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Habitat survey and evaluation for nature conservation in London

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The procedures adopted by the London Ecology Unit in developing a nature conservation strategy for London are described. Habitat survey was undertaken over 1,800 sites totalling 300 km^2 which is about 20% of the area of Greater London. The habitat classification contains 35 categories which were mapped at 1:10,000 scale. Together with information on species this provides a database on London's ecology. Criteria for conservation evaluation are listed and the categories of site protection are described. The implementation process is explained and it is emphasised that this procedure is now well-established as part of the statutory planning system in London. Reasons for successful adoption of this approach in London are considered.

Biotooponderzoek en het gebruik voor natuurbescherming in Londen - In dit artikel worden de procedures beschreven die door de London Ecology Unit zijn toegepast voor het ontwikkelen van een natuurbeschermingsstrategie. Biotooponderzoek heeft plaatsgevonden op meer dan 1800 plekken met een totaal oppervlak van 300 km^2; dit komt overeen met ongeveer 20% van de oppervlakte van groot-Londen. De indeling in biotopen omvat 35 categorien die elk op een schaal van 1:10.000 zijn gekarteerd. Samen met gegevens over soorten vormt dit een gegevensbestand over de ecologie van Londen. Criteria voor de natuurbescherming worden genoemd en de verschillende categorieën beschermenswaardige gebieden worden beschreven. Het proces van de toepassing van de resultaten wordt beschreven. De gehele procedure is thans een verankerd onderdeel van de bestemmingsplan procedure in Londen. De redenen van deze succesvolle toepassing worden verklaard.

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INTRODUCTION

In 1982 the Greater London Council (GLC) instigated a major new programme to cater for nature conservation in Greater London. The object was to develop an ecological perspective in all aspects of the GLC's work. The programmes developed by the GLC over the period 1982-1986 are described in detail elsewhere (Goode 1989). Details of the new initiatives were first described in a popular handbook, *Ecology and Nature Conservation* (GLC 1984), which was the first in a series of ecology handbooks now numbering 29. One of the main objectives was to ensure that nature conservation was built into the strategic planning process in London. It was recognised from the outset that this would require a systematic survey and evaluation of habitats of potential value throughout Greater London. The GLC commissioned such a survey of wildlife habitats in 1984. The results

of this survey provided the basis for developing a comprehensive nature conservation strategy for Greater London which has been adopted as an official part of the statutory planning process.

When the Greater London Council was abolished in 1986 the London Ecology Unit (LEU) continued its ecological work. A new joint committee of local authorities and other public bodies, known as the London Ecology Committee, was formed to oversee and fund the Unit's work. The Unit has continued to develop and refine the overall nature conservation strategy for London. The original wildlife habitat survey has been substantially revised and updated on a borough by borough basis over the past ten years, as the basis for publication of a series of nature conservation strategies for individual London boroughs. Detailed surveys and assessments have been completed for 28 out of the 33 London boroughs. The development of such nature conservation strategies by local authorities in urban areas of the UK is described in detail elsewhere (Goode 1993).

The purpose of this paper is to describe the approach adopted in London; to explain how the strategy has been implemented in strategic planning; and to consider factors which have contributed to successful adoption of the whole process.

WILDLIFE HABITAT RESOURCE

The types of habitat of value for wildlife conservation in London fall into three broad categories:

- encapsulated countryside;
- unintentionally wild areas, developed on derelict or disused land;
- new habitats created or enhanced for nature conservation.

Encapsulated countryside includes a wide range of different types of habitat, such as woodland, heath, marsh, herb-rich grassland, lakes, ponds, and river corridors. Such areas vary in size from tiny fragments less than 1 ha to significant tracts of semi-natural habitat, mainly restricted to the outer boroughs.

Unintentionally wild areas include a great variety of habitats, a large proportion of which are of recent origin, having developed on derelict or disused industrial or other open land. One of the characteristic features of urban areas is the remarkable diversity of species associated with 'urban wastelands'. Other habitats falling in this category include those along railway corridors and a variety of rather specialised habitats associated with derelict cemeteries, mineral workings and even disused sewage works.

The third category includes all those habitats which have been intentionally created to enhance nature within the urban context. This includes everything from small nature gardens in school grounds to more extensive ecological parks specifically created for environmental education. Also included in this category are areas within urban parks which have been converted to natural habitats as part of a nature conservation strategy.

HABITAT SURVEY

In order to develop a nature conservation strategy, the Greater London Council commissioned a comprehensive survey of wildlife habitats in 1984. The Strategy required detailed ecological information for all places of potential significance, including information on the kinds of habitat and an assessment of their importance. It was not considered necessary to undertake comprehensive biotope mapping for the whole of Greater London (1,580 km^2), rather it was decided to limit the survey to those categories of open land of potential significance for nature conservation. A minimum size threshold was also applied of 0.5 ha in inner boroughs and 1 ha in outer boroughs. Formal parks and cemeteries, private gardens, playing fields and open areas with little wildlife interest, such as arable land, were all excluded from

the survey. An initial desk study using air photography resulted in over 1,800 'sites' being selected for survey, totalling about 20% of the land area of Greater London.

For each site information was collected on the types of habitat and dominant species, overall richness of plant species and presence of rare or unusual species. The habitat classification recognised 35 categories as indicated in Figure 1. Habitats were mapped on the basis of individual 'parcels' at a scale of 1:10,000. Individual parcels may form a single site, or larger sites may be made up of a number of parcels comprising different habitat types. The survey was completed in just over one year by a team of six ecologists. Selected statistical data was stored on computer, but it was not possible to digitise the survey information owing to financial constraints. The total cost of this survey was over £100,000 at 1984/85 prices. An initial appraisal of the conservation value of each site was carried out as part of this survey. This was based on the available information relating to both habitat and species. It provided an indication of those sites which were likely to be of value for nature conservation. A more detailed comparative assessment was undertaken subsequently, as described below.

It has not been possible to repeat the comprehensive survey for Greater London as a single exercise, but the London Ecology Unit has undertaken re-surveys for individual London boroughs as a basis for publishing its series of nature conservation handbooks. These later surveys have generally included all sites larger than 0.5 ha. The approach adopted by the LEU in undertaking habitat surveys is described in detail in a report by the LEU intended as a manual for those undertaking habitat surveys in London (LEU 1994b). The database resulting from the original and subsequent surveys consists of map-based information together with field survey forms for all individual sites and parcels. Sites and parcels are individually numbered and these are shown on the survey maps. The maps show the distribution of different habitat types within all the areas surveyed (see Fig. 2). This data provides the basis for selection of Sites of Importance for Nature Conservation in London. The database is also used on a day-to-day basis for advising on the ecological implications of proposed new developments. The survey information thus provides a vital tool in both strategic planning, and as an aid to decision-making for professional planners throughout London. It also provides the basis for the London Ecology Unit to produce popular descriptions of London's natural history, and is crucial to the development of a biodiversity action plan for the capital.

PROCEDURE FOR NATURE CONSERVATION EVALUATION

It is important to recognise that the development of a Nature Conservation Strategy requires a comprehensive database of this kind which is regularly updated. It also requires the application of a series of criteria for nature conservation evaluation, which underpin the value judgements inherent in any system of this kind. The habitat survey provides a set of objective information and it is only through the application of evaluation criteria that decisions regarding nature conservation importance can be reached. The following section describes the process adopted by the London Ecology Unit in developing its nature conservation strategy for London.

The procedure for selecting sites for protection was first described in *Ecology Handbook 3, Nature Conservation Guidelines for London* (GLC 1985). This described ecological policies in London and went on to explain how to decide which areas are important. This provided the basis for the rationale adopted and further refined by the London Ecology Unit in its series of publications comprising a nature conservation strategy for London. A summary account of the various categories of sites and areas for protection

Site & parcel No. _____ / ____ Grid ref _____

Site name _____ Surveyor/s _____

Parcel name _____ Borough _____

Location _____ Area _____ ha/m^2

Owner / manager _____ Date _____

Access / view from _____ Time spent____hrs___mns

Species richness: poor ☐ poor / ave. ☐ ave. ☐ ave./ rich ☐ rich ☐ not Access gained to all ☐ part ☐ none

___ % 01 Native broadleaved woodland	___ % 08 Acid grassland	___ % 16 Bog
_____ 02 Non-native broadleaved woodland	_____ 09 Neutral grassland (semi-improved)	_____ 17 Reedswamp
_____ 03 Coniferous woodland	_____ 35 Neutral grassland (herb rich)	_____ 18 Wet marginal vegetation
_____ 37 Scattered trees	_____ 10 Basic grassland	_____ 19 Fen carr (woodland or scrub over fen)
_____ 05 Recently felled woodland	_____ 11 Improved or reseeded agric grassland	_____ 20 Standing water (includes canals)
_____ 06 Scrub	_____ 07 Amenity grassland	_____ 21 Ditches (water filled)
_____ 38 Planted Shrubbery	_____ 12 Ruderal or ephemeral	_____ 22 Running water (rivers & streams)
_____ 25 Native hedge	_____ 33 Roughland (intimate mix of 9, 14 & 6)	_____ 23 Intertidal mud, sand, shingle, etc
_____ 34 Non-native hedge	_____ 13 Bracken	_____ 24 Saltmarsh
_____ 31 Orchard	_____ 14 Tall herbs	_____ 30 Habitat information not available
_____ 36 Vegetated walls, tombstones, etc	_____ 15 Heathland	_____ 29 Other _____
_____ 26 Bare soil and rock	_____ 39 Allotments (active)	_____ _____
_____ 27 Bare artificial habitat	_____ 28 Arable	_____

treeline w/out hedge ☐ hedge w/treeline ☐
even-aged plantation ☐ ancient woodland ☐
coppice ☐ dead wood ☐ pollarded ☐
flush ☐ wet ☐ wood shrub layer %

grazed ☐ frequently mown ☐
infrequently mown ☐ cuttings removed Y / N
unmanaged grassland ☐ ridge & furrow ☐
flush ☐ wet ☐

floating vegetation ☐ submerged vegetation ☐
emergent vegetation ☐ saline ☐ tidal ☐
naturally formed river bank ☐ trophic status:
eu- ☐ meso- ☐ oligo- ☐ dys- ☐

NOTES / SKETCH MAP Record dominant and notable plant species, birds, butterflies, etc

Figure 1 Habitat survey form.

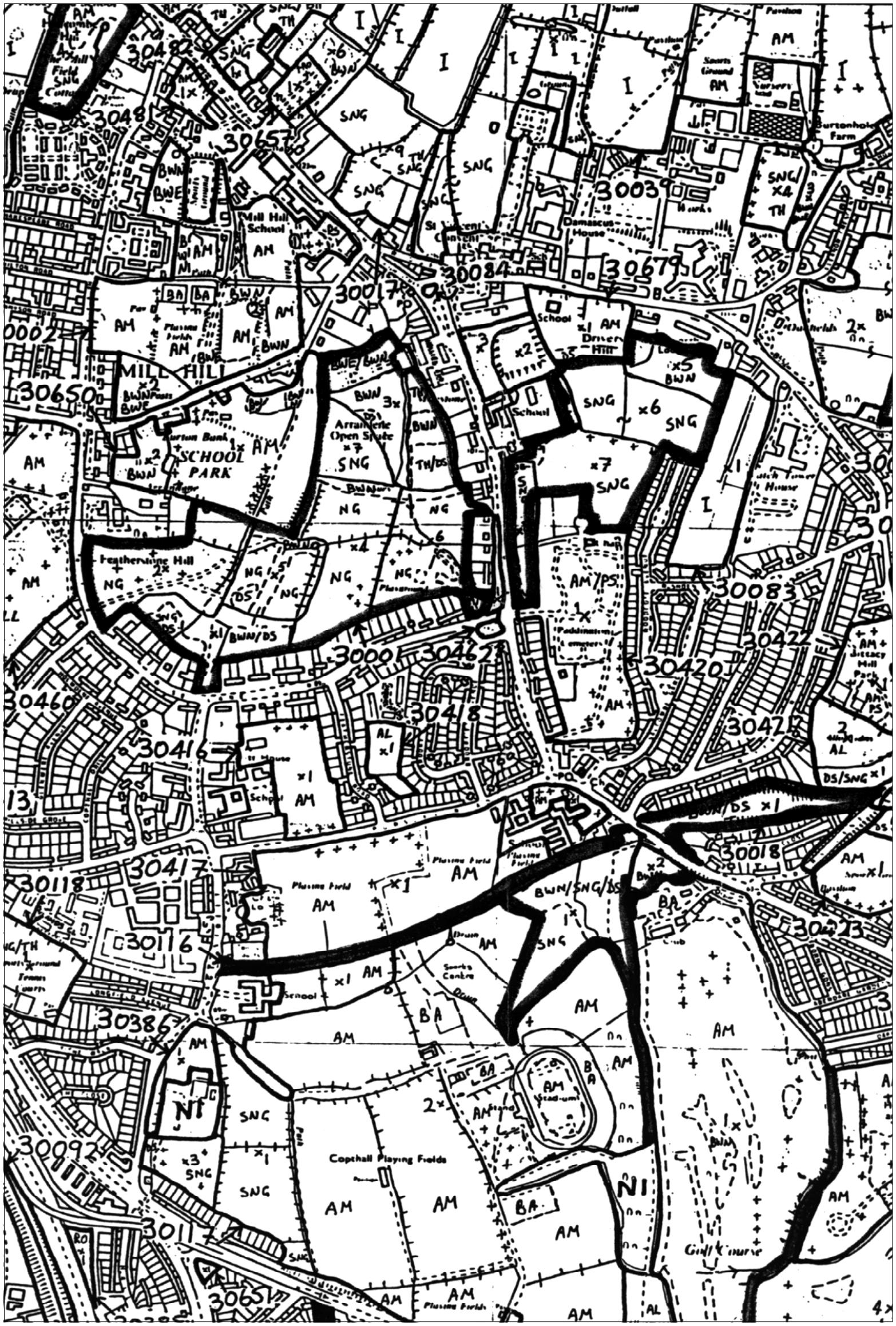

Figure 2 Example of habitat survey map.

has been included in each of the published handbooks on individual boroughs since 1987. Although some changes have occurred in the detailed approach, the rationale remains much the same as that developed in 1985 and has been accepted as the basis for nature conservation planning in London. The approach developed by the London Ecology Unit (LEU 1994a) was endorsed as the agreed policy of the London Ecology Committee in 1994, and by the London Planning Advisory Committee for use in Unitary Development Plans for all London boroughs in 1995.

CATEGORIES OF SITES

The London Ecology Unit recognises a hierarchy of sites which are of three kinds. These are sites of London-wide or Metropolitan, Borough, and Local Importance. The use of these three different levels of importance is an attempt not only to protect the best sites in London but also to provide each part of London with an accessible wildlife site so that people are able to have access to nature within their local neighbourhood. This hierarchy of sites requires that areas of London-wide significance be chosen in the context of the geographical area of Greater London. Sites of Borough Importance are chosen in the context of individual boroughs and their immediate surroundings. Sites of Local Importance are identified in the context of the wildlife resources of local neighbourhoods. It is important to recognise the differences in scale of the search-areas within which the three categories of sites are selected.

Sites of Metropolitan Importance

Sites of Metropolitan Importance for nature conservation are those sites which contain the best examples of London's habitats, sites which contain particularly rare species, rare assemblages of species or important populations of species, or sites which are of particular significance within otherwise heavily built-up areas of London. They are all sites of London-wide significance and are of highest priority for protection in the capital. The identification and protection of Metropolitan Sites is necessary, not only to support a significant proportion of Londonís wildlife, but also to provide opportunities for people to have contact with the natural environment. The best examples of London's habitats include the main variants of each major habitat type, for example oak woodland, wet heathland, or chalk downland. Habitats typical of urban areas are also included, e.g. various types of abandoned land colonised by nature ('urban commons'). Those habitats which are particularly rare in London may have all or most of their examples selected as Metropolitan Sites.

Sites of Metropolitan Importance include not only the best examples of each habitat type, but also areas which are outstanding because of their assemblage of habitats. River corridors are good examples, for example the Crane Corridor which, in addition to the River Crane, includes reservoirs, pasture, woodland and heathland. Rare species of importance in selecting these sites include those that are nationally scarce or rare (including Red Date Book species) and species which are rare in London.

A small number of sites are selected which are of particular significance within heavily built-up areas of London. Although these are frequently of lesser intrinsic quality than those sites selected as the best examples of habitats on a London-wide basis, they are outstanding oases and provide the opportunity for enjoyment of nature in those parts of London which are extensively built-up. Examples include St James's Park, Nunhead Cemetery, Camley Street Natural Park and Sydenham Hill Woods. In some cases (e.g. inner London parks) their function in providing public access to nature is the primary reason for their selection. For sites of higher intrinsic interest it may be only a contributory factor. Only those sites that provide a sig-

nificant contribution to the ecology of an area are identified as Sites of Metropolitan Importance. The definition of this category of site was approved by the London Ecology Committee in September 1988, along with a list of such sites which has been updated regularly since then (LEU 1988).

It is fair to say that if one of these sites is lost or damaged, this represents a significant loss to London's environment. Something would be lost which may be unique, or examples may be restricted to very few other places in London. Management of these sites should as a first priority seek to maintain and enhance their interest, but use by the public for education and appropriate forms of recreation should be encouraged, unless these are inconsistent with nature conservation.

Sites of Borough Importance

These are sites which are important in a borough context in the same way that Metropolitan Sites are important to the whole of London. Although sites of similar quality may be found elsewhere in London, damage to these sites would mean a significant loss to a particular borough. As with Metropolitan Sites, while protection is important, management of borough sites should usually allow and encourage their enjoyment by people and their use for education. Identifying sites of importance at borough level is particularly relevant because it is the individual London boroughs which are the planning authorities for London. Government guidance on nature conservation (GOL 1996) includes reference to the need for boroughs to take local conservation interests into account, and refers to the LEU hierarchy as the basis for selecting nature conservation areas within the boroughs. Boroughs are required to identify sites of Metropolitan Importance in their statutory development plans, and generally use the Sites of Borough Importance as the basis for identifying important nature conservation areas in the borough context. Since the search area for Sites of Borough Importance is effectively an individual borough, there is considerable variation in quality between those for different boroughs. For example, those designated in some outer boroughs will frequently be of higher intrinsic quality than those of inner-London boroughs which are comparatively deficient in wildlife habitat.

Sites of Local Importance

A Site of Local Importance is one, which is, or may be, of particular value to people nearby (such as residents or schools). These sites may already be used for nature study or be run by management committees mainly composed of local people. Sites of Metropolitan or Borough Importance may act as Local Sites if they are accessible to local people in this way. However, specific sites are given this designation in recognition of their role. Local importance means that these sites also deserve protection in planning. Local sites are particularly important in areas otherwise deficient in nearby wildlife sites. To aid the choice of Local Sites, Areas of Deficiency are identified (see below). Local Sites are then chosen as the best available to alleviate this deficiency. Such sites need not lie in the area of deficiency, but should be as near to it as possible. Where no such sites are available, opportunities should be taken to provide them by habitat enhancement or creation, by negotiating access and management agreements, or by direct acquisition of land capable of fulfilling this function.

Areas of Deficiency

Areas of Deficiency are defined as built-up areas more than one kilometre from an accessible Metropolitan or Borough Site. These aid the choice of Sites of Local Importance.

Countryside Conservation Areas

In addition to the three categories of sites described above, the LEU also recognises broader areas of land known as Countryside Conservation Areas. These are areas on the urban fringe where open countryside is characterised by examples of traditional English

landscape. Such broad tracts of land are usually of high wildlife interest. The wildlife value is not usually concentrated in any one part, but is diffused throughout the whole area in features such as hedges, ditches, ponds, meadows, permanent pasture, copses and woods. It is argued that these should be retained and appropriately managed, so that continued use for farming is complementary with maintenance of the wildlife resource. The Wildlife Habitat Survey provides the basis for selecting such areas, taking account of the criteria described below.

CRITERIA FOR CHOOSING THE SITES

Having obtained the necessary ecological information through a systematic survey, it is necessary to use a set of criteria for comparing one area with another. Appropriate criteria for assessing sites in an urban context are described below. These are based upon considerable experience of comparing and evaluating sites in London, but they are not unique to the work of the London Ecology Unit. While the terminology may differ in detail, many of these criteria closely correspond with those developed by the UK Nature Conservancy Council (and its successor authorities) for selecting sites of national importance. Some of the criteria are based in ecological science, in that they are known to be related to attributes that are desirable (these include ancient habitats, size and non-recreatable habitats). Some criteria are based on intrinsic attributes (those that are properties of a site regardless of its geographic setting), but others take geography and use into account.

There have been a variety of schemes published which attempt to put numerical scores onto criteria and to sum them to an overall score of importance. This practice tends to result in a spurious sense of objectivity. The London Ecology Unit agrees with the vast majority of workers in this field, that such a practice does not lead to satisfactory results and can be seriously misleading. Rather, the criteria are used to act as a checklist for a professional judgement of a particular site in comparison with alternatives. For some sites only one or a few of the criteria may be important, but for others it may be all or most of them.

It must be stressed that each criterion is used to facilitate a comparison of candidate sites within a given search area (London-wide, borough, or locality within a borough) and thus they do not take absolute values independent of the search area. Obviously, criteria that show a site to be valuable for a larger search area than London (e.g. regional or national) mean that it is very likely to be important in London.

Representation

The best examples of each major habitat type are selected. As well as woodlands, heaths, marshes, and other semi-natural habitats, typical urban habitats are included, such as abandoned land colonised by nature (‘urban commons’). Where a habitat is not extensive in the search area it will be appropriate to conserve all or most of it, whereas where it is more extensive a smaller percentage will be conserved.

Habitat rarity

The presence of a rare habitat makes a site important, because the loss of, or damage to, only a few sites threatens the survival of the habitat in the search area.

Species rarity

The presence of a rare species makes a site important in a way that parallels rare habitat.

Habitat richness

Protecting a site with a rich selection of habitat types not only conserves those habitats, but also the wide range of orga-

nisms that live within them and the species that require more than one habitat type for their survival. Rich sites also afford more opportunities for enjoyment and educational use.

Species richness

Generally, sites that are rich in species are to be preferred, as this permits the conservation of a correspondingly large number of species. However, it should be noted that some habitats, such as reed beds, heaths and acid woodlands, are intrinsically relatively poor in species.

Size

Large sites are usually more important than small sites. They may allow for species with special area requirements. Large sites may be less vulnerable to disturbance, as recovery is sometimes possible from the undisturbed remainder. They are also more able to withstand visitors, by diluting their pressure within a wider space. Size is also related to the richness of habitat and species, and so is used as a surrogate for these other two criteria where information is incomplete.

Important populations of species

Some sites are important because they hold a large proportion of the population of a species for the search area e.g. waterfowl populations or colonial birds such as grey herons (*Ardea cinerea*) or jackdaws (*Corvus monedula*).

Ancient character

Some sites have valuable ecological characteristics derived from long periods of traditional management, or even continuity in time with the woodlands and wetlands, which occupied the London area before agriculture. Ancient woodlands, old parkland trees and traditionally managed grasslands tend to have typical species that are rare elsewhere.

Recreatability

Habitats vary in the ease with which they can be re-created and the length of time required. For example, ponds can be created from scratch with reasonable success within a few years, but woods not only take much longer - at least decades - to mature, but even then they do not contain the same flora and fauna as ancient woods on undisturbed soils. In addition to the ecological reasons why certain habitats cannot be recreated, many sites are not capable of being recreated because of practical reasons such as land availability and cost. The more difficult it is to recreate the habitats of a particular site, the more important it is to retain the area as a site of conservation importance.

Typical urban character

Features such as canals, abandoned wharves, walls, bridges, tombstones and railway sidings colonised by nature, often have a juxtaposition of artificial and wild features. Some of these habitats are particularly rich in species and have rare species and communities of species. Their substrates may have a particular physical and chemical nature which allows species to thrive that are rare elsewhere. They may also have particular visual qualities. Such areas are often useful for the study of colonisation and ecological succession.

Cultural or historic character

Sites such as historic gardens (often with semi-wild areas and well established trees), garden suburbs, churchyards and Victorian cemeteries which have reverted to the wild, may have a unique blend of cultural and natural history.

Geographic position

This criterion is operated through the hierarchy of search areas and use of Areas of Deficiency. Geographic position may also be an important factor in determining whether a site is likely to be a valuable educational resource for local schools.

Access
Access is an important consideration, especially in areas where there may be a few places for large urban populations to experience the natural world. Nature conservation is not restricted to the preservation of wildlife, but goes hand in hand with the enjoyment of it all by people, from the specialist naturalist to the casual visitor. Some access is desirable to all but the most sensitive of sites, but direct physical access to all parts of a site may not be desirable. This is also an important criterion when considering the educational value of a site.

Use
The importance of a site can include its established usage (e.g. for education, research or quiet enjoyment of nature). This may be just as important in small-scale sites such as community nature gardens in inner-city areas, as in larger long-established nature reserves on the urban fringe.

Potential
Where a site can be enhanced given modest changes in management practices this gives it value. Opportunity exists where a site is likely to become available for nature conservation use, or where there is considerable local enthusiasm about it, or where a voluntary group is willing to use and manage it. Potential in this context can be for habitat enhancement through management, for educational or nature conservation amenity use. Where such potential could remedy a deficiency, or is readily realised, it is considered important.

Aesthetic appeal
This factor is the most difficult to measure, but it includes such factors, which contribute to a countryside feel, as seclusion, quality of landscape views, variety of landscape and habitat structure, colour and natural sounds and scents.

CONSULTATION
The criteria are used with the professional judgement of the LEU but it is equally important that this judgement should benefit from additional consideration by a wide range of interested parties. For this reason the Unit undertakes widespread consultation with individuals and organisations with knowledge of the sites and of London's ecology and natural history. These include local naturalists, voluntary organisations, land owners, statutory authorities, council officers and elected members. Consultation is normally first achieved using a schedule and map of sites recommended for protection in planning. After the consultation period is over this schedule is revised and the site descriptions are drafted for the relevant borough handbook. Every response received is considered in this process. Further public consultation is undertaken on the draft handbook, once it is available. Where the advice from LEU schedules and maps has been incorporated into statutory Local Plans or Unitary Development Plans, it has been subject to the statutory public consultation procedure alongside other aspects of these plans. It will be seen from this that there is considerable public consultation in developing the nature conservation strategy and this is undoubtedly one of the ingredients of its successful implementation.

IMPLEMENTATION
The London Ecology Unit has now produced detailed nature conservation strategies for 28 of the 33 London boroughs. The strategy for each borough is published as an ecology handbook in which all the sites of importance are described. Areas of Deficiency are also identified. Each strategy provides the nature conservation content for the borough's Unitary Development Plan. This is the statutory plan, which provides the basis for strategic planning in London. The series of Ecology Handbooks forms the Nature Conservation Strategy for London. It has resulted in many hundreds of sites being

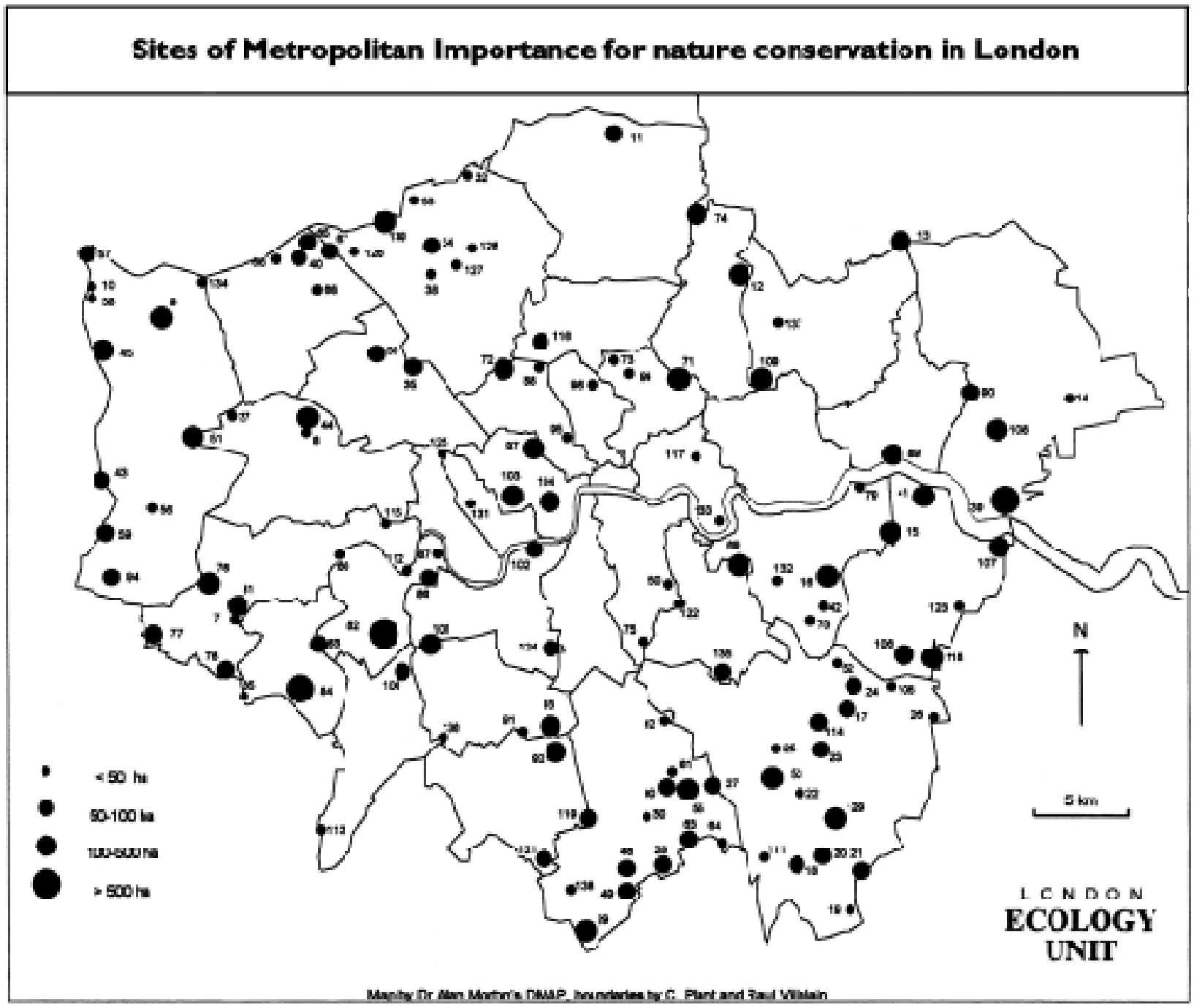

Figure 3 Map of metropolitan sites.

identified for protection in the statutory planning process.

At the London-wide level about 130 Sites of Metropolitan Importance are identified (see Figure 3). They are distributed throughout London and vary in size from only a few hectares to over 1,000 hectares. Most (90 sites) are less than 100 ha, of which 55 are less than 50 ha (see Figure 4). A few Sites of Metropolitan Importance have been lost to development since the list was first endorsed by the London Ecology Committee in 1988. Most of these were wasteland sites which were already scheduled for development. Additional sites have been added to the list over the years as individual boroughs have been surveyed in greater detail in preparation for each borough's Nature Conservation Strategy.

As a result of the detailed surveys for individual boroughs the overall strategy for London has identified over 1,100 sites. Although a few boroughs remain to be surveyed in detail, it is estimated that when this is completed over 1,300 sites will be identified for all categories of protection (i.e. Metropolitan, Borough and Local) within Greater London. The systematic approach adopted by the Ecology Unit has resulted in acceptance of this system of nature conservation designations by both Local and Central Government. The procedure was adopted by

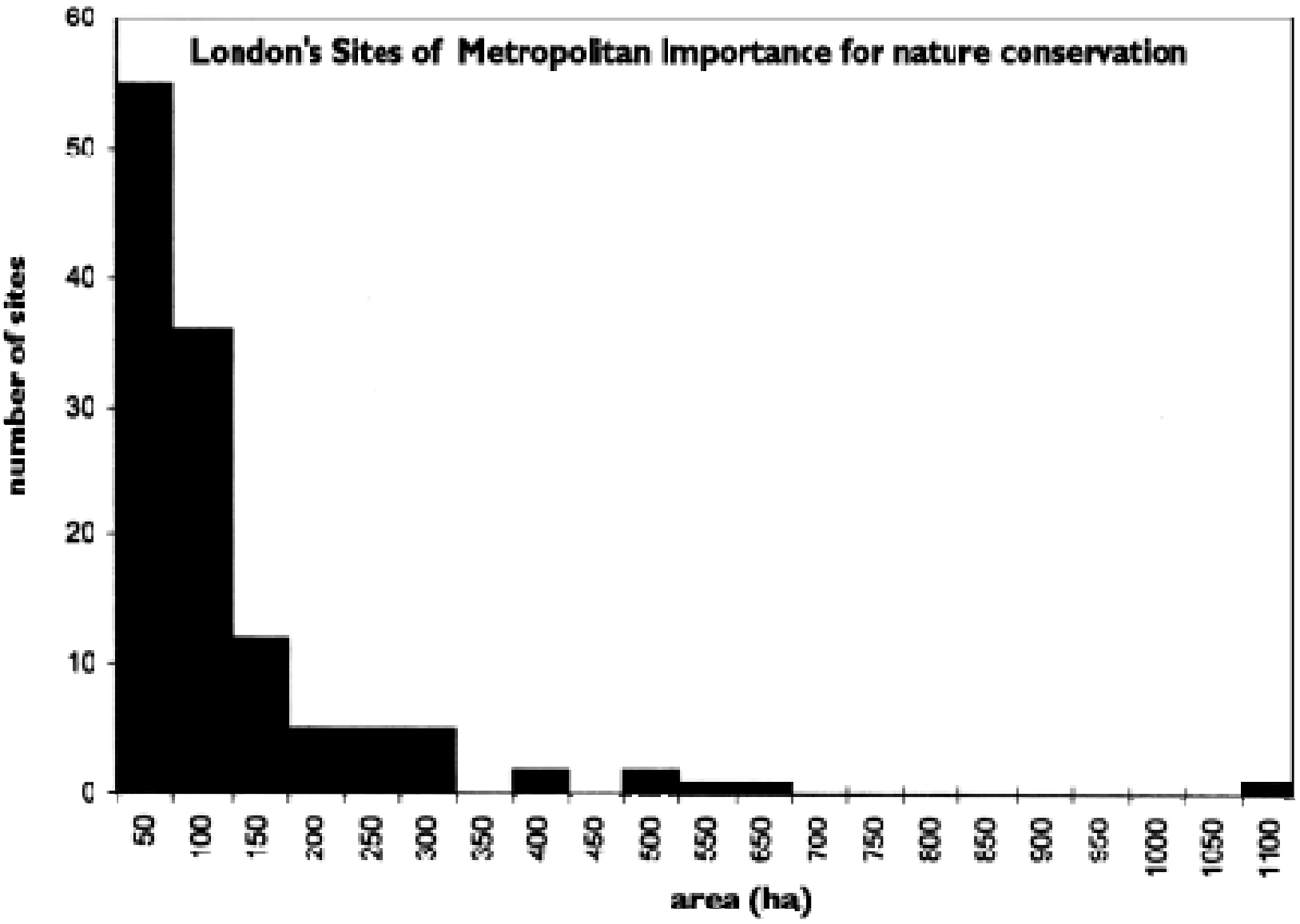

Figure 4 Histogram of metropolitan sites.

the London Planning Advisory Committee in 1995, and Government guidance advocates that London boroughs use the LEU hierarchy in developing their policies for nature conservation (GOL 1996).

It is notable that a significant number of the sites designated through this process are also protected as Statutory Local Nature Reserves (LNRs). This is a designation made by the boroughs to give a greater degree of protection to these important areas in the long term. About 60 such LNRs are now designated in London, compared with only two in 1980.

KEYS TO SUCCESS

Successful development of a nature conservation strategy for London has been dependant upon a number of factors. The objectives were clearly defined from the outset and the approach has been closely tailored to these objectives. For these reasons, and because of the cost, it was decided not to undertake fully comprehensive biotope mapping. Instead, a more pragmatic approach was adopted, restricting the survey to those areas of open space which had potential nature conservation value. The habitat survey has been seen as a crucial element in developing a nature conservation strategy. However, it is not a separate process in its own right, and the methodology used was designed specifically to meet the needs of the nature conservation strategy. Throughout the process there has been a need to ensure that there was effective integration with the planning process. This has required considerable consultation with professional planners on the development of ecological policies and in the progressive refinement of the rationale for site protection. Success has been dependant on ensuring its acceptance as a normal part of the statutory planning process.

Fundamental to all of this has been the need for both political and public support for this programme. The series of ecology handbooks published by the London Ecology Unit has been a crucial factor in gaining such support. The first ecology handbook (GLC 1984) set the scene and was instrumental in gaining political support within the Greater London Council. The series of handbooks for individual London boroughs, which together form the Nature Conservation Strategy for London have maintained the public and political support necessary to ensure success of the overall programme. These handbooks have been progressively refined and improved over the years. Recent examples (e.g., Handbook No. 29, *Nature Conservation in Merton*, which was published in 1998) include a series of walks for people wishing to visit natural areas in different parts of London. They also refer to production of biodiversity action plans as the next stage in implementation of the nature conservation programme for London.

The UK Government intends to create a new strategic authority for Greater London in the year 2000. New legislation for this purpose (currently being enacted) includes provision for the London Ecology Unit to become part of the Mayor's Office of the new authority with responsibility, among other things, for drawing up a Biodiversity Action Plan for London. The database stemming from the Unit's habitat surveys will be crucial to the development of this new strategy. It should be emphasised that this will set a precedent in UK legislation. Production of nature conservation strategies by local authorities have in the past been a discretionary function. The fact that the Government intends to place a duty on the new Greater London Authority to produce a Biodiversity Action Plan means that the process developed over the past 15 years by the London Ecology Unit has become firmly established. It will provide a basis for the statutory work of the new authority alongside other aspects of strategic planning.

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