Urban Habitat Action Plan

1. Introduction

The contribution that urban areas can make in supporting a range of habitats and species is frequently overlooked and opportunities can be missed to contribute to the delivery of landscape-scale Green Infrastructure networks. Increased pressure to allocate land for housing creates urgency as well as opportunity to promote development that integrates habitats and connects greenspace across and within urban areas.

We need to ensure that biodiversity is given adequate and appropriate consideration within development control forward planning and policy. Another challenge will be to ensure that this is communicated through the planning application process to achieve biodiversity net gain on the ground, for the benefit of both people and wildlife living in Worcestershire. In addition, with over 80% of the UK population living in urban areas it is important to recognise that the green infrastructure components of the urban environment offer most people their first contact with wildlife.

2. Current Status

2.1 Description of habitat

Many biodiversity-rich habitats appear in both urban and rural areas and have their own Habitat Action Plans within the Worcestershire BAP. Readers are advised to consult other Action Plans of particular relevance to the urban environment, for example Rivers and Streams, Road Verges, Traditional Orchards and Canals. It is important to emphasise the crucial role that rivers, streams and canals (the 'blue' component of green infrastructure) can play in linking natural habitats to provide functional ecological corridors within and through urban areas.

Well planned and managed green (and blue) infrastructure has multi-functional benefits beyond habitat provision for wildlife, for example flood amelioration and the physical and mental health and well-being of the human population. Certain habitats are unique to, or typical of, the urban environment and it is these that this plan will focus on. They include:

The 'built' environment including both industrial and domestic buildings

Buildings and built infrastructure provide a significant roost and nesting resource in the urban environment. These can be especially important for priority species such as bats and scarcer birds including swift (*Apus apus)*, black redstart (*Phoenicurus ochruros*) and peregrine *(Falco peregrinus)*. Careful connection of such features via green corridors can markedly increase their ecological value.

Municipal parks

Though they are sometimes heavily managed these are of particular importance, not only for the broad biodiversity they contain but because they are often the first point of contact between people and wildlife.

Brownfield sites (i.e. previously developed land)
Previously developed sites, especially those that have been 'derelict' for some time can be extremely important for biodiversity. A number of semi-specialist species are closely allied to urban brownfield locations, whilst a broad range of invertebrates and reptiles can often be found.

Allotments
Allotments are a feature of many of Worcestershire's built up areas and have a significant role to play in the conservation of urban biodiversity. In Worcester city they provide a refuge for some of the best populations of slow-worm (*Anguis fragilis)* in the West Midlands and elsewhere they provide a broad range of grassland, herb and scrub habitats and act as reservoirs of biodiversity for the wider townscape. This function can be particularly valuable where they occur adjacent to ecological corridors such as canals or railway infrastructure.

Churchyards
Though churchyards are often heavily managed they can be very valuable for lichens and in some places relict grassland communities. Where they have untended corners these can develop into suitable habitats for priority species such as slow-worm. Some will also contain good numbers of significant trees and shrubs and can be important to the local landscape character as well as for biodiversity.

Gardens and communal housing greenspace
Though frequently overlooked in the past, these areas can make a substantial contribution to urban biodiversity. Whilst they may contain non-native plants these still provide habitat for nesting birds, invertebrates and other wildlife. In places networks of gardens form the only 'green' corridor in the landscape and can play a vital role in ensuring the permeability of our towns for wildlife. In many cases the garden or communal greenspace will be the first and most frequent point of contact between people and the outdoors.

Playing fields and/or school grounds
Whilst the frequently mown pitch of an open playing field has limited value for wildlife, the surrounding grassland areas can be rich in biodiversity. In addition, thick hedges, trees and shrubs border many school grounds and playing pitches adding to their value. Open spaces, managed or otherwise, can also provide a significant buffer to rapid urban runoff, an opportunity for people to experience the outdoors and in some circumstances an important component of wider green corridors and networks.

Street trees and urban woodlands
Trees play an important role in bringing wildlife into urban spaces. They can offer feeding, nesting and roosting opportunities for birds, be valuable for pollinating and other insects, lichen and fungi and help to provide or strengthen feeding and commuting routes for bats and other mobile species. Trees are also an important influence on the way that people perceive and interact with urban spaces. In addition, trees help to ameliorate atmospheric pollution and the 'heat island' effect and can play a role in managing surface run-off.

2.2 Distribution and extent

For the purposes of this plan the urban habitat includes all those areas of land, water and physical structures capable of supporting biodiversity, both in terms of providing shelter and as foraging habitat, which are located within the planning boundary of a significant settlement as defined in relevant Local Plans. Large villages such as Bretforton and Fernhill Heath are included but Malvern, Kidderminster, Redditch, Tenbury, Bromsgrove, Pershore, Evesham, Droitwich, Stourport, Upton, Bewdley and Worcester provide the bulk of the resource. There are also several 'urban' sites that fall within otherwise rural localities. Examples include Throckmorton airfield and the complex of railway sidings at Honeybourne.

Given the high levels of development proposed for Worcestershire it seems likely that the urban resource will increase over the life of this plan. It will be important to ensure that this growth is managed so that the biodiversity benefit it can offer is realised. Growing pressure on existing brownfield sites must also be managed sensitively, with suitable protection put in place for existing features of interest (see section 3 below).

2.3 Legislation

- Special Areas of Conservation (SAC) and Sites of Special Scientific Interest (SSSI) can be designated on sites with individual or assemblages of habitats or species.

- The Natural Environment and Rural Communities (NERC) Act 2006 establishes a duty for Public Bodies to have regard to Biodiversity in their decision-making processes. This duty does not differentiate between the urban and rural environment and is therefore relevant in the urban planning context.

- Tree Preservation Orders (TPOs) can be placed on individual trees or groups of trees that have a public amenity value.

- The Hedgerow Regulations 1997 provide some measure of protection through a system of notification to Local Authorities. They are only relevant to hedges that are not part of a residential curtilage, and therefore the opportunity to use the Regulations is limited in an urban setting, but they can still be an important instrument.

- Listed buildings and Conservation Areas are subject to planning restrictions and may be of high value for biodiversity. Where Local Authorities are carrying out Conservation Area Appraisals it is considered best practice to include consideration of biodiversity.

- Several species commonly found within or making use of habitats within the urban or semi-urban environment have their own legislative protection. Examples include bats (all species found in the UK are protected), badger (*Meles meles)*, otter (*Lutra lutra)* and great crested newt *(Triturus cristatus)*.

2.4 Summary of important sites

Much of the urban resource has some value for biodiversity but there are some sites that are worthy of particular mention:

- Allotment sites in Worcester. These are amongst the best sites for slow-worms in the West Midlands and can hold significant breeding populations.

- Honeybourne Sidings. A partially disused railway yard of particular importance for invertebrates including the grizzled skipper *(Pyrgus malvae)*.

- Canal basins. Found in several of the county's towns these can be important for invertebrates, scarce plants, otter, water vole (*Arvicola amphibius)* and bats. Their links to the canal corridors enhances their value.

- Terraced houses, especially in Worcester. These are now among the most important sites in the county for breeding colonies of swift.

- Dense networks of garden and greenspace ponds can support meta-populations of great crested newts in addition to many other species. The pond complex at Lyppard Grange in Worcester has been designated a SAC for this reason.

- Urban orchards. Primarily associated with Evesham and Worcester these habitats are of tremendous value for biodiversity and can also be important from a cultural and historical perspective.

- Large Parks. Found in most of the bigger towns but perhaps exemplified by the ones in Great Malvern and Worcester.

- Redditch was designated a new town in 1964 to relieve growing pressure on the West Midlands conurbation. This resulted in its population more than doubling to fill the housing developments built to expand the original settlement. The development of the town was designed to incorporate many of the natural features of the surrounding countryside and to include major landscaping works including the planting of 2 million trees. The borough today incorporates a green network of six local nature reserves, over 100 hectares of ancient semi-natural woodland, wildflower meadows, the 320 ha Arrow Valley Country Park as well as an extensive pond network important for species such as great crested newt.

3. Current factors affecting the habitat

- Management. Much of the urban habitat resource has to meet the needs of multiple users and cannot always be managed in the most appropriate manner to maximise biodiversity benefit

- Lack of awareness. The quality and biodiversity potential of the urban environment can be overlooked or ignored.

- Development Pressure. Urban locations are very important ecologically and often contain protected species. Unfortunately, such areas are also subject to significant development pressure. A decline in the size of the average urban garden also means less space for wildlife in residential

areas. Such pressure is leading to a decline in the overall habitat resource, but it can also act as a driver for providing biodiversity benefit within the built environment.

- Human Activity. There are many problems associated with this variable, including: the impact of domestic animals, especially cats; littering; fly-tipping; disturbance to wildlife from the increased use of footpaths and parks; poorly designed or controlled lighting.

- Barriers. A lack of permeability within and through urban areas creates barriers to the free movement of species. Badly planned 'grey' infrastructure can carve up greenspace and green networks and reduce permeability.

- Contamination. Industrial pollutants may be present and can have a detrimental effect upon the habitat, biodiversity and site users.

- Isolation and fragmentation. Many urban habitats suffer from fragmentation as a result of development or changing land use. This, combined with the small size of many sites, can lead to a decline in species diversity and population size even in situations where the habitats themselves are well managed.

- Health and safety concerns. This can be a particular problem with respect to street trees and their proximity to roads and public buildings but can be mitigated with a robust 'right tree in the right place' policy and appropriate risk management.

4. Current Action

4.1 Local protection

- There is one European protected site within the urban area of Warndon Villages in Worcester, The Lyppard Grange SAC, designated for its great crested newt meta-population.

- There are several SSSIs including Ipsley Alders Marsh in Redditch and Northwick Marsh in Worcester.

- Sites can be listed as Local Wildlife Sites (LWS), which gives some protection within planning policy. There are large numbers of LWS within the urban areas of Worcestershire, in particular covering grassland and woodland habitats. In addition, the main rivers, canals and streams are listed and this includes where they flow through urban areas.

- There are several urban Local Nature Reserves spread widely throughout the urban areas of the county.

- Local Plan policies recognise the importance of green infrastructure and ecologically functional green links. This provides incentive for the creation and protection of such links through the development process.

- Sites and/or green networks may be identified within Neighbourhood Plans and may receive specific protection through district Local Plans.

- Land may be owned by public bodies such as Severn Trent Water and managed appropriately to maximise biodiversity interest.

4.2 Habitat management and programmes of action

- Natural England developed and published a set of benchmarks for the provision of access to green spaces. The Accessible Natural Greenspace Standards (ANGSt) aim to ensure people living in urban areas have access to wildlife-rich green spaces within a certain distance of their home.

- The Woodland Trust's 'Woods for People' project collects and maintains data on accessible woodland across the UK and was responsible for developing the Woodland Access Standard, now widely adopted in forestry policy. This aspires to a level of woodland access provision whereby everyone should have access to a wood of at least 2 ha within 500m of their home and of at least 20 ha within 4km of their home. The Woodland Trust has also published data on canopy cover within towns and cities, with an aspiration that canopy cover should be a minimum of 20% across all urban areas.

- Biodiversity-friendly and sustainable building design is becoming more mainstream with initiatives such as the BREEAM Code for Sustainable Homes and the Building With Nature benchmark for the design and maintenance of green infrastructure in housing and commercial development. In Worcestershire, large strategic developments may be guided by the Green Infrastructure Partnership via the production of GI Concept Statements and site master plans.

- Worcester City Council was an early adopter of the concept of greenspace and green networks and the incorporation of these principles into the planning process. A Green Space Survey was carried out in 2006 (and updated in 2011) followed by the publication of a Biodiversity and Trees Supplementary Planning Document in 2007. This work informed the policies within the South Worcestershire Joint Core Strategy (adopted 2016), including 'SWDP 5: Green Infrastructure'.

- Bromsgrove District Council has supported survey work and a number of habitat improvement projects designed to protect and enhance suitable water vole habitat along watercourses in the town.

- In 2017 Severn Trent Water and the Environment Agency began work on the restoration of the Battlefield Brook where it flows through Sanders Park in Bromsgrove. The work will remove the concrete channelling that currently contains the brook and re-landscape the bed and banks to a more natural profile.

4.3 Survey, research and monitoring

- Worcester City Council have carried out surveys for slow-worms and great crested newts, a full appraisal of over 80 'Greenspaces' and a

comprehensive assessment of the wider 'green network' of interconnecting open space and gardens.

- Malvern Hills District Council and Wychavon District Council have carried out open space audits covering urban greenspace as well as the wider countryside.

- The volunteer members of the Worcestershire Reptile and Amphibian Group carry out surveys within Worcestershire and are particularly active within Worcester city monitoring slow-worm and great crested newt populations at key sites.

- A core element of the Love Your River project approach is engagement with the public and promoting involvement in citizen science initiatives. The Love Your River Bromsgrove project, led by Worcestershire Wildlife Trust, has trained and supported volunteers to undertake water chemical monitoring and invertebrate and water vole surveys.

5. Associated Plans

Bats, Slow-worm, Great Crested Newt, Otter, Water Vole, Stag Beetle, Grizzled Skipper, Traditional Orchards, Hedgerows, Ancient and Veteran Trees, Road Verges, Canals, Rivers and Streams, Ponds and Lakes.

6. Conservation Aim

The value and potential of urban areas and urban greenspace for biodiversity is recognised and a functioning network of green spaces, wildlife habitat provision and permeable wildlife corridors is in place within our urban areas, informed by a regularly reviewed and updated evidence base.

7. Conservation Objectives

- Promote consistent use of Green Infrastructure Concept Plans to guide development on strategic-scale sites

- Promote the use of the Building with Nature Green Infrastructure standards

- Update Worcester City's Green Space audit and encourage other districts to carry out similar audits to the same standard

- All Local Plans to have robust and clear policies on Green Infrastructure and biodiversity enhancement

- All Local Plans to have a policy on greening the built environment (i.e. use of green roofs, bat bricks, swift boxes, living walls) and the promotion of this to householders/developers at every planning stage

- Engage with statutory and public landowning bodies and work with them to secure biodiversity enhancements and more sympathetic management regimes on their landholdings

- Promote the adoption by local authorities of a pollinator-friendly approach to the management of urban parks and public open space

References and further information

Angold, P. G., Sadler, J. P., Hill, M. O., Pullin, A., Rushton, S., Austin, K., Small, E., Wood, B., Wadsworth, R., Sanderson, R and Thompson, K (2006). *Biodiversity in urban habitat patches.* Science of The Total Environment, **360**: 196-204.

Arnott, S (2007). Wildlife on allotments. Natural England.

Baldock, K. C. R., Goddard, M. A., Hicks, D. M., Kunin, W. E., Mitschunas, N., Osgathorpe, L. M., Potts, S. G., Robertson, K. M., Scott, A. V., Stone, G. N., Vaughan, I. P and Memmot, J (2015). *Where is the UK's pollinator biodiversity? The importance of urban areas for flower-visiting insects.* Proceedings of the Royal Society B: Biological Sciences. 282.

Braaker, S., Ghazoul, J., Obrist, M. K and Moretti, M (2014). *Habitat connectivity shapes urban arthropod communities: The key role of green roofs.* Ecology 95: 1010–1021.

Building with Nature green infrastructure benchmark
https://www.buildingwithnature.org.uk/

Chamberlain, D. E., Gough, S., Vaughan, H., Vickery, J. A and Appleton, G. F (2007). *Determinants of bird species richness in public green spaces*. Bird Study. 54:1,87-97

Christopher, A., Lepczyk, M. F. J., Aronson, K. L., Evans, M. A and Goddard, S. B (2017). *Biodiversity in the City: Fundamental Questions for Understanding the Ecology of Urban Green Spaces for Biodiversity Conservation. BioScience*, Volume 67, 799–807.

Fields In Trust work to protect parks and open spaces www.fieldsintrust.org

Francis, R. A., Millington, J. D. A and Chadwick, M. A (editors) (2016). *Urban Landscape Ecology - Science, policy and practice*. 1st Edition. Routledge.

Gaston, K. J., Ávila-Jiménez, M. L and Edmondson, J. L (2013). *Review: managing urban ecosystems for goods and services.* Journal of Applied Ecology **50**: 830–40.

Gaston, K. J., Fuller, R. A., Loram, A., MacDonald, C., Power, S and Dempsey, N (2007). *Urban domestic gardens (XI): variation in urban wildlife gardening in the United Kingdom.* Biodivers Conserv **16**: 3227–38.

Hernandez, J. L., Frankie, G. W., Thorp, R. W (2009). *Ecology of Urban Bees: A Review of Current Knowledge and Directions for Future Study.* Cities and the Environment 2:3-15.

Kruuse, A (2011). *The Green Space Factor and the Green Points System.* Town and Country Planning Association.

Natural England (2007). *Green Infrastructure and the Urban Fringe: learning lessons from the Countryside In and Around Towns programme.* Natural England (NE33).

Natural England (2008). *Green Infrastructure Strategies: an introduction for local authorities and their partners.* Natural England (NE139).

Natural England (2009). *Green Infrastructure Guidance.* Natural England (NE176).

Natural England (2010). *Nature Nearby: Accessible Natural Greenspace guidance.* Natural England (NE265).

Ozdemiroglu, E., Corbelli, D., Grieve, N., Gianferrara, E and Phang, Z (2013). *Green Infrastructure – Valuation Tools Assessment.* Natural England Commissioned Report NECR126.

Planning for a Healthy Environment – Good Practice Guidance for Green Infrastructure and Biodiversity. Town and Country Planning Association & The Wildlife Trusts. July 2012.

The Wildlife Trusts (2018). *Homes for people and wildlife – How to build housing in a nature-friendly way.* Royal Society of Wildlife Trusts.

The Woodland Trust (2010). *Space for People: Targeting action for woodland access.*

Tucker, G., Ash, H and Plant, C (2005). *Review of the coverage of urban habitats and species within the UK Biodiversity Action Plan.* English Nature Research Report number 651.

Worcestershire Green Infrastructure Partnership (2013). *Green Infrastructure Strategy 2013-2018.* Worcestershire County Council.