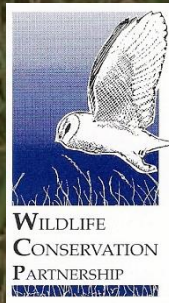


Barn Owl Mitigation and Major Infrastructure Schemes

Photo: simonlitten.com ©

Colin Shawyer

Photo: Simon Litten ©





Subject of this talk

1. **Brief background** - barn owl protection and conservation
2. **The science**
3. **Mitigation**
4. **Monitoring**

So - why are barn owls important and why do we care?





Ensure that works:

- are compliant with the legislation
- minimise any adverse effects on barn owls and maximise any potential benefits

Conservation Concern
for the species



Barn Owl Survey of Britain and Ireland

(from Shawyer, 1987)

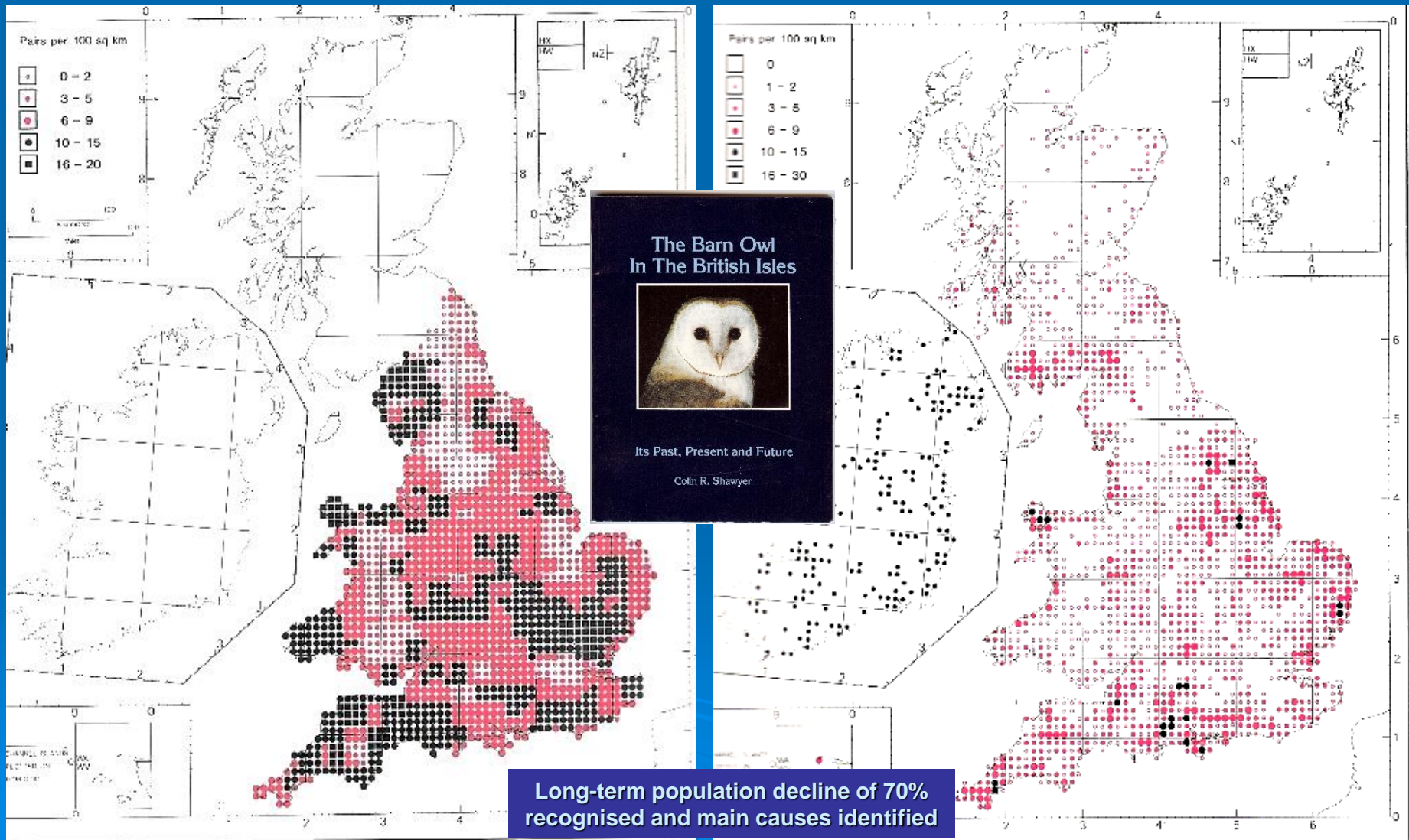
1932

12,000 breeding pairs

England and Wales

1985

3,800 breeding pairs



Species Recovery Areas (SRAs) and Barn Owl Recovery Networks (BORNs)

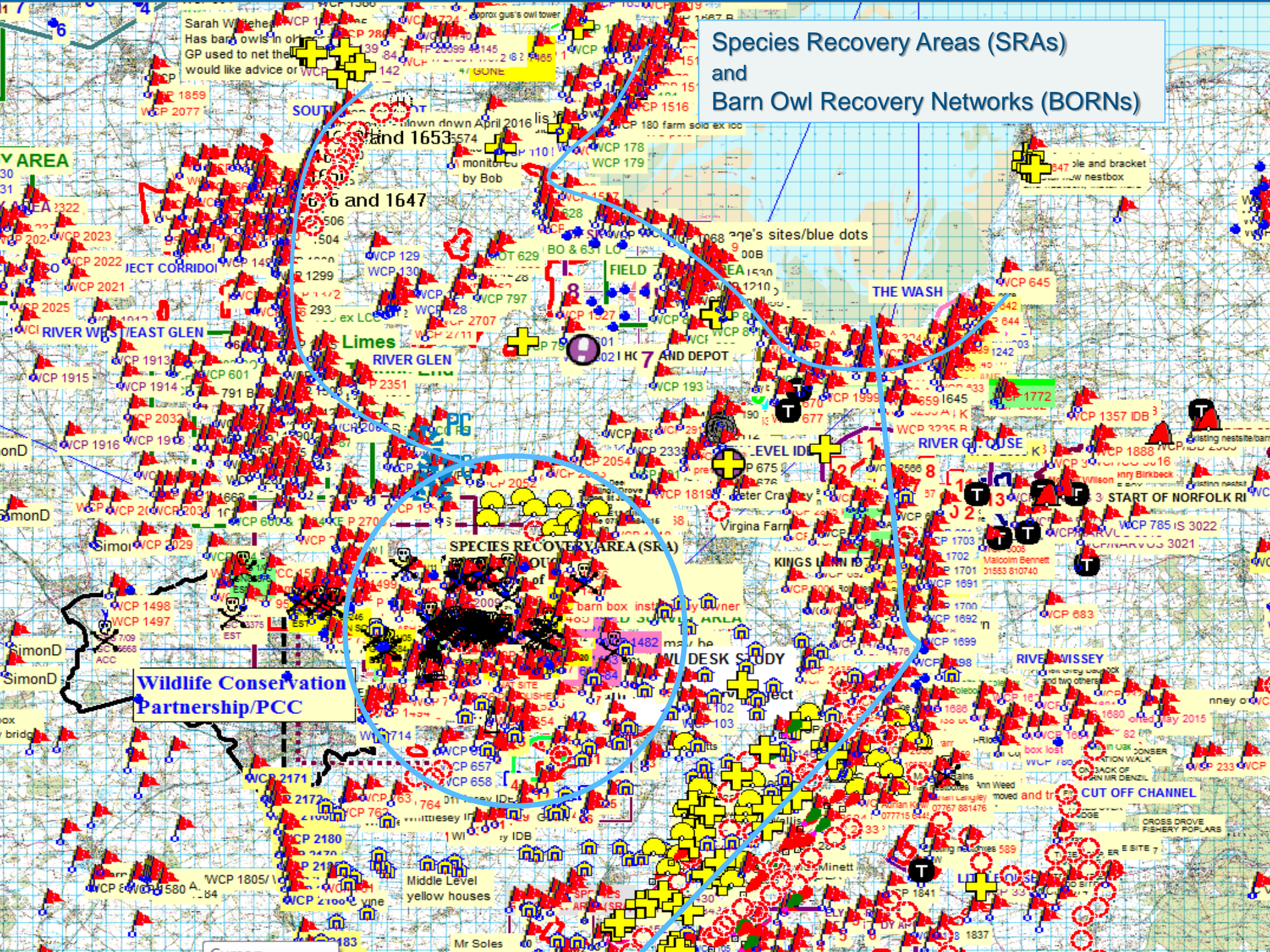




Photo:
mikerae.com ©

1932 12,000 pairs <1% in nestboxes

1987 3,800 pairs 8% in nestboxes

Foraging habitat now being restored

1997 4,000 pairs 20% in nestboxes

Nest boxes being installed

2015 9,000 pairs 75% in nestboxes

Background research into road mortality commissioned by Dept. of Transport in 1995 (Shawyer and Dixon, 1999)



Barn Owl

tops the list of wild bird road casualties in spite of its scarcity in 1995 when the study was undertaken.

3,400 RTA's on English roads
> 80 km/hr

Bird species		1995/1996	1996/1997	1997/1998	Total all years
Barn Owl	<i>Tyto alba</i>	25	47	20	102
Tawny Owl	<i>Strix aluco</i>	10	8	9	27
Long-eared Owl	<i>Asio otus</i>	3	8	5	16
Little Owl	<i>Athena noctua</i>		4	4	10
Kestrel	<i>Falco tinnunculus</i>	4	4	5	13
Buzzard	<i>Buteo buteo</i>	5	1		6
Sparrowhawk	<i>Accipiter nisus</i>	1	3	1	5
TOTAL - BIRDS OF PREY					179
Wood Pigeon	<i>Columba palumbus</i>	4	12	16	32
Feral Pigeon	<i>Columba livia</i>		6	3	9
Collard Dove	<i>Streptopelia decaocto</i>		1		1
Rook	<i>Corvus frugilegus</i>	3	3	5	11
Carrion Crow	<i>Corvus corone corone</i>	5	5	5	15
Jackdaw	<i>Corvus monedula</i>	1			1
Magpie	<i>Pica pica</i>	3		1	4
Moorhen	<i>Gallinula chloropus</i>	2	1	1	4
Red-legged Partridge	<i>Alectoris rufa</i>	1	2	1	4
Lapwing	<i>Vanellus vanellus</i>	1			1
Blackbird	<i>Turdus merula</i>	8	15	15	38
Song Thrush	<i>Turdus philomelos</i>		2		2
Redwing	<i>Turdus iliacus</i>		2	2	4
Fieldfare	<i>Turdus pilaris</i>		1		1
Mallard	<i>Anas platyrhynchos</i>	2	1	2	5
Small passerine sp.		1	5	5	11
Pheasant (domestic)	<i>Phasianus colchicus</i>	43	54	44	141
TOTAL -ALL BIRDS					463
Mammal species					
Badger	<i>Meles meles</i>	47	47	37	131
Fox	<i>Vulpes vulpes</i>	28	38	38	104
Stoat	<i>Mustela erminea</i>	1	1	1	3
Weasel	<i>Mustela nivalis</i>	1	2	2	5
Mink	<i>Mustela vison</i>	3		3	6
Ferret	<i>Mustela putorius</i>		1		1
Domestic Cat	<i>Felix felis</i>	9	11	9	29
Hedgehog	<i>Erinaceus europaeus</i>	3	15	3	21

102

13

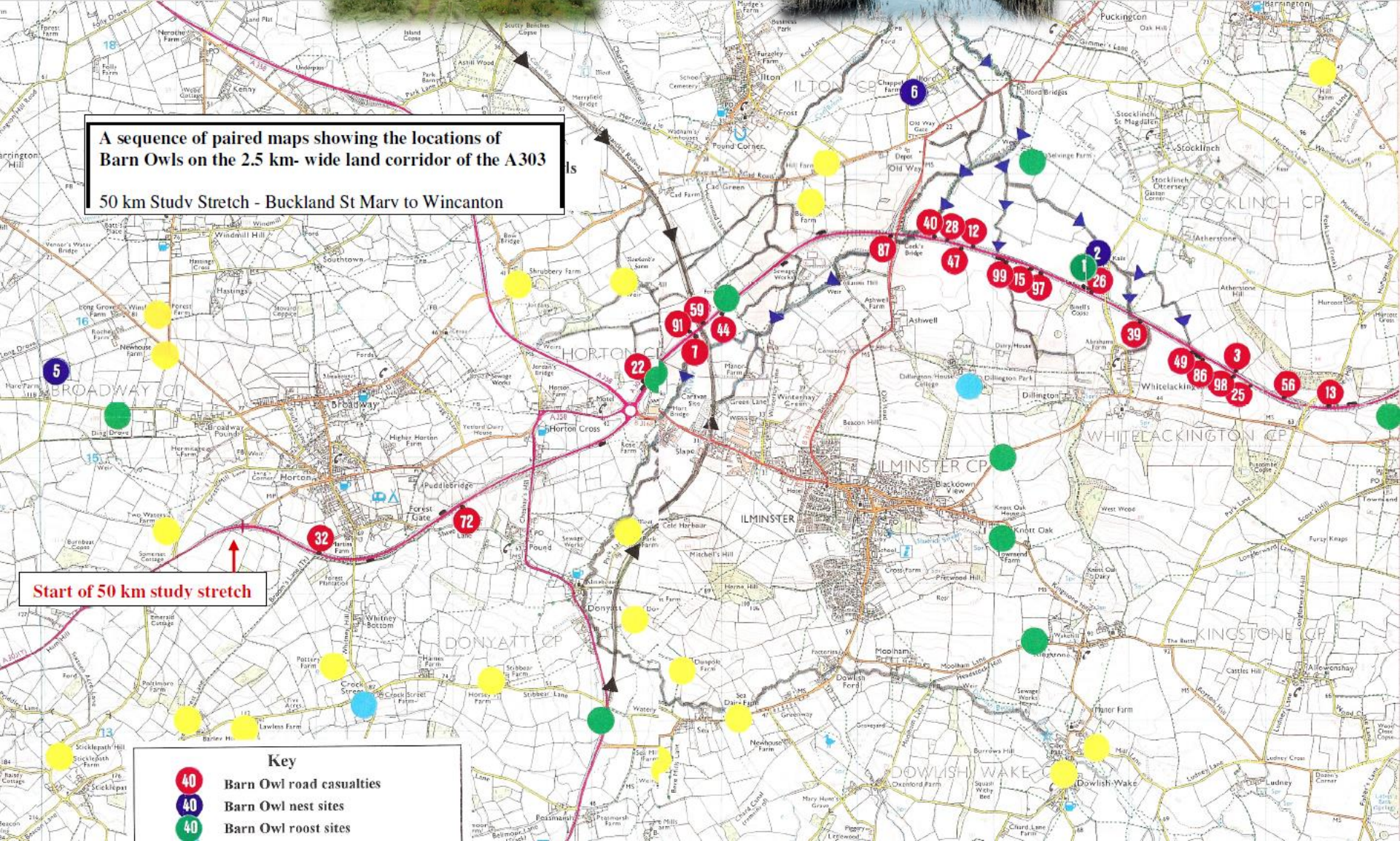
131



A sequence of paired maps showing the locations of Barn Owls on the 2.5 km- wide land corridor of the A303
50 km Study Stretch - Buckland St Marv to Wincanton

Start of 50 km study stretch

- Key**
- 40 Barn Owl road casualties
 - 40 Barn Owl nest sites
 - 40 Barn Owl roost sites



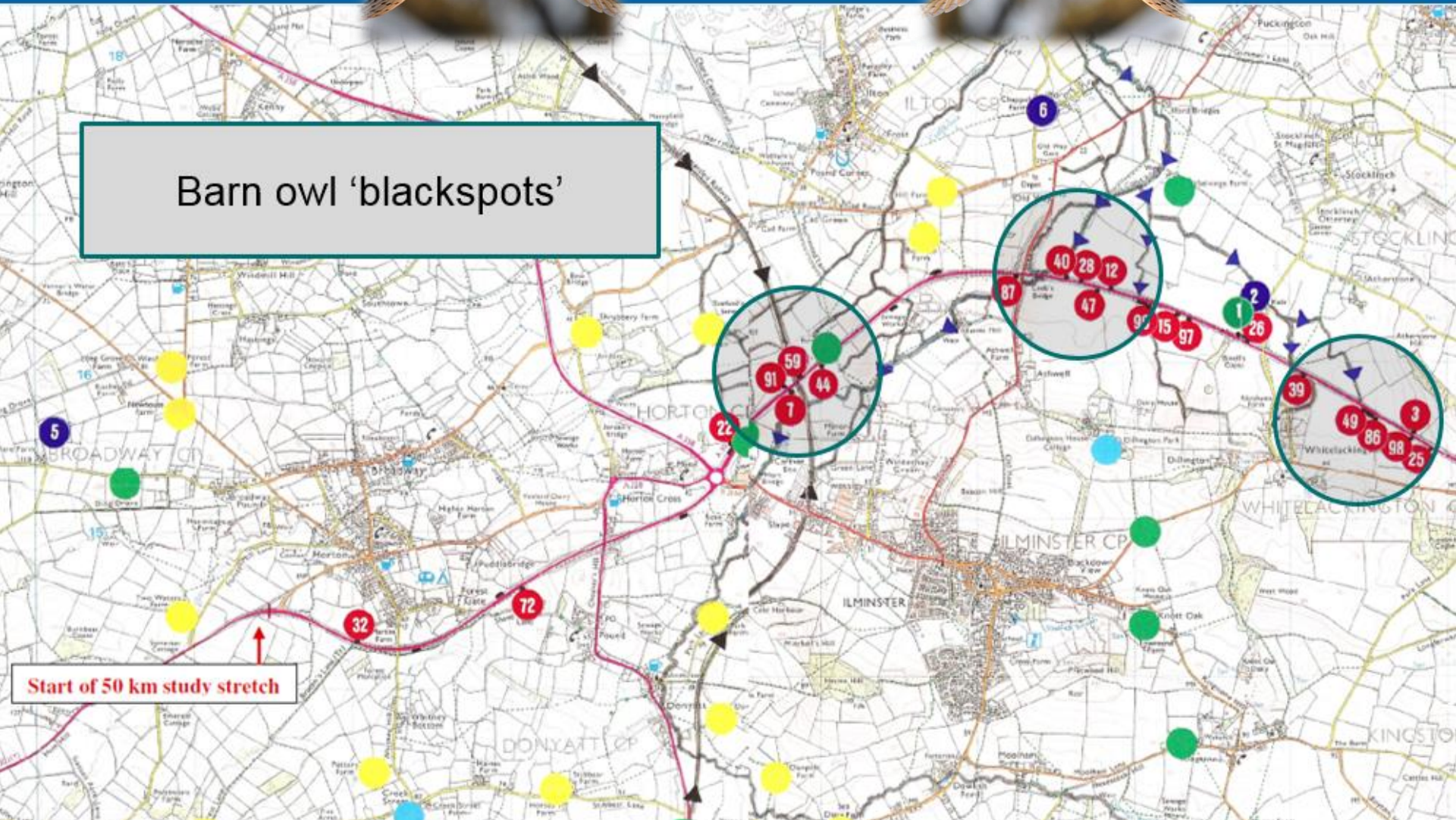






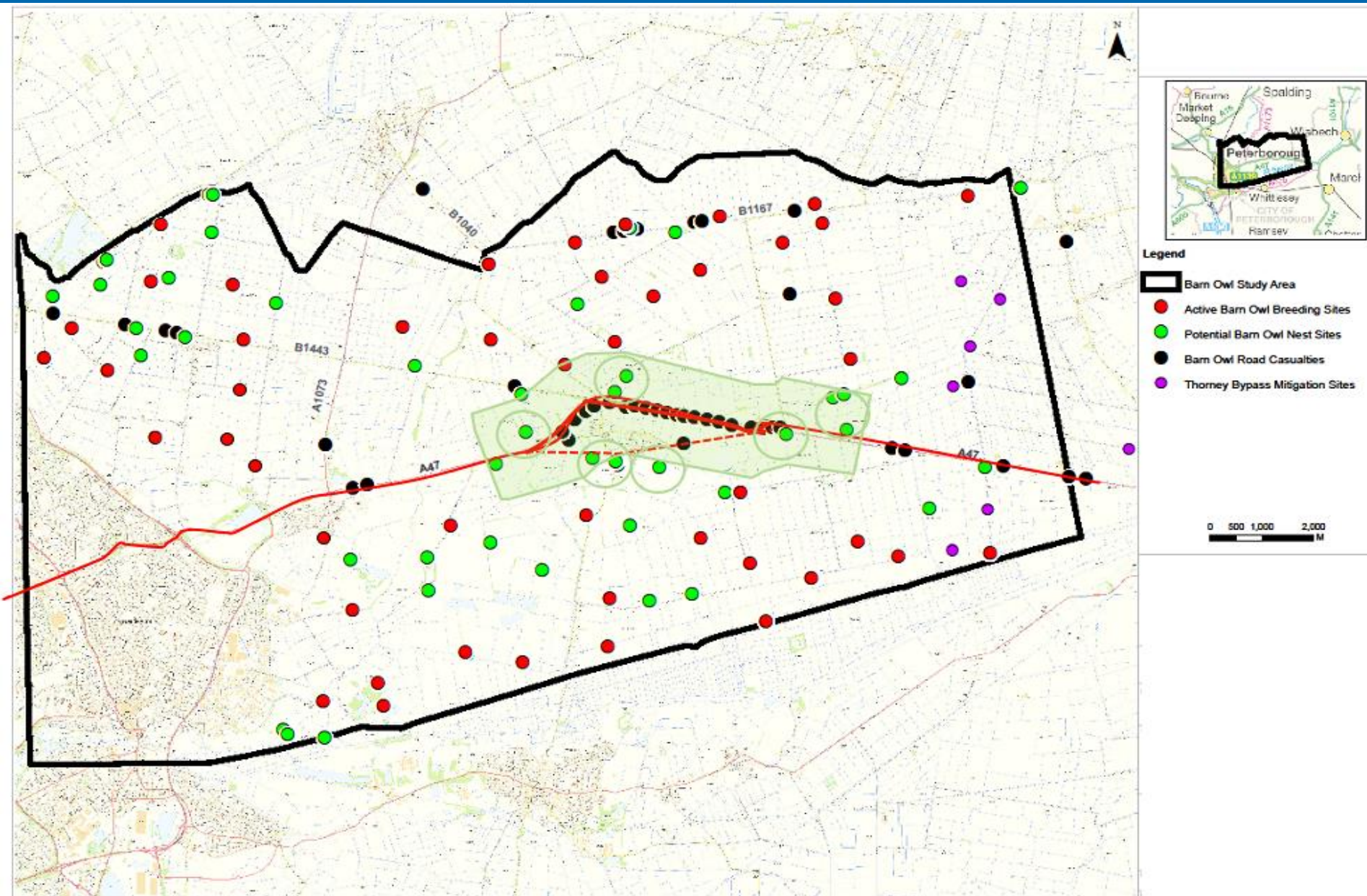
Barn owl 'blackspots'

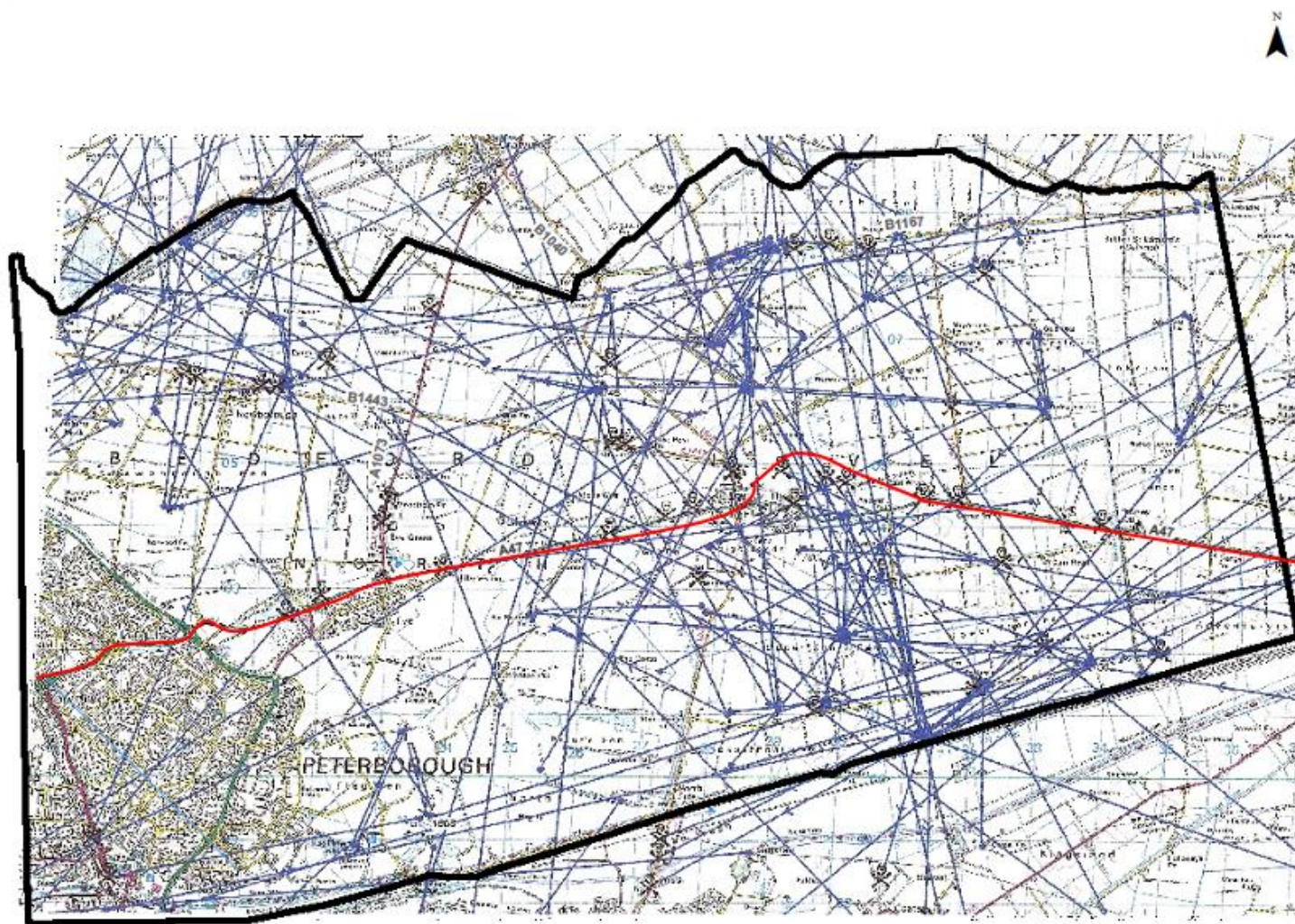
Start of 50 km study stretch



WCP Research - 1994-2015

Impacts of barn owl mortality and its impact on population size following a major road development scheme
(Shawyer, in press 2018)





Legend

-  Barn Owl Study Area
-  Barn Owl Movements

0 500 1,000 2,000
M

Research has aided the development of

Barn Owl Survey Methodology and Mitigation Strategies

Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment

Developing Best Practice in Survey and Reporting



Photo credit: Sylvia Treason ©

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© August 2011

(Revised April 2012 to take account of the new National Policy Planning Framework)

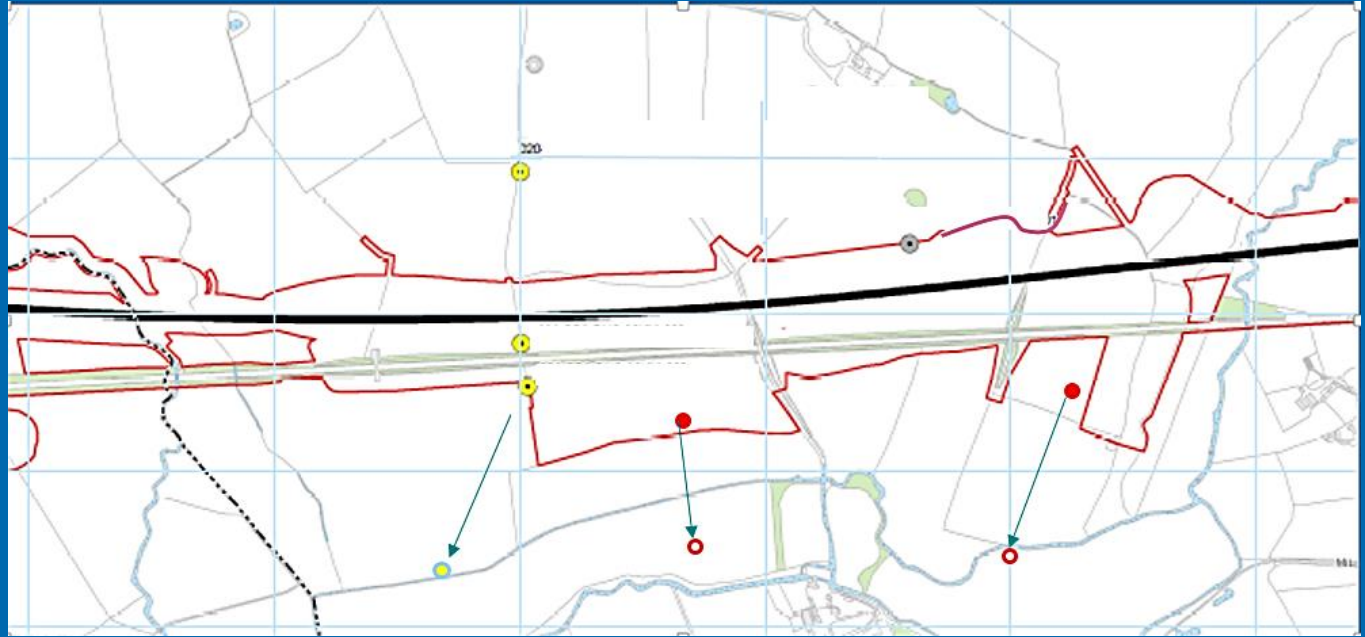
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Email: colinshawyer@aol.com

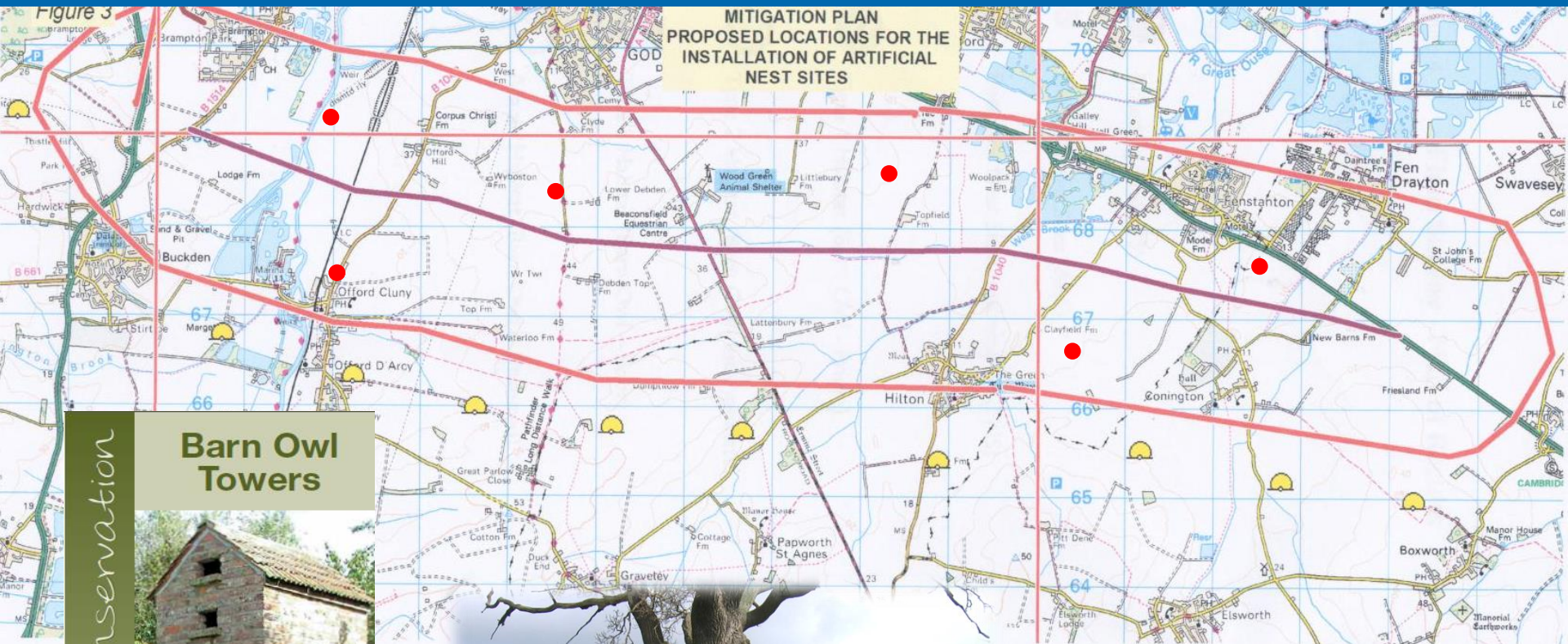


Temporary mitigation during construction

For breeding sites and potential nest sites which fall inside or within 150 m of construction boundaries



Long-term Compensation and Enhancement



Creative Conservation

Barn Owl Towers

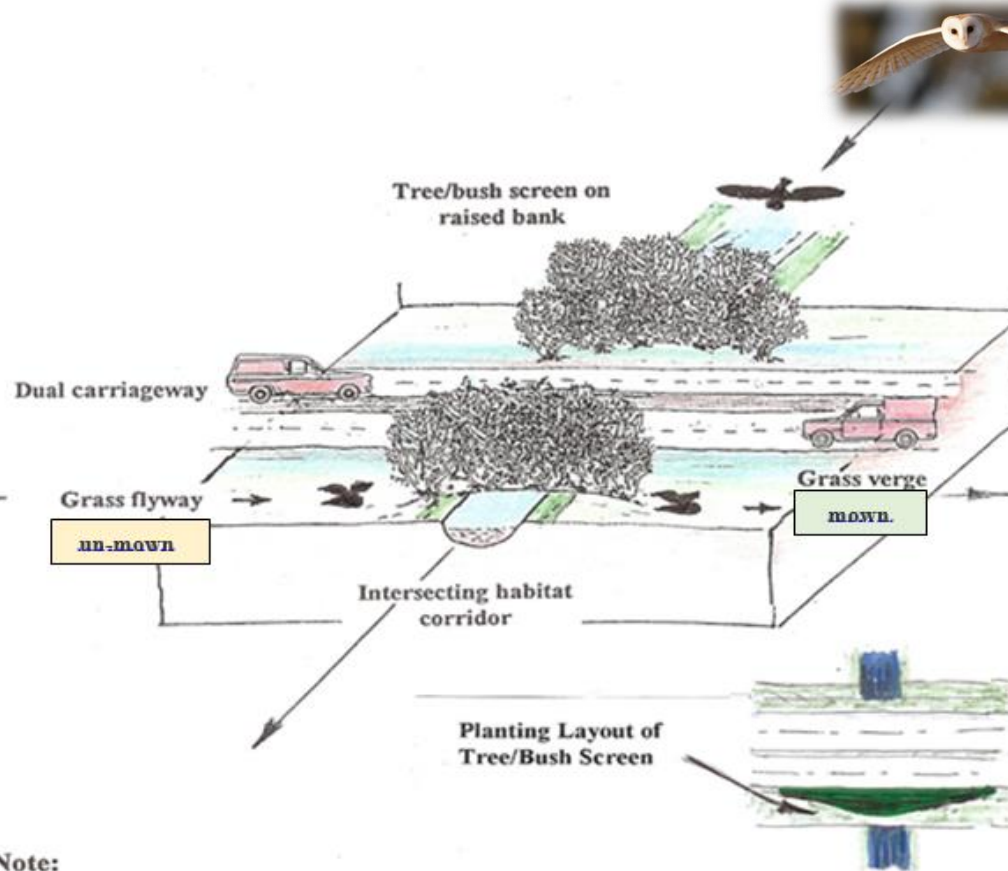


WILDLIFE
CONSERVATION
PARTNERSHIP

An advisory leaflet for farmers,
developers and local authorities



Mitigating the Impact of Barn Owl Road Traffic Collision at Mortality 'Blackspots'



Note:

- Plant high bush/tree screens on raised earth bunds at mortality 'blackspots' to elevate Barn Owls attempting to cross roads
- Maintain an open grass flightway behind screen for Barn Owls attempting to disperse along road verges.

Monitoring 3-5 years after road becomes operational

Critical to inform outcomes and future planning



What do we need to monitor?



Nest occupancy