



REVISED PLAN JANUARY 2017

BARN OWL

Tyto alba

1. INTRODUCTION

The ghostly white form of a barn owl searching hedgerows, ditches and rough, grassy fields for small mammals was once a familiar sight in Warwickshire. As agriculture intensified, however, many such habitats disappeared and the barn owl vanished with them. The barn owl's widespread decline has been attributed primarily to this change in the landscape, with pesticides and road mortality as further negative factors. Development, especially the conversion of barns into residential property, has also contributed to the barn owl's decline by reducing the number of sheltered nest sites within buildings, especially old hay barns.



© Steven Falk

The food supply and feeding habitats of the barn owl are crucial to its success. It relies heavily on small mammals (e.g. voles and shrews) for much of its food and these are most abundant in open areas of rough grassland, or fields with wide, rough grassy margins. The barn owl also requires fence posts, dense hedgerows or hedgerow trees for perches. Being a specialist small mammal feeder, its presence is a good indication that the area is also a rich habitat for a range of small mammals and other animals.

Eggs are laid from March or early April and the clutch size is normally four to seven, but may be larger when food is especially abundant. Currently single-brooded in the UK, but two broods are possible in years of plentiful food. Juvenile mortality is always quite high, with 75-80% surviving less than one year. The barn owl requires several roost sites, as the male roosts away from the female during the breeding season. The female herself may also roost away from the nest site once the young are about a month old. Barn owls reuse their nests in successive years.

Research funded by the [Barn Owl Trust](#) (2006) showed that barn owls are primarily associated with lowland areas of arable and horticultural usage but also occur in pastoral habitats. It is unlikely that they hunt directly where crops are grown or where livestock are grazed but lowland landscapes indirectly provide hunting opportunities in the form of prey-rich rough grass margin habitats. It is estimated that in arable landscapes 14- 21ha of rough grassland is required within 2km of a nest site, in pastoral landscapes 31-47ha and in mixed landscapes 17- 26ha .

2.	OBJECTIVES	TARGETS
Associated Action Plans are: 'Grasslands' (all types), 'Rivers & Streams', 'Field Margins', 'Hedgerows', 'Open Mosaic Habitats on Previously Developed Land', 'Quarries & Gravel Pits', 'Churchyards & Cemeteries' and 'Roadside Verges'		
PLEASE CONSULT THE ' GENERIC SPECIES ' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR OBJECTIVES COMMON TO ALL SPECIES PLANS		
A.	To increase the breeding range to its 1972 level (90% of 10-km squares).	2020
B.	To increase the size of the breeding population to 100 pairs.	2020
C.	To increase the extent of suitable barn owl habitat to 4000ha.	2020

3. NATIONAL BAP OBJECTIVES & TARGETS

The barn owl is not a UK Biodiversity Action Plan (BAP) Priority Species ([Joint Nature Conservation Committee](#), 2007).

4. CURRENT STATUS

The barn owl is the most widely distributed land bird in the world. In Europe, its conservation status is unfavourable and 75% of the population is concentrated in the UK, France, Germany, Italy and Spain.

In Britain, it has been moved to the [Green List of Birds of Conservation Concern](#) (2015); it was previously on the Amber list, having shown a decline of 25-49% in the breeding range. However, the population decline had largely been halted by the late 1990s and was reported as steady by 2002 (Mead). From the [Breeding Bird Survey](#) data collected between 1994 and 2012, the barn owl breeding population was estimated to be up 5% since 1968/72. The abolition of set-aside in 2008 also affected the barn owl though was addressed to some extent by the establishment in 2009 of the [Campaign for the Farmed Environment](#).

Past surveys in Warwickshire recorded barn owls in 46% of 10-km squares in 1966-68, 90% in 1968-72 and 50% in 1988-91 but it seems likely that the first figure was under-recorded, with a real decline between the early 1970s and the early 1990s.

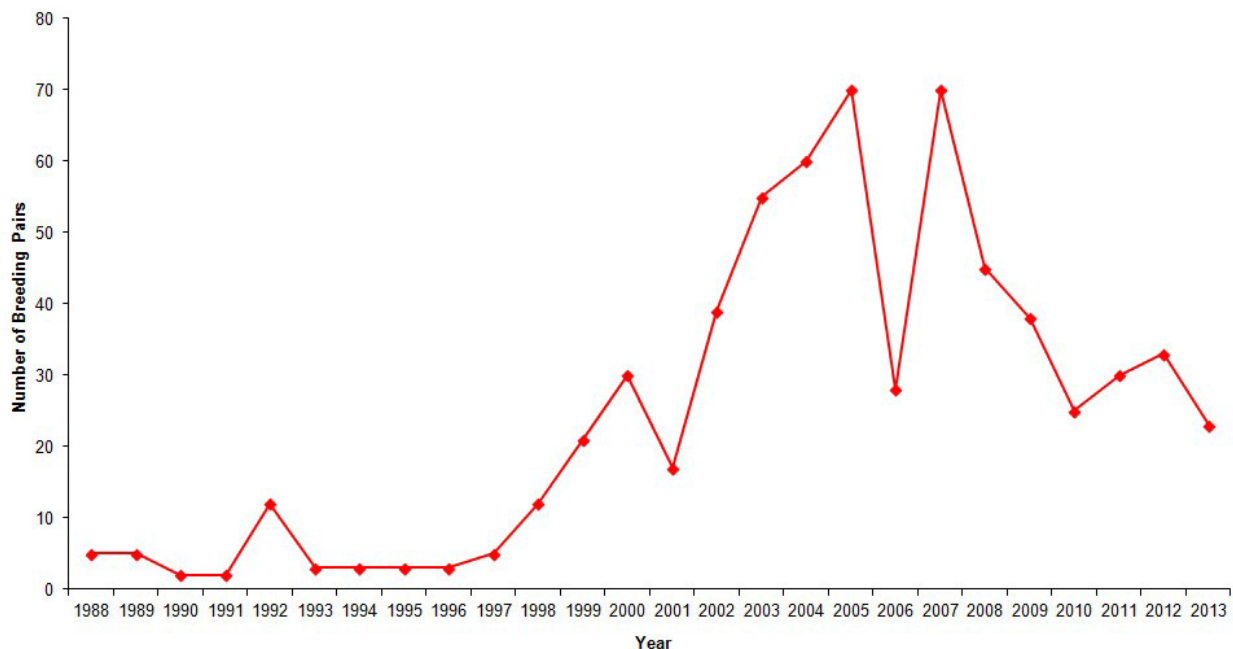
Estimating numbers is complicated because the population fluctuates with the cycles in voles but it seems likely that the county held around 50 ([Hawk and Owl Trust](#) survey) breeding pairs during 1982-85, compared with 200 in 1932. The range then contracted and numbers plummeted, but there has since been some recovery, aided in part by positive land management.

In 2000 the population was estimated at around 40 pairs, with the vast majority in south Warwickshire. However, after an impressive increase in the number of breeding birds recorded by the [West Midland Bird Club](#) (WMBC) from the mid-1990's to 2005-7, with an estimated 100-150 territories, numbers seemed to be falling back to 2000 level numbers

(see graph below, Smith, 2016).) It is possible that this is due to an under reporting or could indicate a genuine slump in the population. According to the Barn Owl Conservation Network, 2013 was the poorest breeding season for barn owls in Britain since 1958 (Smith, 2014) with the species hit hard by the cold and snow lying for several weeks.

However, 2014 was a good breeding season with many pairs having second broods. With 59 breeding pairs and 6 non-breeding pairs in less than 15% of the potential barn owl habitat in S. Warwickshire, it seemed possible that there might be over 100 pairs of birds in the whole county (WMBC). In 2015 breeding was poorer with no second broods and only 28 known breeding pairs.

Graph illustrating the number of breeding Barn Owls in Warwickshire between 1988 and 2013.
Data collated from WMBC Annual Reports (WMBC)



In 2011, the minimum areas of rough grassland in sub region (from HBA data) is 2966.87 ha, which includes scattered scrub, unimproved acid, neutral and calcareous grassland, marshy grassland, wet meadows, field margins, and quarries. It does not include semi improved grasslands, though a proportion of these may be 'rough grassland'. Figures for 'Roadside Verges', 'Disused Industrial & Railway Land' and 'Churchyards & Cemeteries' are not available (2012).

4.1 Legal and Policy Status

A wide range of species and habitats are protected under international and domestic laws, including the [Wild Birds Directive](#) (1979), the [Wildlife and Countryside Act](#) (1981), the [Conservation Regulations](#) (1994) and [EC Habitats Directive](#) (1992). Protection of sites is afforded nationally through [Sites of Special Scientific Interest](#) (SSSI) designation, [Special Areas of Conservation](#) (SAC) and [Local Nature Reserve](#) (LNR) statutory status. Other sites are offered recognition of their value through Local Wildlife Site status (LWS), Local Character Areas and identified Landscape Scale Areas. The [National Planning Policy Framework](#) (2012) chapter/section 11 states conditions with regard to any development negatively affecting biodiversity, including protected sites, ancient woodland and other irreplaceable habitats (paragraph 118). The Wildlife & Countryside Act and schedule 2 of

Warwickshire, Coventry and Solihull Local Biodiversity Action Plan

the [Conservation of Habitats & Species Regulations](#) (2010) make it an offence to intentionally kill, injure, take, possess, sell, buy or transport a range of species.

The barn owl is protected under the Wildlife & Countryside Act and is listed in the [EC Birds Directive](#) and under Appendix II of the [Bern Convention](#). It is on the Amber List of Birds of Conservation Concern (Gregory *et al*, 2002), given an unfavourable conservation status in Europe (Tucker *et al.*, 1994) and listed as globally threatened on the UK Biodiversity Steering Group Report (1995) 'Long List'.

4.2 Current Factors Affecting the Species

The barn owl is a specialist feeder on small mammals, mostly voles, mice and shrews, and is restricted to open areas of rough grassland, field margins, ditches, hedges, riverbanks and the edges of woods. Most nest and roost in farm buildings, though some resort to cavities in trees or even church towers. Barn owls do not survive well in cold, wet or windy weather and prolonged or heavy rainfall. These, coupled with the characteristic population cycles of their favoured prey, can dramatically affect breeding success.

The main threats to the barn owl have been:

- **Loss and fragmentation** of rough grassland.
- **Loss of nest and roost sites** through the demolition of old barns or their conversion into dwellings and also the felling of old trees for safety reasons.
- **Possible poisoning by rodenticides**: these may be consumed by eating contaminated small mammals.
- **Road mortality** through increasing traffic volumes and speed; birds being forced through loss of other habitat to hunt roadside verges.
- **Changing climate** with the recent increase in flooding perhaps reducing populations of small rodents and thereby increasing barn owl mortality. Prolonged wet weather is a continued threat.
- **Disappearance of stack yards and straw-bedding**, which were important sources of prey, especially in hard weather.

5. LOCAL ACTION

- Some nest-boxes have been erected in various parts of the county. The [Environment Agency](#), Hawk and Owl Trust and WMBC have also erected several boxes along the Trent, Sence and Tame valleys in Staffordshire.
- Advice to landowners/managers, by organisations such as RSPB and the Hawk and Owl Trust, on land management for barn owls, has encouraged them to take up agri-environment schemes.
- Two projects circa 2005, one on the River Leam and the other on the Rivers Blythe, Anker and Tame, aimed to enhance farmland habitats for a variety of species including barn owl.
- The presence of barn owls is taken into account in the determination of planning applications (Warwickshire County Council (WCC)).

Warwickshire, Coventry and Solihull Local Biodiversity Action Plan

- The Warwickshire Breeding Bird Tetrads Atlas provided data on the species in parts of the county until 2006 when survey work ceased (pers.comm. Jon Bowley, 2012).
- The [Brandon Marsh Voluntary Conservation Team](#) (BMVCT) began installing Barn Owl nest boxes in 2007; in 2014 there are now 8. Immediately the first boxes were installed owls bred for the first time at Brandon for many years and since then in some years two pairs have bred with 42 young owls being ringed by a licensed ringer. The lack of breeding in 2013 is thought to be because of the long cold winter 2012-13 and also maybe a poor vole year.
- In 2009, 26 barn owl boxes were distributed throughout the Stour Area, funded by Stratford District Council and Stour 2020 Vision group, and are monitored by a [British Trust for Ornithology](#) (BTO) licensed person.
- Stour Valley Wildlife Action Group (SVWAG), founded in 2010, has increased the number of landowners involved in its barn owl project from 20 to 115 in 2015, installing nest boxes which the group builds and funds themselves. With barn owl boxes required to be 1km away from main roads, part of the SVWAG project is to identify suitable sites and identify the most suitable farms. Monitoring of over 250 boxes is carried out by three Schedule 1 permit holders throughout the south of the county (10km. squares SP06, SP16, SP26, SP36, SP46 and SP56 form the northern line of the area covered):
 - 2013 was a very poor breeding season nationally, probably due to the cold spring and low vole numbers and only 18 breeding pairs were monitored; none had second broods and 32 young were ringed.
 - 2014 was a very good breeding season nationally, with the highest levels of productivity on record, after a mild winter followed by high vole numbers. 59 breeding pairs were monitored of which 23 pairs attempted a second brood; 258 young were ringed.
 - in 2015 only 28 breeding pairs were monitored, none had second broods and 58 young were ringed.
- [Agri-environment schemes](#) administered by Natural England are helping to increase the area of rough grassland for hunting barn owls and provide beetle banks.

Delivery for grassland creation is through 14 Entry Level Scheme (ELS) options, 14 Higher Level Scheme (HLS) options and 8 Organic (OS) options. Uptake in 2015 was 1876ha in 286 HLS agreements, 1086ha in 724 ELS agreements and 48ha in 24 OS agreements, a total of 3011ha of barn owl habitat. The uptake of beetle bank options EF7/HF&/OHF7 was 2.62ha.

A capital sum of £28 per nesting box is also offered, the take-up in 2015 being c.50 boxes.
- The [Canal Rivers Trust](#) has installed 3 nest boxes at Nelson Wharf (2015) as part of their 'Natural Asset Management Strategy'.
- [Warwickshire Wildlife Trust](#) (WWT) has installed 10 boxes in the north of the county. 30 of the Trust's sites have substantial areas of grassland managed to some extent as hay meadow grassland through a cutting and grazing regime, giving c.3ha of rough grassland for barn owls.

Warwickshire, Coventry and Solihull Local Biodiversity Action Plan

- Campaign for the Farmed Environment (2015) held an event at Southfields Farm, Coleshill with [Tame Valley Wetlands](#) which covered tussocky grass field margins and hunting for voles.
- Tame Valley Wetlands scheme erected 15 barn owl boxes in 2016.

6. PROPOSED LOCAL ACTIONS

ACTION	Lead	Partners	By
PLEASE CONSULT THE '<i>GENERIC SPECIES</i>' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL SPECIES PLANS			
Policy, Legislation & Protection			
PL1. Raise awareness of the HSE statutory rules and guidelines on the use of second- generation anticoagulant rodenticides.	NE	RSPB WWT	ongoing
Site / Species Safeguard & Management			
SM1. Install at least 10 nest-boxes per year where the habitat is suitable but birds are absent, prioritising efforts around known existing breeding sites.	SVWAG	NE LOs BTO WWT WMBC BCW	2020
SM2. Expand the nest box scheme to Central and North Warwickshire, liaising with at least 5 landowners per year.	WMBC	WWT	2020
SM3. Protect and re-establish rough grassland, particularly along field margins, watercourses and woodland edges, creating networks of linked corridors for hunting, e.g. through agri-environment schemes, to increase the 2011 figure of 2966.87ha to 4000ha.	CSG	NE WWT WCC HBA LOs SRNBG	2020
Advisory			
A1. Alert landowners and users to presence of breeding and wintering barn owls.	WBRC	WMBC NE LWSP WWT	ongoing
Research & Monitoring			
RM1. Establish effective monitoring of range and population, including results from nest box schemes, and training of bird ringers.	WMBC	WCC WWT SVWAG ARG	2015
RM2. Monitor and record the breeding success rate, keeping a database of landowners implementing action for barn owl conservation.	SVWAG	WWT NE WCC	2015

Warwickshire, Coventry and Solihull Local Biodiversity Action Plan

ACTION	Lead	Partners	By
PLEASE CONSULT THE '<i>GENERIC SPECIES</i>' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL SPECIES PLANS			
Communication, Education & Publicity			
CP1. Promote good land management practice for barn owls at one demonstration site in Warwickshire.	NE	WWT LOs RSPB SVWAG	ongoing

Abbreviations: ARG – Arden Ringing Group, BTO British Trust for Ornithology, BCW – Butterfly Conservation Warwickshire, CSG – LBAP Core Steering Group, HBA - Habitat Biodiversity Audit partnership, NE – Natural England, LOs – Landowners, LWSP – Local Wildlife Sites Project, RSPB – Royal Society for the Protection of Birds, SRNBG – Sun Rising Natural Burial Ground, WCC – Warwickshire County Council, WMBC - West Midland Bird Club, WWT – Warwickshire Wildlife Trust.

7. PROGRESS WITH ACTIONS

From 2015–2020 there will be a rolling programme of reporting on progress, of 10 action plans per year with an annual summary of results. Progress with this plan up to 2015 can be seen at www.warwickshirewildlifetrust.org.uk/LBAP.

8. BIBLIOGRAPHY

Lord, J. and Munns, D.J. (1970). Atlas of Breeding Birds of the West Midlands. London.

Cramp, S. (Ed.) (1977-93). Handbook of the Birds of Europe, the Middle East and North Africa: the birds of the Western Palearctic. OUP, Oxford (7 volumes).

Bunn, D.S., Warburton, A.B. and Wilson, R.D.S. (1982). The Barn Owl. Poyser, Calton, Staffs.

Harrison, G.R. (Ed), Dean, A.R., Richards, A.J. and Smallshire D. (1982). The Birds of the West Midlands. West Midland Bird Club, Studley.

Tucker, G.M. and Heath, M.F. (1994). Birds in Europe: their conservation status. Cambridge. BirdLife International (BirdLife Conservation Series no.3)

UK Biodiversity Steering Group (1995). Biodiversity: The UK Steering Group Report, Volume 2: Action Plans. HMSO, London.

Mead, C. (2000). The State of the Nation's Birds. Whittet Books, Stowmarket.

Askew, N. (2006) Identifying priority areas for barn owl conservation in Britain - How much habitat does a pair of barn owls need? Ph.D. research project, University of York.

Lawton, J.H. (2010) [Making Space for Nature](#): a review of England's wildlife sites and ecological network. Report to Defra, advocating a landscape-scale approach guided by four key principles, summarised as '*more, bigger, better and joined*'.

Warwickshire, Coventry and Solihull Local Biodiversity Action Plan

DEFRA (2011) [Biodiversity 2020](#): A strategy for England's wildlife and ecosystem services.

BTO (2013) [Bird Atlas 2007-11](#): The Breeding and Wintering Birds of Britain and Ireland - a comprehensive overview of bird distribution and change in Britain and Ireland, giving national level trends which will place local issues in the national context.

Smith, M.C. (2014) Update on the status of Bird Local Biodiversity Action Plans in Warwickshire. 'Wild Warwickshire' Wildlife Information & Consultancy.

RSPB, BTO & Wildlife & Wetland Trust (2014) [The State of the UK's birds](#) - the theme is migrants, a group showing some of the most dramatic population changes in the last few decades.

BTO (2014) The latest [Bird Trends](#) report, bringing together the latest BTO survey data for 120 breeding bird species across Britain & Ireland, shows that it is bad news for backyard biodiversity. Long-term population trends for each species are presented by country and by habitat.

Smith, M.C. (2016) Updated analysis of Local Biodiversity Action Plan Bird Species, 2013-14.

Eaton, M.A. et al. (2015) [Birds of Conservation Concern 4](#) : the population status of birds in the United Kingdom, Channel Islands and the Isle of Man.

RSPB (2016) [State of Nature](#) – a stocktake of all our native wildlife by over 50 wildlife organisations.

Natural England (2016) [Conservation Strategy for the 21st Century](#). Sets out how NE will help deliver DEFRA's ambitions for the environment to reverse biodiversity loss, sustain distinctive landscapes and enhance engagement with nature.

9. FURTHER INFORMATION

Habitat Biodiversity Audit (HBA) for Warwickshire, Coventry & Solihull – mapping data set and associated information. Phase 1 ([JNCC](#)) 1996-2002 and Phase 2 (Local Wildlife Sites) ongoing.

The lack of annual population change data for this species is now being addressed by the BTO, [Barn Owl Monitoring Programme](#), which began in 2000; additional nest record, ringing and biometric information is also being collected through this scheme (Leech et al. 2003).

Natural England: [Barn owls and Rural Planning Applications](#): What needs to happen. A Guide for Planners.

RSPB [Management Guide to Birds of Lowland Farmland](#)' (2005) and [Farm Wildlife Handbook](#) (2007) [Birds of Conservation Concern](#) (2009) [Advice for farmers](#) and leaflets on 'The barn owl' and 'Barn owls and the law'. Available online or tel. 01234 263616.

Warwickshire, Coventry and Solihull Local Biodiversity Action Plan

'[Barn Owls on Site – a Guide for Developers and Planners](#)(2002)', published by the Barn Owl Trust and English Nature – now [Natural England](#) - is supplied to every Local Authority in the UK and contains a set of recommendations for changes in planning policy.

Barn Owl Conservation Network: Sheepdrove Organic Farm, Warren Farm, Lambourn, Berkshire, RG17 7UU. Tel. 01582 832182.

10. CONTACT

Roger Juckes, South Warwickshire Barn Owl Survey, in partnership with the Stour Valley Wildlife Action Group. Email: rogerjuckes24@btinternet.com

For records: Mark Smith (BTO): Beaufell Close, Woodloes Park, Warwick, CV34 5UG Tel: 01926 491342. Email: mark.smith36@ntlworld.com.