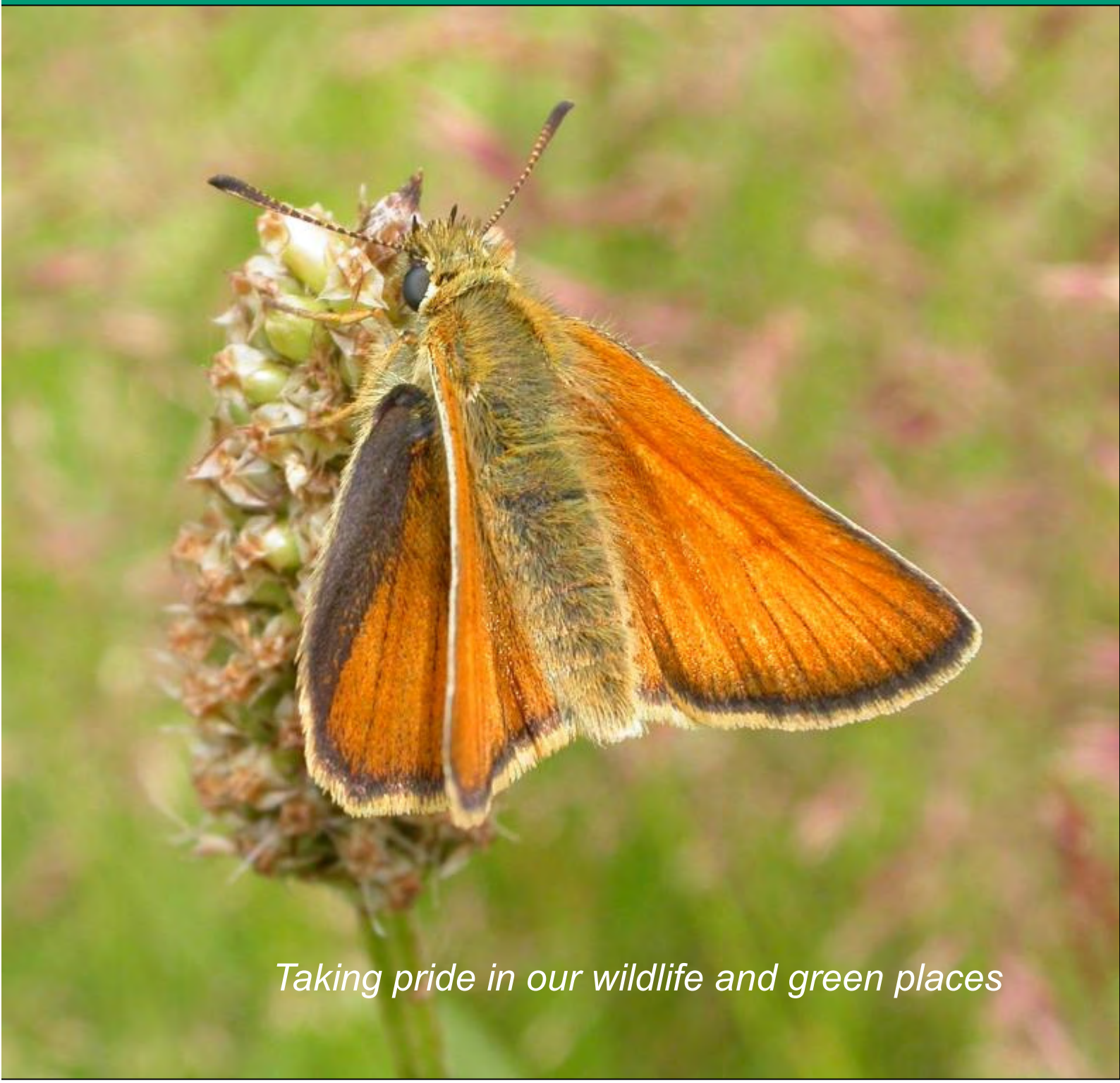
Waltham Forest

Biodiversity Action Plan



Taking pride in our wildlife and green places

www.walthamforest.gov.uk

Waltham Forest

Waltham Forest

Biodiversity Action Plan

Contents

Front cover image:
Small Skipper butterfly

Foreword

Waltham Forest is set to change rapidly over the next twenty years and will continue to do so well into the future.

Our population is expanding and almost everywhere there is new building. Regeneration across East London, including new housing, the sports legacy of the 2012 Olympic and Paralympic Games and the £4 billion Stratford City development, will bring new and lasting benefits for many of our residents: jobs, training, and sports and leisure facilities. We need to make sure that people who move into our borough are successful and that they want to stay here.

We want Waltham Forest to be a place where people choose to live and work.

"All of this brings challenges, not least for our precious wildlife and green places".

However, pressure from development, an increasing population and the effects of climate change could have a significant impact on biodiversity, so we must be prepared for action and consider the environment in all our activities.

The Council will therefore protect and enhance nature reserves, protected species and habitats, sites of importance and green corridors, and through new development improvements to existing open space.

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We will identify and improve the quality of biodiversity and green places in areas of the Borough that are deficient in access, and where possible will establish specific requirements for new and existing development in relation to the provision of new or enhanced habitats.

In line with this approach, we have updated our Biodiversity Action Plan to ensure that it meets the requirements of our future strategy and direction.

I hope you will read this and appreciate the importance Waltham Forest Council places on our natural environment now and for future generations.

Cllr Geraldine Reardon

Cabinet Member for Leisure, Arts & Culture

What is biodiversity?

Biodiversity is the name used to describe the variety of all living things (wildlife) and the places where they live (habitats).

Why should we conserve our wildlife and their habitats?

There are many reasons why biodiversity is important:-

The next generation is entitled to an environment as rich and varied as the current one.

Species which have evolved very slowly may be lost very quickly and cannot be replaced.

Climate change is undermining established habitats and threatening more and more species with extinction.

Agriculture depends on a wide range of genetic material from plants and animals to reinforce crop selection and increase productivity.

Natural processes help to protect to protect planet Earth.

Over one hundred species were lost in the UK in the twentieth century, including seven percent of dragonflies, five percent of butterflies and more than two percent of all fish and mammals.

In addition, many of our familiar birds have seen their populations reduced by over 50 percent in the last 25 years.

In January 1994, the United Kingdom Government published *Biodiversity: The UK Action Plan*.

This was in response to the commitment given by the Prime Minister at the Earth Summit in Rio de Janeiro in 1992.

The UK Biodiversity Action Plan (BAP) set as an overall goal: 'To conserve and enhance biological diversity within the UK, and to contribute to the conservation of global biodiversity through all appropriate mechanisms'.

In response, Waltham Forest Council began developing its own BAP, publishing the final document in 2001.

The BAP outlined the way in which the Council would contribute to the delivery of the UK Plan.

Hawthorn in bloom

Our contribution focused on eleven important habitats, and contained time targeted actions and commitments.

Of these habitats seven were a priority for London as a whole, the remaining four being specific to Waltham Forest.

Since 1992 there have been many changes in European and UK biodiversity legislation and the Council has a number of statutory biodiversity duties.

The legal framework includes:-

Wildlife & Countryside Act 1981 as amended in 2000.

EU Habitats Regulations 1994 including the Birds Directive.

Countryside & Rights of Way (CRoW) Act 2000.

Natural Environment & Rural Communities (NERC) Act 2006.

The NERC Act is of particular importance, as it requires the Council to consider biodiversity in all its activities.

As such, we have updated our BAP to align it with current guidelines and best practice.

For example we now have 12 Habitat and five Species Action Plans, as well as an Open Spaces Strategy.

We also consider the effects of climate change in our Core Strategy policies, and ensure that our patterns of development and use of resources support the long term sustainability of our environment in a practical and effective way.

Redwing on Holly

Our biodiversity vision for Waltham Forest

Vision

Our vision for Waltham Forest is of a diverse natural landscape with the countryside and open spaces integrated into the urban environment.

It is a place where the richness of the biodiversity in the Borough is protected, conserved and enhanced for ours and future generations.

Most importantly it is a place where local people understand and enjoy the natural environment around them, and where wildlife and people can thrive together.

In order to help achieve this, the Biodiversity Action Plan addresses specific objectives for the conservation of key habitats and species, the raising of public awareness and the involvement of all sectors of the community.

The BAP sets specific targets for actions and includes indicators and monitoring methods to help measure its success.

Street trees in Epping Way, Chingford

Our BAP is also closely linked to London's biodiversity priorities, so we can effectively measure our contribution to the protection of wildlife and habitats in the City and the Greater London area.

Our vision, and the contents of this BAP, have been defined and shaped through extensive consultation with conservation organisations, countryside staff, councillors, officers of the Council, friends and volunteer groups.

Field Grasshopper

Markhouse Road, Walthamstow

Goat Willow catkins

Objectives

We have identified six objectives for our Biodiversity Action Plan against which we will measure our achievements.

Common Spotted Orchid

To protect and enhance the wildlife and habitats in Waltham Forest, in particular those of international, national and regional importance.

Orange Peel Fungus

To ensure that developers, major landowners and organisations, including the Council, schools and colleges, the private sector and statutory undertakers, are aware of the importance of conserving biodiversity and are positively involved in the implementation of the BAP.

Field Vole

To ensure the proper consideration of biodiversity conservation in the management of all open space and amenity land in Waltham Forest.

Garden Tiger Moth

To seek opportunities for increasing the area and number of priority and locally important habitats.

Common Blue Butterfly

To develop the long term interest and involvement of people living and working in the Borough., including access to nature.

To monitor and report on our progress against the targets within the BAP.

Managing biodiversity in Waltham Forest

Land off Whipps Cross Road, Epping Forest

Waltham Forest extends from the edge of the Essex countryside in the north, to the inner city East End bordering Hackney and Newham in the south.

Running the length of the western boundary is the Lea Valley, an extensive area of flat, open land with reservoirs, marshes and meadows. Along the northeastern boundary are ridges of higher ground, where the ancient woodlands, grasslands and grass heaths of Epping Forest are found.

Both of these areas are of international importance and have been designated as a Special Protection Area for birds (SPA) and a Special Area of Conservation (SAC)

In addition, Epping Forest and the Walthamstow Reservoirs (which form part of the Lea Valley SPA) are both Sites of Scientific Interest (SSSIs), along with Walthamstow Marshes and the Chingford Reservoirs.

SSSIs are the UK's very best wildlife and geological sites, and are protected by law from damage through development or unsuitable management activities.

In between the Lea Valley and Epping Forest the land is largely developed.

However, important areas of ancient woodland remain, together with churchyards, gardens (public and private), railway embankments, and the valleys of the River Ching and Dagenham Brook. These are all green oases, providing refuges in an otherwise built environment.

With respect to London, these sites are classified as being of Metropolitan, Borough or Local Importance, and descriptions can be found in 'Wildlife Sites in Waltham Forest', which is available on the Council's website.

The majority of these green places are managed directly by the Council, some in partnership with local conservation organisations, and some through its grounds maintenance contracts.

The internationally important sites are looked after by the Corporation of London, Lee Valley Regional Park Authority and Thames Water, while others are maintained by private landowners or voluntary groups.

Fly Agaric Mushrooms


Waterworks Nature Reserve - Lee Valley Regional Park

Development can have a significant impact on biodiversity, particularly in those areas which are not protected by statutory designations.

Construction and regeneration is therefore carefully controlled through the planning system, this is directed by the Unitary Development Plan, which will be succeeded by the Local Development Framework.

Additional guidelines are provided by Planning Policy Statements (PPS), in particular PPS9 on the protection of biodiversity and geological conservation.

We also make recommendations for increasing biodiversity through development, especially where this takes place adjacent to existing green places or helps provide green corridors.

This landscape scale approach, rather than simply concentrating on individual habitats and individual patches of land, is at the heart of Integrated Biodiversity Delivery Areas (IDBAs).

We are the only London Borough to be wholly covered by an IDBA, which have been established to maintain the extent and restore all BAP habitats that exist within the IBDAs, and to provide a focus for habitat creation.

The needs of species and ecosystem processes will be included in delivery, and a partnership approach will be taken.

Long grass and oak trees in Highams Park

Action for habitats

In terms of its biodiversity, Waltham Forest is exceptional, containing one of the highest percentages, if not **the** highest percentage, of priority species and habitats in London.

The main part of the Biodiversity Action Plan consists of detailed individual action plans for the most important habitats found in Waltham Forest.

Each action plan includes a description of the habitat, where it is found in Waltham Forest and why it should be protected.

Also included are specific ten year targets to 2020.

These are required to ensure that the habitat is conserved and where possible expanded in the future.

The detailed Habitat Action Plans (HAPs) can be found in this report.

London Priority Habitats in Waltham Forest

We have identified seven habitats in Waltham Forest which are a priority for London. These are listed below along with a short description.

Acid Grassland

This is so called because the grass sward has developed on acidic soils (in our area this is mainly sand and gravels) which are very low in nutrients. These conditions are ideal for fine-leaved grasses such as bents and fescues, as well as shrubs like Gorse and Broom.

The open nature of these grasslands make them an important breeding area for Skylarks. Patches of bare sand and gravel also allow a number of rare bees and wasps to thrive. All the acid grassland in the Borough is found in Epping Forest.

Leyton Flats (around Hollow Pond) is the largest area, with more on Woodford Golf Course and in Gilbert's Slade. These areas cover about 130 hectares. Other rare or locally important species associated with this habitat include Meadow Pipit, Creeping Willow, Common Lizard, Small Heath butterfly, along with a variety of fungi.

Field Mushrooms

Churchyards and Cemeteries

With their unusual micro-habitats, such as old walls and gravestones, these places provide a special focus for local communities and have specific management needs.

The churchyards of St Mary's in Leyton, St Mary's in Walthamstow, and St John's in Leytonstone, each provide a mix of habitats from mature broadleaved trees and dense shrubs, to open grasslands and patches of scrubby undergrowth.

The large cemetery at Chingford Mount contains many specimen trees.

There are 36 hectares of churchyards and cemeteries in the Borough.

Associated species include Song Thrush, Hedgehog, Tawny Owl, Yew, English Oak, Hart's-tongue Fern, Wall Rue and lichens.

St Mary's Churchyard, Leyton

Parks and Urban Greenspaces

These range from old parks with specimen trees, to the grounds of schools, community centres or housing estates. Playing fields and small areas of public open space are also included, as are the 34 allotments managed by the local community.

The green places are characterised by their formal appearance and close mown amenity grassland, while the allotments often have areas of rough grassland and tall, woody plants growing around their boundaries.

The total area is about 300 hectares.

Associated species include Green Woodpecker, Kestrel, Sparrowhawk, Fieldfare, Redwing and Mistle Thrush.

Fieldfare

Private Gardens

Although generally not thought of as a wildlife habitat, these areas of open space cover a high proportion of the land surface in Waltham Forest.

Gardens contain a wide variety of trees, shrubs, flowers, hedges, rough grass and ponds, and when taken as a whole, actually form an immense resource for wildlife. Furthermore, they provide connectivity, often linking natural habitats together via green corridors.

Typical species such as Hedgehogs, Robins, Wrens and the now uncommon Song Thrush and House Sparrow, depend on private gardens for their survival.

Other rare or locally important species include Slow-worm and Holly Blue butterfly.

Slow-worms

Rivers and Streams

There are several free flowing watercourses in the Borough, including the Rivers Lea and Ching, Coppermill Stream and Dagenham Brook.

Their combined length is about 44 kilometres.

Species found in the water and bankside vegetation include Water Vole, bats, Kingfisher, Goosander, Grey Wagtail, Grass Snake, Barbel, Trout, Three-spined Stickleback, damselflies and Arrowhead (a plant).

Water Vole

Standing Water

Waltham Forest contains a range of lakes, reservoirs and ponds of varying sizes. These are particularly important for water birds and amphibians.

Examples of water bodies include the Walthamstow and Banbury Reservoirs, the Essex Filter Beds, five large pools in Epping Forest, and a number of smaller ponds in parks and private gardens throughout the Borough.

They cover about 270 hectares in total.

Associated species include Pochard, Tufted Duck, Shoveler, Goosander, Gadwall, Kingfisher, Common Tern, bats, Common Frog, Common Toad and Great Crested Newt.

Great Crested Newt

Woodland

This habitat includes both ancient and secondary woodland. Ancient woodland is one which has evolved continuously on the same site since at least 1600, although many are much older.

Much of the ancient woodland in Waltham Forest was managed by coppicing, and examples include Larks Wood, Ainslee Wood, Bluehouse Grove and Hatch Grove.

Rare or locally important species include the Wild Service Tree, Bluebell, Yellow Archangel and Treecreeper.

Secondary woods have spread naturally on land previously cleared for agriculture.

Ainslee Wood

Local and other UK Priority Habitats in Waltham Forest

In addition to the London priority habitats, there are five other habitats which are of importance in Waltham Forest. Of these, two are identified in the UK BAP (Coastal & Floodplain Grazing Marsh and Wood Pasture).

Built Environment

Buildings comprise the main and most varied component of this habitat type.

Historic buildings, because of their age, are often important for lichens and can be used to demonstrate the gradual improvement in air quality over the last few decades.

Lichen

Modern buildings too can be important. Most Brown Long-eared and pipistrelle bat roosts are found in buildings built in the last 30 years and even multi-storey tower blocks are used by this species.

Flats overlooking Coronation Gardens, Leyton

Birds such as the Peregrine Falcon, Kestrel and the ubiquitous Feral Pigeon find buildings a substitute for their original cliff nesting habitat, as do Swifts, House Martins and House Sparrows.

Canals, road and rail infrastructure also form an important part of this habitat.

Utilities such as sewage works, structures relating to the supply of electricity and gas and communication facilities may also be significant, with some providing a home for the rare Black Redstart.

Brown Long-eared Bats

Floodplain Grazing Marsh

In Waltham Forest these are areas found close to rivers and streams which are waterlogged for at least part of the year, and which were traditionally farmed as grazing land or hay meadows.

This is a rare habitat and is restricted to about 20 hectares on Walthamstow Marsh.

Typical species include Reed Bunting, Grass Snake, Adder's-tongue Fern, Lady's Smock, Meadowsweet, Orange-tip butterfly, and Roesel's Bush-cricket.

Roesel's Bush-cricket

Green Corridors

Green corridors through residential, industrial and commercial areas form an essential component of the Borough's ecological network, especially when this connects to the open countryside.

Corridors such as railway embankments, canal sides and lines of trees along road verges help to provide links between habitats for some more mobile species, and will act as valuable habitats in their own right.

Green corridors have a dual purpose however, not only providing areas of habitat through an area of intensive land use, but also access routes for people. The latter can be a problem, as increased human use can lead to disturbance which limits the numbers of species using a corridor.

A wide variety of species benefit from green corridors, including birds, bats, invertebrates and mammals such as Foxes.

Red Fox

Neutral Grassland

Generally growing on fertile, clay soils, these grasslands support a rich variety of wildflowers and insects if they have not been ploughed or otherwise disturbed.

Traditional pasture land includes Pole Hill, Daisy Plain and Chingford Plain in Epping Forest.

Old hay meadows, which are a fast disappearing habitat, can be found in parts of Mansfield Park and the Essex Filter Beds. In total neutral grassland covers about 60 hectares.

Associated species include Skylark, Yellow Wagtail, Grass Snake, Pepper Saxifrage, Spiny Rest-harrow, Yellow Meadow Ant, Small Copper butterfly, Brown-banded Carder Bee and Burnet Moths.

Six-spot Burnet Moths

Wood Pasture

This is a very special habitat of international importance.

It comprises a mixture of grassland and scattered broadleaved trees, with the grass usually grazed by cattle or deer.

The trees are often very old and many have been pollarded (cut above animal reach and allowed to re-grow). This traditional method of management has produced gnarled and hollow trunks, with much dead wood, providing ideal conditions for a multitude of rare insects, fungi and lichens.

Much of Epping Forest is wood pasture and forms one of the largest habitats of this type in Europe.

In Waltham forest there is about 160 hectares, including Hawk Wood, Rising Sun Wood, Walthamstow Forest and Gilbert's Slade.

Poplar Hawk-moth

Comma butterfly

Action for species

Prior to the publication of our first Biodiversity Action Plan in 2001, we examined records of flora and fauna to build a firm understanding of the Borough's wildlife.

Surveys were also commissioned where there were gaps in our knowledge.

This work is on-going to ensure that the needs of wildlife in and around Waltham Forest are addressed.

Most species are associated with particular habitats, and as such their conservation needs will be met in our Habitat Action Plans.

However, a few flagship species have been chosen to help raise awareness of the problems faced by many wild creatures and their habitats in our area.

Although not rare, these species can be identified easily by most people.

Important species occurring in Waltham Forest

There are many hundreds of species of plants and animals living in our Borough, and of these a few are of regional, national or international importance due to their rapidly declining populations. These are listed here.

Amphibians

Common Frog
Common Toad
Great Crested Newt
Smooth Newt
Palmate Newt

Reptiles

Adder
Grass Snake
Slow-worm

Spiders

Gibbaranea bituberculata

Beetles

Smooth Click Beetle
Greater Stag Beetle
Agrilus laticornis

Molluscs

Shining Ramshorn Snail

Other insects

White-letter Hairstreak
Red-belted Clearwing
Buttoned Snout Moth
Red-eyed Damselfly
Psithyrus rupestris

Fungi

Russula raolti

Plants

Native Bluebell
Creeping Willow
Wild Service Tree
Marsh Dock
Spiny Rest-harrow
Mistletoe
Meadow Rue
Brookweed
Common Cow-wheat
Marsh Pennywort
Yellow Archangel
Butterbur

Mammals

Common Shrew
Fallow Deer
Hedgehog
Water Vole
Weasel
Bats - all those present

Birds

Gadwall
Shoveler
Lesser Spotted Woodpecker
Skylark
Tree Pipit
Yellow Wagtail
Song Thrush
Starling
House Sparrow
Tree Sparrow
Reed Bunting
Bullfinch
Linnet
Lesser Redpoll

Flagship species

We have selected five key species which best represent the plants and animals associated with our priority habitats. Some might be found in your garden or local green place, or they might be living in your home or place of work.

Bluebells

Bluebell

Our native Bluebell is a plant of ancient forests, but it can occur almost anywhere and may indicate former cover by species rich hedgerows or woodland.

Pipistrelle Bat

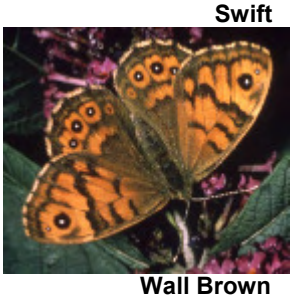
Pipistrelle Bat

The pipistrelle is our smallest bat and can be found roosting in a range of natural habitats across the Borough, as well as in houses and other buildings.

Swift

Swift

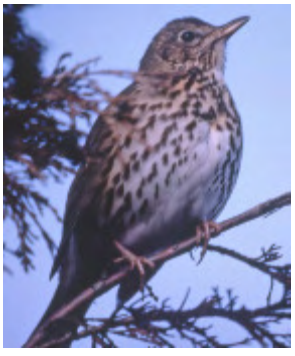
A summer migrant from Africa, the Swift nests exclusively in buildings, typically under the eaves. It is a familiar sight in Waltham Forest from May to August.



Wall Brown

Wall Brown butterfly

The Wall Brown is a Priority Species for London, and along with other butterflies is highly vulnerable to loss of habitat.



Song Thrush

Song Thrush

A bird of parks and gardens as well as woodland and hedgerow, the Song Thrush is not as common as it once was, and the UK population has declined by over 70 percent in some areas.

Access to our green places

Experiencing nature at first hand is a key part of our biodiversity vision for Waltham Forest, and with a wealth of wildlife on our doorstep it is important that everybody has access to it.

We have therefore produced an open spaces strategy which includes recommendations for improving access to nature and green places where this is deficient, and providing access where none exists.

Four areas we are investigating for improvements are Chingford Mount Cemetery, Lloyd Park, St Mary the Virgin Churchyard in Leyton, and Dagenham Brook, including the land on either side of Marsh Lane.

Warren Pond, Chingford

Chingford Mount Cemetery

Education and partnership

We aim to increase the awareness of everyone who lives and works in Waltham Forest of biodiversity issues, and where practical will promote opportunities for its enhancement.

For example, participating in conservation management at one of our green places, or simply leaving a wild area in the garden can all have an important part to play.

The Borough's local nature reserves and visitor centres provide a focus for hands-on activities, while our website and those of other conservation organisations in the region are a valuable source of biodiversity information.

We also work closely with a wide range of like-mined partners, combining resources and expertise to maximise the benefits for wildlife and habitats.

Monitoring and reporting

In updating this BAP we have aligned our reporting framework to the UK's biodiversity action timescales.

Our Habitat Action Plans (HAPs) have been re-written and include targets which are both achievable and realistic, as well as measurable.

We aim to place these action plans on BARS, the Biodiversity Action Reporting System, so that anyone can see what we have achieved and how this has contributed to London's biodiversity targets.

We have entered into a Service Level Agreement with GiGL, (Greenspace Information for Greater London), whereby data on ecology and habitats in the Borough will be stored centrally and shared with all those who have an impact on our wildlife and green places.

This will be of particular importance when considering planning applications, thereby ensuring that no important biodiversity features are lost and that all opportunities for enhancement are taken.

Five yearly reviews of our progress against the HAP targets will also be made, the next in 2015. This will then determine our priorities for the next five years to 2020.

Honeybone Allotments, Walthamstow

Common Toad

Glossary - biodiversity words explained

Amenity grassland: Grassland that improves the quality of an area by contributing to the physical or material comfort of users (as places to picnic, walk, engage in leisure pursuits), and which increases the attractiveness or value of its geographic location.

Biodiversity: The diversity, or variety, of plants, animals and other living things in a particular area or region. It encompasses habitat diversity, species diversity and genetic diversity. Biodiversity is of value in its own right and has social and economic value for human society.

Biodiversity Action Plan: A plan that sets objectives and actions for the conservation of biodiversity, with measurable targets.

Broadleaved: Trees which loose their leaves in winter - also known as deciduous trees.

Brownfield: Any land or premises which has previously been used or developed and is not currently in full use, although it may be partially occupied or utilised. The land may also be vacant, derelict or contaminated. This excludes parks, recreation grounds, allotments and land where the remains of previous use have blended into the landscape, or have been overtaken by nature conservation value or amenity use and cannot be regarded as requiring redevelopment.

Conservation: Protection, management and promotion for the benefit of wild species and habitats, as well as the human communities that use and enjoy them.

Conservation (Natural Habitats &c.) Regulations, 1994: The Conservation (Natural Habitats, &c.) Regulations 1994 transpose the Habitats Directive into domestic legislation. They apply to England, Wales and Scotland and their territorial seas up to 12 nautical miles from baseline. Northern Ireland has its own Regulations with the same coverage of territorial sea.

Coppice: To cut back (as young timber) so as to produce shoots from stools (the stump of the tree) or roots.

Countryside and Rights of Way Act, 2000 (CRoW): The Countryside and Rights of Way Act 2000 (also known as CRoW) amended the Wildlife and Countryside Act of 1981. It created a new statutory right of access to open country and registered common land, modernised the rights of way system, gave greater protection to Sites of Special Scientific Interest (SSSIs), provided better management arrangements for Areas of Outstanding Natural Beauty (AONBs), and strengthened wildlife enforcement legislation.

Deciduous: Shedding or losing foliage at the end of the growing season.

Distribution: The geographical range of a taxon or group; the pattern or arrangement of the members of a population or group.

Ecosystem: A community of organisms and their physical environment interacting as an ecological unit.

Fauna: Animal life.

Flagship species: A species perceived favourably by the public for reasons of aesthetics or other value, used to promote and publicise nature conservation.

Flora: Plant life.

Green corridors: Green corridors are relatively continuous areas of open space leading through the built environment, which may link sites to each other and to the Green Belt or Metropolitan Open Land. They often consist of railway embankments and cuttings, roadside verges, canals, parks and playing fields and rivers. They may allow animals and plants to be found further into the built-up area than would otherwise be the case.

Habitats: The area or environment where an organism or ecological community normally lives or occurs.

Hibernation: The torpid or resting state in which some animals pass the winter, cessation from or slowing of activity during the winter, especially slowing of metabolism in some animals.

Invertebrate: An animal, such as an insect or mollusc that lacks a backbone or spinal column.

Local Development Framework: Statutory plans produced by each London Borough which integrate strategic and local planning responsibilities through policies and proposals for development and use of land in their area.

Local Nature Reserves (LNR): Nature reserves designated by local authorities under the 1949 National Parks and Access to the Countryside Act.

Mitigation: Any process or activity designed to avoid, reduce or remedy adverse environmental impacts likely to be caused by a development project. Mitigating factors are taken into account as a benefit on balance to offset against any perceived or demonstrable harmful impact.

Monitoring: To keep track systematically with a view to collect information. To test or sample, especially on a regular or ongoing basis.

Native: Originating, growing, or produced in a certain place or region; indigenous.

Plant communities: A group of plants living and interacting with one another in a specific region under relatively similar environmental conditions.

Protected species: Certain plant and animal species are protected to various degrees in law, particularly the Wildlife and Countryside Act 1981 (as amended).

Pictures by school pupils in Waltham Forest

Riparian habitat: Habitat located on the banks of a river or stream.

Scrub: A community of trees and shrub species colonising open ground, particularly grassland.

Sites of Borough Importance: Sites which are important in the Borough perspective. Damage to these sites would mean a significant loss to the Borough. Borough sites are divided on the basis of their quality into two grades (I and II), but it must be stressed that they are all important in a Borough-wide context.

Sites of Local Importance: Sites which may be of particular value to nearby residents or schools. In some cases these sites may already be used by schools for nature study or may be managed with help from local people.

Sites of Metropolitan Importance: 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 which are of particular significance within large areas of otherwise heavily built up areas.

Sites of Nature Conservation Importance (SNCI): Sites chosen to represent the best wildlife habitats in the Borough, more commonly referred to as Local Wildlife Sites.

Sites of Special Scientific Interest (SSSI): Sites of Special Scientific Interest can be either of biological or geological (or mixed) interest, notified by Natural England under the Wildlife and Countryside Act 1981 (as amended).

Special Areas of Conservation (SAC): Sites of European importance for habitats and species other than wild birds, designated under the Conservation (Natural Habitats, &c.) Regulations, 1992 in the UK.

Special Protection Areas (SPA): Sites of European importance for wild birds designated under the Conservation (Natural Habitats, &c) Regulations, 1992 in the UK.

Sustainable Development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It is often summed up by the phrases 'think globally act locally' and 'don't cheat your children'.

Sward: The cover of grass and wildflower species that create a grassland.

Unitary Development Plan (UDP): A framework for the development and use of land in the Borough.

Wetland: Lowland areas, such as marshes and swamps that are saturated with moisture.

Wildlife and Countryside Act, 1981: The principle mechanism for the legislative protection of wildlife in Great Britain. Part I gives protection to listed flora and fauna; Part II deals with the protection of Sites of Special Scientific Interest (SSSI) and Part III deals with Public Rights of Way.

How you can get involved

There are many ways that you can get close to nature in Waltham Forest, from a leisurely stroll in Epping Forest to growing vegetables on an allotment.

Try visiting one of our historic parks or gardens, or perhaps the local cemetery, all of which provide homes to a surprising diversity of wild plants and animals.

There are numerous walks along the Lea Valley and throughout the Regional Park, with the Waterworks Nature Reserve near Walthamstow a particularly interesting area.

Each year our Greenspace Communities Team and local groups organise a programme of environmental events open to the public, and joining in with one of the exciting, practical and informative activities is a great way to get involved and contribute to our Biodiversity Action Plan at the same time.

Further details can be found on our website: www.walthamforest.gov.uk

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World Wide Fund for Nature
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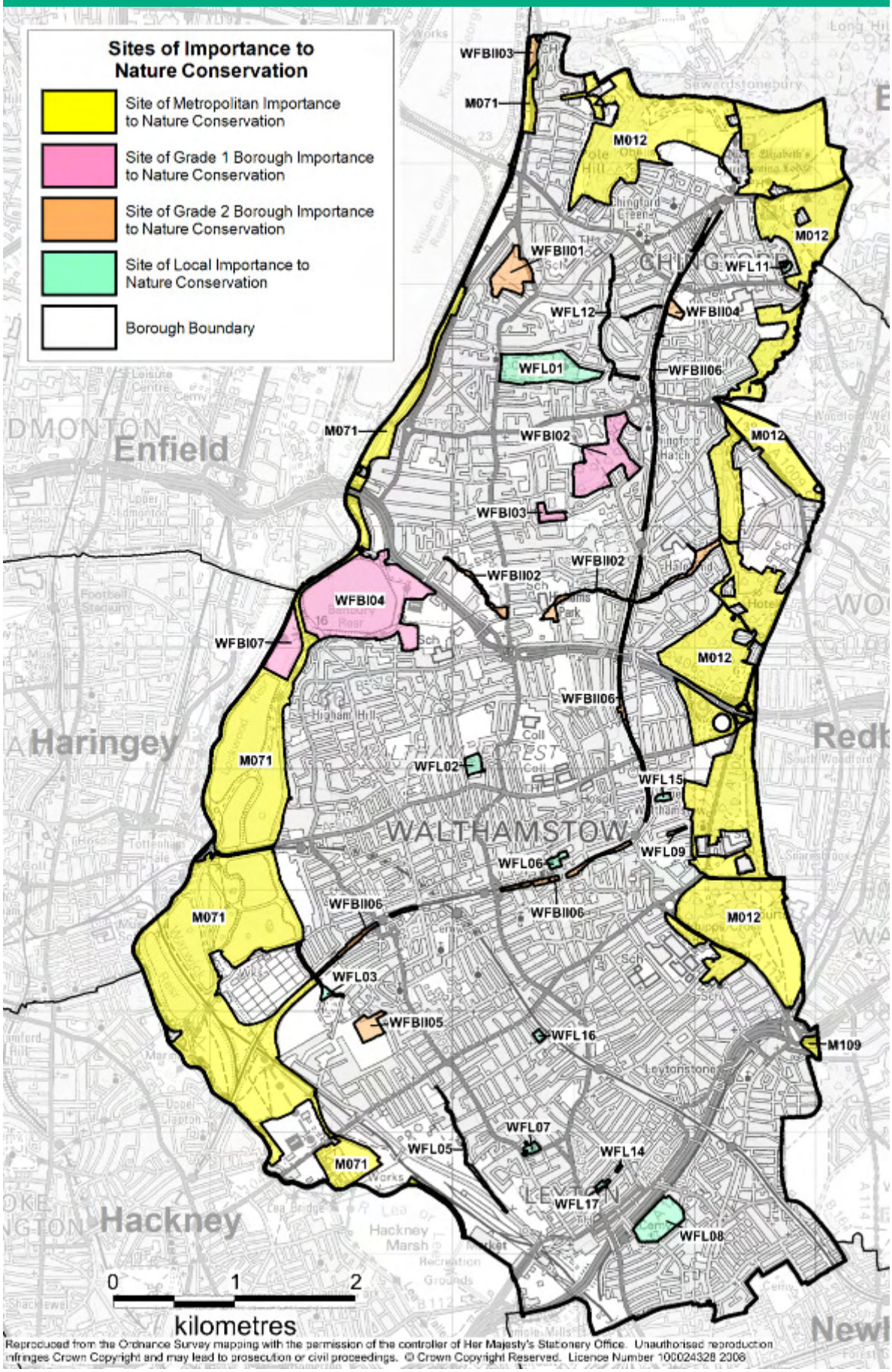
Wildlife sites in Waltham Forest



Sites of Importance to Nature Conservation

Site No.	Site Name	Area	Main Habitats
M012	Epping Forest North	413.41 ha	AG, NG, RS, SW, W, WP
M071	The Lee Valley	321.17 ha	FG, GC, NG, RS, SW, W
M109	Epping Forest South	1.82 ha	AG, NG, RS, SW, W, WP
WFBI02	Larks Wood	17.98 ha	W
WFBI03	Ainslie Wood	2.05 ha	W
WFBI04	Banbury Reservoir	55.03 ha	AG, SW
WFBI07	Tottenham Marshes East	9.38 ha	FG, NG
WFBII01	Mansfield Park	8.41 ha	NG, PU
WFBII02	Ching Brook in central Walthamstow	7.46 ha	GC, NG, RS
WFBII03	Sewardstone Road Rough	1.85 ha	NG
WFBII04	Pimp Hall Nature Reserve (formerly WFL10)	1.32 ha	NG, SW, W
WFBII05	Low Hall Flood Meadows (formerly WFL04)	3.77 ha	FG
WFBII06	Chingford to Walthamstow Railsides	15.42 ha	GC
WFL01	Chingford Mount Cemetery	16.54 ha	CC, SW
WFL02	Lloyd Park	1.95 ha	PU, SW
WFL03	Low Hall Wood	0.94 ha	W
WFL05	Dagenham Brook	1.8 ha	GC, RS
WFL06	St Mary's Churchyard, Walthamstow Village	1.18 ha	CC
WFL07	St. Mary the Virgin Churchyard, Leyton	0.94 ha	CC
WFL08	St Patrick's Cemetery	9.34 ha	CC
WFL09	Greenway Avenue Wood	0.41 ha	W
WFL11	The Copse	0.58 ha	W
WFL12	Green Lanes	1.83 ha	GC
WFL14	Newport Schools Nature Area	0.15 ha	PU
WFL15	Bisterne Avenue Park	0.64 ha	PU
WFL16	Leyton Manor Park	0.6 ha	PU
WFL17	Sidmouth Park	0.56 ha	PU

Notes

Epping Forest sites: Chingford Plain (West), Hawk Wood & Pole Hill, Chingford Plain (East) & Bury Wood, Warren Pond & Whitehall Plain, Hatch Forest & Hatch Plain, Highams Park, Oak Hill, Walthamstow Forest (North), Walthamstow Forest (South), Gilbert's Slade & Rising Sun Wood, Leyton Flats, Wanstead Flats & Bush Wood, Hawkwood Lodge Field Study Centre (WFBI01).

Lee Valley sites: Walthamstow Reservoirs, Walthamstow Marshes, Essex Filter Beds, Lee Diversion & Margins, Spencer's Farm. WFBII06 Chingford to Walthamstow Railsides includes the former WFL13 Walthamstow stations wasteland.

Site numbers issued by Greenspace Information for Greater London (GiGL). Two additional sites are managed by Waltham Forest Council - Whitehouse Woods (The Haven), which is part of M012, and Waltham Way which is part of M071.

Key to Main Habitats: AG - Acid Grassland, CC - Churchyards & Cemeteries, FG - Floodplain Grazing Marsh, GC - Green Corridors, NG - Neutral Grassland, PU - Parks & Urban Greenspaces, RS - Rivers & Streams, SW - Standing Water, W - Woodland, WP - Wood Pasture.

Habitat Action Plan - Acid Grasslands

Acid grassland generally consists of fine-leaved grasses and herbaceous wildflowers and frequently forms a mosaic with lowland heath and mire. It is often found over sands and gravels on acidic soils which are poor in nutrients.

Nationally we have lost 95% of our species rich grasslands and around 2000 hectares of pastures and meadows important for conservation remain in Essex and London. There are nearly 100 hectares of meadow of conservation importance in Waltham Forest, and about 85 hectares of this is acid grassland much of it located within Epping Forest.

Current status

Acid grassland is a London Priority Habitat and is entirely located in the north and east of the Borough, crossing the boundaries of Epping Forest and Redbridge Districts. The three main areas containing this type of vegetation are Woodford Golf Course, Leyton Flats and Gilberts Slade/Rising Sun, with smaller patches remaining on Chingford Golf Course and Chingford Plain.

The vegetation is dominated by plants resistant to grazing and the presence of extensive patches of Gorse, Mat-grass and Heath Rush betray a long history as grazed pasture.

Factors affecting the habitat

The cessation of cattle grazing is the major cause of decline in acid grassland habitat. Safety scares and changes in market conditions has led to increasing difficulty in securing stock for the area, while the lack of fencing makes grazing difficult to control.

Those areas of acid grassland not in the management of the Corporation of London may be threatened by changes in grassland management. Drainage, pesticide use, enrichment and different mowing regimes can all result in a more uniform sward with a decline in species associated with acid grassland. Scrub is also beginning to increase within the grassland areas

The growth of leisure activities has led to increased pressure for car parking and surfaced paths, with erosion from bikes, walkers, and horse riding.

Air pollution and dog walking may alter the plant species present by increasing the amount of available nutrients within the soil, thus favouring vigorous plants to the detriment of the fine-leaved acid grassland species.

Warmer temperatures and a longer growing season, combined with a possible growth benefit from higher CO2 concentrations, might be beneficial for grassland in general. But there are other issues, including summer droughts that might have longer term deleterious effects, and increased winter rain causing flooding and erosion. Changes to temperature can also affect the life cycle of pests and diseases and cause weed problems.

Legal status

All of the areas of acid grassland described are part of Epping Forest Special Area of Conservation, and many of the small patches are designated Sites of Special Scientific Interest.

Furthermore, Epping Forest is owned by the Corporation of London and protected under the Epping Forest Act 1878 as Public Open Space.

Management and restoration

The grasslands and heaths owe their existence and diversity to grazing. This is the ideal management tool for these areas, as it provides a varied sward height for different plants and insects and can create areas of bare ground for seedling establishment.

The Corporation of London's Epping Forest Team manages most of the acid grassland in Waltham Forest.

Because of the difficulties and delay in securing cattle grazing, an interim mowing regime has been adopted to maintain the grasslands until such times that extensive grazing returns.

Aims

To halt the degradation of acid grassland in the Borough.

To expand the habitat where opportunities exist.

To promote the value of acid grassland and secure the involvement of local people in its conservation.

Leyton Flats

Habitat Action Plan - Built Environment

Even the built environment of Waltham Forest can provide opportunities for wildlife. Swifts and House Sparrows have long used buildings for nesting and people have for many years planted their balconies to attract insects, hung out bird feeders and fixed bird and bat boxes. Recently, new ideas of green and brown roofs and living walls are already providing additional wildlife havens in otherwise stark surroundings.

New vertical surfaces with trellises fixed to them can become living walls with planted native ivy. Many old walls covered with ivy provide food and shelter for a wide range of wildlife and even nesting sites for birds.

Roof gardens or plants in containers can provide shelter and food for insects and birds. Water features, with appropriate planting, can be home to dragonflies and other aquatic invertebrates. Sustainable Urban Drainage Systems (SUDS) capturing rainwater from roofs and hard surfaces can be used to create wetland features and reduce flood risk.

Green roofs not only attract wildlife but reduce flood risk by capturing rain, improve the thermal performance of buildings and help reduce the urban heat island effect. They help provide stepping stones for wildlife moving through built-up areas.

Road and rail infrastructure and utility buildings can also make a positive contribution to wildlife habitat. Refuges for insects can be bought off-the-shelf and fixed to balconies, whilst a water pumping station in Waltham Forest has a brown roof designed specially for Black Redstarts.

Factors affecting the habitat

Wildlife features in new buildings may be resisted by designers unfamiliar with them but there are now many successful examples to build confidence.

South facing living walls may not be successful for attracting wildlife, and nest boxes should also avoid prolonged sun. However without some warming sun, insects will be less likely to use the features.

Developers may fear that climbing plants will damage buildings, whereas in most cases they help protect them.

As air quality improves sensitive plants are more able to withstand urban living.

Some features need to be carefully designed to attract particular target species, e.g. brown roofs for Black Redstarts, but detailed knowledge exists with many reference sources.

New buildings will have to be designed to cope with warmer weather, in which keeping cool will be important, more extreme and wet weather, and increased subsidence risk. Flood risk areas will increase requiring measures for both resistance for initial protection and resilience for rapid recovering.

Legal status

Listed buildings and other structures in Conservation Areas may restrict options for biodiversity. Bats and their roosts and birds nesting in buildings are protected by law.

Management and restoration

Biodiversity features should be designed into new building or refurbishments at the start. Planning applications are a tool to direct developers towards SUDS and wildlife features.

Wariness of some new ideas needs to be overcome by clear best practice guidelines and demonstration projects.

Residents can make a significant impact with guidance and encouragement.

Aims

To protect existing wildlife living on and in built structures.

To stimulate incorporation of traditional and new biodiversity features in built development.

To increase awareness and participation in providing wildlife habitat and features.

Windsor Road, Leyton

The Ridgeway, Chingford

Osier Way, Leyton

Habitat Action Plan - Churchyards and Cemeteries

Churchyards are burial grounds adjacent to a church building. The church buildings may themselves be important for wildlife. Cemeteries are interdenominational burial grounds in municipal or private ownership, that may also contain chapels or other habitats.

In Waltham Forest, these burial grounds include habitats of grassland, woodland, scrub and wetland. Churchyards may contain some of the oldest remnants of undisturbed grassland because of their early enclosure of the countryside and lack of disturbance. Gravestones, monuments and walls in churchyards and cemeteries provide masonry habitat similar to rock outcrops that are rare in the urban context. These may be home to ferns, lichens, and invertebrates. Fungi and mosses are also features of some burial grounds.

Current status

The total area of churchyards and cemeteries in Waltham Forest is about 36 hectares (89 acres) spread across 17 sites. St Patrick's Cemetery, St Mary's Churchyard Walthamstow and St Mary's Churchyard Leyton have been designated as Sites of Local Importance for Nature Conservation.

Factors affecting the habitat

A general preference for neatness can make management for biodiversity unwelcome. Short grass paths for easy access to graves does not aid conserving flower-rich grassland. Cleaning masonry and gravestones damages lichen. Herbicides need to be used carefully. Maintenance actions and wildlife development need to be balanced through consultation with users.

A shortage of burial space in the Borough has led to practices of squeezing new graves between old ones or onto paths and verges, loosing valuable flower-rich areas. Lack of land is putting pressure on wooded areas in cemeteries to be cleared.

Current legislation allows private cemeteries to be sold for development. Grave monuments in municipal cemeteries may not have protection (unless specifically listed) and may be removed or destroyed. This has allowed clearance of older sections of cemeteries destroying both historic and wildlife interest.

Many of Waltham Forest's churchyards and cemeteries are now closed to burials but enjoyed as quiet spaces. But their secluded nature attracts anti-social behaviour and calls to clear scrub for increased visibility can harm wildlife habitat.

With the emphasis on formal management, climate change will probably have less of an impact on our churchyards and cemeteries, than it will on other semi-natural habitats. The warmer temperatures may make pests and diseases more virulent, while higher rainfall may create weed problems and extend the mowing season. Summer droughts could also increase the stress on mature trees and future planting may need to include more Mediterranean species.

Legal status

Generally churchyards and church buildings are controlled by the Bishop. Any alterations require his consent. Responsibility for maintaining churchyards rests with the Parochial Church Council for the parish, except where closed and passed to the Council to maintain as public open space. Buildings and other structures can be 'listed' for protection and trees protected by Tree Preservation Orders.

Management and restoration

It is important for managers to find out the nature conservation value of churchyards and cemeteries and their potential for biodiversity.

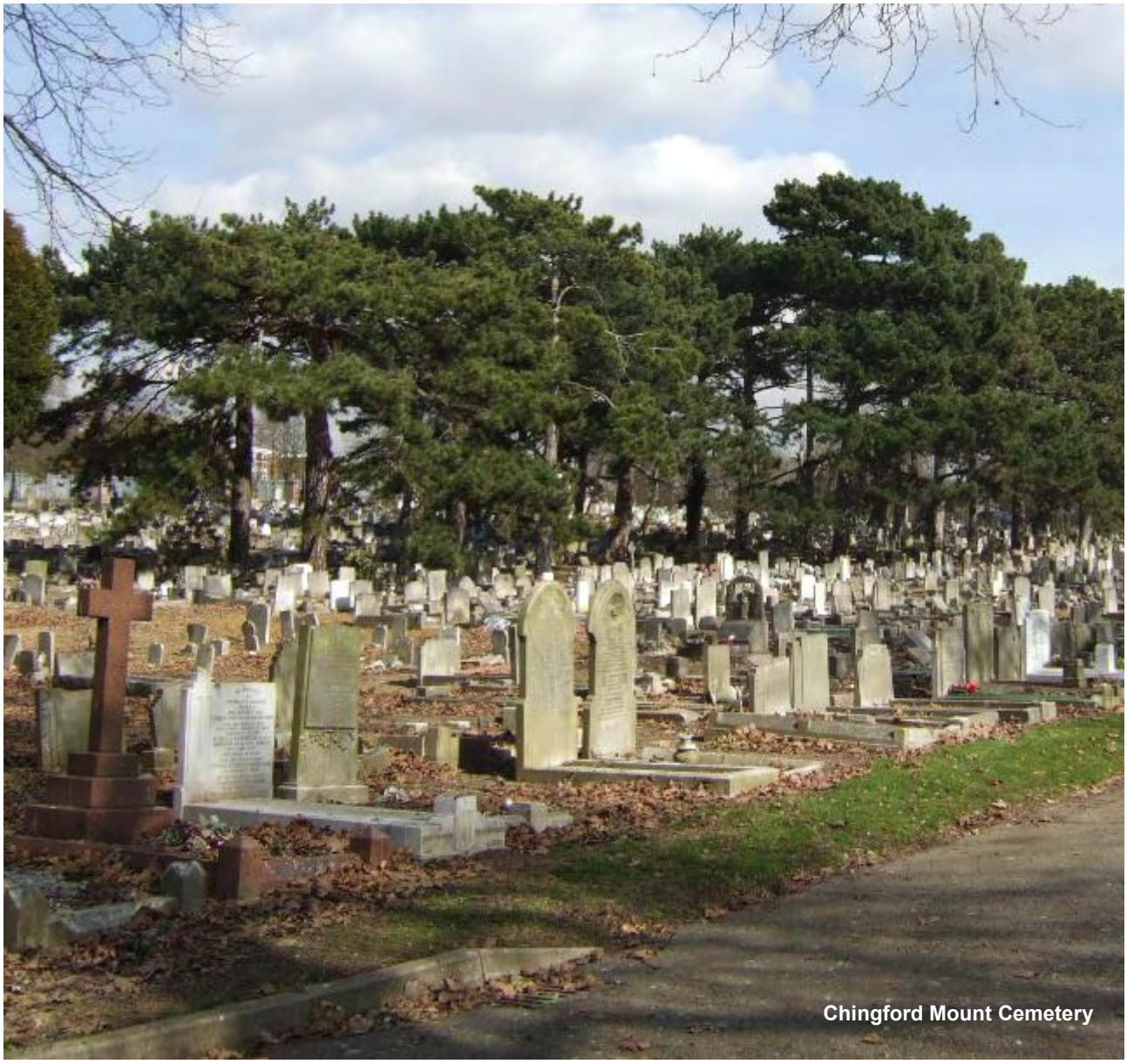
Consultation with users will help allow a balanced approach to wildlife management which also meets the other needs of visitors. Consideration should be given to maintaining long grass areas, deadwood habitat, and native tree and shrub areas.

Aims

To respect the primary purpose of cemeteries and churchyards as places of burial whilst sensitively promoting their value for wildlife.

To increase awareness of the biological and historical importance of churchyards and cemeteries.

To promote appropriate management of churchyards and cemeteries.



Chingford Mount Cemetery

Habitat Action Plan - Floodplain Grazing Marsh

In Waltham Forest these are grasslands found close to rivers and streams which are waterlogged for part of the year and which were traditionally farmed as grazing land or hay meadows. This habitat is restricted to an area of Walthamstow Marsh and is owned by the Lee Valley Regional Park Authority. Prior to 1900 this area was all floodplain grassland, with a hay crop taken by the end of July, then grazed until April.

The habitat is species-rich meadow with Meadow Rue, Lady's Smock and Adder's-tongue Fern in the wetter parts. The grassland is also rich in invertebrates such as the Orange-tip butterfly and Roesel's Bush Cricket. Grass Snakes and Water Voles are present along ditch sides, along with Common Frog, Common Toad and Smooth Newt. Low water levels have assisted the invasion of uncharacteristic plants including Bramble.

Current status

This is a rare habitat in the Borough, restricted to about 20 hectares on Walthamstow Marsh, which is managed as a nature reserve and is a Site of Special Scientific Interest (SSSI). Natural England has assessed most of the Walthamstow Marshes to be in 'unfavourable declining' status requiring remedial action to restore it.

Factors affecting the habitat

Traditional grazing ceased in the early 20th century and without other management coarser grasses began to take over. Without hooves disturbing the ground and incorporating seed, the grass becomes more uniform in structure. Cattle grazing was reintroduced in 2003, this requiring care to avoid conflict with public access.

In the last 50 years river management has changed so that the river rarely floods in winter now. Low summer water levels in the river have allowed the floodplain to dry out. To rectify this a new water source is needed.

Continuous management is needed to prevent succession to courser grasses, bramble and scrub. In the ditches, vegetation change through succession requires rotational clearance.

Invasive species in the ditches also threaten wildlife such as Water Fern (*Azolla*), Floating Water-pennywort, Parrott's Feather and Swamp Stonecrop (*Crassula*).

A significant increase in amenity use in the last 15 years may have affected the habitat through disturbance of breeding birds, and dog faeces enriching areas beside paths.

Warmer temperatures and summer drought could cause the marsh to dry out, creating better conditions for scrub and invasive weed species, while winter flooding and erosion may have the opposite effect and lead to the formation of a permanent water body.

Legal status

Walthamstow Marsh has national legal protection as a Site of special Scientific Interest (SSSI).

Management and restoration

Floodplain grassland owes its diversity to continuous management. Whilst mowing can go a long way to retaining wildlife interest, it is the return of grazing that would restore the full biodiversity value of the marsh.

Mowing is expensive and generates waste.

Aims

To improve the condition of floodplain grassland to 'favourable' status.

To promote the value of the habitat and secure the involvement of local people in its conservation.

These aims are dependent on the landowners and statutory authorities rather than Waltham Forest Council.

Walthamstow Marsh

Habitat Action Plan - Green Corridors

A major threat to sustaining biodiversity is fragmentation of habitats. When links are lost between 'islands' of habitat, wildlife becomes isolated and the small populations are vulnerable and less robust. Small disconnected areas tend to have a lower wildlife value. It is therefore important to plan action not just for habitats but for the *network* of natural habitats to allow wildlife to move around.

Corridors such as vegetation along railway lines, canal sides and rivers, hedges, and lines of trees along road verges, provide links between habitats for more mobile species such as birds, bats, insects and mammals. Gardens can provide valuable corridors for wildlife to move along too. Historic green lanes provide mature and diverse corridors.

Current status

The River Lea provides an intermittent corridor along the west of the Borough, but could be improved by habitat enhancement on neighbouring land such as the reservoir boundaries. Epping Forest provides good north/south connecting habitat and links to this need to be strengthened. There are restricted east/west corridors in the Borough due to the open landscape character of the reservoirs and surrounding grassland.

Existing open spaces provide variable value as links. Playing fields are poor, whilst parks with shrubs and mature trees have greater value.

Factors affecting the habitat

The best green corridors have both aerial and ground level habitat. Park trees over short-mown grass have some value (e.g. for bats) but creating layers of vegetation is best. Open-bottom hedges are less interesting than wide hedge bottoms with plenty of grasses and flowers, while retaining deadwood and leaving long grass margins creates diversity.

For insects it is important to provide nectar sources at intervals for re-fuelling. Hedge cutting and ditch clearance should be carried out on rotational sections or alternate sides to avoid 'sterilising' the whole corridor until the vegetation grows back.

For many non-flying animals wide roads and railways can be an impassable barrier. Habitat links under railway and road bridges can help keep some connection, for example toad tunnels and culverts for mammals.

Over-shading or trampling of river banks and corridors should be avoided to allow low vegetation to grow. Re-profiling steep banks can allow water margin habitat to develop.

The longer growing season resulting from warmer temperatures and wetter weather may lead to an increase in the spread of scrub and invasive weed species along corridors. This will be beneficial to most species, providing more cover for breeding and foraging.

Management and restoration

The East London Green Grid (ELGG) provides a strategic policy background for increasing connected open spaces for wildlife and access. This and the Lee Valley Landscape Strategy (LVLS) identify project ideas to achieve this. Finer scale study is needed to map the connectedness of small habitats across the Borough and look for opportunities for ecological linkage through more street trees, new landscape planting in existing open spaces, improved management of existing habitat links and hedges, and new planting through development.

Aims

To assess and map the existing ecological network links and gaps.

To protect green corridor links.

To enhance the ecological continuity of existing green corridors.

To create new green corridors in areas of deficiency.

To work with others to combine benefits for wildlife and access through green corridors.

Marsh Lane Fields

Footpath in Chingford

Footpath along River Ching

Street trees in Higham Hill

Habitat Action Plan - Neutral Grassland

Generally growing on fertile, clay soils, these grasslands support a rich variety of wild flowers and insects, if they have not been ploughed, or otherwise disturbed. Improved grassland refers to those areas that have been changed through herbicide and fertliser application or re-seeding, and these are covered in the Parks and Urban Greenspaces HAP. Neutral grassland comprises pasture which is generally grazed through most of the year, and meadows which are left to grow until July when hay is cut, and then grazed.

Species associated with neutral grassland include Skylark, Yellow Wagtail, Grass Snake, Pepper Saxifrage, Spiny Rest-harrow, Yellow Meadow Ant, Small Copper butterfly, Burnet Moths, Moles, voles and shrews.

Current status

In Waltham Forest neutral grassland covers about 60 hectares. Nationally, we have lost 95% of these semi-natural grasslands over the last century through agricultural improvement. Not only has the extent of the habitat been greatly reduced but many of its species have been lost.

Traditional pasture land in Waltham Forest can be found at Pole Hill, Daisy Plain, and Chingford Plain in Epping Forest. Old hay meadows can be found in parts of Mansfield Park and Essex Filter Beds.

Factors affecting the habitat

Loss of cattle grazing is the major cause of decline in grassland habitat quality. The assemblage of plants was shaped by often centuries of grazing. Reduced grazing allows the growth of rank vegetation and scrub, and loss of characteristic plants.

Drainage, applying herbicides, enrichment by fertilisers, and inappropriate mowing can all result in a more uniform grass sward and decline in species numbers. In the absence of grazing, mowing will keep the grassland in better condition but can still lead to loss of sensitive species and affect insects. Areas with ant hills cannot be mown.

Stopping grazing and lack of mowing has meant scrub and woodland plants have increased. Without control of scrub, grassland habitat will be lost along with its dependent species and special landscape quality.

Increasing leisure activity brings pressure for car parking and surfaced paths. In heavily used areas, bicycles, walkers and horse riders have caused erosion and disturbance to reptiles and ground-nesting birds. Dogs enrich grass besides paths and this favours more robust plants such as docks and nettles to the detriment of less vigorous species.

Climate change - see Acid Grassland Habitat Action Plan.

Legal status

Most of the Borough's remaining meadow and pasture lies in Epping Forest owned by the Corporation of London (C of L). This is a Site of Special Scientific Interest (SSSI), which affords national legal protection, and a Special Area of Conservation which gives international protection under the EU Habitats Directive. Neutral grassland at Tottenham Marshes is owned by the Lee Valley Regional Park Authority (LVRPA) and protected within a SSSI. Other neutral grassland is designated as Metropolitan Open Land.

Management and restoration

Meadows and pastures owe their character to cattle grazing. This is the ideal management as it provides varied sward height for different plants and insects and creates bare ground for seedlings to grow. Where cattle grazing is not possible, horses are a second choice.

Without grazing, mowing will maintain the habitat in better condition than leaving it unmanaged.

Areas of recently established grass and improved grassland such as parks and verges can be enriched with pasture species to the benefit of biodiversity but not re-creating the true ancient meadow community.

Opportunities for creating wildflower-rich grassland are found in the Parks and Urban Greenspaces HAP and Green Corridors HAP.

Aims

To halt the degradation of neutral grassland in the Borough and improve its quality.

To expand its area where opportunities exist.

To promote the value of meadows and pasture and work with local people to actively conserve the habitat.

Highams Park

Habitat Action Plan - Parks and Urban Greenspaces

Parks and urban greenspaces include: Victorian urban parks; allotments; the grounds of schools, hospitals and housing developments; playing fields; and open grassland around reservoirs. Many of these formal areas are of limited value for wildlife, with predominantly non-native trees and ornamental plants, and with intensively managed, frequently cut recreational grasslands. However, parks in particular may represent the largest area of greenspace accessible to local people to experience the natural world and enjoy wildlife. Great opportunities exist for habitat creation and management in these high profile areas. The 34 allotments sites, however, may be home to a range of wildlife, with habitats of rough grass, and trees and shrubs on the boundaries.

Current status

The total area of parks and urban greenspaces in Waltham Forest is about 300 hectares. Most of this area is managed by the Council. Several sites have been designated as Sites of Borough Importance for Nature Conservation and some others as Sites of Local Importance for Nature Conservation. Conservation groups carry out valuable nature conservation work in some parks and greenspaces, and some school grounds have wildlife areas often with a pond.

Factors affecting the habitat

While many people enjoy wildlife in parks, others desire formal landscapes and consider wildlife habitat to be untidy. Public perceptions of safety can also affect management of green spaces e.g. removing shrubs and filling in ponds, making the area less attractive to wildlife.

Grounds maintenance such as frequent mowing, use of herbicides, and excessive tidying of shrub beds, can affect biodiversity. Although some habitats in parks and open spaces are managed sensitively for wildlife, lack of management or poor management is a key issue.

Heavy usage, trampling and noise affect wildlife. Lighting in parks and sports fields can disturb night-flying insects, interfere with bat foraging, and modify behaviour. Vandalism to young trees and plants can affect habitat quality. Costs of dealing with anti-social behavior may impact on nature conservation budgets.

Within Waltham Forest many parks and greenspaces are surrounded by urban development which isolates populations. Selling off playing fields and infill development and encroachment in parks can further fragment habitat into smaller, more fragile areas.

Climate change will give rise to increased plant growth, earlier flowering and longer growing seasons, more frost damage, water stress in summer leading to plant losses, increased virulence of pests and diseases, more potential for garden ‘escapes’ to become problem weeds, reduced effect of chemical weed control in hot, dry summers, the range of plants grown will change, and lawns will become more difficult to maintain due to the effects of drought.

Legal status

The Borough's UDP protects greenspace as Metropolitan Open Land. Some reservoir land and water has international protection for its bird interest. Other spaces are protected through policies in the UDP but have little or no statutory protection except through Tree Preservation Orders or Conservation Areas.

Management and restoration

Over three quarters of the area within parks and greenspaces is species-poor grassland. Relaxing mowing creates better habitat for wildlife, wildflowers can be added, and pockets of native scrub encouraged.

More schools can be encouraged to develop conservation areas, and native shrubs can replace some exotic planting around buildings.

Hidden "untidy" areas of deadwood and "weeds" can attract invertebrates. Restoring habitat connections, providing refuges and improving habitat quality all help biodiversity.

Aims

To increase biodiversity and encourage good conservation practice in the Borough's parks and urban greenspaces.

To raise awareness of the importance of parks and urban greenspaces for nature conservation .

To work alongside local people to promote enjoyment of wildlife and semi-natural landscapes in parks and greenspaces.

Lloyd Park

Habitat Action Plan - Private Gardens

Although not generally thought of as a wildlife habitat, private gardens cover a large area of Waltham Forest.

Gardens contain a wide variety of trees, shrubs, flowers, hedges, rough grass and ponds, and when considered as a whole represent an immense resource for wildlife in the Borough. Gardens also act as important green corridors, connecting otherwise isolated habitats. 'Mini gardens' on roofs, or window boxes, pots and baskets can also help wildlife, along with bird tables and bird boxes.

Many species now depend on gardens for their survival such as House Sparrows and Swifts. Blackbirds, Robins and Hedgehogs are more common in gardens than natural habitats. Slow-worms may live in compost heaps, Stag Beetle larvae in rotting wood, Common Frogs in a pond and bats in roof spaces. Gardens are usually the closest point of contact people have with nature and gardening is the most popular hobby in the UK.

Current status

Gardens cover about 20% of Waltham Forest's greenspace and constitute one of the largest single land uses. Private residents are the biggest owners of gardens followed by the Council, Housing Associations and businesses.

Factors affecting the habitat

Pressure to build more homes is leading to the redevelopment of larger plots to high-density housing and building in back gardens, with the loss of garden area.

Paving over front gardens for off-street parking reduces wildlife habitat and may affect street trees. Hard surfacing and decking of back gardens is increasing.

Trees may be considered a problem near buildings because of, leaves blocking gutters and making hard surfaces slippery, or reducing light. Building subsidence through the action of tree roots is a serious concern sometimes involving considerable cost. Mortgage lenders and insurance companies may require trees to be removed near houses.

The way we maintain our gardens can reduce their value for wildlife, such as the insensitive use of insecticides, herbicides and even slug pellets, which may dramatically affect the food chain.

Over-tidiness can reduce the value of the garden habitat. Cutting back vegetation during the bird nesting season can prevent successful breeding. Allowing invasive weeds to thrive takes space from more desirable plants.

Climate change - see Parks and Urban Greenspaces Habitat Action Plan.

Legal status

National planning law and local planning policies can help prevent over-development, but cannot prevent an overall loss of garden area. Conservation Areas and Tree Preservation Orders can protect garden trees of particular amenity value. National wildlife legislation protects some garden species such as nesting birds, bats, Badgers, Slow-worms and Great Crested Newts.

Management and improvement

There is increasing interest in wildlife gardening with frequent articles in the press and on television, and huge resources on the internet.

Gardeners are encouraged to provide piles of deadwood and compost heaps to attract

invertebrates and Slow-worms, nectar-rich plants as food sources for butterflies and moths, wildflower areas for insects, native trees and shrubs for insects and birds, ponds for dragonflies and frogs, nest boxes for birds, refuges for amphibians, bat boxes, and over-wintering refuges for insects.

Aims

To establish baseline information about the status of wildlife in gardens.

To increase the number and area of gardens managed sympathetically for wildlife.

A Chingford garden

Habitat Action Plan - Rivers and Streams

There are several free-flowing watercourses in Waltham Forest including the River Lea, Ching Brook, the Coppermill Stream and Dagenham Brook. These provide habitat for a range of aquatic and wetland species. These watercourses and the land through which they flow provides and important corridor for wildlife to move between linked habitats. These rivers are also valued for quiet recreation such as walking, fishing and boating.

Bird life is abundant along much of these watercourses, such as Kingfishers, and bats can be seen at some locations feeding over the water at dusk. In the more natural reaches the banks are home to emergent plants like Common Reed and Arrowhead, where you may see water voles and damselflies. Recently the signs of returning Otters have been seen. In the water you may see Barbel, Three-spined Stickleback and trout.

Current status

The combined length of the rivers and streams in Waltham Forest is about 44 kilometres. The River Lea within Waltham Forest has lost its natural character, running between canalised vertical banks but despite this is designated a Site of Metropolitan Importance for Nature Conservation (SMINC). The River Ching retains a natural character in the north but becomes a canalised but pleasant river as it flows west, and this section is designated a Site of Borough Importance. The Coppermill Stream is part of a SMINC and has a more natural appearance. Dagenham Brook is the most urbanised river in the Borough and suffers from poor water quality, fly-tipping, and invasive weeds.

Factors affecting the habitat

All the waterways have been affected by development, leading to a range of flood-prevention measures along their courses. This disrupts the natural flows and the wetland species that would have once been found along the banks and floodplain. Development up to the water's edge removes a natural buffer zone between the built environment and the water. Canalisation removes the important transition zone from water to land where most wildlife interest is found.

Nutrient enrichment and pollution are particular problems in the River Lea below Tottenham Lock and in the Dagenham Brook. Turbidity from silt run off and excessive weed growth reduces light filtering though the water, while wind-blown litter is unsightly and can be a danger to wildlife.

A number of invasive, non-native species of plants and animals threaten the native fauna. Japanese Knotweed and Himalayan Balsam form dense bankside stands and exclude more desirable native flora. American Mink exterminate Water Voles, and Signal Crayfish displace the native White Clawed Crayfish.

Many rivers are already running low and climate change could make the situation even worse as floods and droughts become more frequent. The Environment Agency estimate that river flows in some areas could be reduced by 80 per cent by 2050 and ecosystems in a third of river catchments are already in danger of drying out in a hot summer.

Legal status

Legal protection of the rivers is afforded through various legislation administered by the Environment Agency, controlling development and activities near and within the watercourses.

Management and restoration

Although the Borough's waterways have been adversely affected by urbanisation, appropriate management of adjoining Habitats can improve the value of the waterway for wildlife, by creating buffer zones. Bank re-profiling to create planting ledges and re-establishing marginal aquatic vegetation is valuable. Clearing invasive weeds allows natural vegetation to regrow.

Water quality can be improved by identifying and correcting sewer misconnections and industrial pollution sources, and by promoting Sustainable Urban Drainage Systems (SUDS through planning applications to reduce flood flows and capture silt and pollutants.

Aims

To improve water and habitat quality.

To increase awareness and participation in the conservation of rivers and streams.

Ching Brook

Habitat Action Plan - Standing Water

Waltham Forest has a range of lakes, reservoirs and ponds of widely varying sizes. These are particularly important for water birds and amphibians. Examples of the water bodies include Walthamstow, Banbury and Lockwood reservoirs, the Essex Filter Beds, five large pools in Epping Forest, and a number of smaller ponds in parks and gardens. Birds associated with these water bodies include Pochard, Tufted Duck, Shoveler, Goosander, Kingfisher and Common Tern. Bats also enjoy feeding over the water, and the ponds are home to Common Frog, Common Toad and Great Crested Newt. Standing water bodies are also home to wetland plants, fish and invertebrates such as dragonflies.

Current status

The areas of standing water cover about 270 hectares, dominated by the reservoirs. The reservoirs support populations of wetland birds of international importance, many of which breed here. One of the largest heronries in Britain is situated on wooded islands within the Walthamstow Reservoirs. Banbury Reservoir is designated a Site of Borough Importance for Nature Conservation. Hollow Pond on Leyton Flats is the next largest but is heavily disturbed as a popular recreational area. Other ponds vary in wildlife value and Great Crested Newts can be found in many of the ephemeral ponds in Epping Forest which also have an exceptional range of dragonflies. The Essex and Middlesex Filter Beds are open water habitats now well-colonised with wetland plants attracting many birds and birdwatchers, and form part of the Lee Valley Site of Metropolitan Importance for Nature Conservation.

Factors affecting the habitat

Over the years many ponds have been filled in or their value destroyed through pollution or enrichment of the water. Lack of management has also led to scrub encroachment shading out wetland habitat.

High levels of recreational use especially around Warren Pond and Connaught Water damage banks and edge habitats. Dogs and people disturb wildlife. Feeding ducks causes enrichment.

Problem species upset the ecological balance. Excess fish from households and introduction of fish for angling (e.g. carp) can cause overstocking. Non-native pond plants have been introduced which can take over a pond. People have introduced Signal Crayfish and Red-eared Terrapins which can take eggs.

Careless angling practices threaten wildlife. Discarded hooks and heavy lines which do not break easily, and discarded litter can be damaging. Over-feeding of bait can reduce oxygen levels in ponds.

Ponds help to reduce flooding, but hotter drier summers could lead to many drying out, with large pools and lakes having very low water levels and/or suffering from intense algal blooms.

Legal status

The Walthamstow Reservoirs are protected nationally through their designation as a Site of Special Scientific Interest (SSSI) and Internationally as a Special Protection Area under the EU Birds Directive.

Much of Epping Forest is protected as a SSSI and Special Area of Conservation under the EU Habitats Directive, and ponds in these areas are legally protected.

Otherwise, although most standing water in the Borough is designated as either of Metropolitan or Borough Importance this gives no legal protection, resorting to the Borough's Unitary Development Plan to protect from development through planning control.

Management and restoration

Reservoirs are managed under strict operational regimes. Helping people to value and understand ponds helps reduce abuse. Pond banks require maintenance to prevent scrub encroachment and access to banks must be managed to control damage by excessive visitor pressure.

Aims

To increase awareness and participation in the conservation of standing water habitat.

To improve the quality of open water habitats where appropriate.

To promote the creation and restoration of ponds and areas of open water.

Hollow Pond

Habitat Action Plan - Wood Pasture

Wood pasture is a very special habitat of international importance. It comprises scattered broadleaved trees, set in grassland which is usually grazed by cattle or deer. Its historic roots mean that the trees are often centuries old and many have been pollarded (cut above the reach of grazing animals and allowed to re-grow). Wood pastures were widespread in the middle ages and up to the 19th century. This traditional method of management has produced gnarled and hollow trunks, with much deadwood, providing ideal conditions for a multitude of rare insects, fungi, bats and lichens.

The ancient trees are mainly Oak and Hornbeam.The grassland comprises open grassland plants but also includes some woodland edge flower species. There are few typical woodland plant species.

Current status

Much of Epping Forest is wood pasture and forms one of the largest habitats of this type in Europe. In Waltham Forest there is about 160 hectares of wood pasture, including Hawk Wood, Rising Sun Wood, Waltham Forest and Gilbert's Slade, all within Epping Forest and owned by the Corporation of London (C of L). The Corporation of London's Epping Forest Team manage most of the wood pasture in Waltham Forest.

Epping Forest is internationally important for its dead wood fauna and rare fungi.

Factors affecting the habitat

Pollarding officially stopped with the passing of the Epping Forest Act 1878, but it may well have ceased well before that. Overgrown pollards have long, heavy braches that either rip out or make the tree top-heavy so it falls over. Overgrown trees also produce denser shade which affects microhabitats and ground flora.

When the cycle of young to old pollards is broken, younger generations are lost as all the pollards become older. This can lead to a break in the supply of deadwood for the specialist wildlife dependent on it.

Grazing is the ideal way to keep the richness of the grassland, while browsing retains the shape of the pollard tree trunks. Concerns over safety and market conditions reduced grazing in the 1990s, such that rank vegetation and scrub has now developed, leading to a loss of habitat and a decline in dependent species. Mowing is difficult, expensive and less effective.

Climate change may bring fluctuations in groundwater levels, leading to water stress and potentially tree death. More frequent storm events, drought, and increased competition from more vigorous species, such as scrub and weeds, will all have an effect on the survival and distribution of wood pasture.

Legal status

All of the wood pasture habitat is within the Epping Forest Special Area of Conservation applied through the EU Habitats Directive. Most of the habitat is nationally protected through being Sites of Special Scientific Interest. The Epping Forest Act protects the area as Public Open Space.

Management and restoration

Many old trees have blown over and it is considered vital to re-pollard them to remove their top-heaviness. Corporation of London has been re-pollarding groups of trees but although Hornbeam responds well, oak does not if it has been left too long.

Cattle grazing has been re-introduced on some areas.

Mowing is undertaken in other places to maintain the pasture and prevent scrub growth.

Aims

To improve the condition of wood pasture in the Borough.

To promote the value of wood pasture and involve local people in its conservation.

Wood Pasture around Warren Pond

Habitat Action Plan - Woodland

Woodland in Waltham Forest includes areas of ancient woodland (at least 400 years old) and secondary woodland that has spread naturally on old agricultural or developed land. The woodlands are mainly in the north and east of the Borough. Wood Pasture has its own Habitat Action Plan.

Much of the ancient woodland in the Borough has been historically managed by coppicing (cutting on a rotational cycle and re-growing). Coppice woods are particularly rich in wildlife. Because of its age, ancient woodland is also of historic and archaeological interest. The predominant type is oak woodland but occasionally Hornbeam dominates where the soil is more acidic. The Corporation of London owns and manages most of the ancient woodland in the Borough. The Council owns Larks Wood and Ainslie Wood.

Secondary woodland comprises mainly sycamore and ash trees. Much has developed in the formerly open areas of Epping Forest since the decline in grazing. Smaller areas have developed in inaccessible areas such as along railways and behind houses.

Wet woodland, on poorly-drained soils, is important for its deadwood species.

Current status

Waltham Forest has about 228 hectares of woodland (although this figure also includes wood pasture, which it grades into). Of this about 70 hectares are secondary woodland and four hectares are wet woodland.

Factors affecting the habitat

Loss of traditional markets for small woodland products has resulted in little management over the last century. This has led to crowded and heavily shaded woodland with a decline or loss of wildflowers. Tree regeneration is also restricted. Another consequence is undesirable trees and shrubs such as Sycamore, Turkey Oak, Laurel and Rhododendron invading.

Although larger woodlands are well protected, small areas in urban areas are vulnerable to new housing and industrial development. Pressure for off-street parking and fears of causing subsidence results in tree loss near properties. Loss of small areas of woodland increases isolation of other woodlands.

Excessive amenity use or poorly planned access can damage vegetation and disturb wildlife. Increased leisure use brings pressure to provide parking and surfaced paths, with the removal of deadwood for safety concerns.

Woodlands are susceptible to climate change through greater forest fire risk, earlier spring bud growth and the increasing incidence of pest and disease attack on many tree species. Drought stress in summer and root waterlogging in winter will affect stability and increase the chances of wind throw.

Legal status

Epping Forest is strongly protected nationally as a Site of Special Scientific Interest and internationally as a Special Area of Conservation under the EU Habitats Directive. All the larger woods in the Borough are also protected through its UDP. Some smaller woods have non-statutory recognition of their wildlife value but small urban woods may have no legal protection. Some prominent individual trees are protected by Tree Preservation Orders. Bat roosts in trees have legal protection.

Management and restoration

Action is needed to remove non-native 'weed' trees and shrubs where appropriate. Tree thinning may be needed, woodland rides widened and coppicing re-started in neglected areas

Old traditional techniques can only be afforded through volunteers and some woodland management must adapt to meet modern timber markets.

Aims

To protect existing woodland habitat and tree coverage.

To secure appropriate management for all woodlands in the Borough.

To expand the total woodland area through new planting and extending existing woods.

To work with local people to encourage active community participation in improving, enjoying and learning about woodland and trees.

Whitehouse Wood

Larks Wood

Low Hall Wood

Bury Wood

Species Action Plan - Bluebell

The Bluebell *Hyacinthoides non-scripta* is a perennial herb belonging to the Lily family and is widely distributed and common throughout the United Kingdom. The drooping, blue bell-shaped flowers that give the plant its name appear from April to June. The Bluebell is abundant in broadleaved woodlands and hedgerows, particularly in damp, shaded environments.

Bluebells seed profusely and also multiply by offshoots from bulbs, so it usually occurs in masses and is often found carpeting the woodland floor in the spring.

It is intolerant of trampling, heavy grazing, water logging, deep shade and competition from vigorous grasses.

Current status

Bluebell is an 'Atlantic' species not reaching further east than western Germany and is absent from Scandinavia. It is of international importance, as 25-49% of the world population is found in the UK.

In Waltham Forest the Bluebell is often common on sandy lenses or light acid soils in woods and bracken-dominated scrub, and is also found in other habitats such as road verges, hedgerows, and well drained grassland.

Bluebell is usually thought of as a reliable indicator of ancient woodland, but recent studies have found that it can occur almost as frequently in secondary woodland and associated habitats.

Factors affecting the species

Habitat loss, particularly woodland and hedgerows.

Lack of management and leading to deep shade or competition with vigorous species such as brambles.

Inappropriate management such as grazing and problems from waterlogging and trampling.

Picking, uprooting and bulb removal, mainly for gardens.

Competition and hybridisation with Spanish Bluebell *Hyacinthoides hispanica*. This is widely planted and the two species may hybridise where the parent species grow together to form *Hyacinthoides hispanica x non-scripta*.

During periods of cold weather, spring flowers such as Bluebells, have already started the process of growth by preparing leaves and flowers in underground bulbs in summer and autumn. With the warmer springs induced by climate change, Bluebells will lose their 'early start' advantage, and be outcompeted by more temperature sensitive weed species.

Legal status

Bluebells are protected through provisions in the *Wildlife and Countryside Act 1981* which makes it illegal to intentionally uproot a wild plant and illegal to sell or offer Bluebells for sale. It is also illegal to pick Bluebells without the landowner's permission.

Mechanisms targeting the species

Epping Forest contains many areas of woodland that are home to thousands of Bluebells and are open for the public to enjoy. The District Council has responsibility to preserve these populations.

Plantlife International - the UK wild plant conservation charity, has produced a leaflet on our native Bluebell and how to protect them.

Aims

To increase knowledge of the status and distribution of Bluebells within the Borough.

To ensure appropriate conservation and enhancement measures are implemented on sites where Bluebells have been recorded and protect existing sites from damage and destruction.

Bluebells in Epping Forest

Species Action Plan - Pipistrelle Bat

Bats are highly adapted nocturnal mammals and are the only mammals to have evolved powered flight. Often thought of as flying mice, they are in fact more closely related to humans than to rodents, and form a special group of their own - the *Chiroptera*, meaning 'hand-wing'.

British bats only eat insects and a single pipistrelle may consume up to 3000 midges in a night. They are generally only seen briefly at dusk as they emerge from their roost sites. With the loss of natural roost sites in trees and woodlands, many bats have adapted to living in buildings, none more so than the pipistrelles. Their reliance on house and built structures for roosting greatly focuses conservation efforts on people's tolerance and goodwill. Bats are also excellent indicators of environmental quality, as their ecological requirements leave them highly sensitive to changes in the environment.

Current status

There are three species of pipistrelles in the UK: Common, Soprano and Nathusius'. The latter is rare and little known, but the other two are common and widespread and can be found in a variety of habitats.

A survey undertaken in 1999 found that there has been a significant decline in Greater London's bat populations since the mid-1980s, although this has tended to affect other species such as Noctule and Serotine far more than the pipistrelles, probably because the latter are highly adapted to the urban landscape.

Factors affecting the species

Destruction of, disturbance or damage to vulnerable maternity roosts can result from entrenched attitudes towards maintenance and management, a lack of public awareness and understanding of bats, as well as continued ignorance of the legislation protecting them.

Hibernation and other seasonal roost sites can be disturbed or damaged for the same reasons as above. These sites include buildings (mainly their roof spaces), trees, bridges and various underground structures, such as cellars, and disused tunnels.

Changes in land use (including development) can result in the loss of insect-rich feeding habitats such as wetlands, woodlands and grasslands.

Flight paths to and from feeding areas and roosts may be disturbed through the loss of flight line features such as green corridors, or through introduction of new features, e.g. artificial lighting.

The *Modelling Natural Resource Responses to Climate Change* report predicts that some bat species could benefit from the warming climate. The key seems to be that warmer winters allow more bats to survive and to be in better condition for breeding the following year.

Legal status

All species of bat are protected in the UK through their inclusion on Schedule 5 of the *Wildlife and Countryside Act*, 1981 (as amended by the *Countryside and Rights of Way Act*, 2000), and on Schedule 2 of the *Conservation (Natural Habitats & c.) Regulations*, 2010. The latter further implements European legislation protecting bats. Bats are also protected from cruel ill-treatment by the Wild Mammals (Protection) Act, 1996.

Mechanisms targeting the species

The place of bats in London life is promoted regionally and locally by organisations such as the London Bat Group and London Wildlife Trust, through a programme of guided walks, illustrated talks, training courses and articles.

The Bat Conservation Trust, Natural England and the London Bat Group have produced various publications, including a series of specifically targeted leaflets aimed at promoting best practice in relation to bats within the building, pest control and arboricultural professions.

Aims

To identify pipistrelle (and other) bat roosts and foraging areas within the Borough.

To raise awareness of pipistrelle bats and the need for their protection.

To secure the involvement of local people in the conservation of pipistrelle bats.

To ensure the protection of known bat roosts.

Common Pipistrelle Bat

Species Action Plan - Song Thrush

The Song Thrush is a relatively common and widespread species throughout the UK. Both sexes are alike, with adult birds having warm brown backs and upper parts and distinctive blackish-brown spots on the yellowish-white lower throat and breast. The Song Thrush is the second smallest of the six thrush species regularly occurring in Britain, and the smallest of the three resident species. In Waltham Forest it is only likely to be confused with the larger Mistle Thrush and in winter with the slimmer Redwing.

The Song Thrush has a distinctive loud and proclaiming song, which can be heard throughout the day, but most regularly before dawn and after sunset. The clearly uttered phrases and repetitions make the species one of the most beautiful of our native songbirds. In mid-January the suburban dawn chorus is often dominated by the calls of this species.

Song Thrushes can potentially be found in any habitat where there is a mixture of woodland, bushes and hedgerows, a preference that often brings it into parks, allotments and gardens. They nest low down in any suitable cover, but typically in shrubs, amongst creepers on walls or on the ground amongst thick vegetation. Their food includes worms, slugs, snails and fruit.

Current status

In London there has been a 29% decline in the population of Song Thrushes between 1994 and 2003, and nationally it is a Species of High Conservation Concern.

Factors affecting the species

Habitat loss - during the breeding season Song Thrushes need nest sites low in dense vegetation. Over-management of suitable habitat, including reductions in shrub cover or removal of hedgerows, are likely to be detrimental to Song Thrush numbers by reducing the supply of suitable nest sites and exposing nests to predators.

Research indicates that a number of combined factors may be affecting the regular food supply of Song Thrushes, leading in turn to pressures on fledgling birds in particular (about half of all fledglings die within their first 45 days, and two-thirds within 70 days), as well as possibly affecting the number of broods.

Increased predation by corvids (crows and Magpies), Foxes, cats and Sparrowhawks may be locally significant in reducing numbers of birds. However, research has indicated that Magpie and Sparrowhawk numbers on 250 study farms across lowland Britain are not connected to Song Thrush populations and the proportion of nests that are predated has actually fallen during the last 30 years.

As climate change leads to hotter, drier conditions, Song Thrushes, which have already declined in the southeast, will be driven further north in pursuit of the snails, slugs and earthworms they feed on.

Legal status

Song Thrushes and their nests are fully protected under the EC Birds Directive and the Wildlife and Countryside Act 1981 (as amended), which makes it an offence intentionally to kill, injure or take any wild bird. It is an offence intentionally to damage or destroy the eggs, young or nest of a Song Thrush while it is being built or in use. It is therefore essential to ensure nests are not destroyed if hedge trimming or tree felling has to be carried out in the breeding season.

Mechanisms targeting the species

The RSPB and the BTO are currently undertaking research into the ecology of the Song Thrush and into the causes of declines. The RSPB has prepared a plan for this species, which is in the UK BAP.

The Song Thrush is currently abundant enough to be fairly accurately monitored across the UK using the Breeding Bird Survey.

As there are indications that this species is increasingly seeking refuge in gardens, useful on-going information about this species can be obtained from national surveys such as the BTO/RSPB Big Garden Birdwatch.

Aims

To establish baseline data on the number of Song Thrushes within the Borough.

To raise awareness of Song Thrushes and the need for their protection.

To secure the involvement of local people in the conservation of Song Thrushes.

Song Thrush

Species Action Plan - Swift

Swifts are widespread all over Western Europe, breeding mainly in urban and suburban areas, where they are primarily dependent on the built environment for nest sites. They are a migratory species wintering in sub-Saharan Africa. Arrival in the UK is generally in the last week in April, with departure by the end of August.

Swifts may travel long distances (100 km) to where food is abundant, and all manner of aerial insects are eaten. Swifts are monogamous and the pair bond is maintained from year to year although only at the nest. The latter comprises a collection of feathers and other plant debris, all gathered from the air. These are stuck together with saliva to form a shallow cup, usually on a ledge or in a hole in a structure at least four metres above the ground. Breeding birds roost in their nest, while non-breeding birds roost on the wing. At dusk Swifts will ascend to 1000-2000 metres, where there is warmer air, and return to lower levels at sunrise. Evening ascent begins with birds circling and giving screaming calls, then bunching more tightly and climbing with rapid almost quivering wing beats. At height they flap only occasionally and then glide, probably dozing rather than sleeping deeply.

Current status

The British population is estimated at 80,000 pairs, although the present population of swifts in Waltham Forest is not accurately known. There is no firm evidence to suggest a decline, but recent peak counts have been lower than in the early to mid 1990s. Other urban species also seem to be declining due to a reduction in their insect prey, possibly

Factors affecting the species

Refurbishment of old buildings has led to a decline in nest spaces. Natural Swift nest sites are primarily crags, sea-cliffs, caves, and hollow trees, although nests of other species are occasionally used. Birds are faithful to their nest sites, usually not moving far when feeding. Most new buildings do not provide opportunities for Swifts to nest, and in many cases modern designs are not suitable for nesting.

The numbers of insects found in farmland/semi-urban areas has declined by 50% in the last 25 years, and this situation is thought to be replicated in the urban environment.

Swifts are migratory, and although they are fast and agile fliers, they are vulnerable to factors such as adverse weather, predation, hunting and lack of food.

The condition of the winter environment has an important role in determining the survival of adult and immature birds prior to and immediately after migration.

In response to climate change, more buildings are being repaired and better insulated. Open eaves with gaps and slats are being closed, and tiled roofs are tighter. This reduces nest sites.

Legal status

Swifts and their nests are fully protected under the EC Birds Directive and the Wildlife and Countryside Act 1981 (as amended), which makes it an offence intentionally to kill, injure or take any wild bird. It is an offence intentionally to damage or destroy the eggs, young or nest of a Swift while it is being built or in use. It is therefore essential to ensure nests are not destroyed if building works are carried out in the breeding season.

Mechanisms targeting the species

London's Swifts working with the RSPB, Swift Conservation, and the BTO, are currently undertaking research into the ecology of the Swift in London and into the causes of declines.

There is no UK Biodiversity Action Plan for the Swift.

The Swift is currently abundant enough to be fairly accurately monitored across the UK using the Breeding Bird Survey.

Aims

To establish baseline data on the number of Swifts within the Borough.

To raise awareness of Swifts and the need for their protection.

To secure the involvement of local people in the conservation of Swifts.

Common Swifts

Species Action Plan - Wall Butterfly

Formerly a widespread and common species, the Wall butterfly *Lassiommata mergera* is usually associated with a wide range of grassland habitats, but it is now an increasingly scarce butterfly throughout the region and appears to be undergoing significant decline.

While there have been some signs of more recent recovery in parts of southern Britain, this species is known to have experienced several expansions and contractions since recording began. For example, in the 1960s a series of cold wet summers is believed to have been the factor behind a marked decrease in the population, while more recently, some apparent expansion of range in the 1970s was followed by dramatic declines from the mid-1980s onwards.

Current status

The species is strongly associated with old industrial sites and canal towpaths and is probably still under-recorded within the area. Nationally, declines have been reported from most of inland lowland Britain with coastal areas now being the stronghold for this species. The reason for declines are not clearly understood and numbers have fallen on both managed and unmanaged sites.

No in-depth ecological studies have yet been carried out on the Wall butterfly, but the species favours areas of dry, unfertilised grassland, ideally with bare patches where the adults like to bask. Eggs are laid on various species of grasses but particularly Cocksfoot *Dactylis glomerata* Wavy Hair-grass *Deschampsia flexuosa* and Common Bent *Agrostis tenuis*.

The aspect of the foodplant however, is probably more important than the actual species of grass, as the Wall favours grasses where the adjacent ground has broken away to leave the tuft of grass exposed, such as within a depression caused by animal hoofprints or Rabbit grazing, or along a crumbling bank.

Factors affecting the species

Housing and industrial development, especially where this leads to fragmentation of suitable habitat.

Loss of grassland diversity and structure through agricultural improvement, and destruction of unimproved grassland.

Cessation of grazing, accidental fires and scrub encroachment.

The increased frequency of extreme weather brought about by climate change is a serious concern for the future. Droughts and flood events in spring and summer which destroy habitat, or unseasonal chilly weather, can adversely affect all the stages of the butterfly life cycle, leading to declines and potentially extinction.

Legal status

The butterfly has no specific protection, other than through general provision in the *Wildlife & Countryside Act 1981*.

Mechanisms targeting the species

Butterfly Conservation is the main UK organisation committed to protecting butterflies and moths.

Through its activities, the charity has raised awareness of the extent of butterfly declines and created widespread acceptance that action needs to be taken.

Local branches, and a network of several thousand volunteers nationwide, work with partner organisations to preserve habitat and provide advice on conservation of the species.

Aims

To establish monitoring at key sites as a means of assessing changes in status and distribution.

To raise awareness of the decline of the Wall butterfly and its importance in conservation management.

To promote protection and best practice management plans at all Wall butterfly sites.


Wall Butterfly

Objectives, actions and targets

Assess habitat quality and habitat change

Action	Lead	Deadline	Resources
Work with local bat group to survey the built environment for bat populations and suggest locations for bat box installation.	LBWF/ LVBG	2012	Yes
Encourage building owners to install bat boxes in key locations and along known bat foraging/commuting routes.	LBWF	Annually	Yes
Survey Chingford Mount Cemetery for wildlife value and potential for biodiversity.	LBWF	2013	Yes
Survey all parks for wildlife value and potential for increasing biodiversity.	LBWF	2013	Yes
Where relevant liaise with Environment agency and partnership groups to share information and support wider watercourse initiatives.	LBWF	Annually	Yes
Ensure all woodlands above 0.1 ha have up to date maps including identifying veteran trees, ancient pollards, ancient woodland indicators and non-native trees and shrubs.	LBWF/ C of L	2020	Yes
Ensure all woodlands above 0.1 ha have current management plans.	LBWF/ C of L	2020	Yes
Implement all woodland management plans using grants where possible.	LBWF/ C of L	2020 +	Yes

Increase habitat size and improve habitat quality

Action	Lead	Deadline	Resources
Draw up recommendations for balcony gardens, nest boxes and feeders and run a campaign to encourage occupiers to adopt these.	LBWF	2013	Yes
Through planning conditions and section 106 agreements require biodiversity features and SUDS to be included in developments.	LBWF	Annually	Yes
Produce management plans for all churchyards and cemeteries of biodiversity importance or potential, to support nature conservation and user wishes.	LBWF	2015	Yes
Increase wildlife habitats at Chingford Mount Cemetery, St Mary's Churchyard, Leyton, and Lloyd Park.	LBWF	2012	Yes
Incorporate recommendations for improving green corridors through the Council's open spaces into their management plans.	LBWF	2013	Yes
Where feasible increase the area of wildflower-rich grassland with appropriate management by 2020.	LBWF	2020	Yes
Create one pond at Pimp Hall for educational purposes (pond dipping).	LBWF	2012	Yes

Ensure policies support the protection of habitats

Action	Lead	Deadline	Resources
Include policies in Local Development Framework to require consideration of biodiversity and SUDS features in applications for built development, according to the best practice document.	LBWF	2011	Yes
Ensure development controllers are aware of legislation protecting bats and nesting birds, and that surveys and measures are required to avoid or mitigate impacts.	LBWF	2011	Yes
Ensure there is policy protection for green corridors in planning control linked to the Council's green corridor mapping.	LBWF	2011	Yes

Action	Lead	Deadline	Resources
Attach conditions to planning permissions and negotiate Section106 agreements requiring the creation and management of open spaces around developments which benefit biodiversity, based on strong policies.	LBWF	Annually	Yes
Put Tree Preservation Orders on identified veteran trees.	LBWF	Annually	Yes

Increase awareness of habitats and the need to conserve them

Action	Lead	Deadline	Resources
Develop biodiversity guidance for planning officers, building managers, designers and developers, to champion best practice in building design.	LBWF	2012	Yes
Explore use of existing church notice boards to explain wildlife management and where appropriate erect interpretation boards.	LBWF	2013	Yes
Arrange at least one wildlife-related walk within churchyards and cemeteries each year.	LBWF	Annually	Yes
Work with major landowners to implement green corridor action plan and plan maintenance work to be sensitive to corridor habitat quality and continuity.	LBWF & others	2015	Yes
Use park notice boards to promote conservation projects and explain wildlife management within parks.	LBWF	2012	Yes
Identify a partner to supply native trees, shrubs and wildflower seed for gardeners in the Borough. (e.g. BTCV)	LBWF	2011	Yes
Provide London Wildlife Trust leaflet on gardening for wildlife in Council offices	LBWF	2011	Yes
Feature pond conservation events at Pimp Hall in newspaper articles and hold an annual event.	LBWF	Annually from 2013	Yes
Support all woodland Friends schemes and meet at least annually (Larks and Ainslie Woods).	LBWF	Annually	Yes

Increase the knowledge of species distributions and populations

Action	Lead	Deadline	Resources
Assist local bird groups and volunteers to map the distribution of Song Thrushes and Swifts in the Borough.	LBWF/ FOAL	2015	Yes
Assist local bat groups and volunteers with surveys in the Borough to assess numbers and distribution of bats.	LBWF/ LVBG	Annually	Yes
Work with local woodland Friends groups and other partner organisations to map locations of Bluebells.	LBWF	2015	Yes
Work with local branch of Butterfly Conservation and other partner organisations to map distribution of Wall butterflies in the Borough.	LBWF	2015	Yes

Raise awareness of species and the need to conserve them

Action	Lead	Deadline	Resources
Provide advice on bats breeding birds, Bluebells and butterflies to all Borough	LBWF	Annually	Yes
Provide bat advice and promote nature conservation best practice to all major tree contractors and developers working in the Borough.	LBWF	Annually	Yes
Ensure that survey and mitigation are included whenever Bluebell, Song Thrush, Swift and/or Wall butterfly populations might be affected.	LBWF	Annually	Yes

Engage with the local community in species conservation

Action	Lead	Deadline	Resources
Hold at least one event in August/September each year themed around bats.	LBWF/ LVBG	Annually	Yes
Create new roost opportunities on five sites involving local people in the projects.	LBWF	2020	Yes
Hold at least one event in Epping Forest each year to look at Bluebells.	LBWF	Annually	Yes
Hold at least one event at Ainslee Wood in spring each year themed around Song Thrushes. These to include Song Thrush walks and dawn choruses.	LBWF	Annually in May	Yes
Hold at least two events in summer each year themed around Swifts. These to include Swift walks and evening roost gatherings.	LBWF & others	Annually in July	Yes
Erect Swift boxes/towers in Chingford Mount Cemetery and Ridgeway Park.	LBWF	2015	Yes
Invite the public on butterfly walks in Ainslee and Larks Woods each summer.	LBWF	Annually	Yes

Pied Wagtail

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Ruckholt Close allotments, Leyton

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