

Richmond upon Thames Habitat Action Plan for Private Gardens



Photo: Mike Hidesley

“Many things grow in the garden that were never sown there.”
(Thomas Fuller, *Gnomologia*, 1732)

1. Aims

This Habitat Action Plan (HAP) aims to help the residents of the London Borough of Richmond upon Thames to make their gardens better for wildlife and thus gain more pleasure from them. It draws on and supports the comprehensive London-wide HAP for Private Gardens (**1a***) compiled by the London Wildlife Trust. The Trust’s 2010 report (*London Garden City*, **1b**) highlights both the importance of gardens to nature and the threat posed by the replacement of greenery by hard landscaping.

Specifically, this HAP aims to:

- Increase awareness of the importance of gardens and gardening to local biodiversity
- Improve the recording of biodiversity in gardens through reporting and surveys
- Demonstrate the importance of gardens in providing wildlife habitats and corridors
- Discourage the loss of garden green space to building and hard landscaping
- Promote gardening methods that conserve and enhance wildlife habitats and biodiversity
- Encourage composting and recycling
- Discourage the use of unsuitable chemicals and peat
- Favour native species and discourage the introduction of harmful invasive species.

2. Introduction - the Scale and Significance of Private Gardens

2.1 Gardens and human development

Gardening for aesthetic and recreational purposes began in the ancient civilisations and, ever since, horticulture has been influenced by fashion and imported ideas and plants. Gardens have also provided food for households, particularly in times of adversity. Therefore, concern for wildlife often came second to human needs but, with increasing interest in the natural environment, many people now want to take opportunities to support other species. Moreover, the industrialisation of agriculture has reduced biodiversity in rural areas and urban gardens have become important refuges for many species.

* **Bold numbers** (e.g. **1a**) refer to sections in the Appendix.



2.2 Private gardens as green areas in Richmond

England is one of the world's more densely populated countries and domestic gardens account for 4.3% of the nation's land. In urban areas, planning data shows that gardens are particularly significant. Open green space covers 38% of London's land, and private gardens cover a further 24% (2a). The total area of the Richmond borough is 22.6 square miles, 51% of this being occupied by parks, golf courses and other open green land. Domestic gardens dominate the remainder – taking up another 19%. There are about 78,000 households in the borough so there is an average of 144 square metres of domestic garden per household - compared to figures of 122 for Greater London and 265 for England.

2.3 The significance of private gardens as habitat in Richmond upon Thames

Richmond upon Thames is particularly rich in wildlife habitat, it spans a section of the Thames estuary and its ancient geological connections with continental Europe endow a high level of biodiversity. It includes four major historic royal estates (Kew Gardens and Richmond Park on the Richmond side of the Thames, Bushy Park and Hampton Court on the Twickenham side). These large, open areas are connected by a mosaic of domestic gardens that provide habitats and green corridors for a great variety of wildlife.

Plants are enormously important to habitat; they provide food and shelter and attract insects that, in turn, support other living things. Although there is limited data on their content, we know that gardens include a great variety of vegetation including many imported species and specially cultivated varieties - see 4.3 below.

3. Current status

3.1 Specific habitats within gardens

Individual gardens vary greatly; there is a lack of detailed information about the biological content of private gardens in the borough and surveys are needed. Typically, gardens include five significant types of habitat:

3.1.1 **Woodland** – clusters of trees and the sheltered land beneath with rotting wood and leaf litter for fungi and invertebrates.

3.1.2 **Hedges** - and shrubbery, provide food and shelter for birds and insects.

3.1.3 **Grass areas** - including unimproved lawns, may contain many native plants.

3.1.4 **Water** - garden ponds (and riverbanks) support amphibians (frogs, toads and newts), dragonflies and plants.

3.1.5 **Walls** – with creepers, mosses and other lower plants – good for moths and birds.

Each can be rich in species, particularly the small creatures that are so important to a healthy environment. Some of these habitats are of special value because of their age. Many new estates incorporate old trees and hedgerows, some being hundreds of years old. Likewise, some new developments on old orchards use the grassland for the lawns of the new properties; such lawns are usually species-rich. Some old ponds, or their remnants, survive together with their marginal and aquatic plants.

4. Specific factors affecting the habitats

4.1 Location & Connectivity

Locations close to open green spaces or rivers can be especially significant. Hedges between properties also provide shelter and corridors for wildlife. Hedges are particularly vulnerable because their continued existence often depends on co-operation between neighbours, and they require more maintenance than fences or walls.

Private gardens are typically small spaces (local average 144 m²) adjacent to other gardens and bounded by fences or walls. Although, for many forms of wildlife, each garden is too small to be viable as an individual territory, it has great value as part of a large green suburban space.

Birds and flying insects are unimpeded by garden boundaries but small mammals such as hedgehogs, and amphibians (frogs, toads, newts) are constrained by walls and fences. Hedgehogs (which appear to have suffered a 30% decline over the last decade) naturally roam 2 to 3 km at



night. The simple measure of providing a 13cm x 13cm hole through the bottom of boundary walls or fences will help these creatures to survive in suburbia.

4.2 Design and Management

As habitats, gardens vary greatly, reflecting site conditions and the gardener's activity - influenced by social and economic factors.

First and foremost, the temptation to replace green garden areas with extensions, sheds, decking and hard surfaces should be resisted. These incursions damage habitat and affect water flows, and better methods can usually be found (e.g. Richmond offers guidance for greener parking areas).

London Wildlife Trust's 2010 report (**1b**) highlights the dramatic loss of garden vegetation caused by householders replacing greenery with hard surfaces and garden buildings – 12% of vegetated garden land had been lost in just eight years, a reduction of 3000 hectares (6,700 acres).

Gardens that are too neat and tidy can also discourage wildlife because rotting wood, dense undergrowth and leaf litter are important to many creatures. Leaf-blowers are noisy and make it all too easy to destroy sheltered, leaf-filled corners favoured by hedgehogs. In general, pesticides and herbicides should be avoided, particularly sprays and slug pellets.

Variety is helpful: shrubs, trees, walls and rockery support different plants and animals. Birds and other creatures can be encouraged by putting out feeders and nest boxes, and homes for bats, bees and hedgehogs. Shallow ponds are important to frogs, toads and newts. Ponds are a national priority habitat, and garden ponds are threatened by building, paving and decking.

4.3 Planting UK

The gardener's choice of plants is crucial to wildlife. Plants are the basic source of food in the ecosystem and also provide shelter. Flowers attract insects so it is useful to choose plants that flower at different times and are known to be desirable to bees (now a national priority) and butterflies; avoid cutting back ivy or shrubs before flowering. Berries and seeds are important to birds in autumn, so leave seed heads in place. Dense and prickly shrubs provide shelter year-round and can help to make boundaries secure.

4.3.1 Native, non-native, and cultivated plants - Britain's wildlife has evolved with our native flora so it is highly desirable to favour native plants (**4a**). Indeed, some of these are disappearing from the countryside and should be planted in gardens to maintain their existence. However, many insects are able to exploit some of the attractive foreign plants that have been introduced over the last 300 years. Most gardeners would want to use some of these exotics and there is no objection providing that they are chosen with care (**4b**).

Invasive plants (**4c**) should always be avoided. British bluebells are threatened by hybridisation with the more robust Spanish version which should be removed. Note that wild plants should not be taken from the countryside, they can be purchased from reputable suppliers.

Also, some highly cultivated plant varieties are not beneficial to insects (e.g. those with double flowers); old garden varieties are often preferable.

4.3.2 Pest resistance - plants which are less susceptible to pests and diseases help gardeners to avoid using biocides. The RHS 'Award of Garden Merit' (**4d**) indicates reliable plants that are often more pest tolerant.

4.4 Gardening and natural resources

The wider environmental issues involved in gardening should also be considered:

4.4.1 Water conservation is important in the South-East and money can be saved by using water butts and recycling mains water. Choosing appropriate plants for dry areas and mulching will make the garden look better and save both effort and water (**4e**).

4.4.2 Peat free composts should always be preferred because of the damage to natural habitats and carbon emissions caused by peat extraction. Very few plants need peat.

4.4.3 Timber – a lot of wood is used in gardens for sheds, fences, decking and furniture, often involving the use of preservatives. Wood is a sympathetic and practical material but it is prudent to



reduce the amount used, and recycle materials or use only FSC sourced timber (4f). Preservatives should be chosen and used carefully (4g).

4.4.4 **Composting** – compost bins (4h) and wormeries are practical even in small gardens, and they are a convenient way of disposing of much food waste. The output is also convenient and reduces the need to lug bags of compost home from the garden centre.

4.4.5 **Climate change** – predictions for the UK suggest that temperatures will not rise dramatically but that there will be more extreme weather events. Therefore, it is prudent to consider the safety of tall trees and the adequacy of drainage systems. The arrival of new insect pests is already a concern (4i).

4.5 Growing food, continuing a local heritage of orchards and nurseries

Over the last sixty years, economic changes have also led to the reassignment of garden space from vegetables to decorative planting. Allotments (a subject in themselves) give some indication of this trend, having declined in number from 1.4 million in 1943 to 297,000 in 1996.

The borough has a history of nurseries and orchards (Middlesex was once home to 7% of the nation's market gardens). A project is under way to explore this part of our local heritage, and Richmond Environment Trust would like to locate and record old orchard trees found in gardens.

Growing one's own fruit and vegetables is enormously rewarding and is possible even in a small garden. To encourage wildlife and avoid wasting effort on pest control, organic approaches are helpful: composting, good soil management and using pest-resistant varieties are basic necessities. Interspersing crops with particular flowers will encourage the right insects and discourage pests – aim for a local balance of nature that favours your efforts rather than striving for perfect crops (4j).

Fruit trees (4k) can be particularly easy and rewarding to grow, providing year-round pleasure with their structure, blossom, foliage and fruit. There are varieties and tree sizes suitable for any garden. On a really small scale, herbs can be grown in pots in a window box or even indoors.

4.6 Planning controls

There is no specific legal protection for private gardens *per se* but planning applications for building are considered in terms of their impact on open space. There is now recognition of the threat posed by the growing trend to replacement of green garden space with hard surfaces, see 5.1 Legal Status below.

4.7 Invasive animal threats

Non-native animals can have detrimental effects on native species. Richmond has large and obvious populations of two invasive creatures. Grey squirrels have displaced Britain's native red squirrel and there is concern that the ring-necked parakeet may put pressure on populations of native birds. Predators, notably cats, can also affect small bird and mammal populations. Although foxes might be regarded as having invaded urban areas, they are a natural British species and the urban population appears to have stabilised, possibly as a result of better control of food waste.

5. Current Action

5.1 Legal Status

Many species are protected in law with varying levels of restriction, e.g. all mammals, including grey squirrels and foxes, are protected to some degree. There is much stronger protection for some, usually threatened, species, e.g. bats. Some native plant species are also protected. Trees within gardens are a major part of the borough's living capital but are only protected by Preservation Orders in certain circumstances - notably in Conservation Areas, where large trees within private gardens are automatically protected.

Legislation in 2008 means that planning permission is now required to pave an area of front garden greater than 5m² with impermeable materials (5a).

5.2 Mechanisms Targeting the Habitat

5.2.1 **Information and promotion** - several organisations offer information on means of encouraging wildlife in gardens through websites and leaflets (5b). The concepts of caring for nature



and sustainability are now mainstream and gardening books and broadcasts reflect this. These ideas have become part of the school curriculum.

Demonstration gardens and wildlife garden areas can be found in several places in London (5c). There is an increasing range of commercially available foods for birds and other animals as well as nest boxes for birds, and shelters for other creatures such as bees and hedgehogs (5d).

5.2.2 **Garden wildlife surveys** - have been conducted on a national basis, e.g. by RSPB, and the London HAP for Private Gardens outlines surveys that have taken place in London (5e). A key objective for the borough is to carry out surveys and gather information to help residents and the local authority to respond to local needs.

5.2.3 **Policy** – at a national level, ‘the proportion of households undertaking wildlife gardening in England’ is one of Defra’s 26 indicators of progress for its biodiversity strategy. Within London, the significance of private gardens is reflected in the Mayor’s Biodiversity Strategy (5f).

6. Flagship Species

These are notable species chosen to represent an environmental concern and to engage public involvement. They may also be indicator species – meaning that their wellbeing is indicative of the general state of biodiversity in an area.

A provisional list of flagship species for Richmond’s gardens is given below. They have been chosen because they themselves face some degree of threat or because their favoured habitats are under pressure nationally and gardens provide them with additional opportunities for food or shelter.

This list may be changed as more information becomes available. In particular, more information is needed on native plants in local gardens (4a).

Native Bluebell	<i>Hyacinthoides nonscripta</i>	British bluebells are threatened by genetic erosion through hybridisation with the Spanish Bluebell (<i>H. hispanica</i>). Spanish bluebells should be removed and replaced with purchased <i>H. nonscripta</i> (never taken from the wild). Not always easy to establish.
Stag Beetle	<i>Lucanus cervus</i>	Britain’s largest terrestrial beetle thrives upon dead wood as part of its lifecycle. The larva will spend nearly seven years in the wood growing in size. London is nationally significant for its stag beetle numbers.
Purple Hairstreak (butterfly)	<i>Quercusia quercus</i>	Dark wings flash iridescent violet purple. Only food plants are oaks. Require undisturbed leaf litter and ground layer for pupation (leaf blowers are bad). Can be seen in hundreds flitting over Oak tree crowns.
Garden Tiger Moth	<i>Arctia caja</i>	Dramatic, beautiful, and easily recognised. Once common in urban areas. Has suffered a massive decline in recent years. Requires flower beds with nectar plants. Needs stinging nettles as food for the hairy caterpillars – a few nettles in little used areas of the garden help.
Bees (all)	Bumble, honey and mason bees: <i>Bombus</i> , <i>Apis</i> and <i>Osmia</i> spp.	Bees, particularly honey bees, are in grave decline for reasons not fully understood; it seems that monoculture and the loss of wildflowers are significant so choose garden flowers liked by bumble and honey bees. The loss of bees as pollinators has serious implications for human food supplies. Short of DIY bee-keeping, tubular bee-nests can be placed in the garden to encourage mason bees which are also good pollinators.



Ruddy darter	<i>Sympetrum sanguineum</i>	Beautiful dragonfly with bright red males. Scarcer than the closely-related common darter, but occurs in some of Richmond's wetlands inhabiting shallow, still water where there is an abundance of bulrushes amidst reeds and other emergent plants. Hunts across a wide area.
Common Frog	<i>Rana temporaria</i>	Main requirements are sunny ponds for breeding, damp cover (long grass, damp areas) for hunting and undisturbed places for hibernation - wood/stone piles and under autumn leaves. Not a priority UK BAP species, but ponds are a national priority habitat and are threatened by building in gardens, paving and decking.
Common Toad	<i>Bufo bufo</i>	A priority UK BAP species. Main requirements are sunny ponds for breeding, damp cover (long grass, damp areas) for hunting and undisturbed places for hibernation - wood/stone piles and under autumn leaves. Ponds are a national priority habitat and are threatened by building in gardens, paving and decking.
House sparrow	<i>Passer domesticus</i>	Once common across gardens throughout London, sparrows have declined in number by 70%. Nestlings in particular depend on insects so hard surfaces in gardens are a problem. Improved insulation standards may be reducing their scope for nest sites. UK BAP priority species.
Song thrush	<i>Turdus philomelos</i>	The smaller thrush within the borough, 20-23cms. Establishes breeding territories in late winter and is one of the first birds to herald the spring. In decline, threatened by various factors in the countryside inc. reduced insect supply (pesticides), competition, loss of nest sites. Song thrushes nest low down in any suitable cover, but typically in shrubs, amongst creepers on walls or on the ground amongst thick vegetation. Song thrushes feed primarily on worms, slugs, snails and fruit. Slug pellets are toxic.
Hedgehog	<i>Erinaceus europaeus</i>	Although hedgehogs are still widely distributed across the UK, their numbers are now experiencing a significant decline. In gardens they eat slugs and insects. Traffic, dry summers, steep-sided ponds and slug pellet poisoning threaten hedgehogs, as well as "tidy" minimalist garden design. This UK BAP priority species needs places to hide and hibernate.
Bats (all)	<i>Pipistrellus spp. and Nyctalus noctula</i>	Winged mammals that feed on flying insects. In decline despite strong legal protection. Bats use hollow trees for winter and summer roosts as well as buildings. Threatened by loss of roost sites (inc. changes to roofing) and excessive night-time lighting.

All Richmond's flagship species, including those for other habitats, are listed in the Appendix (6a).



7. Actions

Please note that the partners identified in the tables are those that have been involved in the process of forming the plan. It is not an exclusive list; new partners are both welcome and needed. The leads are responsible for coordinating the actions - but are not necessarily implementers.

Action	Target Date	Lead	Other Partners
RPG1 To determine the number and total area of private gardens within the borough from planning statistics.	Done	Kew	ETR
RPG2 Structure (2011) and conduct a survey for the use of private garden owners to record the flora, fauna and features within their gardens - joining existing surveys whenever possible, host on GIGL.	2011	Kew, ETR	
RPG3 Update and continue collecting statistics on private gardens to create an open informative database that can connect with other LB's	2015, 2018	Kew, ETR	GIGL
RPG4 Select appropriate flagship species for the gardens in the borough.	Done	Kew, ETR	ETR, LWT
RPG5 Work with local councillors and planning officers, providing advice and making the case for the retention of green garden habitats and biodiversity.	Ongoing	RUTC	ETR, SWLEN
RPG6 Encourage planning control of boundary hedges.	2012		
RPG7 Provide protection for existing wildlife friendly gardens from destructive developments through LBRUT policies and promotion of wildlife friendly gardens			
RPG8 Conduct seminar sessions with relevant wildlife and gardening bodies to formulate information and advice appropriate to the borough.	Sept/Oct 2011	Kew	ETR
RPG9 Develop an information pack and website link detailing the benefits of, and information on how to create a wildlife friendly garden	Oct 2011		
RPG10 Involve local schools in the promotion and creation of wildlife friendly gardening			
RPG11 Promote wildlife friendly gardening around Richmond LB through relevant events, businesses and locally connected websites			
RPG12 Have open days for selected wildlife friendly gardens in connection with relevant events			
RPG13 Work in conjunction with local garden centres to encourage the distribution of native plants and wildlife-friendly products, supported by appropriate information on pest control and chemical usage.			
RPG14 Establish an award scheme for private gardens that demonstrate best wildlife friendly garden practice			



8. Relevant Action Plans

8.1 Local Plans

Ancient parkland, Broad-leaved woodland, Hedgerows, Stag beetle, Song thrush, Bats

8.2 London Plans

Private gardens, Built structures, Churchyards & cemeteries, Park & urban green spaces, Wasteland, Woodland, Bats, House Sparrow, Stag Beetle

8.3 National Plans

Ancient and/or species-rich hedgerows, Woodlands, Heathlands, Grasslands, Built up areas and gardens, Urban, Bees & wasps, Butterflies, Song thrush, moths, Stag beetle, flies

8.4 Key References and Sources of Further Information – see Appendix

9. Organisations and Abbreviations

TCV – The Conservation Volunteers
BTO – British Trust for Ornithology
ETR – The Environment Trust for Richmond upon Thames
FOBC – the Friends of Barnes Common
FORCE – Friends of the River Crane Environment
GiGL – Greenspace Information for Greater London

HRP – Historic Royal Palaces (includes Hampton Court)
LBRUT – London Borough of Richmond upon Thames
LWT – London Wildlife Trust
Kew – Royal Botanic Gardens, Kew (Kew Gardens)
The Royal Parks – Richmond Park and Bushy Park
RSPB – Royal Society for the Protection of Birds
SWLEN – South West London Environment Network

10. Contacts

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APPENDIX

This Appendix contains supplementary information including many extracts from the London Private Gardens HAP prepared by the London Wildlife Trust (LWT), a list of Richmond flagship species extracted from other Richmond Action Plans, internet links, other information sources. Some commercial suppliers of products are also listed but no endorsement is implied.

1a and **1b** London Wildlife Trust: www.wildlondon.org.uk 020 7261 0447 enquiries@wildlondon.org.uk

2a Information obtained from the Land Use Statistics (Generalised Land Use Database), 2005 provided by Richmond Council. Note that LWT estimated a lower figure, 20%, based on aerial photography undertaken in 1991. There may be differences in interpretation of 'garden area'.

4a Native species – the Flora for Fauna database (held on the Natural History Museum website at www.nhm.ac.uk/nature-online/life/plants-fungi/postcode-plants/) lists 270 native plant species as local to the TW postcode area. This list has been established from historical records. For those wishing to restore native vegetation it might be most useful as a means of screening out plants that are unlikely to be local.

LWT's London HAP suggests the following as suitable native species for London gardens:

- Field scabious (*Knautia arvensis*)
- Foxglove (*Digitalis purpurea*)
- Great mullein (*Verbascum thapsus*)
- Hemp agrimony (*Eupatorium cannabinum*)
- Meadow cranesbill (*Geranium pratense*)
- Red campion (*Silene dioica*)
- Honeysuckle (*Lonicera periclymenum*)

Also see www.wildlondon.org.uk/gardening/ and www.plantlife.org.uk/things_to_do/grow_wild/

4b Non-native (exotic) plants that are suitable for London gardens and encourage insects:

- Bergamot (*Monarda didyma*)
- Cosmos (*Cosmos bipinnatus*)
- Hollyhock (*Alcea rosea*)
- Honesty (*Lunaria rediviva*)
- Tobacco plant (*Nicotiana spp.*)
- Perennial cornflower (*Centaurea montana*)

4c Invasive plants that should **NEVER** be planted:

Japanese knotweed (*Fallopia japonica*) is the most invasive weed in Britain and can cause building damage. Giant hogweed (*Heracleum mantegazzianum*), Pirri-pirri Bur (*Acaena— spp.*), Giant knotweed (*Fallopia sachalinensis*) and Cordgrass (*Spartina spp.*) are also banned in England or Northern Ireland.

LWT warns against water fern (*Azolla filiculoides*) and curly waterweed (*Elodea* and *Lagarisiphon*), water plants being particularly dangerous because they can spread so rapidly along watercourses. They also refer to the Royal Horticultural Society's ban on the following at their shows: swamp stonecrop (*Crassula helmsii*), fairy fern (*Azolla filiculoides*), Himalayan balsam (*Impatiens glandulifera*), parrot's feather (*Myriophyllum aquaticum*) and floating pennywort (*Hydrocotyle ranunculoides*).

Plantlife provide a downloadable booklet describing many suitable alternatives to invasives at: www.plantlife.org.uk/publications/gardening_without_harmful_invasive_plants/

4d To find plants that have received the RHS's Award of Garden Merit, see: <http://apps.rhs.org.uk/agm/>

4e Saving water in the garden – see Thames Water's advice at:

www.thameswater.co.uk/cps/rde/xchg/corp/hs.xsl/6685.htm

and the RHS has several items on dry soil and drought resistant plants, start at:

<http://apps.rhs.org.uk/advicesearch/profile.aspx?pid=396>

4f Timber – the Forest Stewardship Council (FSC) certifies wood as being sourced with due care for the environment: www.fsc-uk.org Recycled plastic materials are an alternative in some cases.

4g Preservatives save cost and effort by keeping sheds, fences and decking sound for many years. They also allow cheap softwoods to be used instead of hardwoods from endangered tropical forests, but they are toxic to insects, fungi and sometimes to fish. Therefore, read instructions carefully and

double-check if animals are likely to be in close contact with the wood or if making frames or compost for growing vegetables. See **4j**.

Fortunately the most dangerous chemicals, creosote and CCA (copper/chrome/arsenic), have been restricted or banned for some time but be aware that old timbers may be contaminated (e.g. telegraph poles, sleepers, fencing).

4h Compost bins and wormeries – the London Borough of Richmond upon Thames can help you here:

www.richmond.gov.uk/home/environment/rubbish_waste_and_recycling/recycling_in_the_garden/composting.htm

4i Climate change – insects: Probably associated with climate change, Richmond is suffering an invasion by Oak Processionary Moth (*Thaumetopoea processionea*) which is a hazard to human health, and a leaf miner (*Cameraria ohridella*) that attacks horse chestnut trees. The glasshouse thrips (*Heliethrips haemorrhoidalis*) used to be confined to glasshouses but is now infesting some evergreen shrubs in London gardens. Another glasshouse pest, fluted scale (*Icerya purchasi*) is also now infesting garden plants. Some southern European pests that have recently become established in London and elsewhere in England are rosemary beetle (*Chrysolina americana*), berberis sawfly (*Arge berberidis*) and southern green shield bug (*Nezara viridula*).

For an overview of other climate change impacts see RHS information, starting at:

www.rhs.org.uk/Gardening/Sustainable-gardening/Gardening-in-a-changing-climate

4j On many topics concerning organic gardening and food production the Henry Doubleday Research Association (Garden Organic) offers its members access to online advice. Membership may well be worthwhile to anyone who wants to pursue organic gardening methods. See:

www.gardenorganic.org.uk

The Soil Association's website is aimed at large scale producers www.soilassociation.org

4k Fruit trees - again the RHS provides comprehensive advice:

www.rhs.org.uk/Gardening/Grow-Your-Own/Fruit-A-to-Z/Fruit-key/Tree-fruit

5a Legal restriction on hard surfaces for front gardens – see:

www.communities.gov.uk/publications/planningandbuilding/pavingfrontgardens

5b Advice on wildlife gardening is available from many sources – notably:

Thompson, Ken (2006) *No Nettles required: The Reassuring Truth about Wildlife Gardening*. Eden Project Books. London.

LWT: www.wildlondon.org.uk/gardening/WildlifeGardeningPack/tabid/403/language/en-GB/Default.aspx

Natural England's website: www.naturalengland.org.uk/advice/wildlifegardening/

The RSPB website: www.rspb.org.uk/wildlife/wildlifegarden/

The BBC: www.bbc.co.uk/nature/animals/wildbritain/gardenwildlife/

Bug Life: www.buglife.org.uk/getinvolved/gardening/

Butterfly Conservation: www.butterfly-conservation.org/

Plant Life: www.plantlife.org.uk/things_to_do/grow_wild/

Amphibians and Reptile Conservation: www.arc-trust.org/ and www.pondconservation.org.uk/millionponds

5c Wildlife gardens open to the public can be found at the Natural History Museum, London Wildlife Trust's Centre for Wildlife Gardening, London Zoo, the London Wetland Centre, Regents Park, Queen's Park in Westminster, The Museum of Garden History and in various city farms and community gardens. Kew Gardens also has several areas managed to attract wildlife.

5d Wildlife garden products are now widely available in garden centres and larger supermarkets. Some of the organisations listed above (**5b**) have online shops. Other suppliers offer a range of items to encourage birds, bees and hedgehogs at www.birdfood.co.uk/ and at www.gardenbird.co.uk

5e Garden surveys – the London Private Gardens HAP refers to a number of existing surveys:

6,000 records of stag beetle sightings in surveys carried out by the LWT, Bromley and the People's Trust for Endangered Species in 1999/2000. LWT's 'Wildlife in Gardens' survey attracted 4,400 responses. Garden pond surveys in Merton, Ealing, Croydon and Southwark. Survey by London Ecology Unit and Sutton showed that the diversity of bird species increases with garden size. Ongoing survey in the Natural History Museum Wildlife Garden already demonstrates value of even the most urbanised wildlife gardens for a wide range of invertebrates and birds. Survey of the plants and animals of Buckingham Palace Gardens by the London Natural History Society 1995 - 1998, following work in the early 1960s provides a comprehensive list of the biodiversity in central London. Nationally, BTO's annual Garden Birdwatch has ca. 400 surveyors in London; an ongoing National Butterfly Survey is carried out by Butterfly Conservation; and the Garden Mammal Survey is carried out by the Mammal Society.

5f The London Mayor's Biodiversity Strategy can be downloaded from:

<http://legacy.london.gov.uk/mayor/strategies/biodiversity/index.jsp>

The London Private Gardens HAP (and this document) align with its Proposals and Policies, in particular:

PROPOSAL 7: The Mayor expects that biodiversity and wildlife habitat will be taken into account in proposals for the re-development of garden land, and will develop guidelines for the evaluation of such proposals. PROPOSAL 29: The Mayor will promote the important role of private gardens for wildlife and together with other members of the London Biodiversity Partnership, will provide information to encourage London's gardeners to make their gardens wildlife –friendly. PROPOSAL 62: The Mayor will consider, with the London Development Agency, the development of a strategy for ethical trade, to discourage trading activity that damages biodiversity beyond London's borders, including such issues as the use of peat, limestone and wood products from unsustainable sources. POLICY 8 London's many species, and the landscapes where they are found, should be celebrated and promoted.

6a Flagship species for Richmond (all habitats):

Key to habitats: **AG**, Acid grassland; **AP**, Ancient Parkland; **BW**, Broadleaved Woodland; **PG**, Gardens; **RB**, Reedbeds; **TT**, Tidal Thames

Common Frog, *Rana temporaria*, **PG**

Common Toad, *Bufo bufo*, **PG**

Bittern, *Botaurus stellaris*, **RB**

Common Tern, *Sterna hirundo*, **TT**

Great crested Grebe, *Podiceps cristatus*, **TT**

Great spotted Woodpecker, *Dendrocopos major*, **AP**

Lesser Spotted Woodpecker, *Dendrocopos minor*, **BW**

Green woodpecker, *Picus viridis*, **AG**

Grey Heron, *Ardea cinerea*, **TT**

Reed warbler, *Acrocephalus scirpaceus*, **RB**

Song Thrush, *Turdus philomelos*, **PG**

Tawny Owl, *Strix aluco*, **AP**

Treecreeper, *Certhia familiaris*, **BW**

Common eel, *Anguilla anguilla*, **RB**

Flounder, *Platichthys flesus*, **TT**

Salmon, *Salmo salar*, **TT**

Bumble, Honey and Mason Bees, *Bombus*, *Apis* and *Osmia* spp., **PG**

Cardinal Click Beetle, *Ampedus cardinalis*, **AP**

Depressed River Mussel, *Pseudanodonta complanata*, **TT**

German Hairy Snail, *Perforatella rubiginosa*, **TT**

Purple Hairstreak butterfly, *Quercusia quercus*, **BW**

Ruddy darter, *Sympetrum sanguineum*, **RB**

Garden Tiger Moth, *Arctia caja*, **PG**

Small copper butterfly, *Lycaena phleas*, **AG**

Stag beetle, *Lucanus cervus*, **AP, PG**

Twin-spotted wainscot*, *Archanara geminipuncta*, **RB**

Two Lipped Door Snail, *Lacinaria biplicata*, **BW, TT**

Bats, including *Pipistrellus* spp., *Nyctalus noctula*, **BW**; *Myotis daubentonii*, **TT**

Beef steak fungus, *Fistulina hepatica*, **AP**

Hedgehog, *Erinaceus europaeus*, **PG**

Water Vole, *Arvicola terrestris*, **RB**

Common reed, *Phragmites australis*, **RB**

European Alder, *Alnus glutinosa*, **BW**

Harebell, *Campanula rotundifolia*, **AG**

Heath bedstraw, *Galium saxatile*, **AG**

Native Bluebell, *Hyacinthoides nonscripta*, **BW**

Oak, *Quercus robur*, **BW**

Purple Loosestrife, *Lythrum salicaria*, **TT**

Sheep's sorrel, *Rumex acetosella*, **AG**

Wavy hair-grass, *Deschampsia flexuosa*, **AG**

Tower mustard, *Arabis glabra*, **AG**