

Tayside Biodiversity - Information - Guides - A Guide to Incorporating Biodiversity into Local Services

[Paper document has contents page and aims of the LBAP](#)

INTRODUCTION

What is 'Biodiversity'?

Biodiversity encompasses the whole variety of life - from trees, flowering plants, birds and butterflies to mosses, lichens and even bacteria. Biodiversity also refers to the wide range of habitats these animals and plants depend upon. It is not just about rare and threatened species but embraces all life from the commonplace to the greatly endangered. It also includes humankind - biodiversity is, after all, also about people.

Biodiversity contributes to our quality of life and enriches it - the UK government has recognised the importance of the environment by including populations of wild birds as one of its indicators of the quality of life. Much of Scotland's economy depends directly, or indirectly on our natural resources which supply the raw materials for our clothing, food, drink, fuel, buildings and roads. Tourism based on wildlife is one of Scotland's major income-earners and environment-based jobs include farming, fishing and services providing water, energy and building materials.



Safeguarding our Biodiversity

The UK government signed the International Convention on Biological Diversity at the Rio Earth Summit in 1992. There are now UK Biodiversity Action Plans in place for the conservation and promotion of 391 of the rarest species and 45 of the most threatened habitats in Britain. Those that occur in Scotland are overseen by the Scottish Biodiversity Forum with the help of the Local Biodiversity Partnerships, of which Tayside is just one. In 2002 the first tranche of the Tayside Local Biodiversity Action Plan (TLBAP) was published; a further tranche of Habitat and Species Action Plans will follow in due course.

Work on the ground already includes a wide-ranging series of pilot projects to conserve and enhance Tayside's Barn Owl, Red Squirrel and Swift populations, providing wildlife areas in hospital grounds, pond restoration projects, and reviewing the management of public open spaces to promote wildlife. More projects are underway and many more are planned.

ABOUT THIS GUIDE

This document provides ideas to promote biodiversity within Local Authorities and in Community Planning through Community Planning Partnerships. It is not prescriptive and should not be seen as a 'must do' list of work; rather it highlights what is possible and provides a springboard for future initiatives and good ideas.

Many Local Service providers/agencies have projects planned or already under way that protect and enhance biodiversity. We are in a fortunate position within Tayside to be able to share good practice between the three local authorities of Angus Council, Dundee City Council and Perth and Kinross Council, as well as the Community Planning Partnerships. A wide range of Services is highlighted, together with suggestions on how working practices may be altered to encourage enhancement for biodiversity.

Local Services and the Tayside Local Biodiversity Action Plan

The key to delivering real improvements in biodiversity lies in the step between being merely aware of it and beginning to actively champion it. This can be achieved by treating biodiversity as an integral part of the service delivery.

Why are Local Service providers/agencies so important to the biodiversity process? The target audience of the Tayside

Local Biodiversity Action Plan has been identified as comprising three broad groups:

- land managers and landowners;
- policy makers and policy implementers;
- the wider community e.g. schools, businesses and consumers.

Clearly, Local Service providers/agencies represent or have contact with a significant element of each target audience.

As key partners, Local Authorities have the potential to be providers, advisors, enablers and regulators for biodiversity. Through participation and consensus building Local Authorities can ensure biodiversity action is supported by the wider community - and importantly - fully involves them. Biodiversity does not recognise boundaries and can best be conserved and enhanced by co-ordination and cross-boundary liaison. As Local Service providers/agencies go about delivering services to local people they will find many opportunities to deliver action for wildlife in a host of innovative ways.

Participation by Local Service providers/agencies in the biodiversity process may also help obtain funds from a variety of sources, including HLF and Fresh Futures, by illustrating how they are directly contributing towards national biodiversity targets.

The maintenance and enhancement of biodiversity is vital if we are to achieve the overall aim of sustainable development ensuring that present and future generations benefit from environmental quality and economic benefits. The co-ordination of activity at the regional level is essential to achieve this. It is important not to just protect the best or rarest of what we have, but we should also enhance its general status – a step strongly endorsed in the proposed Strategy for Scotland's Biodiversity.

Every Action Counts

With implementation of the 1st Tranche of the Tayside Local Biodiversity Action Plan now underway, it will be important to report on progress, not just to local level, but to fully integrate our findings into the UK Biodiversity Action Plan reporting mechanism. The Tayside Biodiversity Partnership will co-ordinate reports on an annual basis to monitor achievements and to identify any constraints.

How to Use this Guide

The actions detailed in the following pages have been grouped under headings suitable for most Local Service providers/agencies in the Tayside area. There may be occasions when different local authority departments do not match the listings and cross-referencing of other sections is advised. Each action is assigned a tick box so that departments can quickly check that they are contributing to the biodiversity process.

The Tayside Biodiversity Co-ordinator will be in touch with all three Local Authorities every twelve months to gather information about their involvement in biodiversity. In the meantime, however, please let the Co-ordinator know of your successes - or use the contacts at the end of this document for further information.

INCORPORATING BIODIVERSITY INTO LOCAL SERVICE DELIVERY **(each of these are shown as tick lists in the paper document)**

Architectural Services and Building Design

Incorporate into building designs specific wildlife-friendly features such as barn owl windows and ledges, swift nest boxes in roof spaces or outbuildings, and bat bricks.

Be aware of the possible presence of bats in all buildings (new or old) to be refurbished or re-developed. Bats, their maternity or hibernation roosts, whether or not they are present at the time, are protected under the Wildlife and Countryside Act 1981. Current advice is that bats should not be handled and where bats are present the local SNH Area Office contacted before commencing any works.

Specify materials whenever possible that do not impact negatively on biodiversity. Try to use timber that is Forest Stewardship Council (FSC) approved and consider the re-use of materials if appropriate.

Conserve existing features of the site and landscaping that are important for wildlife during the redevelopment of buildings. If conservation is not possible replace with other designed features nearby.

Consider the use of a 'green roof' or a roof garden – as well as benefiting a variety of wildlife (especially birds and invertebrates) these features can also improve the appearance of roofs.

Community Education

Bring biodiversity into community education on both a formal and informal basis; highlight its importance through community centres and offer community groups opportunities to access wildlife and the countryside through lectures, talks, events and day-trips.

Promote evening and recreational classes with strong biodiversity elements by linking with the wide range of expertise available within local specialist groups such as the Dundee Naturalists, and the Perthshire Natural Science Society.

Link into existing schemes and run well-supported, broad-based countryside volunteers' schemes such as provided by the National Trust for Scotland, the Countryside Ranger Services, and the British Trust for Nature Conservation. These

can act as a conduit by which information about biodiversity can enter local communities.

Encourage participation in the Tayside Local Patch Project and other surveys for squirrels, swifts, barn owls, or slow worms, etc. The Local Patch Project is a general survey to help people of all ages discover the wildlife on their doorstep and to informally adopt a 'local patch' be it their own garden, a local park, roadside verge, a cycle path or golf course.

Community Safety

Contribute to property security on both residential and business premises by planting 'barrier hedges' featuring spiky plants such as hawthorn, berberis and blackthorn. They can be of substantial benefit to the local wildlife.

Ensure appropriate staff are aware of relevant legislation pertaining to biodiversity by facilitating liaison between the Local Authorities and the local police on Wildlife and Countryside Law – contact the Tayside Wildlife and Environment Officer – tel. 01738 892650 or 07808 899113. This should allow for more effective protection of vulnerable or protected species such as badgers, otters, bats or birds of prey.

Countryside Management

Undertake accurate biological recording and the regular monitoring of species and habitats.

Participate in records exchange of fauna and flora so that a wider understanding of biodiversity can be obtained.

Incorporate the relevant TLBAP Habitat Action Plan and Species Action Plan objectives and targets into site management plans where appropriate.

Provide advice on the creation, enhancement and restoration of wildlife habitats throughout all areas of operation.

Publicise the importance of biodiversity through interpretation and environmental education, including guided walks and countryside events.

Assist in the designation of more Local Nature Reserves.

Liaise with the appropriate Departments, including the Countryside Ranger Service, Urban Rangers and Access Officers, to ensure that the Public Rights of Way network is managed in a way that helps to raise awareness of, and protects biodiversity – for example footpath mowing regimes, hedge maintenance, and (where safe to do so) retention of standing dead wood.

Advise appropriately on pest control issues where they relate to wildlife, e.g. Grey Squirrel control as part of the Red Squirrel Conservation Programme.

Ensure when assisting in the development of further local, coastal and glens path networks biodiversity issues are taken into account.

Ensure that biodiversity issues are given due consideration during implementation of the Access to the Countryside elements of the Land Reform Act.

Crematoria and Cemeteries

Develop specific wildlife areas within crematorium grounds and cemeteries as 'contemplative zones' for visitors. Consider erecting a variety of nestboxes to encourage wildlife to use these areas. A mosaic of less frequently cut grass will encourage butterflies and moths, including some of the rarer species.

Explore the opportunity to plant 'commemorative' native trees and shrubs in Gardens of Remembrance, etc. Develop cemeteries with appropriate natural areas to create a peaceful space for both people and wildlife. Include berry-bearing trees such as holly, rowan and crab apple; use native hedge plants and yew in plantings. Underplant appropriate plant species in new woodland areas and encourage the original ground flora in more established woodland.

Use nectar-rich flowers and scented herbs in window boxes, hanging baskets and pots where appropriate to encourage invertebrates and birds.

Leave untouched boundary walls, buildings and older gravestones as far as possible as they can all be important for lichens and mosses.

Raise awareness of any changes in management practice by ensuring appropriate interpretation is made available and, where feasible, involve the local community in simple surveys and plans for habitat enhancement.

Consider setting up a Green Graveyard Initiative and work in partnership with the local community. Liaise, where appropriate, with the national organisation 'Eco-congregation' (www.encams.org/ecocongregation).

Explore the feasibility of woodland burial schemes.

Education

Incorporate awareness and conservation of biodiversity into lesson plans and the National Curriculum across as many subject areas as possible, using appropriate published guidance for support.

Encourage schools and colleges to enhance their grounds to promote a wide variety of wildlife, together with facilities

for outdoor classrooms through SNH's school grounds grants and Grounds for Learning.

Encourage careers teachers and the careers advice service to promote placements for students within conservation and environmental organisations.

Consider linking with 'healthy eating' and 'local food' initiatives where appropriate – or encourage simple 'Square Foot Gardening' projects – details on www.schoolsorganic.net.

Promote the participations of all age groups in the Tayside Local Patch Project ("Discover the Wildlife on Your Doorstep") and other appropriate surveys by encouraging the adoption of a 'local patch' such as the school grounds, nearby park, footpath or community woodland.

Promote the creation/management of wildlife areas in the local community through partnerships between schools, businesses and local agencies, with particular emphasis on business parks and industrial estates.

Encourage educational links with the Tayside Police Wildlife Liaison Officers (PWLOs); a variety of interactive wildlife crime projects are available for primary school pupils.

Encourage participation in National Backyard Biodiversity Day (especially involving pupils aged 9-14, their teachers, families and club leaders). Details on www.biodiversityday.org.

Utilise good quality countryside facilities as learning resources/locations for days out and study visits.

Environmental Health

Run regular environmental awareness raising campaigns for schools and community groups regarding litter and animal welfare in relation to biodiversity.

Protect honey and masonry bees from pest control and advise the public accordingly. Honey bees should be destroyed only where there is a direct public safety risk. Masonry bees, which constitute no risk to the public, should not be destroyed.

Do not destroy 'garden' ants outside buildings.

Guard against the use of control methods for house mice or brown rats which might affect birds of prey or other non-target species (such as domestic pets). Suitable assessment methods should be in place and properly applied prior to the implementation of any treatments.

Remove all loose bait and rodent bodies at the end of the treatment period where poisoned baits are utilised (with all appropriate safeguards in place).

Avoid control measures wherever possible against rodents in gardens and outbuildings that may involve Wood mice *Apodemus sylvaticus* as these are not pests.

Use biodegradable non-persistent treatments to minimise transmission effects to wildlife when controlling public health pests (fleas, bedbugs, cockroaches etc).

Housing

Use sustainably sourced materials wherever possible in maintenance and construction - such as timber that is Forest Stewardship Council (FSC) approved and solvent-free or low-solvent paints. Consider the re-use of materials if appropriate.

Incorporate a specific housing policy for swallows, swifts and house martins to ensure contractors working on buildings do not disturb or remove current nests – and if possible encourage property managers to install artificial nest-boxes as appropriate. Such a cost-effective initiative will raise awareness, especially where well-known buildings are targeted.

Legal Services

Ensure appropriate staff are aware of legislation relevant to the biodiversity of the area and the Local Authority, especially the basic elements of the Wildlife and Countryside Act 1981 and all updates, as this relates to species protection in the area.

Facilitate the drawing up of appropriate, enforceable countryside bylaws in order to protect and promote the importance of biodiversity on the land.

Ensure that appropriate comments regarding the effectiveness of any new legislation relating to biodiversity are relayed to Government during the consultation phase for such legislation.

Leisure

Promote a healthy lifestyle by encouraging the use of cyclepaths, bridlepaths and footpaths. Walks suitable for the family, together with pastimes such as watching wildlife and photography, can improve health, enjoyment of the local environment and engender a greater understanding of wildlife. Check the Paths to Health website: www.pathsforall.org.uk

Consider opportunities for biodiversity enhancement in the maintenance of paths, tracks and the perimeters of sports or playing fields as they act as valuable wildlife corridors.

Promote the enhancement of golf courses to benefit wildlife by involving both greenkeepers and golf club members in understanding the environmental value of their course.

Create, protect and manage cyclepaths and footpaths with biodiversity in mind – retaining an appropriate area of short verge sward will encourage walkers and runners to alternate between the hard and soft surfaces. An adjoining area of taller grasses and attractive wild flowers will also encourage butterflies, bumble bees and hoverflies. 98 per cent of all natural flower-rich meadows have been lost in the past 50 years and a major contribution can be made by encouraging such 'grassland strips'.

Manage the boundaries adjoining paths to improve the surrounding environment for walker and cyclist alike, i.e. where appropriate, under-hedge planting of primroses, ramsons and ragged robin will also greatly assist wildlife, as will the planting of berry-bearing native trees - for example rowan, holly and crab apple. Scented climbing plants such as honeysuckle rambling over fences and walls will enhance the walkers' and cyclists' experience.

Promote volunteering for practical wildlife conservation work to aid social inclusion and to improve both physical and mental health. The BTCV's 'Green Gym' initiative offers the opportunity to improve physical fitness by involvement in practical conservation activities.

Encourage participation – individually or in groups - in appropriate environmental award schemes to focus attention on the exploration and care of a wild place – be it a local pond, sand dune or glen. One such non-competitive scheme open to everyone is the John Muir Award: www.johnmuiraward.org

Contribute to a healthy lifestyle by encouraging the development and retention of allotments to provide an opportunity to grow local food.

Encourage gardening with wildlife in mind – at home, in the community, on allotments and in school grounds. Further information from the Royal Society for the Protection of Birds: www.RSPB.org.uk; Scottish Wildlife Trust: www.swt.org.uk; National Trust for Scotland: www.nts.org.uk; Henry Doubleday Research Association: www.hdra.co.uk

Raise awareness of the damage that can be created by planting non-native plants outwith gardens and public parks, and the increasing illegal sale of wild plants. Commercial gatherers dig up flowers such as bluebells and snowdrops and collect mosses on a large scale for the garden trade. Further information is available from Plantlife: www.plantlife.org.uk

Promote local people's involvement in setting up and maintaining community gardens and community orchards featuring the local heritage varieties of fruit and vegetables. Promote local distinctiveness and a pride of place by encouraging the wider community to get involved in environmental projects and surveys to discover 'the wildlife on their doorstep'.

Raise awareness of the impact of litter and fly-tipping on biodiversity by encouraging personal responsibility for disposal of litter.

Libraries and Museums

Ensure that general biodiversity information is accessible to as wide a range of client groups as possible, including those without direct access to the written word e.g. through 'talking newspapers'.

Act as information centres/contact points for details about biodiversity within the region. Each library could have a section of the public notice board set aside for biodiversity contacts and wildlife groups.

Ensure copies of the Tayside Local Biodiversity Action Plan are readily available in both ringbinder and CD format for people to consult, and make information available through council media and the Internet. Hold a selection of appropriate leaflets together with the TLBAP introductory booklets and Local Patch Project leaflets.

Support the collation and reporting of flora and fauna records.

Parks and Grounds Maintenance

Use linear features and 'wildlife corridors' to connect areas of semi-natural vegetation to minimise fragmentation of habitats, for example plant hedgerows and retain unmown strips of grass. Retain mature tree-lines or plant up gaps with native tree species to assist yellowhammers, birds of prey and bats.

Reduce the area of strimming around trees and shrubs in appropriate areas and allow a block of rough grassland to develop around patch planted trees, thus reducing costs and creating important 'biodiversity banks' for invertebrates.

Reduce the area of short sward amenity grassland in all areas whilst retaining suitable play and recreation provision, setting some of this aside to create 'biodiversity banks'.

Identify areas of species-rich grassland and adopt appropriate management regimes e.g. hay cropping requires a single cut late in the season with cuttings removed.

Develop 'Pocket Wildlife Areas' on urban greenspace by using less intensive mowing regimes and planting native shrubs and trees, as well as heritage fruit varieties where appropriate. Glades within plantings should be kept open to encourage wild flowers, insects and birds - more wildlife is supported at the edge of plantings when there is a variety of ages and heights. Where possible, involve the local community to raise awareness of the benefits in changing to a

less intensive management.

Use more perennials in formal flowerbeds, reducing the need for replacing bedding plants according to season and thereby reducing costs and minimising resources, including water.

Use only biodegradable systemic herbicides wherever possible; ideally applied by spot treatment methods.

Utilise walls and fences for growing a wide variety of climbing plants which will provide shelter and a food source for invertebrates, birds and bats.

Use habitat piles (e.g. small, discrete piles of logs, dead wood or prunings from woody plants) in appropriate locations to encourage fungi, mosses and invertebrates, as well as common toads and hedgehogs.

Consider the use of specific flowers rich in pollen and nectar that will attract a variety of butterflies and moths.

Use native, local provenance species of shrubs, trees and plants whenever possible.

Retain trees where possible - even the old, neglected or dead ones - as these are particularly valuable to wildlife. Standing dead wood should be left in situ if safe to do so.

Chip wood prunings in order to produce mulch for establishing and maintaining low maintenance perennial beds, etc.

Restore ponds and watercourses in late autumn or winter when animals are not breeding. It is usually best to clear only half a pond or one side of a bank at a time, replacing the aquatic plants as soon as possible. Any new plantings should only be of native species found in the local area.

Replace the usage of all peat products with peat-free alternatives and specify peat-free composts for site landscape planting as peat extraction is seriously damaging important wildlife habitats; the UK has lost 96% of its peat bogs in just 50 years.

Avoid the use of limestone pavement or any of its derivatives in horticultural operations. Limestone Pavement is a key habitat in the UK Biodiversity Action Plan; only 3,000 ha. remain in Britain – a small proportion is within Tayside.

Demonstrate to both the local community and visitors to the region through appropriate initiatives how horticultural practices can improve or enhance the area's biodiversity and what is being done for biodiversity locally.

Planning and Development

Utilise the Tayside Local Biodiversity Action Plan in assessing all relevant planning applications.

Ensure Development Plans take full cognisance of biodiversity issues.

Ensure the adequate protection of local, national and internationally important wildlife sites.

Encourage wildlife enhancement and appropriate habitat creation when considering projects and in processing planning applications - including the retention and enhancement of existing features such as wildlife corridors, tree-lines, mature trees, footpaths and grass swards.

Use Tree Preservation Orders (TPO's) where appropriate to protect trees of high wildlife value.

Ensure that biodiversity issues are given due consideration in any Environmental Impact Assessments.

Ensure that all mineral site restoration schemes accommodate wildlife through significant, appropriate habitat creation programmes.

Encourage the creation of wildlife-friendly green space within the context of major development or redevelopment; where appropriate incorporate appropriate biodiversity features into all landscaping for such schemes.

Consider biodiversity as a suitable end-use for brownfield sites where appropriate, especially if this assists in achieving the objectives of strategic projects such as Community Woodlands.

Encourage, where appropriate and feasible, repointing in lime mortar so as not to exclude masonry bees when renovating buildings (including listed buildings). Also, where possible, retention of lime-loving plants such as ferns, liverworts and mosses should be considered.

Maximise the biodiversity benefits when considering implementation of SUDS (Sustainable Urban Drainage Systems), swales or soakaways, water flow technology and willow- and reed-beds. Consideration should be given to any existing water vole populations through the stabilisation of water levels where possible, creation of suitable bank profiles and habitat corridors.

Maximise opportunities for habitat creation through design and development of all schemes, including the re-creation of natural landforms and features such as river and burn meanders. Make sure that all future storm water overflows have incorporated into their design appropriate functioning oil-traps.

Resource Management

Set up composting schemes using locally collected biodegradable materials and manage this to produce an effective

by-product that can be used in horticultural work.

Contact the Waste Action Line: 0800 389 5270 or visit www.sepa.org.uk for further information on how to conserve natural resources through reducing, reusing and recycling waste.

Roads and Transport

Ensure, as far as is possible, that all necessary works are undertaken without a negative effect upon biodiversity. Where Environmental Impact Assessments are not required, endeavour to undertake an ecological survey prior to the determination of road alignment or re-alignment schemes. This is especially important where works are to be undertaken adjacent to sensitive sites or habitats such as Sites of Special Scientific Interest, Wildlife Sites or key habitats identified in the TLBAP.

Ensure that bridges and culverts wherever possible are designed at the initial stage or re-designed when reconstructed to accommodate the safe passage of species such as badger and otter where there is a known presence of the species.

Give consideration wherever possible to the design of bridges and culverts to allow features such as bird and bat boxes.

Ensure that all works to bridges and culverts take into consideration the possible presence of bats which are protected under Schedule 5 of the Wildlife and Countryside Act (1981, as amended).

Ensure, as far as is possible, that road drainage schemes do not discharge into wetland sites or on to sensitive habitats that could be damaged by petrochemical run-off. Where appropriate, work with the relevant authority to consider removal of any which currently do, unless specifically designed for the purpose e.g. balancing ponds. Minimise salt loading of roads, especially by-roads to reduce salt spray effects (notwithstanding the public safety aspects) - particular attention should be paid to areas near wetlands and semi-natural grasslands.

Be aware of the potential presence of water voles in urban waterways and along ditches. These animals are close to extinction, there being only 2% of the original population left in the UK. They are protected under Schedule 5 of the Wildlife and Countryside Act (1981, as amended). Design appropriate protection for all populations of water voles (as well as other vulnerable species) when drainage and similar works are to be undertaken.

Protect roadside trees from root damage—where the service providers/agency has responsibility— during any roadworks or work on utilities' pipes and cables. If trees have to be lost to such works ensure that they are replaced as quickly as possible using native and berry-bearing trees where appropriate.

Protect townscape trees from drought after nearby work by the use of porous, replacement road and paving surfaces, allowing rain water to reach the roots.

Timetable maintenance work where possible - especially verge, grass sward and hedge trimming operations that might disturb nesting birds - to avoid the breeding season (which takes place between March and July).

Reduce the frequency of grass-cutting on roadside verges. Mow suitable safety margins and all sight lines; otherwise allow the development of a rough grassland network to develop along all major road corridors. This favours wild flowers, small mammals and birds of prey and acts as a network along which many species, especially invertebrates, amphibians and reptiles can disperse. Consider scalloping edges or show definite defined areas to demonstrate that the area is being managed for wildlife rather than abandoned. Raise awareness of this change of management to the local community, contractors and local tourist boards.

Liaise with the relevant agencies to take control measures if advised of serious infestations of ragwort (an injurious weed covered by the 1959 Weeds Act) on roadside verges or land managed or owned by the Local Service provider/agency.

Use local provenance wildflower mixes as low maintenance alternatives on poor soil and manage these under a once a year cut/hay crop regime.

Use nursery grown native trees and shrubs from UK-stock, preferably of local provenance. This will contribute towards the preservation of local landscape character and genetic biodiversity, at the same time as possibly improving tree and shrub survival rates and contributing towards the rural economy.

Undertake appropriate roadside hedge management work in late winter to avoid nest destruction and to maintain winter food supplies such as hawthorn berries for birds. All management should be carried out with a view to prolonging the life of the hedge as a wildlife resource; a cut once every two years is usually sufficient. Seek advice as to which roadside hedges to flail or which hedge bottoms, if any, to spray and ensure that staff and contractors are sufficiently trained. Ensure that the local community is kept informed of the benefits to wildlife.

Encourage the height of roadside hedges to be increased to at least 2m, where safe and appropriate to do so, particularly if barn owls are known in the area. This will help prevent road kills when the birds can swoop over lower hedges into the path of vehicles.

Retain mature hedgerows and hedgerow trees where appropriate and plant new or additional hedgerow trees to safeguard future tree-lines. Since the 1950s the UK has lost 190,000 miles of its hedgerows.

Consider the installation of appropriate wildlife warning signs in areas where road kill may be negatively impacting on important species programmes e.g. red squirrels, otters and common toads.

Social Services

Take client groups to well run countryside facilities to allow a wider enjoyment and appreciation of biodiversity.

Involve volunteers in making, siting and maintaining a variety of nestboxes and bird feeding stations to contribute to the various biodiversity projects being undertaken throughout Tayside.

Help residents, visitors and staff in sheltered housing, nursing homes, hostels and hospitals – as well as visitors and staff at medical centres and clinics - appreciate their surroundings by improving the immediate environs both for their benefit and the benefit of wildlife. Where appropriate encourage the setting up of bird feeding stations and provision of identification materials (posters, books and binoculars).

Trading Standards & Licensing

Develop links with the local Police Wildlife and Environment Officer – tel. 01738 892650 or 07808 899113. Information is available through the Partnership for Action Against Wildlife Crime (PAW): www.ukcites.gov.uk on wild birds and the law; amphibians and freshwater pearl mussels; badgers; other wild mammals; poaching of game, deer and salmon; wild plants and the law.

Ensure biodiversity issues are taken into account when liaising with Local Service providers/agencies and the public regarding 'green' legislation – i.e. to reduce the effect on wildlife by minimising the use of pesticides and substances prepared or used for the control of pests or for protection against pests, and poisons (including use of drain cleaners, weedkillers, pond cleaners and mould removers).

**“Biodiversity isn't something to be found in the far blue yonder -
it starts on your own doorstep”
From Magnus Magnusson's Foreword to the
Tayside Local Biodiversity Action Plan**

FURTHER READING

Additional information, including extra website contacts, is given in Appendix 3 of the TLBAP

Biodiversity: The Wider Perspective

- Biodiversity Challenge Group. Biodiversity Counts – Delivering a Better Quality of Life. 2001
- NPPG14 Natural Heritage. January 1999
- PAN 60 (Planning for Natural Heritage). August 2000
- Scottish Biodiversity Group. Action for Scotland's Biodiversity. ISBN 1-84268-010-2. 2000
- Scottish Biodiversity Group. A Flying Start – Local Biodiversity Action In Scotland. ISBN 0-7559-0183-5. 2001
- Scottish Executive. Biodiversity Matters! Towards a Strategy for Scotland's Biodiversity (Strategy Proposals). Paper 2003/5. ISBN 0-7559-2319-7. 2003
- Scottish Executive. Scotland's Biodiversity Resource and Trends. Paper 2003/4 (Towards a Strategy for Scotland's Biodiversity). ISBN 0-7559-2320-0. 2003
- Scottish Executive. Developing Candidate Indicators of the State of Scotland's Biodiversity. Paper 2003/6 (Towards a Strategy for Scotland's Biodiversity). ISBN 0-7559-2321-9. 2003.
- Scottish Executive. Cost Effective Landscape: Learning from Nature (Landscape Design and Management Policy). 1998
- Scottish Executive. Trunk Road Biodiversity Action Plan. ISBN 0-7480 8938-1. 1999.

Species Information

- Barn Owl Trust. Barn Owls on Site: A Guide for Developers and Planners. ISBN 0-9525578-0-0. 1995
- Dewar, S.M, and Shawyer, C.R. Boxes, Baskets and Platforms: Artificial Nest Sites for Owls and Other Birds of Prey. Hawk and Owl Trust. ISBN 0-9503187-6-0. 1996
- English Nature. The Conservation of Wild Mushrooms (and The Wild Mushroom Pickers Code of Conduct). ISBN 1-85716-420-2. 1998
- Environment Agency. Otters and River Habitat Management, 2nd Ed. Environment Agency, Bristol. 1999
- Fauna and Flora Preservation Society. Bats in Houses. 1988
- Fauna and Flora Preservation Society. Toads on Roads (Road Warning Signs and Amphibian Tunnels). ISBN 0947902-015
- Froglife. Great Crested Newt Conservation Handbook. ISBN 095211-0644. 2001
- Froglife. The Herpetofauna Workers Guide: A Directory of Information and Resources for the Conservation of Amphibians and Reptiles in the UK. ISBN 0-9521106-36
- Hawk and Owl Trust. Building for Barn Owls (designs on owl windows and lofts) and Planning for Barn Owls: Advice for local authorities and developers. Leaflets 1996
- JNCC. Habitat Management for Bats: A Guide to Land Managers, Landowners and their Advisors. ISBN 186107-5286. 2001
- RSPB. A Management Guide to Birds of Scottish Farmland. 1996
- RSPB. Wild Birds and the Law: A Plain Guide to Bird Protection Today. 1998
- SNH. Badgers and Development. ISBN 1-85397-1375. 2001
- SNH. Natural Heritage and the Law—Bats. 2003
- SNH. Otters and Development. ISBN 1-85397-255X
- Southern Uplands Partnership. Woodlands for Red Squirrels. Booklet
- Strachan, R. Water Vole Conservation Handbook. Wildlife Conservation Research Unit, Oxford. 1998
- The Stationery Office. Design Manual for Roads and Bridges – Good Roads Guide: Nature Conservation Management in Relation to Bats. ISBN 011552130-5. 1999
- The Stationery Office. Wildlife Crime: A Guide to Wildlife Law Enforcement in the UK. ISBN 0117533173

Practical Guides and Best Practice

- English Nature on behalf of FACT (Forum for the Application of Conservation Techniques). The Practical Solutions Handbook, 2nd Ed: Equipment, Techniques and Ideas for Wildlife Management. ISBN 18516575-6. 2001
- English Nature, Quarry Products Association and Silica & Moulding Sands Association. Biodiversity and Minerals – Extracting the Benefits for Wildlife. Entec UK Ltd. ISBN 0-9535400-0-6. 1999
- Emery, M. Promoting Nature in Cities and Towns, A Practical Guide. Ecological Parks Trust/Croom Helm Ltd. ISBN 0-7099-0970-5. 1986
- Gilbert, O., Anderson, P. Habitat Creation and /Repair. Oxford University Press
- SNH. Community Gardens: Places for People and Wildlife. ISBN 1-85397-104-9. 2001
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“When we try to pick out anything by itself, we find it hitched to everything else in the Universe”
John Muir (1834-1914)

FURTHER INFORMATION

Tayside Local Biodiversity Action Plan

Ring-binder versions of the Local Biodiversity Action Plan are available in most Local Authority Departments, as well as all libraries and museums in Tayside. Alternatively, CD-ROM copies of the Action Plan and an introductory booklet are available from the Tayside Biodiversity Co-ordinator.

The Action Plan can be viewed on www.pkc.gov.uk or www.pkc.gov.uk until such time as the Partnership has its own website.

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