Deflecting visitor disturbance from high value wildlife sites

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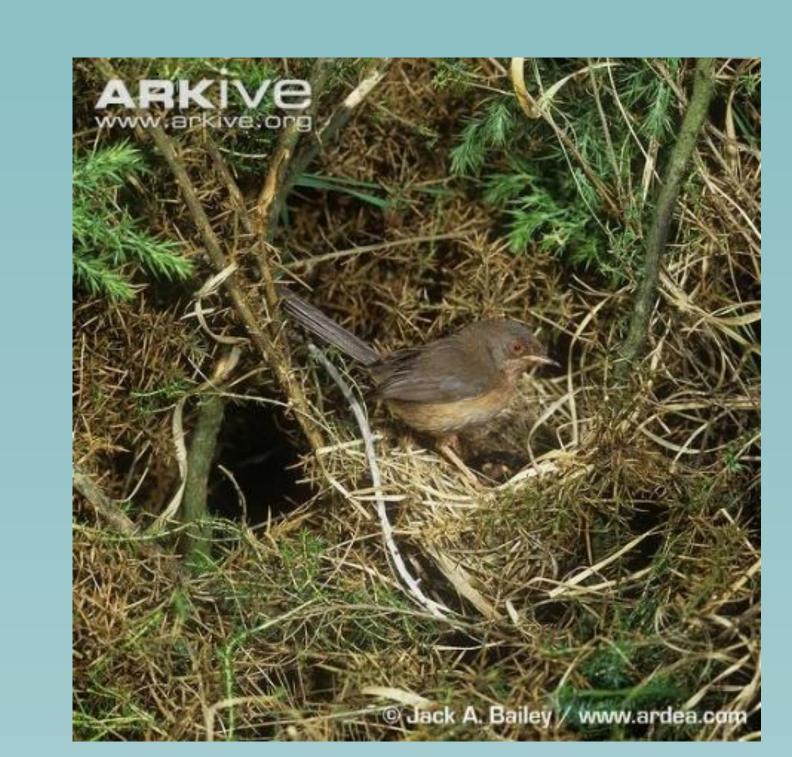
Fig 1. from left to right *Lullula arborea* woodlark, *Caprimulgus europeans* nightjar and *Sylvia undata* Dartford warbler

Introduction and aim

• The three Annex 1 ground nesting bird species that breed in the Thames Basin Heaths Special Protection Area (SPA) are extremely vulnerable to visitor disturbance, and especially when dogs are off the lead

• Suitable Alternative Natural Greenspace (SANG) is designed to be attractive to dog walkers and deflect them away from the SPA

• New developments larger than 10 houses, built since 2006, have a SANG provided within 5km of a dwelling to mitigate against the associated increase in visitor disturbance

Fig 2. Dog off-lead (photo Natural England)

Fig 3. professional dog walker (photo ALAMY)

Research aim

To evaluate SANG Strategy (SANGS) in the Thames Basin Heaths Special Protection Area (SPA) and identify factors that influence its effectiveness and make recommendations for best practice

Research objective 1

Identify patterns of greenspace use and establish if residents chose to visit SANGs in preference to the SPA

Research objective 2

Identify factors that underpin a resident's choice of greenspace and assess if they are potential barriers to the effectiveness of the strategy

Methodology

• A mixed methods sequential exploratory design[1] within a Leisure Constraints Framework[2] was used to evaluate SANGS

• A postal survey was sent to 2000 residents living in new developments built since 2006

• Focus groups were analysed by thematic abductive analysis

Survey results

• The survey response rate was 8.5%

• Sangs were the most frequently visited greenspace (61.2%) compared to the SPA (38.8%), $p<.01$

• Significantly more respondents visited a SANG than the SPA; therefore, it could be argued that the strategy is successful in attracting people away from the SPA

Table 1 below shows :

• there is no clear relationship between having a SANG as their nearest type of greenspace and choosing a SANG as their preferred place to visit

• there was not a significant association between the numbers of residents who chose a SANG and travelling less than 5km to their preferred greenspace

• SANGs are preferred for short visits that can be made on foot

• dog walking was not significantly associated with choosing a SANG

Table 1 Variables related to SANGs and greenspace choice

Variable	Greenspace choice	Per cent	Test result (chi^2)	p-value	n
SANG is the nearest greenspace	SANG	62.0			
	SPA	38.0	0.12	0.728	156
'travelled under 5km'	SANG	71.0			
	SPA	29.0	3.15	0.076	156
'dog-walking'	SANG	63.3			
	SPA	36.7	0.09	0.768	169
Visits on foot	SANG	81.5			
	SPA	18.5	19.56	0.000***	156
Has a SANG within walking distance	SANG	77.5			
	SPA	22.5	5.86	0.015*	170

Note: ***p < 0.001; **p < 0.01; *p < 0.05.

• Table 2 shows residents who chose a SANG were more likely to have no prior knowledge of the area before moving into a new development, have a SANG preferably walking distance from home, value good site infrastructure and visit with or meet people on-site

Table 2 Logistic regression on choosing a SANG

Variables	Model 1 β	Model 1 Wald	Model 2 β	Model 2 Wald	Model 3 β	Model 3 Wald
'since'	3.26***	20.48	3.88***	21.35	6.57***	15.14
'heathland'	-0.71	0.87	-1.12	1.71	-1.75	2.35
'safety'	1.58**	6.73	1.72*	6.30	0.05	0.00
'social'	2.18*	4.91	2.25*	4.88	4.28**	6.88
'distance'			-0.08**	8.71	-0.18***	10.39
'dog-friendly'					-3.03	
'infrastructure'					4.95**	9.28
'environment'					2.22	0.17
Constant	3.09***	14.70	2.26*	0.10	6.78	1.42
Hosmer and Lemeshow X^2	1.9 (5)		2.8 (8)		5.3 (8)	
% correct predictions	79.5		81.8		86.4	
Nagelkerke's R^2	0.538		0.628		0.765	
-2 Log Likelihood	75.25		64.76		45.90	
n	141		141		141	

NB: The dependent variable is coded 1 choose a SANG and 0 did not choose a SANG. ***p < 0.01; **p < 0.05; *p < 0.1

Focus group results

• Many participants had multi-destination routes that offer an explanation for some of the unexpectedly large travel distances reported in the survey

• Focus groups highlighted the lack of awareness of the existence of SANGs and their purpose

• Residents living next to a SANG prefer to walk from home as the alternative of getting into a car is perceived as more effort

Conclusions

• In summary, the focus group results supported the survey results predicting that if there were a SANG proximal to a new development, residents would walk to it in preference to driving. There was also evidence of an aversion to driving to greenspace on a frequent basis.

• Distance clearly played an important role in the choice of the most frequently chosen greenspace but less so for less frequent visits

• Multi-destination trips and place attachment explain why on average, people travelled longer distances than expected and why they sometimes did not visit the nearest greenspace

Future Work

• Identify if there is a causal relationship between environmental factors and the Annex 1 species breeding populations

• The postal survey can be repeated using a stratified sample of both pre and post-SANGS residents in equal numbers, to find out if a compensatory visitor flow between the SPA and SANGs has occurred and if it affects the effectiveness of the strategy

Recommendations for best practice

• SANG owners and managers continue to improve awareness of SANGs by ensuring developer packs have the relevant information

• Increase on-site public engagement and increase signage to SANGs and within SANGs for visitor management, where appropriate

• SANG owners and managers to provide Infrastructure to encourage visitor social interaction such as suitable outdoor seating

• Local authority planners, developers and Natural England aim to support developments with adequate integral greenspace as bespoke SANGs where possible on the ground

• Replace the requirement for strategic SANGs within 5km with larger 'Super SANGs' and a larger catchment

• SANG owners and managers to maximise the opportunity to create a more biodiverse SANG environment where possible

Literature cited

1 Tashakkori, A. A. T., Charles (EDS) 2003. *Handbook of Mixed Methods in Social and Behavioural Research,* London, Sage.

2 Crawford, D. W., Jackson, E. L. & Godbey, G. 1991. A Hierarchical model of leisure Constraints. *Leisure Sciences,* 13, 309-320.