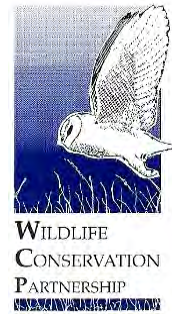




## Norfolk Barn Owl Project Report



### Barn Owl Recovery Project 6552



Supporting the objectives of the Norfolk County and IDB BAPs

# Norfolk Barn Owl Project

## Barn Owl Recovery Project 6552

### Background

The availability of prey-rich grasslands alongside watercourses and the establishment of habitat connectivity over wide areas of countryside are of prime conservation importance for the successful recovery of the barn owl population in Britain (Shawyer 1987).

Habitat restoration is the primary objective for barn owls in the Species Action Plan for Norfolk and the County's internal drainage boards of Kings Lynn, Norfolk Rivers and Broads, whose operations are overseen and supported by the Water Management Alliance (WMA).

Over the last two decades concerted efforts have been made by the Wildlife Conservation Partnership (WCP) in association with WMA to develop sympathetic habitat management regimes for the banks of watercourses and provide artificial nest sites. This has led to the establishment of viable barn owl breeding populations in the Broads and fenland regions of east and west Norfolk.

Re-establishment of habitat connectivity between these two barn owl populations in central Norfolk and in the wider area of Eastern England was required to meet the primary objectives of the BAPs of Norfolk and the IDBs which have been drawn from the national conservation plan of the Barn Owl Conservation Network (Brazil and Shawyer 1989).



The Sheepdrove Trust

### The Project

The Kings Lynn IDB, Norfolk Rivers IDB and Broads IDB set out with the support of landowners to use their catchments across central Norfolk as the foundation for this important phase of the barn owl recovery project.

### Surveys

A desk study was undertaken to establish existing breeding sites in central Norfolk. Taking these into account a habitat creation plan was developed. This identified potential locations where artificial nest sites could be used and spaced in a way which could meet the project's aim of achieving habitat connectivity for barn owls across central Norfolk.

Landowners were contacted within the Kings Lynn, Norfolk Rivers and Broads IDB catchments. Field surveys were subsequently undertaken at 55 sites to establish the suitability of habitat and identify and agree locations with local landowners for the future installation of nestboxes.

Two styles of nestbox were required for this project. The nestboxes and their installation using nylon bolts would conform to the recommendations and 'best practice' of the Barn Owl Conservation Network (BOCN). The shortage of mature trees and suitable farm buildings in the Kings Lynn IDB would require the use of the pole-mounted nestbox type whilst in the

Norfolk Rivers IDB and Broad's IDB catchments, trees and buildings were more freely available and better suited to the 'A' Frame style of nestbox.

Of the 55 sites surveyed, 36 were eventually selected for the installation of nestboxes. These required the use of 16 pole-mounted and 20 'A' Frame types.

### **Nestbox installation**

The 36 nestbox kits were cut on flat-bed CNC machines, assembled and delivered to their relevant sites in preparation for installation. Much of the ground was waterlogged or flooded during 2012 preventing the access of vehicles and heavy plant onto site. Installation was eventually undertaken in two phases the first involving the 'A' Frame nestboxes in 2012 and the pole-mounted types in 2013.

Three additional 'A Frame' style nestboxes which had been made by a landowner were installed within the Broads IDB on land where surveys carried out as part of this project had identified suitable habitat. A nestbox camera was also supplied to a landowner for incorporation into an existing nestbox (one of a pair) within the Broads IDB. A further pair of nestboxes was renovated on a farm near Aylsham. These 6 additional nestbox sites were brought into the project with the support of the landowners concerned.

### **Nestbox monitoring**

Monitoring of all 42 of the project nestboxes was carried out under English Nature Disturbance Licence and BTO Ringing Permit between April and August 2013. Barn owls were measured, weighed, sexed, aged and ringed at those sites where they were found. The results of the research monitoring are recorded on spreadsheets 1 to 5 in this report.

### **Nestbox maintenance**

Maintenance of the nestboxes, largely to remove old jackdaw and stock dove nests, was completed by October 2013.

### **Conclusions**

In spite of 2013 being the worst breeding season for barn owls since 1958 and the delayed installation of the nestboxes in the Kings Lynn catchment, barn owls were recorded at 20 of the 42 new nestbox sites. The expectation is for breeding occupancy to increase from its current level of 15% in 2013 to about 40% by 2015.

### **The project's future**

The Kings Lynn IDB, Norfolk Rivers IDB and Broads IDBs will continue to support the annual monitoring and maintenance of this project after 2013.





## Nestbox types used in project



Design copyright: Colin Shawyer



Design copyright: Colin Shawyer

## Field Surveys and Installation

### Land surveys conducted in west and central Norfolk



### Poles prepared for installation



### Preparing to auger and lift nestbox assembly into hole



### Nestbox assembly installed - ready for next site





## Nestbox installations undertaken - autumn 2012



WCP 2975



WCP 2976



WCP 2977



WCP 2978



WCP 2979



WCP 2980



WCP 2982



WCP 2983



WCP 2984





WCP 2985



WCP 2986



WCP 2987



WCP 2988



WCP 2989



WCP 2990



WCP 2991



WCP 2992



WCP 2993





WCP 2994



WCP 2981 (in belfry)

### Nestbox installations undertaken - winter 2013



WCP 679



WCP 678



WCP 650



WCP 649





WCP 2995



WCP 2996



WCP 2997



WCP 2998



WCP 2999



WCP 3000





WCP 691



WCP 654



WCP 3001



WCP 3002





WCP 648



WCP 655

### Nestbox monitoring and maintenance - summer/autumn 2013



Water Management Alliance acknowledges the generous support of:



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## NESTBOX MONITORING &amp; MAINTENANCE RECORD

WILDLIFE  
CONSERVATION  
PARTNERSHIP

For: WLMA/SITA

Year: 2013

Installed November 2012

Location: Norfolk

Sheet 1

C R & V M Sawyer  
2 Mill Walk  
Wheathampstead  
Herts AL4 8DT

Box No.	Grid ref.	Site Name Owners Name	Date	Box Type	Species Present	Adult Ring Number/s	Clutch Size	Brood Size	Quill/Wing Length/s	Age/s youngest - oldest	Pullus Ring Number/s	Egg Date	Comments	Box Mtn'
2975		Aylsham	20/8	B1	BO	roost - fresh pellets								P
2976		Tuttington	20/8	B1	BO ♀	GR63528 375g								Nil
					BO ♂	GR63527 312g								
2977		Burgh next Aylsham	20/8	B1	BO	roost - 20+ pellets								P
2978		Oxnead	21/8	B1	BO	roost - fresh pellets								Nil
					SD		2							
2979		Skeyton	21/8	B1	BO	roost - fresh pellets and moulted secondaries								Nil
2980		Swanton Hill	21/8	B1	BO ♂	GR63529 338g								Nil
2981		Sparham		B1										
2982		Swanton Abbott	21/8	B1	BO	roost - fresh pellets								Nil
					SD		2							
2983		East Winch		B1										
2984		Blackborough		B1										
2985		Sparham	20/8	B1	BO ♂	flew								Nil
													RHP feather 204 ♀ + 2 male secondaries	

## Key to Type of Box/Platform/Basket used

Barn Owl B1 B2 B3 B4 B5 B6	Kestrel K1 tree K2 build. Tawny Owl T1 T2	Little Owl L1 tree L2 build. Long-eared Owl E1	Hobby H1 Osprey Goshawk OTHER
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Note: 2nd visits in bold

[Bracketed figures signify an egg/fledgling failure]

## Key to Species Present

BO	Barn Owl	SQ	Squirrel
TO	Tawny Owl	PM	Pine Martin
LO	Little Owl		
EO	Long-eared Owl	OTHER:	
KE	Kestrel		
SD	Stock Dove		
FP	Feral Pigeon		
JD	Jackdaw		

## Key to Box Maintenance

C - Cleared out R - Relined P - Pruned  
S - Painted M - Mended I - Replaced

## Summary Information

Number of nestboxes present - 42			
Barn Owl present in	20 boxes	nesting in	6 boxes
Tawny Owl present in	0 boxes	nesting in	0 boxes
Little Owl present in	0 boxes	nesting in	0 boxes
Kestrel present in	8 boxes	nesting in	4 boxes
Jackdaw nesting in	4 boxes		
Stock Dove nesting in	15 boxes		
Squirrel in	1 box		
48% occupancy success for target species			
15% nesting success for target species			



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## NESTBOX MONITORING &amp; MAINTENANCE RECORD

WILDLIFE  
CONSERVATION  
PARTNERSHIP

For: WLMA/SITA

Year: 2013

Installed November 2012

Location: NORFOLK

Sheet 2

C R & V M Shawyer  
2 Mill Walk  
Wheathampstead  
Herts AL4 8DT

Box No.	Grid ref.	Site Name Owners Name	Date	Box Type	Species Present	Adult Ring Number/s	Clutch Size	Brood Size	Quill/Wing Length/s	Age/s youngest - oldest	Pullus Ring Number/s	Egg Date	Comments	Box Mtn'
2986		Nr Lenwade	20/8	B1	JD						bred&fledged			C
					SD			1						
2987		Nr Frettenham	20/8	B1	Nil									P
2988		North Walsham	21/8	B1	SD		[2]							Nil
													Mitigation box by barn - no inspection door not inspected	
2989		Nr Gayton	20/8	B1	BO♀	GR63526 350g								Nil
					BO♂	flaw								
2990		Massingham	20/8	B1	Wasps' nest									Nil
2991		West Lexham	20/8	B1	SD			1						Nil
2992		East Lexham	20/8	B1	KE						bred&fledged			P
2993		East Lexham	20/8	B1	SD	roost								Nil
2994		Swanington	20/8	B1	SD			2						Nil
		Edingthorpe		B3	BO			1 fled						
						camera supplied for nestbox								
842		Nr Aylsham	21/8	B1	BO	roost and moulted feather								C
				B1	SQ									

Key to Type of Box/Platform/Basket used

Key to Species Present

Summary Information

Barn Owl B1	Kestrel K1 tree K2 build.	Little Owl L1 tree L2 build.	Hobby H1
B3	Tawny Owl T1 T2	Long-eared Owl E1	Osprey
B4 T B			Goshawk
B5 B6			OTHER:

BO Barn Owl	SQ Squirrel
TO Tawny Owl	PM Pine Martin
LO Little Owl	
EO Long-eared Owl	OTHER:
KE Kestrel	
SD Stock Dove	
FP Feral Pigeon	
JD Jackdaw	

Number of nestboxes present			
Barn Owl present in	boxes	nesting in	boxes
Tawny Owl present in	boxes	nesting in	boxes
Little Owl present in	boxes	nesting in	boxes
Kestrel present in	boxes	nesting in	boxes
Jackdaw nesting in	boxes		
Stock Dove nesting in	boxes		

Note: 2nd visits in bold

Key to Box Maintenance

[Bracketed figures signify an egg/fledgling failure]

C - Cleared out R - Relined P - Pruned  
S - Painted M - Mended I - Replaced

...% occupancy success for target species

...% nesting success for target species



**Location: NORFOLK**

### NESTBOX MONITORING & MAINTENANCE RECORD

Sheet 3

WILDLIFE  
CONSERVATION  
PARTNERSHIP


















**C R & V M Shawyer**  
2 Mill Walk  
Wheathampstead  
Herts AL4 8DT

[illegible]

**Key to Type of Box/Platform/Basket used**

### Key to Species Present

### Summary Information

Barn Owl	Kestrel	Little Owl	Hobby
B1 	K1 tree 	L1 tree 	H1 
B2 	K2 build. 	L2 build. 	
B3 			Osprey 
B4 T → 	Tawny Owl	Long-eared Owl	Goshawk 
B5 	T1 	E1 	OTHER:
B6 	T2 		

**Note: 2nd visits in bold**

[Bracketed figures signify an egg/fledgling failure]

BO	Barn Owl	SQ	Squirrel
TO	Tawny Owl	PM	Pine Martin
LO	Little Owl		
EO	Long-eared Owl	OTHER:	
KE	Kestrel		
SD	Stock Dove		
FP	Feral Pigeon		
JD	Jackdaw		

### Key to Box Maintenance

C - Cleared out    R - Relined    P - Pruned  
S - Painted    M - Mended    I - Replaced

Number of nestboxes present -			
Barn Owl present in	boxes		
Tawny Owl present in	boxes	nesting in	boxes
Little Owl present in	boxes	nesting in	boxes
Kestrel present in	boxes	nesting in	boxes
Jackdaw nesting in	boxes		
Stock Dove nesting in	boxes		
...% occupancy success for target species			
...% nesting success for target species			



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## NESTBOX MONITORING &amp; MAINTENANCE RECORD

WILDLIFE  
CONSERVATION  
PARTNERSHIP

For: WLMA/SITA

Year: 2013

Sheet 4

Location: NORFOLK

C R & V M Shawyer  
2 Mill Walk  
Wheathampstead  
Herts AL4 8DT

Box No.	Grid ref.	Site Name Owners Name	Date	Box Type	Species Present	Adult Ring Number/s	Clutch Size	Brood Size	Quill/Wing Length/s	Age/s youngest - oldest	Pullus Ring Number/s	Egg Date	Comments	Box Mtn'
648		Kings Lynn Pump	24/7	B4 T	KE	roost							25/4 BO ♀ GR63402 368g	Nil
123		Middleton Stop		B4 B	JD						bred&fledged			C
649		Tilney Fen End	23/7	B4 T	Nil									
127		Green Bank		B4 B	JD						bred&fledged			C
650		Tilney Fen End	23/7	B4 T	Nil								23/4 BO ♀ GR63399 410g;	
128		Green Bank		B4 B	BO	GP73625 ♀ 352g	1	2	2mm/26wc	14/12 days	GR63447		1 of 2 ringed - 1 too small. Prey cache 2 ♂ voles	
654		Walton High Bank 1	23/7	B4 T	KE	roost								
129				B4 B	SD			2						
655		Walton High Bank 2	22/7	B4 T	Nil									Nil
130				B4 B	KE					bred&fledged				Nil
678		Wiggenhall St Mary 1	23/7	B4 T	Nil				328/275/330/380/388g				23/4 BO ♀ GR63398 385g; BO ♂ GR63397 280g	
124				B4 B	BO			5	4/28p/8/30/39	27/23/28/34/36	GR63457-61 ♀ ? ♂ ♀ ♀		Prey: 1 ♂ vole	
679		Wiggenhall St Mary 2	23/7	B4 T	KE			[2]						C
125				B4 B	JD								nest material - did not breed	C
691		Nr Emneth Hungate	22/7	B4 T	Nil								24/4 BO ♀ GR63401 350g; BO ♂ GR63400	
				B4 B	SD			2+[2]					302g	

Key to Type of Box/Platform/Basket used

Barn Owl	Kestrel	Little Owl	Hobby
B1	K1 tree	L1 tree	H1
B2	K2 build.	L2 build.	Osprey
B3	Tawny Owl	Long-eared Owl	Goshawk
B4 T →	T1	E1	OTHER:
B5	T2		
B6			

Key to Species Present

BO	Barn Owl	SQ	Squirrel
TO	Tawny Owl	PM	Pine Martin
LO	Little Owl		
EO	Long-eared Owl	OTHER:	
KE	Kestrel		
SD	Stock Dove		
FP	Feral Pigeon		
JD	Jackdaw		

Summary Information

Number of nestboxes present -			
Barn Owl present in	boxes	nesting in	boxes
Tawny Owl present in	boxes	nesting in	boxes
Little Owl present in	boxes	nesting in	boxes
Kestrel present in	boxes	nesting in	boxes
Jackdaw nesting in	boxes		
Stock Dove nesting in	boxes		
Squirrel present in	boxes		
...% occupancy success for target species			
...% nesting success for target species			

Note: 2nd visits in bold

[Bracketed figures signify an egg/fledgling failure]

Key to Box Maintenance

C - Cleared out R - Relined P - Pruned  
S - Painted M - Mended I - Replaced



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## NESTBOX MONITORING &amp; MAINTENANCE RECORD

WILDLIFE  
CONSERVATION  
PARTNERSHIP

For: WLMA/SITA

Year: 2013

Sheet 5

Location: NORFOLK

C R & V M Shawyer  
2 Mill Walk  
Wheathampstead  
Herts AL4 8DT

Box No.	Grid ref.	Site Name Owners Name	Date	Box Type	Species Present	Adult Ring Number/s	Clutch Size	Brood Size	Quill/Wing Length/s	Age/s youngest - oldest	Pullus Ring Number/s	Egg Date	Comments	Box Mtn'
2995		Nr Tilney St Lawrence	23/7	B4 T	Nil									Nil
				B4 B	SD								few twigs - did not breed	C
2996		Nr Stowbridge 1	22/7	B4 T	Nil									Nil
				B4 B	SD						bred&fledged			C
2997		Nr Stowbridge 2	22/7	B4 T	Nil									Nil
				B4 B	SD			2						Nil
2998		Nr Rungay's Bridge	22/7	B4 T	KE			3			EY18210♂		1 of 3 ringed - others fledged	Nil
				B4 B	BO	roost								Nil
2999		Tilney Fen End 3	22/7	B4 T	Nil									Nil
				B4 B	BO♀	GR63443	[1]	1	12unf	30 days	GR63445		BO♂ GR63289 288g	Nil
3000		Nr Emneth Hungate	22/7	B4 T	Nil									Nil
				B4 B	BO/SD	BO roost							Fresh barn owl pellet	C
3001		Hungate		B4 T									Not checked - no access	
				B4 B										
3002		Reffley Pump	24/7	B4 T	Nil									Nil
				B4 B	BO/SD	roosts								Nil

## Key to Type of Box/Platform/Basket used

Barn Owl B1 B2 B3 B4 T B5 B6	Kestrel K1 tree K2 build. Tawny Owl T1 T2	Little Owl L1 tree L2 build. Long-eared Owl E1	Hobby H1 Osprey Goshawk OTHER:
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## Key to Species Present

BO Barn Owl	SQ Squirrel
TO Tawny Owl	PM Pine Martin
LO Little Owl	
EO Long-eared Owl	OTHER:
KE Kestrel	
SD Stock Dove	
FP Feral Pigeon	
JD Jackdaw	

## Key to Box Maintenance

C - Cleared out R - Relined P - Pruned  
S - Painted M - Mended I - Replaced

## Summary Information

Number of nestboxes present -	
Barn Owl present in	boxes
Tawny Owl present in	boxes
Little Owl present in	boxes
Kestrel present in	boxes
Jackdaw nesting in	boxes
Stock Dove nesting in	boxes
Squirrel present in	boxes
%... occupancy success for target species	
%... nesting success for target species	

Note: 2nd visits in bold

[Bracketed figures signify an egg/fledgling failure]