

Cities, towns and villages

(Updated 2007)

1. A Definition

Wildlife is not confined to the countryside, but is to be found in close association with people in gardens, allotments and parks, derelict land, in walls and on roofs, beside canals, on waste tips; in fact anywhere you care to look will contain at least a few and probably a high diversity of species either adapted to the particular conditions of the built environment, or occurring there



because a habitat which is also found elsewhere happens to be in an urban¹ area. Geological exposures are often found in built-up areas in the form of road or cuttings or, more temporarily, during excavations for building developments. Indeed, buildings and walls themselves can be both a geological exposure, excellently demonstrating the internal character of local rocks, and a habitat, providing a home for plants, lichens and invertebrates.

Whilst Devon has fewer truly “urban” areas than many counties, there are a great many towns and villages scattered throughout the County which essentially constitute built-up environments. This plan considers ways in which all these places can be maintained and enhanced for wildlife and geological heritage conservation, and for the benefit of local inhabitants.

This Plan covers all places within a largely built-up environment, in cities, towns and villages, which offer opportunities for the enjoyment of wildlife and the geological heritage, including parks (but excluding ancient formal parkland, for which see relevant Action Plan), graveyards, amenity grasslands, school playing fields, gardens and allotments. Those natural and semi-natural features, habitats and species which happen to fall within urban areas but which are mainly found outside them are treated in the relevant Devon Action Plans.

¹ For the purposes of this document “urban” refers to the built environment, including that of cities, towns and villages.

2. Why an Action Plan?

The great majority of our population lives in settlements of one kind or another, even in Devon which is a county that has a higher proportion of rural dwellers than most.

As such, the maintenance of biodiversity in the sense that it pertains to our quality of life, needs to be ensured in the places where the majority of people live and work – and not only in the natural and semi-natural environments that we call “the Countryside” (although this is of course of vital importance, as well).

People in the built environment benefit from daily contact with wildlife and natural green spaces in many different ways; trees help keep down levels of air-borne pollution; parks and other public green spaces provide a welcome escape from vehicles and a safe and stimulating environment for children’s play; gardens and allotments provide people with intimate contact with greenery and wildlife; in fact a large part of what people in towns and cities call “quality of life” is provided by access to wildlife in one form or another.

Wildlife conservation projects in towns and cities help to bring local communities together in a concerted way which few other activities can achieve, as well as being a way in which people can positively work to improve their local environment.

In addition, those geological exposures that do exist are often easily and relatively safely accessible and provide excellent opportunities for educational use by nearby schools. Geological resources are also available in buildings and walls – especially the older ones which are most likely to have been built with local materials. Churches and graveyards offer some of the most informative displays of traditionally used geological materials, whilst modern shopping centres tend to exhibit exotic assemblages of foreign marbles and granites.

3. Characteristic wildlife

Many species of bird occur in close proximity to people in cities, towns and villages. In fact certain species, such as robins, thrushes and blackbirds, tits and finches positively benefit from man’s activities such as digging gardens to expose worms and grubs, as well as the provision of bird tables and feeding stations. Birds of prey such as sparrowhawks have taken advantage of this abundance of food and may be seen even in the most built-up of environments where there are areas of greenery. The spectacular and noisy roosts of starlings, as they gather in their thousands on buildings and trees are a familiar experience to many city-dwellers in autumn and winter.

upon the substrate available. Even species such as dandelions, thistles, rosebay willowherb and other plants often seen as weeds add a splash of colour to areas of so-called 'derelict' land.

Insects benefit from the relatively sheltered and warm microclimate of the built environment, and butterflies, bees, wasps and even crickets and grasshoppers are to be found, the former particularly fond of cultivated and naturalised bushes such as *Buddleja* - also known appropriately as the "butterfly bush"!

Ponds within gardens create environments for a fascinating range of wildlife; dragonflies, newts, frogs, water plants, pond snails and a plethora of tiny and microscopic life as well.

Walls, roofs, gravestones and other expanses of rock-like material, provide ideal natural substitutes for lichens. While certain species occur only in places where the air is exceptionally clean, many others are found in built-up areas. The orange-yellow encrusting species such as *Xanthoria* are particularly noticeable.

4. Special species

Examples of species distinctive to and widespread in cities, towns and villages in Devon. Species marked (p) are 'Species of Principal Importance in England' (NERC Act, S.41).

- **Mammals**: Pipistrelle bat (p²), hedgehog (p)
- **Birds**: Song thrush (p), blackbird, blue tit, bullfinch (p), siskin, house martin, swift, house sparrow (p)
- **Amphibians**: Palmate newt, common frog, toad (p), slow worm (p)
- **Invertebrates**: Peacock butterfly, speckled wood, orange tip, hummingbird hawk moth, great green bush-cricket, house spider, woodlouse spider.
- **Fungi**: *Agrocybe aegerita*, *Galerina stylifera*, *Geastrum fornicatum*, *Stropharia aurantiaca*, *Lepiota leucothites*, *Lyophyllum decastes*
- **Lichens**: *Lecanora muralis*, *Physcia aipolia*, *P. tenella*, *Xanthoria partietina*, *Lepraria lesdainii*, *Caloplaca flavescens*, *Cladonia pyxidata*
- **Vascular plants**: foxglove, primrose, ivy-leaved toadflax, maidenhair spleenwort

² soprano pipistrelle
Devon BAP
Version: May 2009

5. Special geodiversity features

Key Geological Features, including potential Global Geosites, which are represented by exposures in urban areas in Devon include:

- Stratigraphical (Phanerozoic): Devon (marine) carbonates and clastics
- Permian-Triassic red-bed sequence
- Stratigraphical (Quaternary): Late Pleistocene interglacial/glacial, cave/beach sediments (Saalian-Weichselian) [provisionally includes Pleistocene giant mammal/ hominid assemblages]
- Igneous and metamorphic geology: Igneous rocks linked to the northern European Variscan fold-belt
- Igneous and metamorphic geology: Permian-Carboniferous igneous rocks of Britain
- Geomorphological features, erosional and depositional processes, and landscapes: Rias
- *Structural: Variscan nappes and allochthon/ parautochthon of Devon and Cornwall

Other important Earth heritage features which are well represented in exposures in urban areas in Devon include:

- Devonian Igneous rocks
- Lower Carboniferous stratigraphy and palaeontology (marine)
- Upper Carboniferous stratigraphy and palaeontology (marine and non-marine)

6. Current extent

There are no figures currently available for the area of cities, towns and villages in Devon.

7. Current problems for cities, towns and villages in Devon

Inappropriate management of sites, either over-management, incorrect management, insufficient management, or complete neglect. 'Tidying' of urban parks can lead to a uniform land use. Development pressures; many wildlife-colonised sites are ultimately lost to development.

Pollution: including chemical, air and water pollution; also light and noise pollution. Eutrophication of soils, for instance as a result of dog fouling, can destroy areas of limestone grassland by promoting the luxuriant growth of plants such as some grasses at the expense of smaller and rarer specialised species.

People pressure: urban sites constitute areas of high population and therefore may suffer the effects of over-use or misuse, including fouling by dogs, erosion and disturbance by mountain biking, vandalism, illegal activities such as poaching, air gun abuse, motorbike scrambling, *etc.* Such activities can also make site use or management difficult or even dangerous.

Conflict of interests on sites; nature conservation very often takes second place to the demands of leisure and sports uses, especially pertinent as lottery funding is generating a large number of such developments.

Lack of understanding and awareness of the wildlife conservation value of some sites, and of the various opportunities for enhancing wildlife in their gardens and other places.

Health and safety concerns often lead to the netting or even concreting of geological exposures.

Lack of resources and best practice information to allow sympathetic conservation management of sites, in relation to other demands on them.

Redevelopment of old buildings and loss of roosts for bats and nesting sites for birds such as swallows and house martins.

Development provides virtually the only opportunities in urban areas to study bedrock geology. Generally, however, geologists are **unaware of opportunities** or unable to access such sites. As a result many potentially scientifically important exposures have not been recorded.

8. Recent changes in extent

Over the last 40 years or so, Devon's main urban centres have expanded rapidly, even linking together formerly separated villages. This pattern of development has now expanded to some of the smaller towns and even villages. Two new, large settlements are planned on green field sites in East Devon and the South Hams. This expansion does not necessarily, however, mean that available space for wildlife in urban areas has also increased, as other habitats of equal or greater value may have been lost and higher densities of development mean that less green space survives within the built environment.

9. Current site protection

Nature conservation features of national importance do occur within urban areas in Devon and include:

Bonhay Road Cutting SSSI, part of the Exe Estuary SSSI (in Exeter), Dawlish Cliffs SSSI, Faraday Road SSSI, Mount Wise SSSI, , Plymbridge Lane and Estover Road SSSI, Richmond Walk SSSI, Wallsend Industrial Estate SSSI,

Kent's Cavern SSSI, New Cut (Torquay) SSSI and Lummaton Quarry SSSI (all Torquay).

Plymouth Sound and Estuaries complex is a Special Area of Conservation (under the EU Habitats Directive) and a classified Special Protection Area (under the EU Birds Directive) and adjoins the urban areas of Plymouth. The Exe Estuary - bordered by Exeter, Topsham, Exmouth and Dawlish - is also a Special Protection Area.

A number of County Geological Sites are present in urban areas, including in Exeter, Tavistock and especially Torbay. The recent establishment of a database of CGS in Devon will ultimately facilitate the listing of all sites in these areas.

There are also many County Wildlife Sites within urban areas.

10. Current positive initiatives for cities, towns and villages in Devon

Please note: this list is incomplete and currently under-represents initiatives for wildlife

- The County Geological Sites (CGS) and County Wildlife Sites (CWS) schemes identify non-statutory sites of (at least) County importance for their geology and wildlife, and provide planning authorities with this information to steer development away from such sites or to ameliorate potential damage Devon RIGS Group (see below) and Devon Wildlife Trust co-ordinate the identification of CGS and CWS, respectively.
- Devon RIGS (Regionally Important Geological/Geomorphological Sites) Group promotes geological conservation, by working with local authorities, landowners and others, and provides advice, on request on County Geological Sites and the management needed to retain or enhance their geological interest. The RIGS Group is undertaking detailed LA by LA surveys, completed projects include for the North Devon AONB, mining districts in West Devon, Torbay, Exeter, South Hams, East Devon, Teignbridge, the Teign Estuary and Dartmoor.
- The Ussher Society is a forum for presenting and discussing the results of geological research into Earth heritage sites in the South West of England. These results are published annually in *Geoscience in south-west England*.
- The British Geological Survey has recent completed new surveys of parts of the County (including Exeter, Plymouth and Torbay). New geological maps have been published, supported by descriptive memoirs (Exeter and Plymouth) and a brief review (Torbay). A new survey of the Tiverton area is currently taking place (2007). All four areas include important

urban centres.

- DCC/EN co-ordinated Devon Roads and Geology Pilot Project, aimed to identify opportunities to conserve geological exposures on Devon's road network, and to develop interpretation and education facilities.
- Devon Educational register of Geological sites provides a web-based resource for educational groups and includes over 80 CGSs and SSSIs (www.devon.gov.uk/geology). Some of these sites are in an urban context.
- The Devon Aggregates and Biodiversity Project, a partnership between Aggregates Industries UK and Devon County Council and funded by the Aggregates Levy sustainability fund produced Parish Geodiversity Audits for 10 parishes in the county. These PGAs not only document the geodiversity present, they also identify opportunities for conservation and community participation. Initiatives concerning the built environment are proposed on the majority of these plans. A parallel process also produced biodiversity action plans for each parish.
- Devon County Council and English Nature (now Natural England) have supported Devon RIGS Group in the establishment of a database of County Geological Sites, including descriptions, maps and photographs. Some of this information is available via the newly established Devon RIGS website.
- Torbay has been proposed as a 'European Geopark', a programme supported by UNESCO. 'Coral Coast Geopark' project is supported by Torbay Coast and Countryside Trust, the Torbay Heritage Forum and Torbay Council. Actions to date include the production of new geological interpretation and a Local Geodiversity Action Plan.
- Sites cleared as part of English Nature's 'Facelift' programme include Bonhay Road SSSI in Exeter, where interpretation has also been installed.
- Scrub clearance at Lummaton Quarry SSSI by Torbay Coast and Countryside Trust has not only improved geological exposure, it has also expanded a colony of small blue butterfly.
- Scrub clearance in limestone areas of Plymouth carried out by Plymouth City Council has not only re-created areas of limestone grassland, it has also demonstrated the longevity of a dormant seed bank and hence the potential for restoration elsewhere.

11. Biodiversity planning context

The Devon Biodiversity Action Plan forms a key link in the chain of biodiversity planning running from the National UK Plan, through regional guidance, to local delivery.

Although there is no equivalent national Geodiversity Action Plan, the Devon BAP fulfils the role of a Local Geodiversity Action Plan (LGAP) in an innovative and integrated approach to natural heritage conservation.

National BAP Context

Habitat of principal importance in England (NERC Act, S.41):

- Open mosaic habitats on previously developed land

Current national BAP targets can be viewed on the [Biodiversity Action Reporting System](#) (BARS).

Regional BAP Context

Regional targets for priority BAP habitats can be found on the website of [Biodiversity South West](#).

Associated Action Plans within the Devon BAP:

- Great green bush-cricket
- Primrose
- Caves, karst and limestone habitat
- Pits, quarries and cuttings
- Rivers streams and floodplain and fluvial processes
- Sea cliff and slope
- Species-rich hedgerow

12. Biodiversity objectives and targets for cities, towns and villages in Devon

Objective 1

Foster greater public understanding and awareness of the built environment as a place for the enjoyment of wildlife and Earth heritage.

Target: Establish a Community Wildlife Group in each settlement of 5000 or more people by 2010.

Objective 2

Ensure that there is provision of accessible “natural green space” and geological features to the populations of towns and cities.

Targets:

- For all new housing developments, ensure that at least the legally required standards for access to green spaces are met.
- For existing urban housing, seek to use any opportunities which arise to increase the provision of green space (where ever possible and appropriate, within 300m of every home).
- Safeguard and enhance important geological features in urban areas and maintain them in a suitable condition, with information provision, for educational use.

Objective 3

Expand the range and distribution of common and nationally/locally scarce species and habitats in cities, towns and villages.

Target: Ongoing.

Objective 4

Enhance accessibility to major development sites to allow for scientific recording by geological specialists.

Target: Ongoing.

13. Wider benefits from pursuing these objectives

The pursuit of the objectives set out in this plan will not only benefit the biodiversity of cities, towns and villages. Conservation has wider benefits and advantages for society, by providing a resource which is the basis of many aspects of the local economy, and by adding to the quality of life of the people of Devon in ways which are beyond financial measure. Thus enhancing the interests of biodiversity enhances the interests of society as a whole.

Improved quality of life for the inhabitants: Contact and involvement with wildlife is, for many people, central to a good quality of life; this is true for people in highly built-up places as it is for those in smaller towns and villages. As well as providing benefits such as improved air quality, and places for children to play, the existence of wildlife areas, no matter how small, adds a spiritual lift to the every day lives of inhabitants.

Enhanced attractiveness of towns and cities: By providing new areas for wildlife and by enhancing existing areas, our towns and cities may become more attractive places to visitors and tourists as well as local residents, leading to the enhancement of local economies.

Educational opportunities: By enhancing opportunities for people's contact with wildlife and geological heritage, new opportunities for local schools to use local natural areas as part of their curricula are created. This will help to engender a sense of value and understanding by present and future generations of the role of wildlife in the built environment.

Scientific and heritage benefits: Where important specimens such as unusual fossil assemblages have been recorded during temporary excavations in urban areas, conservation of these finds in a museological context is the only option, as there is no longer any site to conserve. Working with county-based museums will ensure that such material remains available for future study and display, including for raising awareness of Devon's rich geological heritage, thereby fulfilling a number of the key functions of such institutions.

14. Priority or indicative actions for cities, towns and villages in Devon

Action	Key Partners
1. Ensure all Local Development Frameworks (& other strategic documents) contain provision for retaining wildlife and geological features within housing and other development, to include the provision of nature reserves within all towns and cities in Devon.	LAs; NE; DWT; DRIGSG
2. Ensure that the statutory requirements for the provision of green space within new housing developments are met. Where possible, there should be wildlife gain (e.g. habitat creation) in all developments through the use of Section 106 Agreements.	LAs
3. Encourage environmentally friendly building design and landscaping that provides habitat for animals and plants and uses native species.	LAs; DWT; NE; Developers
4. Ensure that urban wildlife sites that meet the criteria for CGS and CWS are identified and designated, with landowners identified and advised on positive management. Where appropriate, establish suitable management agreements.	LAs; NE; DWT; DRIGSG
5. Ensure maintenance regimes of open spaces within cities, towns and villages enhance the potential for wildlife and enjoyment.	LAs
6. Provide advice on wildlife and geological conservation to land managers, other professionals and schools to enhance areas to benefit wildlife, geological heritage and enjoyment.	DWT; NE; DRIGSG; DCC
7. Continue to establish and promote sites of geological and wildlife interest within urban areas which are accessible to the general public and provide suitable on-site interpretative facilities. Encourage the use of these by schools and other educational establishments.	LAs; RIGS
8. Raise public awareness and understanding of urban biodiversity and geodiversity for social well-being and enjoyment through campaigns, initiatives, radio and press features and competitions. Promote wildlife gardening through displays in garden centres, etc.	DWT; NE; RSPB; DBWPS; Local Wildlife Groups; DCC; BTO
9. Establish a geological records centre for Devon and promote the reporting and recording of new finds, including from construction sites	DRIGSG, museums, universities, DCC, landowners including NT

Cities, Towns and Villages Action Plan Champion: currently not assigned

Abbreviations used in text and table

BAP	Biodiversity Action Plan
BTO	British Trust for Ornithology
DBWPS	Devon Birdwatching and Preservation Society
DRIGSG	Devon RIGS (Regionally Important Geological/ Geomorphological) Sites Group
DCC	Devon County Council
DWT	Devon Wildlife Trust
LAs	Local Authorities
NE	Natural England
RIGS	Regionally Important Geological/ Geomorphological Sites
RSPB	Royal Society for the Protection of Birds