

Dursley Neighbourhood Development Plan

Biodiversity and wildlife

Dr Kathy Meakin, local resident and professional ecologist

Personal statement: I have studied ecology or worked professionally in ecological consultancy and wildlife conservation sectors for the last 20 years, including a PhD in invertebrate biodiversity assessment from the University of Leeds and numerous assessments for protected species affected by developments such as the Channel Tunnel Rail link and M25 road widening. Shortly after becoming a Dursley resident in 2007 I started work as an ecologist at Gloucestershire Wildlife Trust. The views expressed below are my own objective assessment of the opportunities for wildlife in Dursley, illustrated mostly with my own and other resident's casual observations, with deference to other residents with a longer acquaintance with the wildlife of the town and what has changed.

Introduction

Section 40 of the Natural Environment and Rural Communities Act 2006, places a duty on all public authorities in England and Wales to have regard to conserving biodiversity as an integral part of policy and decision making. The National Planning Policy Framework is clear that pursuing sustainable development includes moving from a net loss of biodiversity to achieving net gains for nature, and that a core principle for planning is that it should contribute to conserving and enhancing the natural environment and reducing pollution (<http://planningguidance.planningportal.gov.uk> accessed 8/9/2014 abridged).

The Dursley Neighbourhood Development plan can support the delivery of Section 40 by identifying green spaces in need of protection, key species and wildlife corridors that connect this wildlife to the wider countryside, without which they will not be sustainable.

Over the past 50 years increased public awareness of wildlife has led to one of the most dramatic shifts in British wildlife. As agriculture has intensified and semi-natural habitats declined, urban and suburban parks and gardens have become important refuges for many formerly common and widespread animals such as frogs, toads and newts and now arguably hold more of their populations than the wider countryside (Gaston & Evans 2010). Connectivity to remaining, more natural habitat patches that can be safeguarded is vital to the continued survival of these populations. The wildlife of Dursley is a particular case in point, the town, by virtue of its topography being in close proximity to semi-natural habitats. Linkages which can none the less be broken by piecemeal development that is not guided by the strategic overview of the town's biodiversity this section aims to provide.

Wildlife Corridors of Dursley.

1. Woodland

The town of Dursley has a possibly unique relationship in lowland England to its surrounding countryside and wildlife, being fringed entirely along its shared western border with Cam by a band of continuously wooded hills, the undulating woodland edge stretching for at least 12 km alongside the town. The woodlands, which have key wildlife site status, are mostly ancient semi-natural with

some small plantation blocks of conifer, and continue almost unbroken all the way along the steep Cotswold scarp slope to Uley and then to Stroud to the north-east. Dormice *Muscardinus avellanarius* occur where there is a diverse understorey and along the scrub of the woodland edge and may even occur in gardens and hedgerows that connect to the woods. With only 11.5% of the UK covered by trees (JNCC.defra.gov.org accessed 8/9/2014) the woodlands of Dursley are a remarkable natural asset to the local community.

2. Semi-improved grasslands

Patches of poor semi-improved rough improved grassland along the perimeter of the woodland such as Hardings Drive and the slopes above Woodmancote not only form a buffer between the town and the woodland, but are in themselves valuable habitat for many species of the woodland edge notably mammals, birds and, being east facing, are warm enough for reptiles. No information was available at the time of writing to confirm their value to plants and invertebrates.

Semi-improved grassland refers to permanent grasslands that have not been sown but may have had some agricultural improvement in the past and still have notable plant species. More recent grasslands are dominated by ranker grasses and are not botanically rich, but valuable to other species. Notably for Dursley: slow worms *Anguis fragilis*, great crested newts *Triturus cristatus* (protected under the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981) small mammals and their attendant predators – kestrel *Falco tinnunculus* and barn owl *Tyto Alba* have all been observed in the fields included in the current housing development proposal for the land off Ganzell Lane (Eric Palmer pers. comm.). These fields are part of the last remaining rank grasslands with old un-flailed hedgerows to the south of the River Ewelme between Dursley and Uley.

3. Rivers and hedgerows

The River Cam/Ewelme forms a third important wildlife corridor. Flowing along the eastern edge of Dursley and although culverted under the town, analysis of satellite photographs (Google Maps accessed 8/9/2014) shows that the river corridor is wooded for almost its entirety from Chestal to the railway line close to the M5 (Figure 1), where it connects with other streams and in turn with a well-developed hedgerow network to the north (hence their inclusion here). The tree lined stream network is at least 20 km long, and intersects several small habitat patches such as the sewage works and extensive ponds at Everhot (see bats below).

4. Gardens and green spaces

Many large, well established gardens and remnant green spaces facilitate the movement of wildlife into and through the town from the woodland. At Dursley's widest point, estimated at Rosebury Road, local people are still only approximately 670m from woodland edge or put another way, woodland wildlife is only 670 m away from gardens.

Although probably detrimental to wildlife at the time; assuming sympathetic gardeners who prefer not to keep all of their gardens too tidy and lazy cats, the large, well established and connecting gardens of the Garden suburb, Hunger Hill and the Fortress are in particular expected to provide valuable habitats for amphibians, reptiles, birds and insects and connect with other gardens all the way to the A4135. The main road through town will be a barrier to the eastward dispersal of many

smaller species but the main direction of dispersal will be along the valley, which has been largely unfragmented by roads (see hedgehogs below).

Garden visits from badgers *Meles meles* and roe deer *Capreolus capreolus* produce mixed reactions, but the penetration of woodland birds such as the greater spotted woodpecker *Dendrocopus major*, (which have taken to bird feeders) into gardens as close to the town centre as Windsor Road (pers. obs. 2009) is probably more universally welcomed. Badgers are frequent visitors to many gardens in the town, with an unconfirmed badger sett reported from the bank at the end of Yellow Hundred Close (Nicola Christopher pers.comm.). Although often a nuisance, badgers and their setts are protected under the Protection of Badgers Act 1992, which makes it an offence to kill, injure or interfere with a badger or interfere with a badgers sett (www.naturalengland.org.uk accessed 9/9/2014) often making badger setts a very serious and costly problem for developments.

Gardens constitute much the larger part of green space in Dursley. Unmanaged or informal green space is more restricted with the largest and most important area comprising the bank above Lister Petter, which extends all the way to the hollow behind Long Street below Sainsburys Car Park (Figure 2). The bank is a mixture of planted and self-seeded trees and scrub with some tall herb and rough grassland and connects much of the “missing” river section of the river corridor through Dursley (see bats below). Before the trees were cut down on the corner of Long street and Drake Lane, there would have been better wildlife connectivity to Chestal and the hedgerow network towards Downham Hill.

Flagship species for Dursley – engaging the community with local wildlife

For sustainable development that benefits local wildlife, targetted ecological surveys are strongly recommended to provide a sound evidence base for decision makers and as a baseline against which to measure the sustainability of future developments.

Records of species recorded in the Dursley area can be requested from the Gloucestershire Centre for Environmental Records for a small fee to cover their costs. The data can be provided either as a spread sheet or mapped so that it can be viewed using software such as Parish Online which has been specially developed to help parishes interpret their spatial data.

Biological records can give a much fuller account of the town’s biodiversity than mentioned here and are well worth pursuing. However, it is often easier to interpret patterns in biodiversity using a smaller number of species that act as “flagships” or “umbrella species” for the many. In a development context, species that are protected by law because they are declining at a national or European level are particularly relevant. Planners and developers must have due regard for them, carry out assessments and devise licenced mitigation as necessary.

As ecological assessments commonly only take a site view of protected species, are rarely done by local ecologists and almost never monitored, it is strongly recommended that the community conducts its own species surveys under the auspices of the neighbourhood development plan to assess whether the criteria of the Natural Environment and Rural Communities Act 2006 are being met . The author is prepared to donate time to train Dursley volunteers for free and with the exception of bat detectors with minimal equipment costs. With the right promotion in the local

papers there is considerable scope for widespread community engagement and pride in surveying the following emblematic species using methods (for which licences would not be required):

Bats

Continuous tree cover along linear landscape features such as the river and hedgerow network (Figure 1) will be of particular importance to bats. The eighteen species of UK bat, (treated here for simplicity as a single entity), are all given equal protection under the Conservation of Habitats and Species Regulations 2010 and the Wildlife and Countryside Act 1981. Bats roosting in buildings and trees in the town need this corridor to commute to insect food in the wider countryside. Many of the smaller species will not cross gaps as small as 10 m in hedges (Entwhistle et. al. 2001) and can easily become isolated. Surveys with bat detectors to determine levels of bat activity are highly recommended to assess the importance of this corridor and patterns of bat activity within Dursley.

Slow worms

Slow worms are a notable, if probably under recorded feature of the wildlife of the area, due to their secretive nature. The shallow soils of the east facing grassland slopes below the woodland create an ideal temperature regime for basking and it is likely that this is a source habitat for a now widespread population of this inherently vulnerable animal that has spread into gardens across the town, with observations ranging from at least the church yard at (Ref) to gardens in Highfields (per obs 2008-2013), with doubtless many other sightings by residents across large areas of Dursley going unrecorded. Asking interested residents to put out carpet tiles and record any slow worms found underneath would inform us how widespread and abundant this nationally declining species is in our town.

Hedgehogs

Many residents report that hedgehogs used to be much more common around Dursley, a picture that is reflected nationally. The People's Trust for Endangered Species report that as much as a quarter of the population has been lost in the last 10 years, on top of evidence of a long term decline from 1960 to 1980 from game keepers (PTES 2011). Declines are largely attributed to the loss of permanent pastures and hedgerows compounded in urban and suburban areas by smaller, tidier gardens with impassable fencing and over use of slug pellets. Badgers are natural predators of hedgehogs and at high densities can compound, but not cause, decline in conjunction with these other factors. Public outreach and education supported volunteers in the local community can again do much to improve the fortunes of this species in Dursley's garden wildlife corridors.

Amphibians

Frogs, toads and newts have been the biggest beneficiaries of the rise of the garden pond. It is estimated that 20% of ponds in the UK were lost between 1958 and 1988, with some counties reporting losses over 90 % (Halliday 2010).

Asking residents to report on if they have ponds and whether they see amphibians would enable us to understand where particularly good areas are and hence where any new developments should include mitigation for amphibians or detailed surveys for great crested newts.



Figure 1. The main river and hedgerow network. A key resource for foraging and commuting bats. Satellite imagery Google Maps.

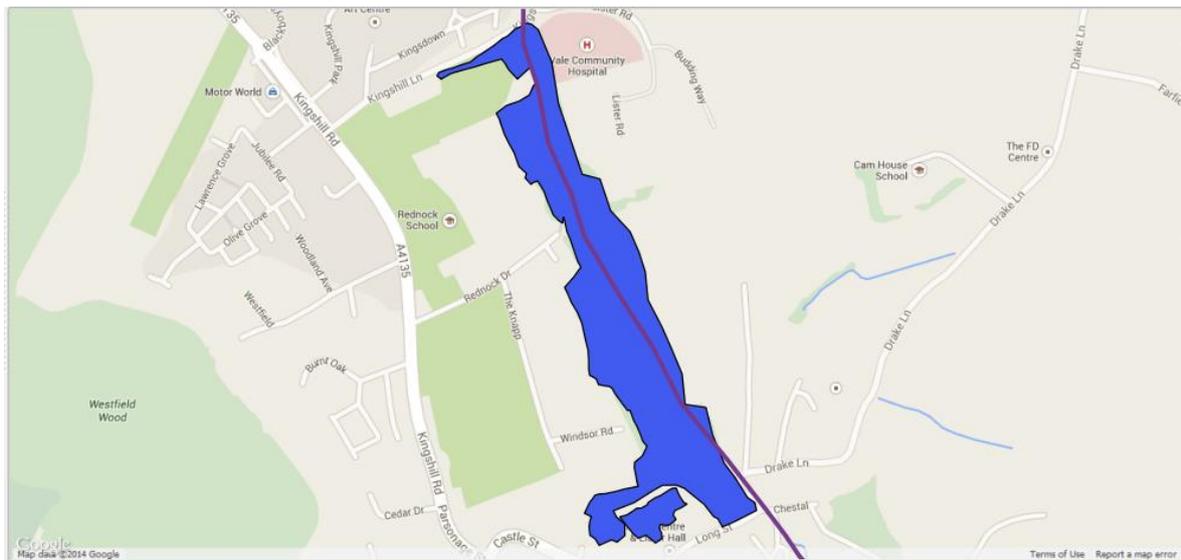


Figure 2. The “bank” greenspace above Lister Petter. Google maps.

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