

### **Appendix 3:**

**Excerpts from: *Dogs, access and nature conservation* (Taylor, K. et al, 2005)  
English Nature Research Reports, Number ENRR649.**

Also available online: <http://publications.naturalengland.org.uk/publication/65013>.



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# Dogs, access and nature conservation

English Nature Research Reports



working today  
for nature tomorrow

## Executive summary

English Nature appointed Asken Ltd and Penny Anderson Associates Ltd (PAA) to prepare a report on *Dogs, Access and Nature Conservation* that will serve as a reference for managers of sites of nature conservation importance. An extensive literature search and review was undertaken, discussions held with researchers and site managers and a structured survey of site managers in England and Scotland was undertaken by email.

There were around 6.1m dogs in the UK in 2003 (a decline from 1998 when there were estimated to be 6.9m). The Kennel Club recognises at least 172 different breeds but groups them into seven major categories based on the characteristics for which they have been bred. There are also many dogs that are crossbreeds. In some of the most popular breeds (eg Labrador, golden retriever, terriers and crosses), their breeding has been to put up birds for shooting or to pursue mammals. However, all dogs retain an innate tendency to chase a moving object, such as a wild animal.

Research into dog walking and dog behaviour has shown that:

- around 5-7% of walkers in the uplands and 25-50% of walkers in lowland areas are accompanied by dogs;
- around 50-90% of these dogs were off-lead and up to 14% were deemed (by researchers/observers) to be running out of control;
- a walker with a dog has a larger 'sphere of influence' with regard to wildlife than a walker without a dog, and groups of dogs may exert a stronger influence than a single dog.

The research shows that disturbance is greater where:

- the animal reacts in the same way to a dog as it does to a predator;
- the stimulus approaches more directly;
- distance to a refuge is greater;
- the cost of fleeing is lower (and so the significance, in survival terms, is low).

However, the pattern of disturbance varies between species and at different times in their breeding cycle.

Disturbance is an effect that does not necessarily mean that long term impacts at population level will arise and it is important to recognise this distinction. However, very few studies have examined impacts at a population level.

For breeding birds there is clear evidence, both research-based and anecdotal, that disturbance exposes the eggs or young to a greater risk of loss to opportunistic predators, especially corvids. This appears to be the greatest risk arising from disturbance on sites where visitor and dog numbers are high. This effect is greatest for ground nesting birds in a variety of habitats.

Ground nesting birds have been the subject of most research (although little of the research examines disturbance by dogs independently from disturbance by humans with and without dogs) and appear to be the group most vulnerable to disturbance. Key findings for all bird groups or species are that:

- the presence of dogs provokes a disturbance response at greater distances and for longer periods than stimuli from recreational activities (including people without dogs) during the breeding season for most of the species studied, especially ground nesting ones, and for one

species this disturbance distance was twice as long in the breeding opposed to the wintering season;

- breeding success can be improved significantly when dogs are managed, including in beach environments;
- lekking birds may be particularly vulnerable to disturbance by dogs although research in the UK is limited;
- of the wader species, only the Eurasian dotterel has been shown not to be disturbed by dogs or people;
- although some species exhibit no behavioural response to disturbance by dogs or people, they appear to produce less fit young (eg marsh harriers) and this relationship is worthy of further study;
- the response to dogs differs between species of ground feeding/roosting wintering birds but dogs generally have a greater effect than walkers and (for some species) joggers;
- reaction to dogs has an energy cost and this can be significant in winter, although compensatory feeding (eg at night) is found in some species;
- evidence concerning possible habituation is mixed.

Very little work has been found about effects on mammals and other animals. Although effects have been observed (eg disturbance of deer, changes in behaviour patterns of badgers), the available information suggests that any effects of dogs on populations are not significant. There is a potential risk of dogs spreading disease amongst wild animals but, again, there is no evidence to suggest that this is significant.

Research and anecdotal reports show that dogs contribute to nutrient enrichment of infertile habitats through defecation and urination. These effects tends to be concentrated around car parks and site entrances as dogs tend to perform these bodily functions shortly after being let out of cars or taken off a lead, and in approximately a one metre zone beside the paths. Observed symptoms of enrichment are dominance of nutrient-loving species and reduced species diversity. Ideally, owners would pick up the faeces of their dogs (little can realistically be done about urination) but a significant proportion of owners do not. However, a significant proportion of owners are responsive to campaigns to encourage them to clear up after their dogs, particularly when they are made aware of the effects and are provided with facilities for convenient disposal.

The presence of dogs at a site can exert an influence on how it is managed, particularly where some form of grazing by livestock is thought to be the optimum management regime. The influence arises from:

- the need to consider the compatibility of livestock (especially breeding ewes and lambs) and dogs;
- concerns that may be expressed by users (not just dog walkers) about the presence of large grazing animals.

However, there are many measures that can be employed to assuage these concerns and, in practice, re-introduction of grazing can be effected at most sites without undue adverse effects. Even so, instances were found (as reported in the National Survey) of grazing being prevented or altered because of perceived difficulties arising from the presence of dogs.

It is important to recognise that dogs play an important positive role in British society. Benefits include:

- promotion of health and well-being of their owners (and their children);

- use as working dogs;
- use of dogs to assist people with illnesses or disabilities;
- economic benefits in terms of sales of dog-related goods.

Over all types of sites, a significant minority of regular access users are dog owners, although observers at some heathland sites in southern England have recorded that as many as 93% of all users were dog walkers. Their needs and preferences are similar to non-dog owners, although they like to have opportunities to let their dog safely off its lead. However, non-dog owners are not always welcoming of dogs, with a significantly proportion having been observed to take what appear to be evasive action when a dog approaches, and object particularly to finding dog faeces in public access areas.

The role of dogs differs in other countries, although north European societies and those developed from European origins (eg USA, Australia, New Zealand, South Africa) have a similar view of dogs. In these countries, management of dogs in national parks tends to be more restrictive than in the UK (eg with dogs being banned totally, or from sensitive areas, or only with permits), although it is important to recognise that there are many differences between British national parks and those elsewhere. In other countries and regions, the dog is perceived differently, and is a source as human food in southeast Asia, whilst viewed as unclean by some Muslims.

There are certain risks to health and safety associated with dogs' presence in the countryside (ie injury to people with dogs, injuries caused by dogs and zoonoses). Although incidents can occasionally be serious, these risks are not significant overall.

The laws relating to dogs in the countryside and their effects are described in Section 8. It is important to recognise that these may change over time.

The survey of site managers (to which there were 77 respondents) highlights the difficulty of observing effects of dogs on wildlife. Nevertheless, it has provided information about effects on wildlife that is entirely consistent with research findings. It also sheds some light on the effectiveness of different management measures and leads (tentatively) to conclusions that:

- dog management policies vary in effectiveness but wardening, steering and regulations appear to work best, whilst leaflets and signage are less effective, except as part of a comprehensive strategy;
- a multi-faceted policy is likely to be more effective than one or no policy.

Recommendations for site managers are offered. In brief, these are that site managers should:

- develop integrated strategies for dog management and control, including control of potential predators that benefit from the presence of dogs (such as corvids and gulls);
- consider zoning their sites to differentiate between areas where dogs are allowed/not allowed and where they can be on/off-lead at times throughout the year;
- plan strategically how the pattern of people's behaviour can be influenced (without breaching their rights), such as through steering, use of signs etc., to direct people towards areas where impacts of dogs (and humans) will be less significant on the not unreasonable assumption that they will take their dogs along the same route;
- exploit the tendency for dogs to urinate and defecate soon after their arrival at a site by creating 'sacrifice areas' between car parks and site entry points where feasible;
- implement campaigns to promote responsible behaviour amongst dog owners and where they can find dog-friendly sites;

- co-ordinate dog management with other aspects of site management (eg predator control, livestock management).

Although a lot of research literature has been brought to light during the course of the project, gaps in knowledge have become evident. Key gaps are:

- the stimulus that dogs represent for disturbance of different bird species and the interaction of different variables (eg speed of approach, size of dog, potential for habituation);
- effects of dogs in water and water margin environments (inland and coastal waters);
- population level impacts on the species showing negative effects of disturbance;
- various experiments into effects of dog management measures, with dogs as the key variable (as distinct from human disturbance generally);
- monitoring of effects on wildlife where new access has been provided;
- flushing distances for different species and how this distance is influenced by factors such as habitat, seasonality, availability of food and so on;
- more detailed study of the attitudes of different cohorts of dog owners and their reaction to different methods used to influence their behaviour.

In conclusion, whilst research has rarely tried, or been able, to distinguish the specific effects of dogs on wildlife, as distinct from effects of humans and dogs generally, the evidence that is available (both anecdotal and from controlled experiments) shows that dogs do disturb ground nesting birds in particular and that this disturbance can lead to adverse effects on individuals, and in some cases on populations. The greatest risk is from predation of eggs or young (particularly by corvids) when parent birds are flushed from nests, whilst other effects include reduced feeding opportunities coupled with higher energy costs leading to reduced fitness.

Yet, such is the benefit that dogs bring and the widespread expectation that dog owners can take their dogs into the countryside, it is impractical to consider banning dogs from all sites of nature conservation value. Evidence suggests that integrated management strategies can be devised (based on control of dogs and influencing their owners) that will reduce the impact of dogs on many nature conservation sites, and seek mutually beneficial solutions.

## Appendix 4:

Excerpts from: *Literature review on the effects of pet cats on nearby protected wildlife sites.* (Floyd, L. & Underhill-Day, J. C., 2013):

Unpublished report by Footprint Ecology for Breckland Council.

Also available online: <http://www.footprint-ecology.co.uk/reports/Floyd,%20L%20and%20Underhill-Day,%20J%20C%20-202013%20-%20A%20literature%20review%20on%20the%20effects%20of%20pet%20cats%20on%20.pdf>.



# A literature review on the effects of pet cats on nearby protected wildlife sites



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Literature review on the effects of pet cats on  
nearby protected wildlife sites



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## Summary

This report, commissioned by Breckland Council and Natural England, provides a summary of the current evidence available relating to the potential impacts of domestic cats on wildlife in the United Kingdom and the links between development and cat predation on nearby wildlife sites.

Cats are a popular and valuable companion animal in the UK and studies suggest that the population of owned cats in the UK exceeds 10 million. Approximately one quarter of households in the UK own at least one cat and various factors, such as income, region, education level and gender appear to influence levels of cat ownership.

The domestic cat *Felis catus* is a highly successful generalist predator and has become one of the most abundant carnivores in the UK, reaching far higher densities than native carnivores, such as the red fox. It is primarily a predator of small mammals, but will also kill large numbers of birds, herpetofauna and invertebrates. Whether or not predation by cats has a significant impact on prey populations depends somewhat on whether cat-induced mortality is compensatory (i.e. the animal would have died anyway) or additive (i.e. the death of the animal is a loss to the population) and requires a detailed understanding of the population dynamics of the prey species.

The home ranges of cats have been studied worldwide and mean hunting ranges of in excess of 300 hectares have been recorded; males have been observed to have consistently larger home ranges than females, and nocturnal home ranges are larger than diurnal ones. When considering the maximum linear distance travelled by cats from one point to another, distances of over 3km have been recorded.

Measures to mitigate the effects of cat predation have been studied, including the use of bells and other collar-mounted devices along with fencing and the modification of cat behaviour by owners, such as limiting the amount of time a cat spends outside. To date, no method has entirely prevented predatory activity in cats, but many have reduced predation rates of certain groups of species.

## **Appendix 5:**

**Excerpt from: British Standard (2013): *BS 42020:2013: Biodiversity – Code of practice for planning and development*. British Standards Limited 2013.**

BS 42020:2013

# **Biodiversity — Code of practice for planning and development**

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- h) means of securing planning controls, e.g. planning conditions and obligations, and the level of detailed information that may be secured at a later stage if consent is granted; and
- i) any particular drawing, plans, pro forma documents, etc., that could be required or used to assist in presenting the findings (see 5.4 and 6.8).

6.1.10 Pre-application discussions should aim to ensure that any and all ecological evidence required with the planning application is proportionate to the proposed development (see 5.5).

## 6.2 Adequacy of ecological information

6.2.1 All ecological information should be prepared and presented so that it is fit to inform the decision-making process (see 8.1). As such, all ecological information should be:

- a) appropriate for the purpose intended and obtained using appropriate scientific methods of ecological investigation and study (see 6.10);
- b) sufficient, i.e. in terms of:
  - 1) scope of study;
  - 2) habitats likely to be affected;
  - 3) species likely to be affected;
  - 4) ecological processes upon which habitats and species and system function are dependent;
  - 5) coverage of a sufficiently wide area of study commensurate with the requirements of the species or feature of interest, including connected systems (e.g. downstream);
  - 6) undertaken over a sufficient period of time and at an appropriate time of year to reveal sufficient details of populations or habitat characteristics (see 6.4.4);
  - 7) being sufficiently up to date (e.g. not normally more than two/three years old, or as stipulated in good practice guidance); and
  - 8) identification of risks, e.g. spread of pathogens or invasive non-native species.

*NOTE The shelf life of any given survey depends on the type of survey undertaken and whether environmental conditions within the study area were "normal" or unusual at the time undertaken (e.g. extreme weather), or are likely to have changed or remained the same. The greater the recent change, the greater the need for up-to-date information.*

6.2.2 The ecological information should be understandable by laypersons (i.e. include a non-technical summary), be substantiated throughout with clear evidence, be true and accurate, and follow good practice guidelines, where appropriate, for both content and format (see 6.3.5 and 6.3.6).

## 6.3 Ecological reports

6.3.1 Ecological reports to the client and other members of the design team may go through various provisional drafts during the pre-application design process. However, the final report submitted with the application should provide as much certainty as possible (see 6.6.1) and be prepared specifically with the aim of enabling the decision-maker to reach a sound and lawful determination of the application (see 6.6 and 8.1). The emphasis should be on identifying and addressing significant impacts. All non-site or non-case specific information should be placed in an appendix, rather than the main text.