*Living Commons*' (RSPB Cymru, 2000).

As has already been noted, this present county report is one of a set of reports compiled by the Rural Surveys Research Unit (University of Wales, Aberystwyth) over an twelve-year period. The first collection of reports was commissioned and funded by the Nature Conservancy Council, and thereafter by English Nature. To complete the picture a study of commons in the remaining counties of England was commissioned in 1995 by the Department of the Environment (now the Department of the Environment, Transport and the Regions - DETR). This report has been prepared as part of this latter phase of the national survey of common lands.

3. The Database of Registered Commons

Before describing the attributes of commons in Greater London it is necessary to note that the data presented here are derived from three main sources. Firstly, the registers of common land that are maintained by local authorities; secondly, information gained from site-based evaluations of individual commons; and thirdly, from the biological records of local/regional agencies and organisations (e.g. English Nature offices, county wildlife trusts). The information collated from these various sources has been entered into a Microsoft Access database to facilitate the analysis and retrieval of common land records. Some of this information is quantitative in nature (e.g. areas of habitats), and some is textual and qualitative (e.g. descriptions of vegetation and associated habitats).

In addition to the computer files that constitute the database, record sheets have been produced that detail the essential characteristics of all commons included in the

biological survey (i.e. mainly commons over 1 hectare in size). These sheets constitute a hard copy physical record and are included in Appendix 3 for the county of Greater London. In addition to the types of data described above the data sheets also include maps of Phase 1 habitat types for those commons that were included in the survey.

Given that the Phase 1 information forms such a key part of the data record it is appropriate at this point to describe briefly the approach adopted within the survey.

This involved :

(i) identifying all common land over 1 hectare in size and preparing broad-based vegetation maps using the standard 'Phase 1' coding of the Nature Conservancy Council (as it then was), and where possible, National Vegetation Classification communities. Phase 1 surveys secure a relatively rapid record of semi-natural vegetation and wildlife habitats at a scale of 1:10000.

(ii) preparing descriptions of the biological interest of each common land unit, principally from a botanical viewpoint, but also recording information on fauna where feasible. These descriptions include references to particular species of flora and fauna identified within the surveys. From these lists of species have been compiled for each of the county reports. Quantitative and textual information summarise the essential biological attributes of individual commons.

(iii) from on-site observations, making summary evaluations of management practices on each common, together with recommendations (where sufficient information is available) concerning the resolution of any problems relating to the conservation interest.

Although the national survey of commons is based on a Phase 1 mapping of habitat types it is evident that the various categories identified can be aggregated into other higher order groupings to suit particular needs. Thus, it is possible for instance to aggregate the categories with a view to defining broad and priority habitat types as defined in the UK Biodiversity Action Plan and associated reports (1994, 1998). This said, it should be emphasised that the matching of Phase 1 categories to these new

biodiversity categories cannot always be effected neatly, for in certain cases more detailed information concerning particular species or site conditions is required. Despite this, and since the biodiversity value of commons is an important issue, an effort is made in this report and in the summary report to comment on such matters, and to generate estimates of the habitat types and areas concerned.

Although the biological survey of commons in England and Wales has examined all CL units over 1 hectare in size, it is to be appreciated that this threshold is somewhat arbitrary in nature and was selected to limit extensive field work demands. To identify those commons over 1 hectare reference was initially made to the area statistics detailed in the land sections of the registers. However, since these statistics were known to be frequently crude estimates, maps held in the common land registration offices were also consulted to check if the areas recorded were sufficiently reliable. It is for this reason that certain commons with registered areas over one hectare were not covered in the survey, and why others under one hectare were actually included. Some commons over 1 hectare in size were also excluded because the areas concerned were highly fragmented, with component parts being less than this threshold. A small number of commons under 1 hectare were also included because they abutted other larger areas of common land.

Finally, in regards to the database of common lands it can be noted that OS grid references define centroid locations for individual commons. Although not used in this report (apart from the production of the location map), these co-ordinates has enabled the integration of the survey information into a full Geographical Information System (GIS). In this case the GIS adopted is ArcInfo and ArcView3. Such a system greatly extends the utility of the Access database, and allows sophisticated spatial searches, queries and mapping to be undertaken. The GIS facility was extensively deployed in the preparation of the full England report (Aitchison et al, 2000).

Having described the aims and objectives of the biological survey of common land in England, it is appropriate to consider the essential characteristics of common lands in the county of Greater London.

4. The Common Lands of Greater London

Although an effort was made by the Royal Commission on Common Land to ascertain the location and extent of commons in the mid 1950's, it was not until 1967, following the Commons Registration Act 1965, that a formal inventory of commons and greens was initiated in England and Wales. Despite weaknesses in the legislation and deficiencies in the procedures adopted during the registration process itself, the 'terriers' prepared by the various registration authorities now serve as a definitive record. The 1965 Act defines common land as '*land subject to rights of common (as defined in this Act) whether those rights are exercisable at all times or only during limited periods*', and '*waste land of a manor not subject to rights of common*' (Section 22).). A list of the commons recorded in the registers for Greater London is included in Appendix 1.

(i) Sizes of Commons

At the time they were consulted the commons registers for the former county of Greater London contained 122 separately identified commons (CL Units). It is to be appreciated that the registers themselves can be subject to modification in each of their three sections – lands, rights and ownership. It is for this reason that certain of the data presented here, notably concerning rights and ownership, need to be treated with a degree of circumspection. This does not apply to the data collated in regard to habitat types however. For the counties considered in this phase of the survey, these were derived through field evaluations undertaken between 1996 and 1999.

While the land section of the registers generally include figures specifying the areas of these commons, they cannot be regarded as accurate measures. More detailed mapping and calibrations made during the biological evaluation of the commons (e.g. the measurement of habitat areas) have indicated that errors can be of a significant order. In this section of the report reference is made to the 'register' areas rather than re-calculated areas. Of necessity the latter are however used in the statistical summary of habitat types below.

Figure 1 shows that commons are to be found throughout the county, but with a dominant cluster in the area between Ealing, Paddington and Richmond.

The total registered area of these commons was 1574 hectares. Nearly 38% of the commons are less than 1 hectare; the majority (53%) are between 5 and 50 hectares. Ten commons are over 50 hectares. Of these two are over 100 hectares in size – CL17 (Hackney Marsh - 136 hectares) and CL18 (Hampstead Heath - 144 hectares). On the ground the area of individual tracts of common land can be much larger than emerges from the registers because of the contiguity of commons. Thus in Greater London there are 17 commons that are contiguous with other commons.

(ii) Rights of Common

In Halsbury's Law of England a right of common is defined as a "*right, which one or more persons may have, to take or use some portion of that which another man's soil naturally produces*" (4th Edition, vol 6, p177). It follows from this that owners of commons cannot exercise "rights of common" on their own land. That said, they can still possess rights to use their commons for various purposes (e.g. sporting rights, grazing rights, rights to take minerals). Without entering into detail, it can be noted in regard to rights of common that a number of different types of rights can be distinguished. The six main categories are : rights of pasture (sheep, cattle, horses and ponies), estovers, turbary, piscary, pannage and common in the soil.

Because of deficiencies and complexities in the way rights of common were registered it is not possible to state precisely how many separate holdings/parts of holdings have rights attached to them. A major complication in this regard is that the registers contain large numbers of entries that are either cross-referenced (i.e. a particular right may relate to more than one registered unit of common land) or multiply registered (i.e. the same right is separately, but incorrectly, recorded for more than one common). A further difficulty is that the rights sections of the registers are continually being updated. That said, no doubt many changes that have occurred on the ground have not been recorded.

At the time they were consulted the number of final and provisional rights entries for commons in Greater London was only 59. These were registered on 14 commons, the vast majority of which had between 1 and 5 entries.

Table 1

Rights of Common	Number of Commons	% Commons
Sheep	2	1.6
Cattle	3	2.5
Horses/Ponies	2	1.6
Pasture (Unspecified)		
Other Livestock		
Estovers		
Turbary		
Common in the Soil		
Piscary		
Pannage		
Other Rights	10	8.2

N.B. Individual commons can have more than one type of right. Figures refer to surveyed commons only.

(iii) Ownership

Commons and wastes, like ordinary freehold land, have owners. They do not necessarily form part of the public domain. In the common land registers the ownership sections for many commons were, at the outset, empty. This was either because ownership was not known at the time or simply because the details were not recorded (the 1965 Act did not make this mandatory). The situation in terms of ownership can be quite complex with commons frequently having more than one owner, and owners of different types (eg private individuals, trusts, companies etc). When the registers for Greater London were last consulted 13 commons (11%) had no information recorded concerning ownership. Where it proved impossible to trace owners, Commons Commissioners were required by Section 9 of the 1965 Act to place the commons concerned under the protection of their local authorities. In Greater London 6 commons had been made subject to Section 9 at the time the registers were examined.

The largest number of commons (43) were owned by parish and other councils. Thirty-four commons had private owners for parts of the land concerned. Nine commons were recorded under the Land Registration Acts of 1925 and 1936.

These statistics should be regarded as illustrative of the diversity of ownership forms that prevail in regard to common land; in no way should they be considered definitive of the current situation in the county. Ownership details for commons can quickly become outdated, as properties change hands. Furthermore, titles to ownership may not be specified within the common land registers themselves; in some cases reference is simply made to records held at the Land Registry.

5. Biological Characteristics of Common Land

(a) Habitat Types.

For purposes of the survey habitats were categorised according to the NCC Phase 1 classification (Nature Conservancy Council, 1990). It is to be appreciated that this is a broad structural classification rather than one based upon vegetation communities. Phase 1 habitats are recorded on the site cards for each of the commons and on associated maps. To add further detail, an effort was made to apply the National Vegetation Classification (Rodwell, 1992) wherever possible. This extra information is included mainly in the description of vegetation communities.

In preparing the habitat maps and site descriptions for the individual commons, the project brief required that extensive consultation of existing information sources should be made and that any field survey be targeted at filling any 'gaps' in available habitat information. The various information sources are fully described in the relevant sections of the individual site reports (Appendix 3).

Table 2 provides a statistical summary of the habitats recorded during the course of the survey. The total surveyed area was just 1560 hectares. It is evident that the great majority of this (89%) was associated with woodland (46.5%) and various anthropogenic habitats (42.5%), most notably amenity grassland habitats.

Table 2

Habitat Types (NCC Phase 1)	Area (hectares)	Number of Commons	% Common Land
Woodland and Scrub			
A111 Woodland : Broadleaved (Semi-natural)	647.5	30	41.3
A112 Woodland : Broadleaved (Plantation)	0.7	2	0.0
A121 Woodland	2.5	1	0.2
A131 Woodland : Mixed (Semi-natural)	1.0	1	0.1
A21 Scrub : Dense/Continuous	60.6	30	3.9
A3 Parkland : Broad-leaved and/or	15.9	11	1.0
Grassland			
B11 Acid Grassland (Unimproved)	83.8	21	5.4
B12 Acid Grassland (Semi-Improved)	8.4	6	0.5
B21 Neutral Grassland (Unimproved)	23.4	11	1.5
B22 Neutral Grassland (Semi-Improved)	1.5	2	0.1
B31 Calcareous Grassland (Unimproved)	0.2	1	0.0
B4 Improved Grassland	4.4	2	0.3
B5 Marsh/Marshy Grassland	5.2	2	0.3
B6 Poor semi-improved grassland	26.6	1	1.7
Tall Herb and Fern			
C11 Bracken Continuous	0.1	1	0.0
C31 Tall Ruderal			
Heathland			
D11 Dry Dwarf Shrub Heath (Acid)	2.1	4	0.1
Bog, Flush and Fen			
E21 Acid/Neutral Flush	0.6	1	0.0
E31 Fen : Valley Mire	0.1	1	0.0
Open Water			
G1 Standing Water	13.5	23	0.9
G2 Running Water	1.3	2	0.1
Anthropogenic Habitats			
J11 Arable	8.3	3	0.5
J12 Amenity Grassland	597.8	57	38.1
J13 Ephemeral/Short Perennial	0.6	1	0.0
J3 Built-up Areas	19.4	21	1.2
J4 Bare Ground	18.7	27	1.2
J5 Other Habitat	21.1	21	1.4
Woodland and Scrub			

Many London commons support woodland, usually secondary growth but with some ancient woodland and old pasture. Semi-natural broad-leaved woodland covers over 41% of the area of the London Commons.

Hainault Forest (CLs41,74) is part of the 'ancient wood pasture Forest of Havering' being mainly *Quercus robur*- *Carpinus betulus* woodland with *Carpinus betulus* (Hornbeam) pollards, some *Fraxinus excelsior* (Ash) coppice.

Commons of secondary woodland growth are usually *Quercus* sp. dominated accompanied by *Betula* spp. Several commons also include semi-natural and/or planted conifers, mainly *Pinus sylvestris*.

Open parks/amenity grasslands are usually planted with parkland trees such as London Plane, *Quercus* spp., *Tilia europaeus*, but also with species such as *Robinia pseudoacacia*, *Viburnum* spp. *Laburnum anagyroides*.

Scrub communities were recorded on 30 commons though this habitat only takes up about 4% of the total common land area.

Grassland

Amenity grassland is found on 57 of the commons surveyed and is the most frequently encountered habitat type (see Anthropogenic habitats below). Hackney Marshes (CL17) and Blackheath Common (CL11), Wandsworth Common (CL 32), Clapham Common (CL 12) are the most significant areas. Several small commons are entirely amenity grassland with planted trees, but this habitat is more usually included in a more varied landscape.

Acidic grassland is found on 27 commons usually unimproved and under conservation management. Examples include Hampstead Heath (CL18), Hayes Common (CL140), Barnes Common (CL61), Hackney Marsh (CL17), Plumstead Green (CL 25), Wormwood Scrubs (CL 34) Monken Hadley (CL 43), Large Poor's Field, Ruislip (CL 194), Ickenham Green (CL 91).

Neutral grasslands are evident at Pickhurst Green (CL 75) and Lambourne Common (Part of Hainault Forest) (CL 74) and marshy grasslands are found at Ickenham Marsh (CL90).

Tall Herb and Fern

A few commons have this habitat in abundance. No Man's Land, Hillingdon (CL92) is quite a large unmanaged area for a London suburb and supports much *Urtica dioica*, *Fallopia japonica* etc. Petersham Common (CL63) has, within woodland, more open areas colonized by *U. dioica*, *Phragmites australis*. Otherwise tall ruderal habitat is found along streamsides or occasional roadside commons and is often indicative of disturbed land.

Heathland

Several commons are relict heathlands with small areas of dry heath still surviving. Hampstead Heath has some small patches of *Calluna vulgaris* on the western edge of the common and some *Erica tetralix* on wetter ground near the centre of West Heath though these are reintroduced.

A crossroads in Hayes Common is surrounded by open grassland and heath which is under active restoration by the local council.

Keston Common (CL80) supports some of the most diverse range of habitats in London including heath, acid grassland, valley mires and woodland.

Barnes Common and Barnes Green (CL61) was heathland till early 1900's but now supports a wide variety of habitats (mostly woodland) and only a small fragment of dry heath.

Bog, Flush and Fen

Keston Common (CL80) has mire habitat and Rowley Green (CL123) some acidic flush/wet heath. Both sites are under active conservation management.

Open Water

Several larger commons include ponds of great wildlife interest though some may be 'landscaped' and support non-native species. Some are heavily used for fishing.

Streams pass through several commons though they rarely contain interesting plant species. The banks and stream edge communities can sometimes form the most 'semi-natural' parts of some commons.

Artificial ponds (often concrete-lined) are also frequent.

Anthropogenic Habitats

As noted above, many London commons are entirely amenity grassland with parkland trees, or are larger commons with this habitat included. Commons, large or small, often have surfaced paths, laybys, car parks and buildings (often disused) added. Some small commons appear to be mostly dumps or very disturbed land, though these places are not without wildlife interest.

(b) Notable Plant Species

Most of the rare species of the London Commons are found on just a few sites. Keston supports most such species though some are found at Hampstead Heath, Stanmore and Barnes Common. See individual site records for full description (Appendix 3).

Keston Common:

Nationally scarce: *Moenchia erecta*.

Rare in Greater London: *Narthecium ossifragum*, *Eriophorum angustifolium*, *Vaccinium myrtillus*, *Potentilla argentea*, *Ranunculus lingua*.

Scarce in Greater London: *Erica tetralix*, *Scutellaria minor*, *Ranunculus hederaceus*, *Trifolium striatum*, *Myosotis ramosissimum*, *Montia fontana*, *Stellaria pallida*, *Erophila verna*, *Juncus squarrosus*, *Saxifraga granulata*, *Epipactis helleborine*, *Melampyrum pratense*, *Carex pilulifera*.

Uncommon in Greater London: *Myriophyllum spicatum*, *Cerastium semidecandrum*, *Frangula alnus*, *Zannichellia palustris*, *Ornithopus prepusillus*, *Molinia caerulea*, *Aphanes arvensis*, *Erodium cicutarium*, *Taraxacum laevigatum*, *Bidens cernua*.

Hampstead Heath: *Molinia caerulea*. Well recorded for bryophytes (54 species and some rarities), six *Sphagnum* spp. Details are included in the site record.

Stanmore Common (CL50)

Regionally rare plants: *Aira praecox*, *Achillea ptarmica*, *Calluna vulgaris*, *Carex pilulifera*, *Dactylorhiza maculata*, *Equisetum palustre*, *Festuca ovina*, *Galium palustre*, *Galium saxatile*, *Hydrocotyle vulgaris*, *Hypericum pulchrum*, *J. conglomeratus*, *J. acutiflorus*, *J. articulatus*, *Luzula multiflora*, *Lychnis flos-cuculi*, *Molinia caerulea*, *Ranunculus flammula*, *Scutellaria minor*, *Veronica scutellata*, *Succisa pratensis*. In woodlands: *Carex pendula*, *Epipactis helleborine*, *Equisetum telmateia*.

Barnes Common and Barnes Green (CL 61)

Site of *Rosa pimpinellifolia* (Burnet Rose) and *Medicago sativa* ssp. *fulcata* (Sickle Medick) but otherwise a common of many habitats rather than rare species.

(c) Fauna

While the main purpose of the Biological Survey of Common Land was to record the habitats and vegetation present, some consideration was also given to fauna. Although faunal survey work is much more time-consuming, and often cannot be undertaken without numerous visits to a site, an attempt was made to compile information on fauna through an examination of existing information sources (if readily accessible) and by noting the more obvious and easily-recognised elements of the fauna. It is recognised that that much information pertaining to fauna exists in the records of English Nature and specialist recorders. These were not consulted for this particular survey. With these caveats duly noted, it is appropriate to make brief reference the major faunal groups. Appendix 2 includes the full list of fauna mentioned within the site records.

Vertebrates

The larger commons of woods and varied habitats have interesting avifauna. Hampstead Heath has over 150 species of bird recorded, 45 of which breed regularly (including Common Tern, Spotted Flycatcher, Sparrowhawk and all three species of Woodpecker found in the UK. Stanmore Common (CL 50) has at least 38 breeding species. Other noted birds from London commons include Hawfinches, Nightingales. Birds in passage include Hobby, Wheatear and Firecrest.

Pipistrelle and Noctule bats feature at Hampstead Heath.

Invertebrates

Hampstead Heath is very well researched for invertebrates with one current rarity *Tapinocyboides pygmaeus*, one nationally scarce (Notable A) and 12 other nationally scarce species on the Invertebrate Site Register. There are also many former records from this site with species not recently re-recorded.

Stanmore Common (CL 50) is also known for the quality of its invertebrate fauna. Nationally rare and notable species that have been recorded though not recently re-found include: *Sesia bembeciformis* (lunar burnet moth), *Gelechia nigra* (groundling moth), *Myopa strandi* (parasitic fly). Recently found important new species include *Athysanus argentarius* (plant bug), *Sciapus contristans*, *Megamerina dolium* (flies), *Mordellistena humeralis* *Mordellistena humeralis* (beetle), *Platypus cylindrus* (Pinhole borer beetle) and *Agrilus pannonicus* (jewel beetle).

(d) UK Biodiversity Action Plan

In June 1992, the UK Government signed the Convention on Biological Diversity at Rio de Janeiro, which included the commitment to prepare national plans and programmes for the conservation of biodiversity. The UK Biodiversity Action Plan was published in 1994 (HMSO, 1994), this being followed by the initial steps toward the action planning process, with the publication of *Biodiversity: The UK Steering Group Report* (DETR, 1995).

This report highlighted a range of habitats with two categories being defined – **Broad Habitats** and **Priority Habitats** for action plan preparation. The report also included a "short" and a "middle" list of species, together totalling some 416 species , for which action plans had either already been prepared, or would be in the course of the UK BAP process. These lists have subsequently been combined, again with some revision and refinement, to produce a single list of **Priority Species** for action plan preparation.

Broad Habitats

The matching of Phase 1 habitat types described above to the broad habitat categories is detailed in Appendix 4. It is from this matching process that the area statistics included in Table 3 have been derived. This tabulation shows that two broad habitat types dominate in Greater London, accounting for 89% of all common land in the region. These are dwarf shrub broadleaved woodland (47%) and Improved Grassland (42%). Only one other habitat claims more than 5% of the area of common land surveyed – acid grassland (6%).

Table 3

1. Broadleaved, mixed and yew woodland	709.9	47.2
2. Coniferous woodland	2.5	0.2
3. Boundary and linear features		
4. Arable and horticultural	8.3	0.6
5. Improved grassland	627.0	41.7
6. Neutral grassland	21.4	1.4
7. Calcareous grassland	0.2	0.0
8. Acid grassland	92.2	6.1
9. Bracken	0.1	0.0
10. Dwarf shrub heath	2.1	0.1
11. Fen, marsh and swamp	5.9	0.4
12. Bog		
13. Standing water and canals	14.8	1.0
14. Rivers and streams		
15. Montane habitats		
16. Inland rock		
17. Built up areas and gardens	20.0	1.3
18. Supralittoral rock		
19. Supralittoral sediment		
20. Littoral rock		

21. Littoral sediment

Broad Habitats	1504.4	100.0
----------------	--------	-------

Priority Habitats

Unfortunately, the Phase 1 habitat types do not translate easily or convincingly into ‘priority’ habitats. In some cases the matching is clear, in most others very crude assumptions would have to be made if estimates of the areas associated with the various priority habitat types are to be derived. Given the complexities and uncertainties involved it is appropriate here to draw attention (albeit very tentatively) to the habitats concerned in Greater London, where it is possible to do so. This translation cannot always be effected cleanly or fully because of the detail that underpins certain of the categories concerned.

(a) Woodlands

Six categories of woodlands have been classed as priority habitats. These are upland oakwood, lowland beech and yew woodlands, upland mixed ash woodlands, wet woodlands, native pine woods and lowland wood pasture and parkland. These categories refer to special types of situations and cannot be differentiated at the Phase 1 level of mapping. All that can be stated is that commons with A111 habitats may fall into one or more of these priority habitats. In Greater London this habitat was recorded on 30 commons and covered 648 hectares.

(b) Ancient and/or species-rich hedgerows

This habitat type could apply to a number of Phase 1 categories (J211, J212, J221, J222, J231 and J232). These would embrace both the ‘ancient’ and ‘species-rich’ dimensions of the habitat category. However, it is unlikely that those hedgerows that are species-poor (J212, J222 and J232) would be worthy of inclusion in the category. In Greater London there were no commons where this priority habitat was recorded.

(c) Cereal Field Margins

Field margins were not examined in the survey, but it is worth noting that arable (J11) was recorded on just 3 commons, covering 8 hectares.

(d) Lowland Hay Meadow

Again it is not possible to differentiate this habitat type with accuracy. However, since it is dominantly associated with unimproved neutral grasslands reference can be made to Phase 1 category B21. The category refers specifically to lowland locations however. Taking the 250 metre contour (800 feet) as a threshold to distinguish lowland and upland locations, and referring specifically to the median elevation of the commons concerned, it can be noted that in Greater London this habitat covers 20 hectares on 10 commons.

(e) Upland Hay Meadow

This category is difficult to comment upon since it specifically refers to NVC MG3 communities, mainly to be found in the uplands of northern and western Britain. It does not apply in the case of Greater London.

(f) Lowland Dry Acidic Heath

Phase 1 categories B11 and B12 are applicable to this priority habitat in lowland locations. In Greater London the survey identified 23 commons with this habitat, covering 92 hectares.

(g) Purple Moor Grass and Rush Pastures

This priority habitat refers specifically to certain species-rich *Molinia/Juncus* swards in lowland sites. It is not possible to identify commons that fall into this category with accuracy, but it can be noted that in Greater London the survey identified just 2 lowland commons with B5 habitats (5.2 hectares). However, it is not possible from the survey data to differentiate commons or areas with species-rich swards.

(h) Lowland Calcareous Grassland

This priority habitat is broadly defined by two Phase 1 categories - B31 and B32. In aggregate these habitats were recorded on just 1 lowland common in Greater London (0.2 hectares).

(i) Upland Calcareous Grassland

The Phase 1 categories associated with this priority habitat do not occur in upland situations in this county.

(j) Lowland Heathland

Lowland heathlands are defined by a number of Phase 1 types – D11, D12, D2, D5 and D6. These habitats occur on 4 lowland commons and cover 2 hectares.

(k) Coastal/floodplain grazing marsh

Identifying commons that have priority habitats of this type is difficult and could include areas with various Phase 1 types – B21, B22, B4, B5, B6 and H26. Much depends upon the geographical location of the commons and their management. The areas concerned should include “periodically inundated pasture, or meadow with ditches which maintain the water levels, containing standing brackish or fresh water.” For information it can be noted here that there are 14 lowland commons with one or more of the Phase 1 habitats specified. Identifying how many of these have the defining attributes of this priority habitat would require further field research.

(l) Fens

This habitat category is described as “minerotrophic peatlands”. These could include the following Phase 1 types in lowland situations – E31, E32, E33, E21, and E22. In Greater London one or more of these habitats occur(s) on just two lowland commons, with an aggregate area of 0.7 hectares.

(m) Reedbeds

While this priority habitat would be mapped as F1 under the Phase 1 system it actually applies only to those areas where *Phragmites australis* is dominant. In Greater London was not recorded on any of the commons surveyed.

(n) Raised Bog

This priority habitat matches the Phase 1 category E162 This habitat type was not recorded on any of the surveyed commons.

(o) Mesotrophic standing waters

This priority habitat could apply to commons with Phase 1 types G12 and G15, but such a determination would require more detailed research. In Buckinghamshire this habitat type was recorded for two commons, covering an area of 1.3 hectares.

(p) Eutrophic standing waters

This priority habitat might include commons with G11 and/or G15 Phase 1 categories. These habitats were not recorded on any of the commons surveyed.

(q) Aquifer-fed naturally fluctuating water bodies

The two Phase 1 habitat types (G13, G14) that might include areas in this priority habitat category were not recorded on any of the commons surveyed.

(r) Chalk rivers

The Phase 1 type G25 relating to marl-based running water could define this particular priority habitat. However it was not identified on any of the commons surveyed.

(s) Upland Heathland

The various Phase 1 types that comprise this priority habitat category have been described above (see lowland heathland) and apply specifically to upland contexts. They do not characterise any of the commons surveyed in Greater London.

(t) Blanket Bog

Three Phase 1 habitat types identify the blanket bog category (E161, E17 and E18). In Greater London these habitat types were not recorded on any commons.

(u) Limestone Pavements

Limestone pavements constitute a discrete Phase 1 category (I13). They do not figure on any of the commons in the county.

(v) Maritime Cliff and Slope

Five Phase 1 habitats could be included in this priority habitat category (H81, H82, H83, H84 and H85). None of these were recorded on commons in the county.

(w) Miscellaneous coastal habitats

The list of priority habitats contains a number of highly specific coastal categories. These include (a) vegetated shingle structures (H3); (b) saltmarsh (H23, H24, H26); (c) sand dunes (H5, H64, H65, H66, H67, H68); (d) saline lagoons (G16); and (e) deep mud and mudflats (H11). None of these habitats were recorded on the commons surveyed in the county.

Recorded Species and Priority Species

A full list of species referred to in this report and the appendix of site records is presented in Appendix 2. Those which are "Priority Species" of the UK Biodiversity Action Plan (UK Biodiversity Group, 1998) are highlighted in **bold type**. Note that the occurrence of a species on this list does not necessarily imply the existence of a confirmed biological record.

6. Use and Management

During site visits observations were made concerning the use and management of commons. Summary details are provided in Table 4.

Table 4

Use and Management Activity*	Number of Commons	CL Numbers
Grazing :		
Cattle	1	94.
Horses	2	1,50.
Grassland management :		
Mowing (conservation)	2	74, 32
Mowing (amenity)	55	92,52,18,61,3,4,9,11,12,13,14,15,16, 17,19,20,21,22,23,24,25,26,27,28,29, 30,31,32,33,35,40,42,43, 47,48,49,53,55,60,62,64,65,68, 74,75,81,84,85,89,91,100, 114, 115, 116, 118.
Other management :		
Grazing re-introduced	1	94
Scrub clearance	3	94, 50, 43,
Wildlife enhanced areas introduced	3	81,65, 34
Tree planting (Conservation)	1	36, 31, 30,63,
Tree planting (amenity)	55	As per amenity grassland above.
Reintroduced pollarding	1	41
Managed as a public garden	2	29, 68,

* As noted at time of survey

Management Issues and Recommendations

Given that site visits were mainly concerned with Phase 1 mapping or the checking of habitat information derived from other sources, recommendations concerning management are inevitably cursory in nature. However, a number of suggestions concerning particular commons are detailed within the site record cards (Appendix 3).

Table 5 summarises the range of issues that are highlighted.

Table 5

Suggested management activities

Management Activity	Number of Commons	CL Numbers
Manage scrub	30	Ongoing requirement on most wooded commons.
Enhance mire habitat	1	80.
Restore Pond	8	89, 62, 60, 51, 50, 25, 11, 52.

Control scramble bikes	1	90
Remove dumped waste	4	93, 90, 71, 62,
Aftercare of planted trees needed.	9	27, 28, 24,20, 19, 17, 15, 13, 4
Control scrub and manage heather.	2	140, 18,
Control <i>Fallopia japonica</i>	3	93, 25, 61
Replacement of hedges	1	18.

Encroachments

During the site visits, a number of features were noted which potentially could have an adverse effect upon the nature conservation value and integrity of the commons. These are termed encroachments and are summarised in Table 6. Most of the encroachments are relatively limited in extent, although piecemeal erosion of common land can lead to serious losses. Tipping of various types (e.g. garden refuse, rubble and general domestic rubbish) was the most widely-recorded encroachment.

Table 6

Type of Encroachment	Number of Commons	CL Numbers
Motorbike scrambling	1	90
Dumping	6	92,17,25,83,93, 100

7. Commons and Protected Areas

A significant proportion of the common land within the county lies within formally designated protected areas. Table 7 records the number and area of common land lying within such designations, both national and local. Details of these sites are recorded in Appendix 3.

Table 7

Protected Areas and Common Land

Protected Areas	Number of Commons	Area (ha) Within Designation	% Common Land in County
SSSI	5	219.0	14.0

Site of Metropolitan Importance	4	149.7	9.6
Site of Borough Importance	3	101.3	6.5
Local Nature Reserve	2	58.4	3.7
Wildlife Trust	2	16.4	1.1

** Particular commons may be associated with more than one designation.*

General References

Aitchison, J.W. (1990) The commons and wastes of England and Wales 1958-1989, *Area*, 22.3, 272-277

Aitchison, J.W. (1987) Public access, commons and village greens, *Area*, 19.1, 19-23

Aitchison, J.W. and Hughes, E.J. (1982) The Common Land Registers of England and Wales : a problematic data source, *Area*, 14.20, 151-156

Aitchison, J.W. and Hughes, E. J. (1988) The common lands of Wales, *Transactions of the Institute of British Geographers*, 13(1), 96-108

Aitchison, J.W. and Hughes, E.J. (1986) 'Commons, Conservation and Amenity in Wales', *Landscape Research*, 11, 17-21

Aitchison, J.W. and Penfold, N. (1988) The fight to save our commons, *Geographical Magazine*.

Aitchison, J.W. and Gadsden, G. (1992) 'Common Land' in *Agriculture, Conservation and Land Use*, eds Howarth W and Rodgers C P, University of Wales Press, Cardiff.

Aitchison, J.W. (1995) 'The Town and Village Greens of England and Wales', *Landscape Research*

Aitchison, J.W. and Medcalf, K. (1994) *Common Land and Conservation*, English Nature Research Reports, No. 77.

Countryside Commission, *Common Land : Report of the Common Land Forum*, 1986, CCP 215.

Countryside Commission, (1985), *Management Schemes for Commons*, CCP197, Cheltenham

Denman, D R, Roberts, R A and Smith H J F , 1967, *Commons and Village Greens*, Leonard Hill, London.

Department of the Environment, 1978, *Common Land : Preparation for Comprehensive Legislation* (mimeo)

DOE and MAFF (1995) *Rural England. A Nation Committed to a Living Countryside*. Cm3016. London : HMSO

Dudley Stamp L, *The Common Lands and Village Greens of England and Wales*, *The Geographical Journal*, 1964, 130, 457-469

Gadsden G D, (1988), *The Law of Commons*, London, Sweet and Maxwell

Hoskins W G and Dudley Stamp L, (1963.), *The Common Lands of England and Wales*, London, Collins

HMSO (1958) *Royal Commission on Common Land 1955-58*, Cmnd 462

Mackay, D. (1985) *Common Land : Towards Protection 1236-1986*. *Ecos*, 6, 33-38.

Wager. J. (1967) 'Outdoor Recreation on common land', *Journal of the Town Planning Institute*, 53, 398-403

Williams, M. (1970) 'The enclosure and reclamation of waste land in England and Wales in the eighteenth and nineteenth centuries', *Transactions of the Institute of British Geographers*, 51, 55 -69

Wilson, O. (1993) Common lands in the Durham Dales: management and policy issues, *Area*, 25.3, 237-245

Biological Survey/Land Management References.

Aitchison, J.W. and Medcalf, K.A. (1993). *Common Land and Conservation: Biological Surveys in England and Wales*, A Synthesis Rural Surveys Research Unit, Department of Geography, University of Wales, Aberystwyth.

Bardgett, R.D. and Marsden, J.H. (1991). *Heather Condition and Management in England and Wales*. English Nature, Peterborough.

Batten, L.A., Bibby, C.J., Clement, P., Elliott, G.D. and Porter, R.F. (eds. - 1990). *Red Data Birds in Britain* Nature Conservancy Council and Royal Society for the Protection of Birds.

Birks, H.J.B. and Ratcliffe, D.A. (1980). *Upland vegetation types. A list of National Vegetation Classification plant communities* NCC, unpublished.

British Trust for Conservation Volunteers (1980). *Woodlands: a practical conservation handbook*. BTCV, Wallingford.

BTCV (1980). *Hedging: a practical conservation handbook*. BTCV, Wallingford.

BTCV (1981). *Waterways and wetlands: a practical conservation handbook*. BTCV, Wallingford.

Bruce, N. (1989). *Wildlife Importance of Common Land: an assessment by county*. Royal Society for Nature Conservation, Lincoln.

Clapham, A.R., Tutin, T.G. and Moore, D.M. (1987). *Flora of The British Isles*. Cambridge University Press.

Countryside Commission (1986). *Common Land: the report of the Common Land Forum*. CCP 215 Countryside Commission, Cheltenham.

Crofts, A. and R. G. Jefferson (eds. - 1994). *The Lowland Grassland Management Handbook*. English Nature/The Wildlife Trusts.

Department of the Environment, Transport and the Regions (1998). *Good Practice Guide on Managing the Use of Common Land*.

Environment Agency (2000) 'The State of the Environment in England and Wales', TSO, London.

HMSO (1995). *Biodiversity: The UK Steering Group Report. Volume 1: Meeting the Rio Challenge*.

HMSO (1995). *Biodiversity: The UK Steering Group Report. Volume 2: Action Plans*.

Huntings Surveys and Consultants Ltd. (1986). *Monitoring Landscape Change*. Unpublished report to the Department of the Environment and the Countryside Commission. 10 volumes.

Hywel-Davies, J. and Thom, V. (1986). *The Macmillan Guide to Britain's Nature Reserves*. New Edition. Macmillan, London. 780 pp.

Kirby, P. (1992). *Habitat Management for Invertebrates: A Practical Handbook*. Joint Nature Conservation Committee/Royal Society for the Protection of Birds.

- MacDonald, A. and Armstrong, H. (1989). *Methods for Monitoring Heather Cover*. Research and Survey in Nature Conservation, No 27. Nature Conservancy Council, Peterborough.
- Nature Conservancy Council (1984). *Nature Conservation in Great Britain*. Nature Conservancy Council, Peterborough.
- Nature Conservancy Council (1988). *Site management plans for nature conservation: a working guide*. NCC, Peterborough.
- Nature Conservancy Council (1990). *Handbook for Phase 1 Survey: a technique for Environmental Audit*. Nature Conservancy Council, Peterborough.
- Palmer, J. (1989). *A Future for Wildlife on Commons*. Royal Society for Nature Conservation, Lincoln. 2 volumes.
- Parry, M., Bruce, A. and Harkness, C. (1981). The Plight of British Moorlands. *New Scientist* 28, 550-551.
- Perring, F.H. and Farrell, L. (1983). *British Red Data Book 1: Vascular Plants*. Nature Conservancy Council, Peterborough/Royal Society for Nature Conservation, Lincoln.
- Perring, F.H. and Walters, S.M. (1990). *Atlas of the British Flora*. Botanical Society of the British Isles.
- Peterken, G.F. (1993). *Woodland Conservation and Management* Chapman and Hall. 2nd edition.
- Pritchard, D.E., Housden, S.D., Mudge, G.P., Galbraith, C.A. and Pienkowski, M.W. (eds. - 1992). *Important Bird Areas in The United Kingdom Including The Channel Islands and The Isle of Man*. Royal Society for the Protection of Birds.
- Ratcliffe, D.A. (1977). *A Nature Conservation Review*. Cambridge University Press, Cambridge. 2 Volumes.
- Rodwell, J. (1992). *British Plant Communities*. Cambridge University Press. 5 vols. (National Vegetation Classification).
- Rowell, T.A. (1988). *The peatland management handbook*. Research and Survey in Nature Conservation, 14. Nature Conservancy Council, Peterborough.
- Stace, C.A. (1991). *A New Flora of the British Isles*.
- Stewart, A., Pearman, D.A. and Preston, C.D. (1994). *Scarce Plants in Britain*. Joint Nature Conservation Committee.
- Sutherland, W.J. and Hill, D.A. (eds. - 1995). *Managing Habitats for Conservation*. Cambridge University Press.
- UK Biodiversity Group (1998). *Tranche 2 Action Plans (4 vols)*. English Nature, Peterborough.
- Wells, T.C.E., Bell, S. and Frost, A. (1981). *Creating Attractive Grasslands using Native Plant Species*. Nature Conservancy Council, Peterborough.
- Wigginton, M. J., (ed. - 1999). *British Red Data Books 1: Vascular Plants (3rd edition)*. Joint Nature Conservation Committee, Peterborough.

APPENDIX 1

Greater London : List of Registered Commons

Key

1	CL Number
2	Commons Surveyed
3	Name/Location of Common
4	Register Area (hectares)
5	Calculated Area (hectares)
6	Easting
7	Northing
8	OS Map 100 Sq Km
9	OS Map 10 Sq Km

1	2	3	4	5	6	7	8	9
1	*	Tylers (or Upminster) Common	32.06	32.10	556500	190500	177	TQ59
3	*	Clapton Common	2.58	2.60	534300	187600	177	TQ38
4	*	Brook Green	2.05	2.10	523500	179000	176	TQ27
8		Lacey Green	0.42	0.00	531300	157400	187	TQ35
9	*	Bradmore Green	1.50	1.50	530900	158300	187	TQ35
10	*	Bostall Heath	29.88	30.00	547200	178000	177	TQ47
11	*	Blackheath	85.58	85.60	539500	176600	177	TQ37
12	*	Clapham Common	78.01	78.00	528500	175000	176	TQ27
13	*	Eelbrook Common	6.09	6.00	525400	176800	176	TQ27
14	*	Garrett Green	3.20	3.20	526500	172300	176	TQ27
15	*	Goose Green	2.00	2.00	534000	175400	177	TQ37
16	*	Hackney Downs	16.48	16.50	534500	185700	177	TQ38
17	*	Hackney Marsh	136.01	144.90	536500	186000	177	TQ38
18	*	Hampstead Heath	144.93	145.00	526500	186500	176	TQ28
19	*	Little Wormwood Scrubs	8.42	8.40	523000	182000	176	TQ28
20	*	London Fields	12.84	12.80	534600	184300	177	TQ38
21	*	North Millfields	9.94	9.90	535300	186500	177	TQ38
22	*	South Millfields	14.99	15.00	535600	186400	177	TQ38
23	*	Parsons Green	1.03	1.00	525100	176400	176	TQ27
24	*	Peckham Rye Common	22.50	22.50	534500	175300	177	TQ37
25	*	Plumstead Green	40.83	41.00	545000	177800	177	TQ47
26	*	Shepherds Bush Common	3.13	3.10	523400	179800	176	TQ27
27	*	Stoke Newington Common	2.15	2.20	533800	186600	177	TQ38
28	*	Streatham Common	23.93	23.90	530500	170900	177	TQ37
29	*	The Rookery	3.88	3.90	531000	170800	177	TQ37
30	*	Tooting Bec Common	58.12	58.10	529000	172000	176	TQ27
31	*	Tooting Graveney Common	22.13	22.10	528700	172000	176	TQ27
32	*	Wandsworth Common	69.43	69.50	527100	175100	176	TQ27
33	*	Well Street Common	8.66	8.70	535900	184400	177	TQ38
34	*	Wormwood Scrubs	73.47	73.50	522500	181800	176	TQ28
35	*	Old Oaks Common	3.92	3.90	521500	181600	176	TQ28
36	*	Harrow Weald Common	19.55	19.60	514600	193000	176	TQ19
39		Nunhead Green	0.18	0.00	534900	175800	177	TQ37
40	*	Eltham Common	13.02	13.00	543000	176400	177	TQ47
41	*	Hainault Forest (Lambourne Common)	79.92	79.90	548000	194000	177	TQ49
42	*	Little Eltham Common	1.99	2.00	542700	176400	177	TQ47
43	*	Monken Hadley Common	73.49	73.50	526000	197200	176	TQ29
47	*	Chiswick Common	3.20	3.20	521000	178700	176	TQ27
48	*	Stamford Brook Common	1.02	1.00	521800	179100	176	TQ27
49	*	Turham Green Common	2.98	3.00	520400	178400	176	TQ27

50	*	Stanmore Common	48.15	48.20	515700	194000	176	TQ19
51	*	Little Common, Stanmore	2.50	2.50	516400	193300	176	TQ19
52	*	Stanmore Marsh	3.91	3.90	517700	191400	176	TQ19
53	*	Shoulder of Mutton Green	1.50	1.50	545500	176300	177	TQ47
54		Plough Green	0.21	0.00	521600	166600	176	TQ26
55	*	Malden Green	2.11	2.10	522100	166300	176	TQ26
56		Back Green	0.70	0.00	522400	166300	176	TQ26
57	*	Rushett Common	7.20	7.00	516800	160300	187	TQ16
60	*	Totteridge Common and Green	13.92	13.90	524000	194300	176	TQ29
61	*	Barnes Common and Barnes Green	49.55	49.50	522500	176000	176	TQ27
62	*	Palewell Common	5.83	5.80	520900	174700	176	TQ27
63	*	Petersham Common	7.01	7.00	518400	173600	176	TQ17
64	*	Ham Common	48.69	48.70	518500	171800	176	TQ17
65	*	East Sheen Common	21.29	21.30	519500	174600	176	TQ17
66		Pest House Common	0.93	0.00	519000	174700	176	TQ17
67		Between Church St and The Thames	0.02	0.00	516700	176100	176	TQ17
68	*	Westerley Ware	1.11	1.10	519100	177700	176	TQ17
69		Short Lots	0.55	0.00	519400	177600	176	TQ17
70		Cholmondeley Walk	0.24	0.00	517500	174700	176	TQ17
71	*	The River Walk and Towpath	2.56	2.60	516800	175700	176	TQ17
72		Part of Tylers Common, Upminster	0.19	0.00	556800	190800	177	TQ59
73		Part of Clapham Common	0.16	0.00	528300	174800	176	TQ27
74	*	Hainault Forest (Lambourne Common) pt	5.53	5.50	547200	193600	177	TQ49
75	*	Pickhurst Green	3.16	3.20	539500	166900	177	TQ36
76		Biggen Hill Green	0.17	0.00	541700	159400	187	TQ45
77		Old Hill	0.83	0.00	545300	163400	177	TQ46
78		Pratt's Bottom Green	0.60	0.00	547200	162200	177	TQ46
80	*	Keston Common	21.48	21.50	541800	164000	177	TQ46
81	*	Leaves Green	7.52	7.50	541400	161900	177	TQ46
82		Sparrow Common	0.20	0.00	543800	166700	177	TQ46
83	*	Farnborough Common	4.97	5.00	544800	165200	177	TQ46
84	*	Green Street Green	3.94	3.90	545500	164200	177	TQ46
85	*	Broadstreet Green	1.65	1.65	543500	165300	177	TQ46
86		Darrick Common	0.90	0.00	544500	165300	177	TQ46
87		Broomhill Common	0.71	0.00	546100	166700	177	TQ46
88		Gumping Common	0.40	0.00	544200	166000	177	TQ46
89	*	Uxbridge Common	5.63	5.60	506000	185000	176	TQ08
90	*	Ickenham Marsh	7.62	7.60	508800	185200	176	TQ08
91	*	Ickenham Green	6.50	6.50	507600	187000	176	TQ08
92	*	No Man's Land, Field Heath Road	1.40	1.40	506400	182000	176	TQ08
93	*	Watts Common	2.27	2.30	505400	191400	176	TQ09
94	*	Large Poor's Field, Ruislip Common	16.38	16.40	508800	189800	176	TQ08
95		Land at Tudor/Prince's Gardens junction	0.04	0.00	519400	181500	176	TQ18
96	*	Land off Bird Lane/Hall Lane	3.29	3.30	556700	189500	177	TQ58
97		Part of Tylers Common, Upminster	0.53	0.00	556900	190300	177	TQ59
100	*	Kidbrooke Green	1.37	1.40	541200	175900	177	TQ47
102		Milespit Hill Waste (Hendon Manor)	0.90	0.00	523000	191800	176	TQ29
103		Wise Lane Waste (Hendon Manor)	0.66	0.00	522400	191600	176	TQ29
104		Hammers Hill Waste (Hendon Manor)	0.50	0.00	522200	192300	176	TQ29
105		Kew Pond	0.18	0.00	519200	177500	176	TQ17
107		Frogmore Green	0.10	0.00	513000	178700	176	TQ17
108		Northolt Village Green	0.80	0.00	513200	184200	176	TQ18
109		Mattock Green	0.40	0.00	517300	180400	176	TQ18
111		Haven Green	0.83	0.00	517800	181000	176	TQ18
112		Friars Place Green	0.10	0.00	520600	181200	176	TQ28
113		East Acton Green	0.30	0.00	521400	180600	176	TQ28
114	*	Ealing Green	1.30	1.30	517700	180400	176	TQ18
115	*	Ealing Common	15.65	15.70	518500	180500	176	TQ18
116	*	Drayton Green	1.20	1.20	516300	181000	176	TQ18
117		Castlebar Green	0.10	0.00	517400	181100	176	TQ18
118	*	Acton Green	5.90	5.90	520600	178800	176	TQ27

119		Cuckoo Green	0.10	0.00	515300	180800	176	TQ18
123	*	Rowley Green	8.80	8.80	521700	196100	176	TQ29
124		Land opposite Turnham Green PO	0.03	0.00	520700	178400	176	TQ27
128	*	Land in Birds Lane, Upminster	3.38	3.40	556700	189500	177	TQ58
129	*	Land in Hall Lane, Upminster	2.54	2.50	556200	189600	177	TQ58
131		Fronting 11-25/33-41 College Rd	0.50	0.00	533200	173600	177	TQ37
132		Fronting 93-115, Dulwich Village	0.30	0.00	533200	173800	177	TQ37
133		Land in front of Dulwich College	0.50	0.00	533300	173000	177	TQ37
134		Land in Borough of Southwark	0.60	0.00	532800	174400	177	TQ37
140	*	Hayes Common	91.10	91.10	541000	165200	177	TQ46
142		Public footpath by 3 St.Mary's Grove	0.01	0.00	519900	177900	176	TQ17
147		Land in Moor Lane, Hillingdon	0.07	0.00	505200	177900	176	TQ07
148		Land in Moor Lane, Hillingdon	0.12	0.00	505300	177900	176	TQ07
149		Land in Moor Lane, Hillingdon	0.04	0.00	505400	177800	176	TQ07
150		Land in Accommodation Ln, Hillingdon	0.14	0.00	504900	177600	176	TQ07
151		Land on Colnbrook by-pass, Hillingdon	0.19	0.00	504300	177100	176	TQ07
152		Land in Bath Road, Hillingdon	0.10	0.00	504200	176600	176	TQ07
153		Land in Bath Road, Hillingdon	0.09	0.00	504400	176600	176	TQ07
155		Part of River Wandle, Sutton	0.12	0.00	528400	165500	176	TQ26
156	*	Poor's Field, Joel St, Northwood Hills	5.08	5.10	510400	190000	176	TQ19
162		Land called Broadwalk, Camden	0.10	0.00	528300	187400	176	TQ28
181		Part of Uxbridge Common	5.69	0.00	506000	185000	176	TQ08

APPENDIX 2

GREATER LONDON

LIST OF SPECIES MENTIONED IN REPORT AND SITE DESCRIPTIONS

Vascular Plants, Ferns, Horsetails, Bryophytes, Lichens etc.

Note : The occurrence of a species in this list does not necessarily indicate the existence of a confirmed biological record). Nomenclature for higher plants follows that of Stace, C.A. 1991. Priority Species of the UK Biodiversity Action Plan (UK Biodiversity Group, 1998) are given in **bold type**.

<i>Acer campestre</i>	Field maple
<i>A. platanoides</i>	Norway maple
<i>A. pseudoplatanus</i>	Sycamore
<i>Achillea millefolium</i>	Yarrow
<i>Acorus calamus</i>	Sweet flag
<i>Aesculus flava</i>	Yellow Buckeye
<i>Aesculus hippocastanum</i>	Horse chestnut
<i>Agrimonia eupatoria</i>	Agrimony
<i>Agrostis canina</i>	Velvet bent
<i>A. capillaris</i>	Common bent
<i>Ailanthus altissima</i>	Tree of Heaven
<i>Aira praecox</i>	Early hair grass
<i>Ajuga reptans</i>	Bugle
<i>Alisma plantago-aquatica</i>	Water plantain
<i>Alliaria petiolata</i>	Jack by the hedge
<i>Alnus glutinosa</i>	Alder
<i>Alopecurus pratensis</i>	Meadow foxtail
<i>Anisantha sterilis</i>	Barren brome
<i>Anthoxanthum odoratum</i>	Sweet vernal grass
<i>Anthriscus sylvestris</i>	Cow parsley
<i>Aphanes microcarpa</i>	Slender Parsley-piert
<i>Arabidopsis thaliana</i>	Thale cress
<i>Arctium minus</i>	Burdock
<i>Armoracia rusticana</i>	Horseradish
<i>Arrhenatherum elatius</i>	False oat grass
<i>Artemisia vulgaris</i>	Mugwort
<i>Arum maculatum</i>	Lords and ladies/cuckoo pint
<i>Aster</i> sp.	Aster
<i>Aulacomnium palustre</i>	A moss
<i>Baeomyces rufus</i>	A lichen
<i>Ballota nigra</i>	Black Horehound
<i>Bellis perennis</i>	Daisy
<i>Betula pendula</i>	Silver birch
<i>B. pubescens</i>	Downy birch

<i>Bidens cernua</i>	Nodding bur marigold
<i>Brachypodium sylvaticum</i>	Wood false brome
<i>Bromopsis erecta</i>	Upright brome
<i>B. ramosa</i>	Hairy brome
<i>Bromus erectus</i>	see <i>Bromopsis erecta</i>
<i>B. hordeaceus</i>	Soft brome
<i>B. lepidus</i>	Slender Soft-brome
<i>B. mollis</i>	see <i>B. hordeaceus</i>
<i>B. ramosus</i>	see <i>Bromopsis ramosa</i>
<i>B. sterilis</i>	see <i>Anisantha sterilis</i>
<i>Bryonia dioica</i>	White bryony
<i>Buddleja</i> sp.	Buddleja
<i>Callitriche stagnalis</i>	Water starwort
<i>Calliargon cuspidatum</i>	A moss
<i>Calluna vulgaris</i>	Heather/ling
<i>Caltha palustris</i>	Marsh marigold
<i>Calypogeia fissa</i>	A moss
<i>Calystegia sepium</i>	Hedge bindweed
<i>Campylopus flexuosus</i>	A moss
<i>Campylopus introflexus</i>	A moss
<i>Capsella bursa-pastoris</i>	Shepherd's purse
<i>Cardamine flexuosa</i>	Wavy bittercress
<i>C. pratensis</i>	Lady's smock/cuckoo flower
<i>Cardaria draba</i>	Hoary cress
<i>Carex binervis</i>	Green-ribbed sedge
<i>C. echinata</i>	Star sedge
<i>C. hirta</i>	Hairy sedge
<i>C. nigra</i>	Common sedge
<i>C. ovalis</i>	Oval sedge
<i>C. pendula</i>	Pendulous sedge
<i>C. pilulifera</i>	Pill sedge
<i>C. pseudocyperus</i>	Cyperus sedge/hop sedge
<i>C. remota</i>	Remote sedge
<i>C. sylvatica</i>	Wood sedge
<i>Carpinus betulus</i>	Hornbeam
<i>Carpinus betulus fastigiata</i>	Cultivated Hornbeam
<i>Castanea sativa</i>	Sweet chestnut
<i>Cedrus libani</i>	Cedar of Lebanon
<i>Centaurea nigra</i>	Black knapweed
<i>Cephalozia connivens</i>	A moss
<i>Cerastium fontanum</i>	Common mouse ear
<i>C. glomeratum</i>	Sticky Mouse-ear.
<i>C. semidecandrum</i>	Little Mouse-ear
<i>Ceratodon purpureus</i>	A moss
<i>Ceratophyllum demersum</i>	Rigid hornwort
<i>Chamaemelum nobile</i>	Chamomile
<i>Chamerion angustifolium</i>	Rose-bay willow-herb
<i>C. hirsutum</i>	Great Willowherb
<i>Chelidonium majus</i>	Greater celandine
<i>Chrysanthemum leucanthemum</i>	see <i>Leucanthemum vulgare</i>
<i>Circaea lutetiana</i>	Enchanter's nightshade
<i>Cirsium arvense</i>	Creeping thistle
<i>C. vulgare</i>	Spear thistle
<i>Cladonia chlorophaea</i>	A lichen

<i>C. coccifera</i>	A lichen
<i>C. coniocraea</i>	A lichen
<i>C. fimbriata</i>	A lichen
<i>C. flauca</i>	A lichen
<i>C. floerkeana</i>	A lichen
<i>C. fucata</i>	A lichen
<i>C. macilenta</i>	A lichen
<i>C. portentosa</i>	A lichen
<i>C. pyxidata</i>	A lichen
<i>C. ramulosa</i>	A lichen
<i>C. subcervicornis</i>	a lichen
<i>C. verticillata</i>	a lichen
<i>Clematis vitalba</i>	Old man's beard
<i>Coelocaulon aculeatum</i>	A lichen
<i>Conopodium majus</i>	Pignut
<i>Convolvulus arvensis</i>	Field bindweed
<i>Cornus sanguinea</i>	Dogwood
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Cyperus longus</i>	Galingale
<i>Cypressus</i> sp.	Cypress
<i>Cytisus scoparius</i>	Broom
<i>Dactylis glomerata</i>	Cocksfoot
<i>Dactylorhiza fuchsii</i>	Common spotted orchid
<i>D. maculata</i> subsp. <i>ericetorum</i>	Heath spotted orchid
<i>Danthonia decumbens</i>	Heath-grass
<i>Daucus carota</i>	Wild carrot
<i>Deschampsia caespitosa</i>	Tufted hair grass
<i>D. flexuosa</i>	Wavy hair grass
<i>Digitalis purpurea</i>	Foxglove
<i>Dipsacus fullonum</i>	Teasel
<i>Dryopteris dilatata</i>	Broad buckler fern
<i>D. filix-mas</i>	Male fern
<i>Eleocharis palustris</i>	Common spike rush
<i>Eleogiton fluitans</i>	Floating club rush
<i>Epilobium hirsutum</i>	Great willow herb
<i>Epipactus helleborine</i>	Broad-leaved helleborine
<i>Equisetum fluviatile</i>	Water horsetail
<i>E. palustre</i>	Marsh horsetail
<i>E. telemateia</i>	Giant horsetail
<i>Erica cinerea</i>	Bell heather
<i>E. tetralix</i>	Cross-leaved heath
<i>Eriophorum angustifolium</i>	Common cotton grass
<i>Erodium moschatum</i>	Musk stork's bill
<i>Erophila verna</i>	Common whitlowgrass
<i>Eucalyptus</i> sp.	Eucalyptus
<i>Eurynchium praelongum</i>	A moss
<i>Fagus sylvatica</i>	Beech
<i>Fagus sylvatica purpurea</i>	Copper Beech
<i>Fallopia japonica</i>	Japanese knotweed
<i>Festuca gigantea</i>	Giant fescue
<i>F. ovina</i>	Sheep's fescue
<i>F. rubra</i>	Red fescue
<i>Fissidens exilis</i>	A lichen

<i>Fragaria vesca</i>	Wild strawberry
<i>Fraxinus diversifolia</i>	Cultivar of Ash
<i>Fraxinus excelsior</i>	Ash
<i>Frullania dilatata</i>	A moss
<i>Galium aparine</i>	Cleavers
<i>G. mollugo</i>	Hedge bedstraw
<i>G. saxatile</i>	Heath bedstraw
<i>Genista anglica</i>	Petty whin
<i>Geranium molle</i>	Dove's foot cranesbill
<i>G. robertianum</i>	Herb robert
<i>Geum urbanum</i>	Wood avens/herb bennet
<i>Ginkgo biloba</i>	Maidenhair Tree
<i>Glechoma hederacea</i>	Ground ivy
<i>Gleditsia triacanthos</i>	Honey Locust
<i>Glyceria fluitans</i>	Floating sweet grass
<i>G. maxima</i>	Reed sweet grass
<i>G. notata</i>	Plicate sweet grass
<i>G. plicata</i>	see <i>G. notata</i>
<i>Gnaphalium uliginosum</i>	Marsh cudweed
<i>Hedera helix</i>	Ivy
<i>Heracleum mantegazzianum</i>	Giant hogweed
<i>H. sphondylium</i>	Hogweed
<i>Hesperis matronalis</i>	Dame's Violet
<i>Hieracium perpropinquum</i>	A Hawkweed
<i>Hieracium pilosella</i>	see <i>Pilosella officinarum</i>
<i>Holcus lanatus</i>	Yorkshire fog
<i>H. mollis</i>	Creeping soft grass
<i>Hordeum</i> sp.	Barley
<i>Hyacinthoides non-scripta</i>	Bluebell
<i>Hydrocotyle vulgaris</i>	Marsh pennywort
<i>Hypericum tetrapterum</i>	Square-stalked St. John's wort
<i>Hypochaeris radicata</i>	Common cat's ear
<i>Hypogymnia physoides</i>	A lichen
<i>Ilex aquifolium</i>	Holly
<i>Impatiens glandulifera</i>	Indian balsam
<i>Impatiens parviflora</i>	Small Balsam
<i>Iris pseudacorus</i>	Yellow flag
<i>Juncus acutiflorus</i>	Sharp-flowered rush
<i>J. articulatus</i>	Jointed rush
<i>J. bufonius</i>	Toad rush
<i>J. effusus</i>	Soft rush
<i>J. inflexus</i>	Hard rush
<i>J. squarrosus</i>	Heath rush
<i>J. tenuis</i>	Slender rush
<i>Laburnum anagyroides</i>	Laburnum
<i>Lamium album</i>	White dead nettle
<i>Lamium purpureum</i>	Red Dead-nettle
<i>Lapsana communis</i>	Nipplewort
<i>Larix decidua</i>	Larch
<i>Lemna minor</i>	Duckweed
<i>L. trisulca</i>	A duckweed
<i>Leontodon autumnalis</i>	Autumn hawkbit
<i>Leskia polycarpa</i>	A moss
<i>Leucanthemum vulgare</i>	Ox-eye daisy

<i>Ligustrum vulgare</i>	Wild privet
<i>Linaria purpurea</i>	Purple Toadflax
<i>Linaria vulgaris</i>	Common toadflax
<i>Linum catharticum</i>	Fairy flax
<i>Lolium perenne</i>	Perennial rye grass
<i>Lonicera periclymenum</i>	Honeysuckle
<i>Lotus corniculatus</i>	Bird's foot trefoil
<i>Lupinus polyphyllus</i>	Garden Lupin.
<i>Luzula campestris</i>	Field wood rush
<i>L. multiflora</i>	Heath wood rush
<i>L. pilosa</i>	Hairy woodrush
<i>Lychnis flos-cuculi</i>	Ragged robin
<i>Lycopus europaeus</i>	Gypsywort
<i>Malus domestica</i>	Cultivated Apple
<i>Malus sylvestris</i>	Crab apple
<i>Malva sylvestris</i>	Common mallow
<i>Medicago sativa ssp. fulcata</i>	Sickle Medick
<i>Melampyrum pratense</i>	Common cow-wheat
<i>Melica uniflora</i>	Wood melick
<i>Melilotus officinalis</i>	Ribbed melilot
<i>Mentha aquatica</i>	Water mint
<i>M. arvensis</i>	Corn mint
<i>Menyanthes trifoliata</i>	Bogbean
<i>Mercurialis perennis</i>	Dog's mercury
<i>Mnium hornum</i>	A moss
<i>Moenchia erecta</i>	Upright chickweed
<i>Molinia caerulea</i>	Purple moor grass
<i>Montia fontana</i>	Blinks
<i>Myosotis ramosissimum</i>	Early Forget-me-not
<i>Myriophyllum spicatum</i>	Spiked water milfoil
<i>Narthecium ossifragum</i>	Bog asphodel
<i>Nasturtium officinale</i>	see <i>Rorippa nasturtium-aquaticum</i>
<i>Nuphar lutea</i>	Yellow water lily
<i>Nymphaea alba</i>	White water lily
<i>Nymphiodes peltata</i>	Fringed water lily
<i>Odontites verna</i>	see <i>O. vernus</i>
<i>Odontites vernus</i>	Red bartsia
<i>Oenanthe crocata</i>	Hemlock water dropwort
<i>Onobrychis vicifolia</i>	
<i>Ornithopus perpusillus</i>	Bird's foot
<i>Orthotrichum affine</i>	A moss
<i>O. diaphanum</i>	A moss
<i>O. striatum</i>	A moss
<i>Ostyra carpinifolia</i>	
<i>Oxalis acetosella</i>	Wood sorrel
<i>Pappus sp.</i>	
<i>Parmelia perlata</i>	A lichen
<i>Pastinacea sativa</i>	Wild parsnip
<i>Pedicularis sylvatica</i>	Wood lousewort
<i>Pentaglottis sempervirens</i>	Green Alkanet
<i>Persicaria amphibia</i>	Amphibious bistort
<i>P. hydropiper</i>	Water-pepper
<i>P. maculosa</i>	Redshank
<i>Petasites fragrans</i>	Winter Heliotrope

<i>Phragmites australis</i>	Common reed
<i>Phyllitis scolopendrium</i>	Hrt's tongue fern
<i>Pilosella officinarum</i>	Mouse-ear hawkweed
<i>Pinus sylvestris</i>	Scots pine
<i>Plantago alisma-aquatica</i>	Water Plantain
<i>Plantago coronopus</i>	Buck's horn plantain
<i>P. lanceolata</i>	Ribwort plantain
<i>P. major</i>	Great plantain
<i>Platanus x hispanica</i>	London Plane
<i>Poa annua</i>	Annual meadow grass
<i>Poa nemoralis</i>	Wood meadow grass
<i>P. pratensis</i>	Smooth meadow grass
<i>Polygala serpyllifolia</i>	Heath milkwort
<i>Polygonum amphibium</i>	see <i>Persicaria amphibia</i>
<i>P. aviculare</i>	Knotweed
<i>P. hydropiper</i>	see <i>Persicaria hydropiper</i>
<i>P. persicaria</i>	see <i>Persicaria maculosa</i>
<i>Polystichum setiferum</i>	Soft shield fern
<i>Polytrichum commune</i>	A moss
<i>Populus canescens</i>	Grey poplar
<i>P. nigra var italica</i>	Lombardy poplar
<i>P. tremula</i>	Aspen
<i>P. x canadensis</i>	Hybrid Black-poplar
<i>Potamogeton polygonifolius</i>	Bog pondweed
<i>Potentilla argentea</i>	Hoary Cinquefoil
<i>Potentilla erecta</i>	Tormentil
<i>P. reptans</i>	Creeping cinquefoil
<i>P. rupestris</i>	Rock Cinquefoil
<i>P. sterilis</i>	Barren strawberry
<i>Primula veris</i>	Cowslip
<i>Prunus avium</i>	Wild cherry
<i>P. laurocerasus</i>	Laurel
<i>P. padus</i>	Bird Cherry
<i>P. spinosa</i>	Blackthorn
<i>Pseudoscleropodium purum</i>	A moss
<i>Pteridium aquilinum</i>	Bracken
<i>Pulicaria dysenterica</i>	Fleabane
<i>Quercus cerris</i>	Turkey oak
<i>Q. petraea</i>	Sessile oak
<i>Q. robur</i>	Pedunculate oak
<i>Q. rubra</i>	Red Oak
<i>Q. x hispanica</i>	Lucombe Oak
<i>Ranunculus acris</i>	Meadow buttercup
<i>R. aquatilis</i>	Water crowfoot
<i>R. bulbosus</i>	Bulbous buttercup
<i>R. ficaria</i>	Lesser celandine
<i>R. flammula</i>	Lesser spearwort
<i>R. hederaceus</i>	Ivy-leaved water crowfoot
<i>R. lingua</i>	Greater spearwort
<i>R. peltatus</i>	Pond Water-crowfoot
<i>R. repens</i>	Creeping buttercup
<i>R. sceleratus</i>	Celery-leaved buttercup
<i>Rhododendron ponticum</i>	Rhododendron
<i>Robinia pseudoacacia</i>	False-acacia

<i>Rosa canina</i>	Dog rose
<i>R. pimpinellifolia</i>	Burnet rose
<i>Rorippa nasturtium-aquaticum</i>	Watercress
<i>Rorippa sylvestris</i>	Creeping Yellow-Cress
<i>Rubus fruticosus</i> agg.	Bramble
<i>Rumex acetosa</i>	Sorrel
<i>R. acetosella</i>	Sheep's sorrel
<i>R. obtusifolius</i>	Broad-leaved dock
<i>Ruscus aculeatus</i>	Butcher's broom
<i>Sagina</i> sp.	Pearlwort
<i>Salix capraea</i>	Sallow
<i>S. chrysocoma</i>	Weeping Willow
<i>S. cinerea</i>	Grey willow
<i>S. fragilis</i>	Crack willow
<i>S. matsudana</i> cv. <i>Tortuosa</i>	Corkscrew Willow
<i>S. repens</i>	Creeping willow
<i>Sambucus nigra</i>	Elder
<i>Sanguisorba minor</i>	Salad burnet
<i>Sanicula europea</i>	Sanicle
<i>Saxifraga granulata</i>	Meadow saxifrage
<i>Scutellaria minor</i>	Lesser skullcap
<i>Senecio jacobaea</i>	Ragwort
<i>S. vulgaris</i>	Groundsel
<i>Sequoia</i> sp.	Redwood
<i>Sieglingia decumbens</i>	see <i>Danthonia decumbens</i>
<i>Silene alba</i>	White campion
<i>S. dioica</i>	Red campion
<i>Sisymbrium officinale</i>	Hedge bindweed
<i>Solanum dulcamara</i>	Bittersweet
<i>Solidago canadensis</i>	Canadian Goldenrod
<i>Sonchus asper</i>	Prickly sow thistle
<i>Sorbus aria</i>	Whitebeam
<i>S. aucuparia</i>	Rowan
<i>S. intermedia</i>	Swedish Whitebeam
<i>Sparganium erectum</i>	Branched bur reed
<i>Sphagnum angustifolium</i>	A bogmoss
<i>S. capillifolium</i>	A bogmoss
<i>S. cuspidatum</i>	A bogmoss
<i>S. fimbriatum</i>	A bogmoss
<i>S. magellanicum</i>	A bogmoss
<i>S. palustre</i>	A bogmoss
<i>S. papillosum</i>	A bogmoss
<i>S. recurvum</i>	A bogmoss
<i>S. squarrosum</i>	A bogmoss
<i>Spirea</i> sp.	Bridewort
<i>Stachys sylvatica</i>	Hedge woundwort
<i>Stellaria graminea</i>	Lesser stitchwort
<i>S. holostea</i>	Greater stitchwort
<i>S. pallida</i>	Lesser Chickweed
<i>Stratiotes aloides</i>	Water-soldier
<i>Succisa pratensis</i>	Devil's bit scabious
<i>Symphoricarpos albus</i>	see <i>S. rivularis</i>
<i>S. rivularis</i>	Snowberry
<i>Symphytum officinale</i>	Comfrey

Taraxacorum officinalis
Taraxacum officinale agg.
Taxus baccata
Teucrium scorodonia
Thlaspi arvense
Tilia x europaea
Trachystemon orientalis
Traeliposis granulosa
Trifolium campestre
Trifolium dubium
T. glomeratum
T. pratense
T. repens
T. striatum
Tripleurospermum maritimum
Tussilago farfara
Typha latifolia
Ulex europaeus
U. minor
Ulmus glabra
U. procera
Ulotia bruchii
Urtica dioica
Usnea inflata
Vaccinium myrtillus
Verbascum thapsus
Veronica arvensis
V. chamaedrys
V. officinalis
V. scutellata
Viburnum lantana
V. opulus
Vicia cracca
V. sativa
Viola riviniana

Dandelion
Dandelion
Yew
Wood sage
Field Penny-Cress
Common lime
Abraham-Isaac-Jacob
A lichen
Hop Trefoil
Lesser trefoil
Clustered Clover
Red clover
White clover
Knotted clover
Scentless mayweed
Coltsfoot
Bulrush/cat's-tail
Gorse
Dwarf gorse
Wych elm
English elm
A moss
Stinging nettle
A lichen
Bilberry
Great mullein
Wall Speedwell
Germander speedwell
Heath speedwell
Marsh speedwell
Wayfaring tree
Guelder rose
Tufted vetch
Common vetch
Common dog violet
Birch polypore fungus

Birds

Accipiter nisus
Acrocephalus schoenobaenus
Aegithalos caudatus
Alauda arvensis
Alcedo atthis
Anas clypeata
Anas platyrhynchos
Anthus trivialis
Apus apus
Ardea cinerea
Aythya ferina
Aythya fuligula
Branta canadensis
Carduelis cannabina

Sparrowhawk
Sedge warbler
Long-tailed tit
Skylark
Kingfisher
Shoveler
Mallard
Tree pipit
Swift
Heron
Pochard
Tufted duck
Canada goose
Linnet

<i>Carduelis carduelis</i>	Goldfinch
<i>Carduelis chloris</i>	Greenfinch
<i>Carduelis flammea</i>	Redpoll
<i>Carduelis spinus</i>	Siskin
<i>Certhia familiaris</i>	Tree creeper
<i>Coccothraustes coccothraustes</i>	Hawfinch
<i>Columba palumbus</i>	Wood pigeon
<i>Corvus corone</i>	Carrion crow
<i>Cuculus canorus</i>	Cuckoo
<i>Cygnus olor</i>	Mute swan
<i>Delichon urbica</i>	House martin
<i>Dendrocopus major</i>	Great spotted woodpecker
<i>Dendrocopus minor</i>	Lesser-spotted woodpecker
<i>Emberiza citrinella</i>	Yellowhammer
<i>Erithacus rubecula</i>	Robin
<i>Falco subbuteo</i>	Hobby
<i>Falco tinnunculus</i>	Kestrel
<i>Ficedula hypoleuca</i>	Pied flycatcher
<i>Fringilla coelebs</i>	Chaffinch
<i>Fulica atra</i>	Coot
<i>Gallinula chloropus</i>	Moorhen
<i>Garrulus glandarius</i>	Jay
<i>Hirundo rustica</i>	Swallow
<i>Larus canus</i>	Common gull
<i>Larus ridibundus</i>	Black-headed gull
<i>Luscinia megarhynchos</i>	Nightingale
<i>Motacilla alba</i>	Pied wagtail
<i>Motacilla cinerea</i>	Grey wagtail
<i>Muscicapa striata</i>	Spotted flycatcher
<i>Oenanthe oenanthe</i>	Wheatear
<i>Parus ater</i>	Coal tit
<i>Parus caerulea</i>	Blue tit
<i>Parus major</i>	Great tit
<i>Parus montanus</i>	Willow Tit
<i>Parus palustris</i>	Marsh tit
<i>Passer domesticus</i>	House sparrow
<i>Passer montanus</i>	Tree sparrow
<i>Phalacrocorax carbo</i>	Cormorant
<i>Phylloscopus collybita</i>	Chiffchaff
<i>Phylloscopus sibilatrix</i>	Wood warbler
<i>Phylloscopus trochilus</i>	Willow warbler
<i>Pica pica</i>	Magpie
<i>Picus viridis</i>	Green woodpecker
<i>Podiceps cristatus</i>	Great-crested grebe
<i>Prunella modularis</i>	Dunnock
<i>Pyrrhula pyrrhula</i>	Bullfinch
<i>Rallus aquaticus</i>	Water rail
<i>Regulus ignicapillus</i>	Firecrest
<i>Saxicola rubetra</i>	Whinchat
<i>Sitta europaeus</i>	Nuthatch
<i>Streptopelia turtur</i>	Turtle dove
<i>Strix aluco</i>	Tawny owl
<i>Sturnus vulgaris</i>	Starling
<i>Sylvia atricapilla</i>	Blackcap

Sylvia borin
Sylvia corruca
Tachybaptus minutus
Troglodytes troglodytes
Turdus merula
Turdus viscivorus

Garden warbler
Lesser whitethroat
Little grebe
Wren
Blackbird
Mistle thrush

Other vertebrates

Apodemus sylvaticus
Clethrionomys glareolus
Muntiacus reevesi
Mustela nivalis
Oryctolagus cuniculus
Sciurus carolinensis
Sorex minutus
Vulpes vulpes
Pipistrellus pipistrellus
Nyctalus noctula

Wood mouse
Bank vole
Muntjac
Weasel
Rabbit
Grey squirrel
Pygmy shrew
Fox
Pipistrelle Bat
Noctule bat

Bufo bufo
Rana temporaria

Common toad
Common frog
Common newt

Anguis fragilis
Lacerta vivipara
Natrix natrix

Slow worm
Common lizard
Grass snake

Anguilla anguilla
Gasterosteus aculeatus

Eel
Three-spined stickleback

Invertebrates Insects

Odonata (dragonflies)

Aeshna cyanea
A. grandis
A. juncea
A. mixta
Anax imperator
Coenagrion puella
Enallagma cyathigerum
Erythromma najas
Ischnura elegans
Libellula depressa
L. quadrimaculata
Orthetrum cancellatum
Sympetrum sanguineum
S. striolatum

Southern hawker
Brown hawker
Common hawker
Migrant hawker
Emperor dragonfly
Common azure damselfly
Common blue damselfly

Common blue-tailed damselfly
Broad-bodied chaser
Four-spotted chaser
Black-tailed skimmer
Ruddy darter
Common darter

Lepidoptera (butterflies and moths)

<i>Aglais urticae</i>	Small tortoiseshell
<i>Anthocaris cardamines</i>	Orange tip
<i>Aphantopus hyperantus</i>	Ringlet
<i>Celastrina argiolus</i>	Holly blue
<i>Coenonympha pamphilus</i>	Small heath
<i>Inachis io</i>	Peacock
<i>Lasiommata megera</i>	Wall brown
<i>Lycaena phlaeas</i>	Small copper
<i>Maniola jurtina</i>	Meadow brown
<i>Ochlodes venata</i>	Large skipper
<i>Pararge aegeria</i>	Speckled wood
<i>Pieris brassicae</i>	Large white
<i>Polygonia c-album</i>	Comma
<i>Polyommatus icarus</i>	Common blue
<i>Quercusia quercus</i>	Purple hairstreak
<i>Thymelicus lineola</i>	Essex skipper
<i>Thymelicus sylvestris</i>	Small skipper
<i>Vanessa atalanta</i>	Red admiral
<i>Tyria jacobaeae</i>	Cinnabar moth
<i>Hymenoptera (ants, bees and wasps)</i>	
<i>Lasius flavus</i>	Yellow ant Solitary bee
<i>Coleoptera (beetles)</i>	
<i>Pyrochroa coccinea</i>	Cardinal beetle Whirligig beetle Greater diving beetle Horse leeches
<i>Araneae (spiders)</i>	
<i>Lepthyphantes insignis</i>	
<i>Molluscs (slugs and snails)</i>	
	Pond snail Ramshorn snail

APPENDIX 3

SITE REPORTS FOR SURVEYED COMMONS NOTES

1. Site Cards : Habitat areas

The layout of the site cards from the survey is largely self-explanatory. However, a note concerning the quoted area for individual sites is needed. The areas of habitats within commons were determined using various methods - Calcomp digitizer, Reiss Polarplanimeter or manual counting of Imm graph paper overlays. It must be emphasised that these area estimates do not in all cases summate to the total area of common land as recorded in the registers. Apart from the errors that inevitably occur in deriving such measurements, it should not be assumed that the area as recorded in the registers is a definitive measurement. The survey has drawn attention to numerous, and sometimes gross, inaccuracies. For the surveyed commons, both the registered areas and the measured habitat areas are included on the site cards and in the list of commons - Appendix 1.

2. Survey maps

The Phase 1 vegetation maps are presented mainly at a scale of either 1:10.000, or for larger sites, 1:25.000. In certain cases it has been necessary to slightly reduce the size of the final copy to fit in the report. For some maps the earlier scale of 1:10.560 applies. The boundaries of the survey sites have been checked against the originals held by the registration authority. They are delineated by a bold line. The actual site boundary follows the inside edge of the line, to avoid obscuring habitat information.

The habitats present are indicated using the appropriate Phase 1 alphanumeric. In addition, the vegetation maps have also been annotated with dominant species codes for ericaceous species. These facilitate the easy identification of areas of dwarf shrub vegetation and its composition. The codes are as follows:

Cv	Calluna vulgaris
Vm	Vaccinium myrtillus
Et	Erica tetralix
En	Empetrum ingrum

The survey maps are not otherwise annotated with dominant species codes. The extra detail would make the maps too complex and difficult to interpret. Instead, the dominant species codes are referenced within the vegetation description.

3. Botanical nomenclature

The nomenclature for higher plants used in the vegetation descriptions follows that of: Stace, C.A. **New Flora of the British Isles**, Cambridge University Press, 1991. The English names for plants are not included in the site reports themselves. However, a full list of species noted during the survey is provided in Appendix 2.

APPENDIX 4

CORRESPONDENCE BETWEEN THE UK BIODIVERSITY ACTION PLAN BROAD HABITAT CLASSIFICATION AND THE PHASE 1 HABITAT CLASSIFICATION

Phase 1 Habitats	Broad Habitat Types
A111 Broad-leaved Semi-natural Woodland	1. Broadleaved, mixed and yew woodland
A112 Broad-leaved Plantation	1. Broadleaved, mixed and yew woodland
A121 Coniferous Semi-natural	2. Coniferous woodland
A122 Coniferous Plantation	2. Coniferous woodland
A131 Mixed Semi-natural	1. Broadleaved, mixed and yew woodland
A132 Mixed Plantation	1. Broadleaved, mixed and yew woodland
A21 Dense Scrub	1. Broadleaved, mixed and yew woodland
A22 Scattered Scrub	Unclassified (subject to context)
A3 Parkland scattered trees	Unclassified (subject to context)
A4 Recently-felled	1. Broadleaved, mixed and yew woodland
B11 Acidic Grassland : Unimproved	8. Acid grassland
B12 Acidic Grassland : Semi-improved	8. Acid grassland
B21 Neutral Grassland : Unimproved	6. Neutral grassland
B22 Neutral Grassland : Semi-Improved	6. Neutral grassland
B31 Calcareous Grassland Unimproved	7. Calcareous grassland
B32 Calcareous Grassland Semi-improved	7. Calcareous grassland
B4 Improved Grassland	5. Improved grassland
B5 Marsh/Marshy Grassland	11. Fen, marsh and swamp
B6 Poor Semi-Improved Grassland	5. Improved grassland
C11 Bracken : Continuous	9. Bracken
C12 Bracken : Scattered	Unclassified (subject to context)
C22 Upland Species-rich ledges	16. Inland rock
C31 Other : Tall Ruderal	Unclassified (subject to context)
C32 Other : Non-ruderal	Unclassified (subject to context)
D11 Dry Dwarf Shrub Heath : Acidic	10. Dwarf shrub heath
D12 Dry Dwarf Shrub Heath : Basic	10. Dwarf shrub heath
D2 Wet Dwarf Shrub Heath	10. Dwarf shrub heath
D3 Lichen/Bryophyte Heath	15. Montane habitats
D5 Dry Heath Acidic Mosaic	8. Acid grassland (part)/10 Dwarf Shrub Heath (part)
D6 Wet heath/acidic grassland mosaic	8. Acid grassland(part)/10 Dwarf Shrub Heath (part)
E161 Blanket Bog	12. Bog
E162 Raised Bog	12. Bog
E17 Bog : Wet Modified	12. Bog
E18 Bog : Dry Modified	12. Bog
E21 Flush/Spring : Acid/Neutral	11. Fen, marsh and swamp
E22 Flush/Spring : Basic	11. Fen, marsh and swamp
E23 Flush/Spring Bryophyte Dominant	11. Fen, marsh and swamp
E31 Fen : Valley Mire	11. Fen, marsh and swamp
E32 Fen : Basin Mire	11. Fen, marsh and swamp
E33 Fen-flood plain	11. Fen, marsh and swamp
E4 Bare Peat	Unclassified (subject to context)
F1 Swamp	11. Fen, marsh and swamp
F21 Marginal	13. Standing water and canals (part)/14 Rivers and streams

F22 Inundation	(part) 13. Standing water and canals (part)/14 Rivers and streams
G1 Standing Water	(part) 13. Standing water and canals
G2 Running Water	14. Rivers and streams
H11 Intertidal Mud/Sand	21. Littoral sediment
H12 Intertidal Shingle	21. Littoral sediment
H13 Intertidal Rocks	20. Littoral rock
H23 Saltmarsh /Dunes	21. Littoral sediment
H24 Saltmarsh/Plants	21. Littoral sediment
H26 Saltmarsh/Continuous	21. Littoral sediment
H3 Shingle	19. Supralittoral sediment
H4 Rock/Boulders	18. Supralittoral rock
H5 Strandline Vegetation	19. Supralittoral sediment
H64 Sand Dune/Slack	19. Supralittoral sediment
H65 Sand Dune/grassland	19. Supralittoral sediment
H66 Dune Heath	19. Supralittoral sediment
H67 Dune Scrub	19. Supralittoral sediment
H68 Dune Open	19. Supralittoral sediment
H81 Maritime Cliff Hard	18. Supralittoral rock
H82 Maritime Cliff Soft	18. Supralittoral rock
H83 Crevice/ledge vegetation	18. Supralittoral rock
H84 Coastal/maritime grassland	18. Supralittoral rock
H85 Coastal heathland	10. Dwarf shrub heath
I111 Inland Cliff - Acid/Neutral	16. Inland rock
I112 Inland Cliff - Basic	16. Inland rock
I121 Scree – Acid/Neutral	16. Inland rock
I122 Scree – Basic	16. Inland rock
I13 Limestone pavement	16. Inland rock
I141 Other Exposure - Acidic/Neutral	16. Inland rock
I142 Other Exposure - Basic	16. Inland rock
I21 Artificial - Quarry	16. Inland rock
I22 Artificial - Spoil	16. Inland rock
I23 Artificial - Mine	16. Inland rock
I24 Artificial – refuse tip	17. Built up areas and gardens
J11 Arable	4. Arable and horticultural
J12 Amenity grassland	5. Improved grassland
J13 Cultivated - ephemeral	17. Built up areas and gardens
J14 Introduced Shrub	1. Broadleaved, mixed and yew woodland
J21 Hedges - Intact	3. Boundary and linear features
J22 Hedges - Defunct	3. Boundary and linear features
J23 Hedges – With trees	3. Boundary and linear features
J26 Dry Ditch	3. Boundary and linear features
J31 Industrial estate	17. Built up areas and gardens
J32 Military building	17. Built up areas and gardens
J33 Domestic building	17. Built up areas and gardens
J34 Caravan Site	17. Built up areas and gardens
J35 Seawall	17. Built up areas and gardens
J36 Buildings	17. Built up areas and gardens
J4 Bare Ground	Unclassified (subject to context)
J5 Other Habitats	Unclassified (subject to context)

Source : JNCC

