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The "Quality" of Green Space: features that attract people to open spaces in the Thames Basin Heaths area

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Summary

An understanding of why people choose to visit particular sites is crucial to successful access management. Such an understanding provides the potential to create alternative sites which will be attractive to visitors and also highlights how visitors might be deterred from visiting particular areas.

The Thames Basin Heaths SPA, comprising 13 individual sites of special scientific interest (SSSIs), is surrounded by a high human population. Considerable numbers of visitors are known to visit the SPA and future development could bring more people to the general area. There is therefore a clear need to understand what attracts people to the SPA and how alternative sites (sites created mainly for access / public enjoyment rather than for nature conservation) should be designed.

In order to gain this understanding, visitors were interviewed at 10 different sites, five outside the SPA and five within the SPA. People were questioned close to access points during standard time periods, totalling fifteen hours at each site, split equally between weekend and weekdays.

A total of 532 questionnaires were completed. Most (428 of the questionnaires) were with dog walkers. Other reasons for visiting included exercise, taking children out and walking. A high proportion of interviewees visited the sites regularly (38% visited daily) and people were typically local to the site where interviewed (the median distance travelled for all visitors was 2.4km). Daily visitors were more likely to be female and less likely to be in full time employment than other visitors. One quarter (24%) of daily visitors were retired, and most (96%) of daily visitors were dog walkers.

Visitors were asked to score different features which influenced their choice to visit that site. The ability to let the dog off a lead and safety on site were given the highest scores. Features relating to access – a quick journey time from home, provision of parking and convenient access from home all scored highly, especially for dog walkers and those people visiting daily. People not walking dogs gave higher scores than dog walkers to the presence of water bodies, the presence of viewpoints and the presence of way-marked routes on sites they visited.

Photos were used to represent hypothetical 'ideal' sites, and interviewees were asked to select photos which showed the kind of site they would want to visit. Semi-natural habitats seemed to be preferred, and the following attributes of sites would seem to represent people's ideals: gravelled, relatively narrow paths, through wooded habitats (deciduous preferred), undulating terrain and the presence of water, such as a lake.

There were differences between visitors to sites within the SPA sites and those to non SPA sites. A greater proportion of visitors to the SPA sites were dog walkers.

Visitors to the SPA selected sites for convenient car access and provision of car parking, whereas visitors to non SPA sites gave higher scores to the presence of surfaced paths, way-marked routes, a variety of routes and the presence of viewpoints. Dog walkers visiting SPA sites gave a higher weighting (than those visiting sites outside the SPA) to the ability to let their dog off lead, to not having to clear up after their dog and to the absence of livestock. People visiting the SPA spent longer on SPA sites. There were also differences in interviewee's choices of photographs of ideal sites. Visitors to the SPA preferred sites with soft sandy paths and sites with undulating topography, whereas more visitors to non SPA sites preferred pictures of an urban park and an artificial lake.

These results provide clear guidance on the design of alternative sites. The fact that there are differences between the responses of visitors to the SPA and to non SPA sites suggests that alternative sites should not be created as parks or urban green space. For alternative sites to attract visitors away from the SPA, alternative sites will need to contain semi-natural habitats, and it would appear that a variety of interest within the site – water, undulating ground, tree cover – would be important. However, access to sites is clearly crucial, and alternative sites should be located close to population centres and with convenient vehicle access. Alternative sites should also feel safe to visitors.

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Acknowledgements

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Introduction

Southern heathlands, an open habitat found on poor, acid soils and dominated by heathers and gorse (*Calluna vulgaris*, *Erica* ssp. and *Ulex* ssp.), have a limited global distribution, and are among the most threatened habitats in Britain and Europe (Noirfalise & Vanesse 1976, Cox et al 1998). The UK heathlands constitute not only some 20% of the whole world resource of this habitat, but also hold some of the most extensive surviving remnants of humid and wet heathland and mire (Farrell 1989, Tucker & Evans 1997, English Nature 2001).

Due to their importance for rare and vulnerable bird species listed in Annex 1 of the European Union's Directive on the Conservation of Wild Birds (EC/79/409 as amended), known as the Birds Directive, most aggregations of southern heathland in England have been classified as Special Protection Areas, for their populations of three wild bird species: Dartford warbler, nightjar and woodlark.

Heathlands in southern England now occupy about a sixth of the area they formerly covered. Many heathland fragments have survived in close association with urban and suburban development. As a result, they can suffer from a range of uses and abuses, from the high human populations living around them. These `urban effects' can include fire, trampling, tipping, pollution, soil erosion, predation by cats and disturbance by humans and their dogs (De Molinaar 1998, Haskins 2000, Underhill-Day 2005).

A number of studies have shown disturbance effects from humans and dogs to the Annex 1 species. These include: lower nesting densities on heaths in more urban areas (nightjar, woodlark, Dartford warbler), or where measured levels of disturbance were greater (woodlarks), higher nest failure rates on urban than rural heaths (nightjars), and close to paths used by humans (nightjars) (Liley & Clarke 2002, 2003, Mallord 2005, Murison 2002).

The Thames Basin Heaths SPA consists of dry and wet heathland, mire, oak and birch woodland, gorse scrub and acid grassland, plus areas of rotational conifer plantation. It covers an area of some 8400ha, consisting of 13 Sites of Special Scientific Interest (SSSI) from Hampshire in the west, to Berkshire in the north through to Surrey. This location, to the south west of London on the M3 corridor, has led to high development pressures, which, from the mid 20th century continue to the present day. It has been estimated that the Thames Basin Heaths declined in area by 53% between 1904 and 2003 with fragmentation of 52 main blocks to 192 smaller blocks during the same period (Land Use Consultants 2005). These heaths hold 7.8% of the nightjars, 9.9% of the woodlarks and 27.8% of the Dartford warblers breeding in the UK. Where studies have been carried out on heaths in the Thames Basin, they have invariably shown substantial urban effects (Hall 1996, Liley 2004, Terence O'Rourke 2004).

At present there are an estimated 288,000 residential properties within 5km of the SPA boundary. The Land Use Consultant study (2005) calculates that at least 35,170 houses will need to be built around the Thames Basin Heaths based on the current housing allocation to 2016. This number of houses will require a land area of 12km^2, assuming a density of 30 houses per hectare. Current estimates suggest that these heaths currently receive in the order of 5 million visits p.a. (Liley *et al. in press*). Surveys of access patterns within the SPA (Liley *et al. in press*) have provided a clear indication of who visits the SPA and why. Most visitors come to the heaths to walk their dog (59% of visits), but others visit to exercise, take the children out, jog, cycle or ride their horses. The majority of people arrive at the sites by car (83% of all visitors), yet travel short distances to reach sites (median distance 3.1km). Once on the site, people typically walk distances of well under 3km.

The Thames Basin Heaths are therefore subject to intense human pressures, which are likely to rise. There is concern that future developments may impact even more heavily on the Annex 1 species and the habitat that supports them. However, it is clearly important that people should not be denied access to green space and natural areas. For example, recent research is providing strong evidence of the health benefits that result from public access to the countryside (see Bird 2004 for a review). The challenge is therefore to find means whereby provisions for public access do not compromise the integrity of the SPA. There are several approaches that might meet these challenges, over and above any changes that might be sought in the numbers and location of new developments. On-site, measures might be proposed which could alter availability of access to sites, modify footpath networks and encourage users away from sensitive areas. There is also the potential to create alternative areas of green space, or even improve existing green space, to make sites outside the SPA attractive to visitors.

In order to design appropriate areas of alternative green space, it is necessary to understand exactly what features on sites attract people to the SPA and what features might attract them elsewhere. Previous studies of green space design (see Dunnett et al 1992 for review and discussion) have focused on urban parks, not areas of semi-natural habitat such as those found within and around the Thames Basin Heaths SPA. For example previous studies of the Royal Parks in London have also indicated a long list of characteristics of prestigious parks that are considered to be particularly important. They include the presence of trees and greenery, appearing clean and well kept, fresh air, open spaces, peace and quiet, lakes and ponds, feeling safe, being away from noise and dirt, good toilets, pageantry and good catering facilities. Many of these features will not be applicable to visitors to the heaths and commons of the Thames Basin Heaths.

The work outlined here was therefore commissioned by English Nature to investigate the following:

- What features attract different access users to sites, both within the SPA and outside
- How should alternative sites be designed in order to attract people that otherwise would visit the SPA

- Where should alternative sites be located in order to attract people
- How might access management be most effective (e.g. is there potential to persuade people not to visit particular sites)

Methods

In order to explore which features attract visitors to existing sites and which features would be desirable in alternative sites, a questionnaire was designed to capture a range of data through face-to-face interviews. The questionnaire included questions relating to purpose of visit and criteria for choice of site, attitudes towards hypothetical 'ideal' site features, willingness to observe restrictions on dog walking and brief background socio-economic information (see Appendix 1). Interviews using the questionnaires were conducted at ten different sites, five within the SPA and five outside the SPA (Table 1).

Table 1: Sites used within the survey

Site	*Grid Reference*	*Description*
Within the SPA		
Lightwater Country Park	SU915 620	Open heath and common adjacent to visitor centre, gym and children's playground.
Sandhurst to Owlsmoor SSSI	SU845 630	Mixed woodland, heath and scrub adjacent to Sandhurst and Owlsmoor.
Crowthorn Wood	SU878 660	Plantation, clearfell and heathland within Broadmoor to Bagshot Woods & Heaths SSSI.
Bourley & Long Valley SSSI	SU844 509	Grassland, woodland and large areas of open heath
Horsell Common	TQ006 604	Heath, scrub and woodland to the north of Woking.
Outside the SPA		
California Country Park	SU785 650	Country park with lake, children's play area, heathland. Also café and children's play area.
Shepherd's Meadow, Blackwater Valley SSSI	SU849 604	Wet meadow and woodland with a river, site managed by Bracknell Borough Council.
Stoke Park, Guildford	TQ005 507	Urban park near the centre of Guildford
Fairmile Common, Cobham	TQ125 617	Common with broadleaved woodland, heath and ponds inside the M25
Fleet Pond	SU820 550	Large lake, surrounded by coniferous woodland and small patches of heath

A total of 15 hours was spent at each site and during this time the interviewer attempted to question all people encountered. The fifteen hours were split equally between a weekday and a weekend day and then into 3 equal time periods:
07.30 – 10.00, 11.00 – 13.30, 14.30 – 17.00

Sites were switched between time periods on each day of survey work. The late period was, towards the end of the month, started at 13.30 and completed at 16.30 to allow for the change in day-length and ensure that interviews were not conducted in

the dark. All the interviews were conducted by the same person (JM) during November 2005.

Interviews were conducted close to access points and strategic locations were chosen where the number of people encountered could be maximised.

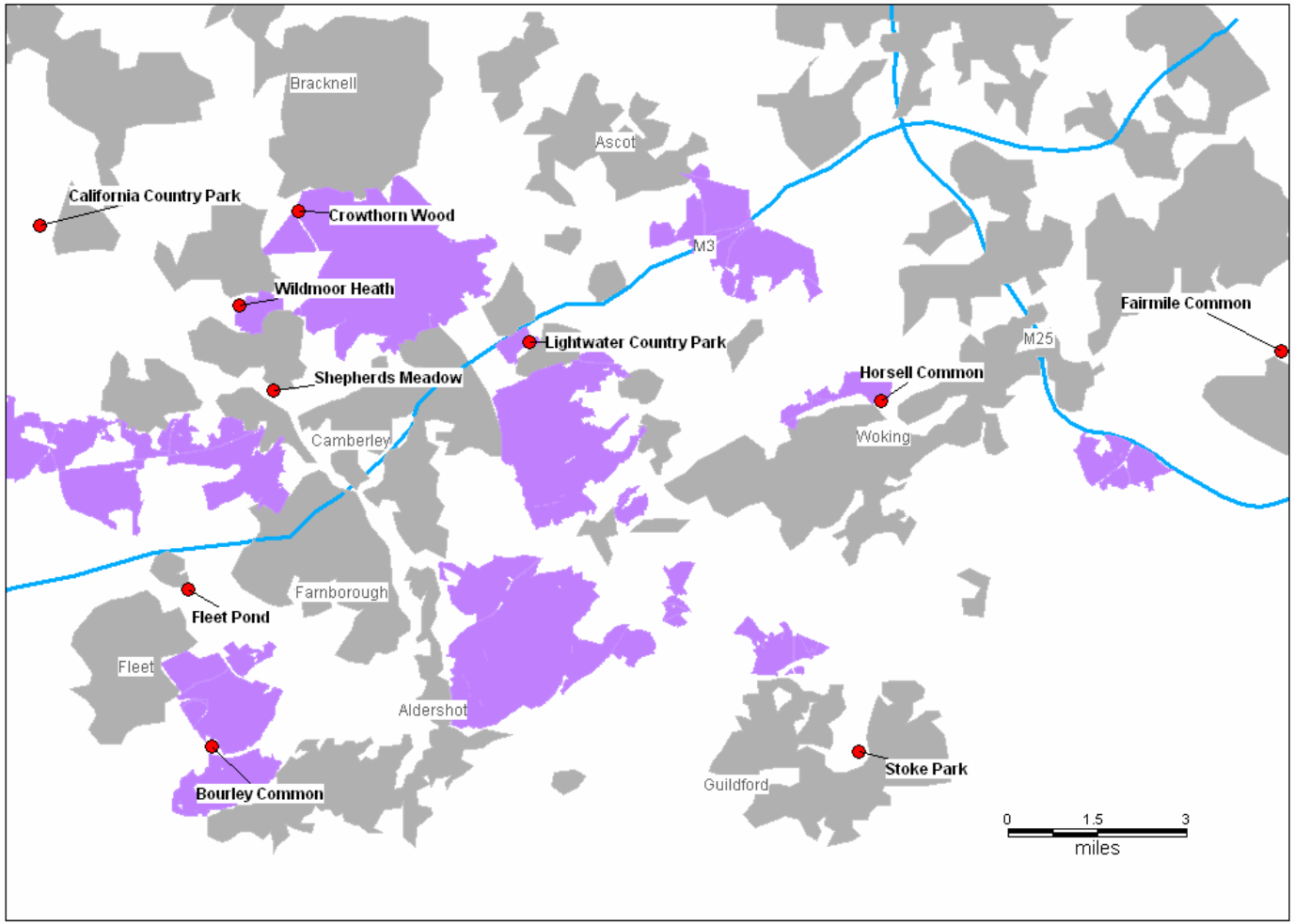

Figure 1: Location of sites (red dots) where questionnaires conducted. The purple areas show the SPA.

Results

The results section is structured as follows

1. Snapshot of people interviewed, an overview of the questionnaire data

2. What features of a particular site attract people to that site?
   2.1. Are different groups of people (such as dog walkers) attracted by particular features?
   2.2. Attitudes of dog walkers to keeping dogs on leads and clearing up after their dogs

3. What would an 'ideal' site look like?
   3.1. Do different users, such as dog walkers, have different preferences?

4. Is there any difference between people who visit sites frequently compared to those who visit less frequently, as to why they choose particular sites and as to how their ideal site would look?

5. Is there difference between the people that visit the SPA and those that do not, as to why they choose particular sites and as to how their ideal site would look?

Snapshot of people interviewed and overview of the data.

A total of 532 interviews were conducted. Only one person per group was interviewed, and therefore the total number of people within interviewed groups was much larger, a total of 949 people (757 adults and 192 children). The majority of interviewees (80%) gave dog walking as the reason for their visit. Other reasons included exercise (4%), taking children out (9%), walking (9%), cycling (2%) and jogging (2%). Most people interviewed visited the sites regularly (83% at least once a week), and visits were typically short in duration (72% of interviewees visited for less than an hour). Interviewees travelled short distances to reach the sites (mean distance 3.8km). Half (49%) of all interviewees were in full-time employment, while 29% were retired. A total of 5% of interviewees came from homes without gardens, and the majority (50%) came from detached houses with gardens. The age range of interviewees spanned from the under 16s (1%) to 65 – 74 years (2%). Half (51%) of all people interviewed were between 35 and 54 years old. Group sized ranged from 1 to 18, though most (59%) of people were on their own. There was no significant difference in the number of women compared to men interviewed. These data are summarised in Appendix 2, which gives the totals and summary information about the people interviewed.

What features of a particular site attract people to that site?

The ability to let the dog off the lead, personal safety, quick and convenient access and the provision of parking scored highly as reasons people chose to visit the particular site at which they were interviewed (Figure 2). These factors do not especially relate to the habitat or landscape at the site apart, perhaps, from personal safety. Women scored personal safety higher than men (mean for men = 3.8, mean for women = 4.5, $T = 5.73$, $p < 0.01$). Easy walking distance from home was consistently given a low score (it was given a score of 0 (i.e. irrelevant in attracting the interviewee) in 330 (62%) of interviews). This would suggest that very few of the people interviewed walked to the sites where they were interviewed. No requirement to clean up after the dog and the presence of way-marked routes also seemed largely irrelevant in why people selected particular sites.

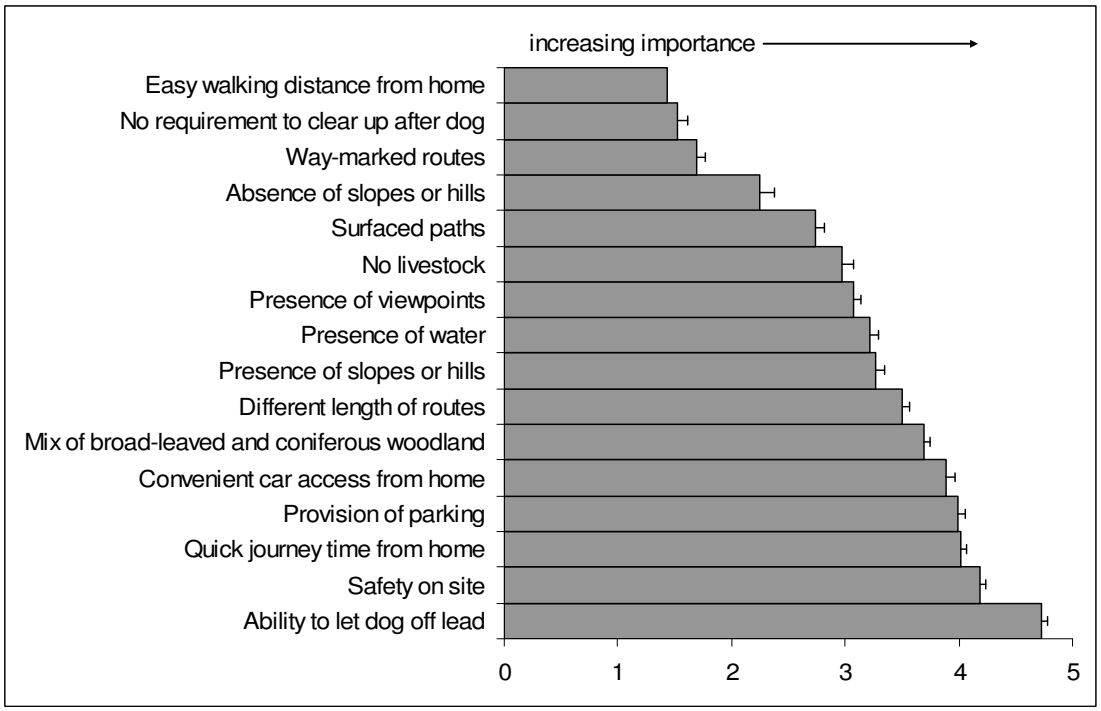

Figure 2: Mean scores attributed to different reasons for selecting the particular site where the person was interviewed. People were asked to give a score between 5 (very important) and 0 (irrelevant) to each potential reason. Error bars give one standard error. The sample size does vary for each reason, as reasons varied between sites (i.e. presence of slopes or hills was not a feature of all sites) and only people with dogs were asked questions relating to dogs.

Do different features attract different people?

Most people were visiting to walk their dog, with 80% of people interviewed (57% of all people) giving dog-walking as a reason for their visit. Dog walkers were much more likely to be early visitors and to be weekday visitors compared to non-dog walkers. They were more likely to be female and to be in part time employment. They are also more likely to be 'middle-aged': 51% are aged 45- 65 compared to 30% of non dog walkers. In this section we therefore consider dog walkers as a separate group and compare dog walkers to non dog walkers.

Comparing those people with dogs to those without dogs, there were some differences in the scores given to features which attracted people to the site (Figure 3). Non dog-walkers gave higher scores to the presence of way marked routes, presence of view points and to the presence of water. Dog walkers gave higher scores to features related to access - convenient car access from home, quick journey time from home and provision of parking.

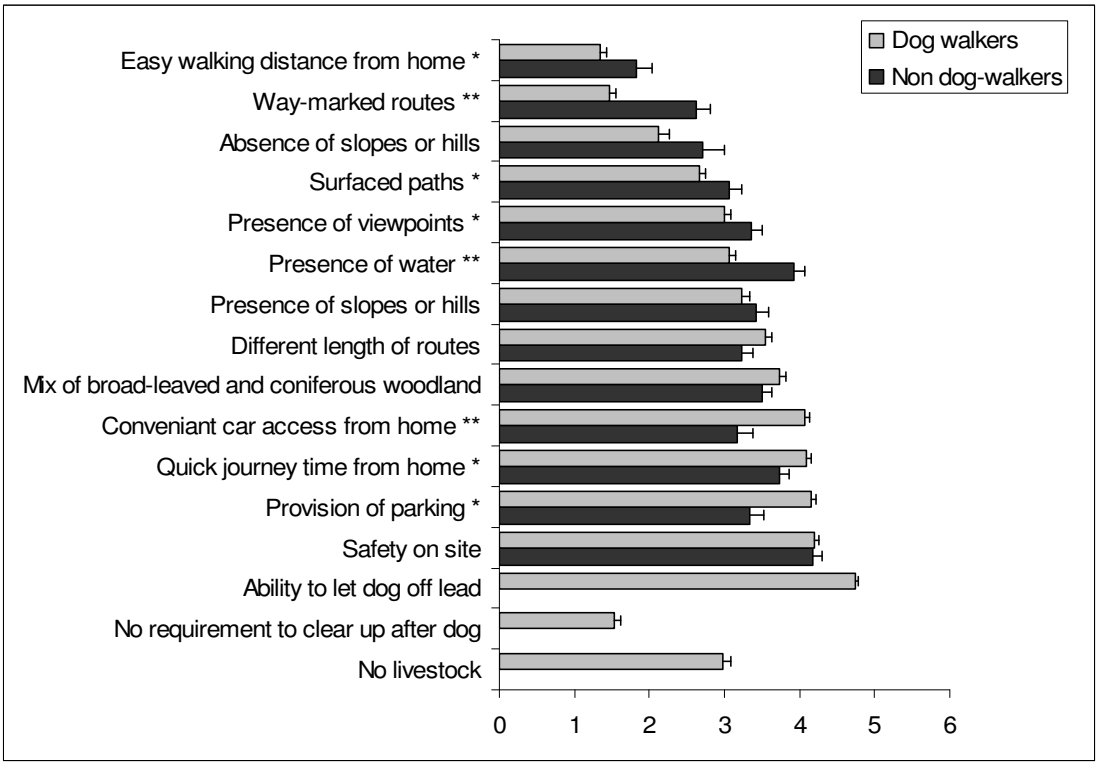

Figure 3: Mean scores attributed to different reasons for selecting the particular site where the person was interviewed, for dog walkers and non dog-walkers. People were asked to give a score between 5 (very important) and 0 (irrelevant) to each potential reason. Asterisks indicate those features where significant differences (p = 0.01, * = 0.05) were found between dog walkers and non dog walkers. Error bars give one standard error. The sample size does vary for each reason, as reasons varied between sites (i.e. presence of slopes or hills was not a feature of all sites) and only people with dogs were asked questions relating to dogs.**

The higher scoring given by dog walkers to features relating to convenient access is perhaps to be expected. Dog walkers visit the sites more frequently than non-dog walkers (Table 2), and they also visit for shorter time periods (Table 3), i.e. dog walkers visit the same sites many times but each visit is brief. Other users, without the daily requirement to exercise their pet, visit sites less frequently and for longer, and therefore may be less likely to be influenced by factors relating to ease of access.

Table 2: Frequency of visits for dog walkers and non-dog walkers. The differences between the two groups are significant ($\chi^2_4 = 125$, $p < 0.01$).

Frequency of visit	Non dog walkers		Dog walkers	
	Count (no interviews)	*%*	*Count (no interviews)*	*%*
At least once a day	8	8	192	45
At least once per month	36	34	184	43
At least once per week	31	29	29	7
Less than monthly	22	21	18	4
Don't know / first visit to site	9	8	3	1
TOTAL	106	100	426	100

Table 3: Duration of visits for dog walkers and non-dog walkers. The differences between the two groups are significant ($\chi^2_3 = 33$, $p < 0.01$).

Duration of Visit	Non dog walkers		Dog walkers	
	Count (no interviews)	*%*	*Count (no interviews)*	*%*
less than 20 minutes	3	3	28	7
20 - 40 minutes	20	19	136	32
40 minutes - 60 minutes	44	42	203	48
more than 1 hour	39	37	59	14
TOTAL	106		426	

The impact of requirement for dog walkers to keep dogs on leads and clear up after their dogs

As well as giving scores for the relative importance of being able to let their dog of a lead and for the need to clear up after their dog, dog owners were also asked specific questions about these two issues. Of the 532 interviews conducted, the total number of interviewees with dogs was 428. These 428 people were asked about their willingness to keep their dog on a lead. Well over half (57%) of people very willing to keep their dog on a lead, and only one-quarter (24%) unwilling (Table 4). This apparently conflicts with the high score given to the importance dog owners put on the ability to let dogs off leads. However, dog owners typically responded to the question as meaning keeping dogs on leads for part of the walk, and most would respond with a proviso that they would be willing to put their dog on a lead for a part of the walk, but would go to alternative locations should their dog be required to be under a lead for the entire walk.

Table 4: Willingness to keep a dog on a lead

	Count	*%*
Very willing	244	57
Somewhat willing	48	11
Reluctant	34	8
Unwilling	102	24
TOTAL	428	100

Dog walkers were clearly willing to clear up after their dog had fouled, with only 3% of dog-walkers reluctant or unwilling to clear-up behind their pet (Table 5), matching the relatively low score given by dog walkers when asked whether no requirement to clear up after their dog actually attracted them to a given site.

Table 5: Willingness to clear-up after dog

	Count	*%*
Very willing	398	93
Somewhat willing	20	5
Reluctant	7	2
Unwilling	3	1
TOTAL	428	93

Figure 4: Photographs used in questionnaire

A B C

J K L

D E F

M N O

G H I

P Q R

What would an ideal site look like

The photographs used to represent different sites are shown in Figure 4. Each person interviewed was shown the photographs in groups of three, each group of three representing a different 'theme' such as path type, or the presence of water bodies. Each person was asked which of the photographs in each group of three best matched the kind of site that they would most like to visit (assuming car-parking, distance from home etc was the same for each site).

ABC: Types of path

Of the three photographs showing path types, the proportions of people who showed a preference for each photograph showed some variance, and was only just significant (from equal numbers of people preferring each photo) at the 0.05 level ($\chi^2_2 = 9.49$, $p < 0.05$). The picture that most people did prefer was the wide gravelled track with fewer people preferred the path with a soft sand substrate.

Table 6: Count (no of interviews) and percentage where a given photograph was preferred (Photos A, B & C, showing different path types).

Photo	*count*	*%*
A (grassy path)	164	31
B (soft sandy substrate)	143	27
C (gravelled track)	199	37
A/C	3	1
B/C	3	1
Blank	20	4
TOTAL	532	100

A selection of comments as to why people selected a given picture is given in Table 7. It can be seen that different people thought both B and C were "more wild" and each path type was described as a "good path" by different people. Path C was recognised as the easiest for wheel-chair users, while one person commented that path B (with the soft sand) was "easier on the limbs".

Table 7: A selection of comments given by people when asked about their choice of photographs A, B and C. The comments are from a random selection of40 questionnaires.

	Answer given	
A	B	C
all green	better for wildlife	easy to follow path
easy for pram / dog	looks more interesting	good path
good for the dog	lots of colour, path ok	good path, nice place
grass for dog	mixed site, path, fine	good path, open space ,nice view
grassy, downland	more adventurous	good path, views
green and open country	more interesting, not too broad a path	looks nicer
green and wooded	more wild, path easier on limbs	more interesting
green for dog	trees and pretty	nice landscape, good track
green, good path		nice path - open for dog
open for dog		nice walking path
greenery		path good, wild
open, can see dog, woods also open		open, view
open space		path good for wheelchair
		path good
		reasonable path, natural

DEF: tree cover

Photos DEF all show a wide track, and differ in the amount of tree cover on either side of the route. Photograph D shows a track with dense deciduous woodland, and a thick understorey of rhododendron. More people clearly preferred this amount of tree cover (the significantly different from an equal distribution of answers, $\chi^2_2 = 280$, $p < 0.01$) and only 6% of people interviewed showed a preference for the open habitat (Table 8).

Table 8: Count (no of interviews) and percentage where a given photograph was preferred (Photos D, E & F, showing different degrees of tree cover).

Photo	*count*	*%*
D (thickly wooded)	336	63
E (open heath)	31	6
F (scattered trees)	143	27
D/F	5	1
E/F	1	0
(blank)	16	3
TOTAL	532	100

In a random sample of 40 questionnaires, the range of comments regarding the tree cover (Table 9) show that people who selected photograph D chose that photograph because they liked the tree cover, which was "more interesting" and "good for dog walking". Quotes about F included a preference for coniferous trees and another preferring the "heath with trees".

Table 9: A selection of comments given by people when asked about their choice of photographs D, E and F. The comments are from a random selection of40 questionnaires.

Answer given		
D	E	F
good for dog walking - trees for hide and seek with dog	none in sample	good footpath, open feel
like tree cover, less open		good path, open woodland
like woodland		looks more natural, heath and trees
more interesting		more trees than E, less managed than D
trees		open
woodland		open and trees
woodland - not knowing what's around the next corner		open and trees, security, view
woodland, good surface		open but with trees
woodland, shady, shelter		pleasant vista, like coniferous trees
woods		
woods more interesting		
woods, good path		

GHI: slopes

The three photographs all showed open grassy locations. People's preferences showed a distribution that was significantly different from an equal distribution between the three photographs ($\chi^2_2 = 447$, $p < 0.01$). People clearly did not select the steep slope (the photograph is looking uphill), and also a relatively small proportion selected the flat grassy area. Nearly three-quarters of interviewees (73%) selected the undulating topography (Table 10)). Both photographs H and I are taken on ancient monuments (earthworks / hill forts). Site H clearly shows a relatively flat path but surrounded by undulating ground with clear views all round.

Table 10: Count (no of interviews) and percentage where a given photograph was preferred (Photos G, H & I, showing different degrees of slopes).

Photo	*count*	*%*
G (steep grassy slope)	25	5
H (undulating topography)	389	73
I (flat grass)	91	17
G/H	6	1
H/I	2	0
(blank)	19	4
TOTAL	532	100

People's comments about the three photographs (Table 11), reveal that people were selecting the photographs because of the gradient, with people choosing G preferring the hills and slope, whereas people that selected I often did so because there were no gradients.

Table 11: A selection of comments given by people when asked about their choice of photographs G, H and I. The comments are from a random selection of40 questionnaires.

Answer given		
G	H	I
like climbing hills	easy to walk, varied and interesting	grass for dog
like hill	good path and views	not so hilly
like hills	hilly	not so hilly, trees too
like slope	interesting, variable terrain	not too slopey
like steep slope	looks nicer, no big slope	
like the north downs	more appealing	
	more interesting	
	open and variety	
	open, nice views	
	open, path, wild, not too steep	
	path and features	
	path is wide enough for wheelchair	
	pathway	
	variable terrain	
	variable terrain, view etc	
	varied terrain	
	variety	
	variety of terrain	
	views	

JKL: width of paths

Photographs J, K and L showed paths with differing amounts of vegetation around them, meaning that the width of the path varies in each. In photograph J there are trees present but the path is open, totally unobstructed and is a wide track. Photographs K and L both show narrow paths winding through thick vegetation, however L is open to the sky (it passes through gorse) compared to photograph K, where low branches angle out over the path. The distribution of peoples preferences

was not equal for each picture ($\chi^2_2 = 57$, $p < 0.01$), with a clear preference for K, the narrow path surrounded on either side by trees (Table 12).

Table 12: Count (no of interviews) and percentage where a given photograph was preferred (Photos J, K & L, showing different path widths).

Photo	*count*	%
J (no vegetation by path)	172	32
K (path narrow and enclosed)	237	45
L (path narrow but not enclosed)	98	18
J/L	1	0
K/L	5	1
(blank)	19	4
TOTAL	532	100

People appeared to be selecting photograph K for a variety of reasons, including the fact that it looked "interesting" and "intriguing" (Table 13). Both photographs K and J were selected by at least one interviewee because they were considered "safe" or to offer more security.

Table 13: A selection of comments given by people when asked about their choice of photographs J, K and L. The comments are from a random selection of40 questionnaires.

Answer given:		
J	K	L
broad path, open	dog would have more fun	less open / man-made
good path	interesting but with slightly wider track	more natural, less used track
not so enclosed	looks interesting	narrow and enclosed
open	looks intriguing	nice to walk in
open and trees, security	looks like its going somewhere	woodland, path width not important
open but with trees	mixture of trees	
open, safe	more enclosed woods, wildlife	
safer	more going on	
trees and open (can see dog)	more interesting	
trees and wide path	more wildlife	
wide open path	nice path, woods	
	no reason	
	pretty	
	trees / woodland	
	woodland	
	woodland and varied, path width unimportant	
	woodland, and path is wide enough for wheelchair	
	woodland, more to explore	
	woods and path and security	

MNO: feel of the site

Photographs M, N are both managed landscapes, with high levels of human intervention. Photograph M shows an urban park with mown grassy lawns and photograph N shows a track through a plantation where much of the land has been cleared. The third photograph shows deciduous woodland with little evidence of recent management. The distribution of people's preferences was not even between the photographs ($\chi^2_2 = 203$, $p < 0.01$), with the majority of people (61%) preferring the unmanaged land shown in picture O (Table 14).

Table 14: Count (no of interviews) and percentage where a given photograph was preferred (Photos M, N & O, showing a park, conifer plantation with clearings and dense, unmanaged woodland).

Photo	*count*	*%*
M (urban park)	88	17
N (plantation with clearfell)	101	19
O (deciduous woodland)	322	61
M/N	3	1
N/O	3	1
(blank)	15	3
TOTAL	532	100

The range of comments given by people who selected photograph O was varied, including "a touch of mystery", a preference for woodland and "more wildlife" (Table 15). Different people gave, in their reasons for their selection, safety / security as a factor in their choice for each picture, highlighting the fact that safety issues may be different for different people.

Table 15: A selection of comments given by people when asked about their choice of photographs M, N and O. The comments are from a random selection of40 questionnaires.

Answer given:		
M	N	O
deciduous trees	open but not formal	interesting, nice wooded path
easy walking	open but with trees	looks prettier
open - safety	open, safer	more enclosed woodland
open and trees	trees, open and more natural	more natural
open but with mature trees		more trees
open for kids to run		more wildlife
		not as open
		prefer woodland
		pretty
		pretty not coniferous
		surrounded by trees
		touch of mystery
		trees
		water
		woodland
		woodland, variety of wildlife
		woods and path and security
		woods, intriguing

PQR: water bodies

Photographs P and R both showed a landscape with water bodies present. Photograph P shows a large lake, contrasting with the small heathland pool in a shallow depression shown in R. The photograph with no water present shows the open grassy view used in previous sequences (photographs Q, I and A are all the same location). People's preferences were significantly different from an equal distribution across all photos ($\chi^2_2 = 144$, $p < 0.01$), and the image with the lake was preferred by most (Table 16). In total, 79% of those people that gave a preference for a single photograph preferred one showing a site with water.

Table 16: Count (no of interviews) and percentage where a given photograph was preferred (Photos P, Q & R, showing a view with a pond, a lake and no water).

Photo	*count*	*%*
P (large lake)	302	57
Q (no water)	100	19
R (shallow pool)	118	22
P/R	3	1
Q/R	1	0
(blank)	8	2
TOTAL	532	100

The reasons people gave for choosing photograph P, the large lake were typically that they liked the water (Table 17). Those that preferred the site with no water justified their choice by saying that they liked to "keep dog from the water" or that without the water it was "better [for the dog] to run around".

Table 17: A selection of comments given by people when asked about their choice of photographs P, Q and R. The comments are from a random selection of40 questionnaires.

Answer given		
P	Q	R
different wildlife in pond	better to run around	more natural water body
if it's a river	keep dog from water	more wildlife
lake	no water	nice to see water
like lake	open	water better for dog
like pond	path	water, but more natural
like the lake	water often too busy	woods and pond
like the water		
like water		
path and pond		
pond		
water		
water / wildlife		
water looks clear		

Do different users, such as dog walkers, have different preferences as to their 'ideal site'

There was little difference between each of the main user groups, in terms of the preferences for given photographs within each group. For each group of three photographs, the same photograph was selected most frequently by each of the main groups of visitors (Table 18).

Table 18: Summary of pictures selected, giving proportions (percentage of those asked selecting a single photo) of people selecting given photographs for each user group. Numbers in bold show the photograph in each group of three that was selected most frequently by the given user group.

	User Group (figures give %s)				
	All	Dog walkers	Taking kids out	Walkers	Notes
Type of path					
A (grassy path)	31	31	24	21	A,Q & I same photo
B (soft sandy substrate)	27	28	29	23	
C (gravelled track)	**37**	**35**	**47**	**54**	C & E same photo
Tree Cover					
D (thickly wooded)	**63**	**62**	**71**	**71**	
E (open heath)	6	7	4	4	C & E same photos
F (scattered trees)	27	27	25	21	F, J & N same photo
Slope					
G (steep grassy slope)	5	4	2	6	
H (undulating topography)	**73**	**72**	**78**	**79**	
I (flat grass)	17	18	16	10	A,Q & I same photos
Path width					
J (no vegetation by path)	32	33	31	29	F, J & N same photo
K (path narrow and enclosed)	**45**	**42**	**58**	**58**	
L (path narrow, not enclosed)	18	19	11	13	
Feel of site					
M (urban park)	17	17	16	19	
N (plantation with clearfell)	19	21	11	10	F, J & N same photo
O (deciduous woodland)	**61**	**58**	**73**	**69**	
Water bodies					
P (large lake)	**57**	**52**	**78**	**75**	
Q (no water)	19	21	5	8	A,Q & I same photos
R (shallow pool)	22	23	16	17	
TOTAL (no of interviews)	532	426	55	48	

People that visit frequently

In terms of actual visitor pressure, people that visit sites regularly are clearly an important sub-category of visitors.

In order to explore differences between frequent and less frequent visitors to the sites, respondents have been simply categorised into daily visitors and less frequent users. Thirty-eight percent of respondents (200 individuals) reported visiting the site on a daily basis. Daily visitors were significantly more likely to be female (Pearson χ^2 = 11.9, p= 0.001) and also differ from less frequent visitors in terms of their employment status. While 57% of less frequent visitors were in full time employment/self employment this figure falls to 38% for daily users who were more likely to be either in part time employment or retired. The part time employment status of daily users is strongly linked to their gender profile as female respondents in the sample were much more likely to be employed/self employed on a part time basis (35% compared to just 6% of male respondents). Given that 24% of daily visitors described themselves as retired it is not surprising that 22% are aged 65 and over compared to just 11% of less frequent visitors. Comparing people visiting daily, weekly, monthly or less frequently, there was no significant differences between groups in the median distance travelled to sites (Kruskal Wallis H = 2.17, p >0.05).

The distinctive profile of daily users is also reflected in the time and duration of visit. For instance, 43% of daily users were interviewed between 0730 and 1000 compared to 29% of less frequent visitors (p=0.005). Once at the site[1], although daily and less frequent visitors were equally likely to have a short visit (<20 minutes), the former were significantly less likely to have a long visit of >60 mins (12% compared to 22% of less frequent visitors) but more likely to have a medium length visit of 20-40 mins (34% compared to 27% of less frequent users). Daily visitors also differed in terms of their main use of the site/purpose of visit with 96% reporting that the main reason for their visit was for dog walking compared to 71% of less frequent users.

Although daily visitors were more likely to visit for dog walking purposes there was virtually no difference in the willingness of daily and less frequent visitors to keep their dogs on a lead at specified times or to clean up after their dog.

There were however, some differences between the two groups in terms of why they chose to visit the particular site where they were interviewed. Ease of access by car and the provision of parking facilities were less important for daily visitors whereas easy walking distance and quick journey time from home (presumably on foot) were more important for daily visitors compared to less frequent users. Personal safety on site also scored more highly for daily visitors which might reflect a combination of the greater likelihood of a daily visitor being female and to be visiting the site as early as 0730. Despite these differences however, there were no statistical (or

[1] The most 'popular' site for daily users was Horsell Common accounting for 21% of daily users compared to 13% of less frequent users and 16% of the whole sample.

otherwise interesting) differences between the two groups in terms of their preferences revealed through the 'ideal site' exercise, comparing photographs.

Is there difference between the people that visit the SPA and those that do not?

To our knowledge, no studies of heathland access patterns have compared visitor data for sites designated for their nature conservation interest compared to undesignated sites. Here we focus on this difference, and compare the sites within the SPA to those outside the SPA. Some of the non-SPA sites are SSSIs. In total, 308 interviews were conducted within the SPA and 224 on non SPA sites.

There were significant differences between SPA and non SPA sites in the reasons people gave for their visit. There were significantly more dog walkers interviewed on SPA sites than would be expected ($\chi^2_1 = 41.57$, $P < 0.01$). Within the SPA, 75% of all people were walking their dog; on the non SPA sites there was considerable variation between sites (Table 1), but across all five non-SPA sites 44% of people were walking their dog.

Table 19: Totals (%by site) of visitors within different user groups on each site

	Exercise	*Taking children out*	*Walking*	*Dog walking*	*Cycling*	*Jogging*	*Other*
SPA sites							
Bourley Common	3 (2)	6 (5)	4 (3)	100 (83)	0 (0)	7 (6)	1 (1)
Crowthorn Wood	1 (1)	5 (7)	5 (7)	53 (74)	5 (7)	2 (3)	1 (1)
Horsell Common	3 (2)	19 (13)	17 (11)	107 (71)	3 (2)	0 (0)	2 (1)
Lightwater Country Park	7 (7)	21 (20)	12 (11)	64 (60)	1 (1)	1 (1)	0 (0)
Wildmoor Heath	1 (1)	4 (5)	1 (1)	71 (92)	0 (0)	0 (0)	0 (0)
Non SPA sites							
California Country Park	4 (2)	90 (46)	30 (15)	43 (22)	4 (2)	0 (0)	25 (13)
Fairmile Common	0 (0)	4 (8)	5 (10)	32 (64)	7 (14)	0 (0)	2 (4)
Fleet Pond	2 (1)	52 (25)	66 (32)	65 (32)	5 (2)	2 (1)	14 (7)
Shepherds Meadow	3 (4)	0 (0)	6 (9)	58 (83)	1 (1)	0 (0)	2 (3)
Stoke Park	4 (6)	13 (19)	12 (18)	36 (54)	0 (0)	0 (0)	2 (3)
Total (SPA)	15 (3)	55 (10)	39 (7)	395 (75)	9 (2)	10 (2)	4 (1)
Total (non SPA)	13 (2)	159 (30)	119 (23)	234 (44)	17 (3)	2 (0)	45 (9)

People who visited SPA sites tended to visit more regularly ($\chi^2_3 = 24.3$, $p < 0.01$). Of the interviewees on SPA sites, 42% of interviewees visited daily compared to 32% of interviewees to non SPA sites. Taking just those people walking dogs, there was no difference in the frequency for visitors visiting the SPA compared to non SPA sites

($\chi^2_3 = 5.9$, $p = 0.1$). This would suggest that dog walkers always visit regularly, regardless of whether they visit the SPA or not. However, non-dog walkers visit the SPA sites more regularly than they do non SPA sites.

Proportionately more visitors to the SPA visited for longer (for all four time categories, $\chi^2_3 = 6.9$, $p = 0.08$). This difference was also significant for dog walkers only (for all four time categories, $\chi^2_3 = 12.3$, $p < 0.01$). There was no significant difference, for either dog walkers or non-dog walkers in the distance travelled to reach the sites.

Visitors to the SPA scored the following features significantly (Mann-Whitney U test, $p < 0.01$) higher than those visitors to non-SPA sites: convenient car access; provision of car parking; a mixture of broadleaved and coniferous woodland. By contrast, visitors to non SPA sites scored the following features significantly higher than visitors to the SPA: easy walking distance from home; presence of surfaced paths; way-marked routes; a range of different length routes; and presence of viewpoints. These data would suggest that visitors to the SPA rate convenient access particularly highly and that visitors to non SPA sites prefer less 'wild' sites, with a stronger preference for things like surfaced paths and way-marked routes.

For the dog walkers interviewed at both types of site, being able to let one's dog off the lead, not having to clear up after one's dog, and the absence of livestock from a site were all rated higher by visitors to the SPA sites (Mann-Whitney U test, $p < 0.01$ for all). Proportionately more people on SPA sites were reluctant or unwilling to keep their dog on a lead if requested ($\chi^2_3 = 8.8$, $p = 0.03$). There was no difference in the proportion of people who were willing / unwilling etc. to clean up after their dogs ($\chi^2_3 = 5.7$, $p = 0.12$).

With the photographs representing 'ideal' sites, there were differences in the responses of visitors to the SPA and to non-SPA sites. These differences tended to be that visitors to the SPA were selecting the more natural habitats, with visitors to non-SPA sites selecting more 'urban' environments. The following differences between the two groups were found:

ABC: Types of path

Proportionately more visitors to the SPA chose Photograph B, the path with a soft sand substrate while more visitors to non-SPA sites chose Photograph A, the grassy path. This difference was apparent for all visitors ($\chi^2_2 = 13.8$, $p = 0.001$) and for dog walkers only ($\chi^2_2 = 13.6$, $p = 0.001$).

GHI: slopes

Taking all visitors, there was no significant difference in the proportions choosing each photograph between the two types of site ($\chi^2_2 = 5.07$, $p = 0.08$). However, taking just dog walkers, proportionately more visitors to the SPA chose photograph H which shows the undulating topography, while more visitors to non-SPA sites chose Photograph I, the flat grassy area ($\chi^2_2 = 8.37$, $p = 0.02$).

MNO: feel of the site

With all visitors, proportionately more visitors to the SPA chose Photograph N, showing a semi-wooded landscape, while more visitors to non-SPA sites chose Photograph M, an urban park ($\chi^2_2 = 8.24$, $P = 0.02$). Taking only those interviewees that were walking their dogs, there was there was no significant difference in the proportions choosing each photograph between the two types of site ($\chi^2_2 = 3.73$, $p = 0.16$).

PQR: water bodies

With all visitors, proportionately more visitors to the SPA chose Photograph R, the shallow pool, while more visitors to non-SPA sites chose Photograph P, the large lake ($\chi^2_2 = 24.25$, $p < 0.01$). Dog walkers made similar choices, with a significantly higher proportion of dog walkers to the Spa choosing photograph I ($\chi^2_2 = 9.59$, $p = 0.008$).

Discussion

The questionnaire data reveals the profile of typical visitors to green space and to the SPA. These people live locally, make regular visits to the sites (79% at least once a week), the visits are brief (75% of all people for less than one hour), and they visit for a range of reasons with dog walking the most common. These are similar patterns to those revealed in more detailed access studies on the SPA (Liley *et al.* in press), for example the 57% of people walking dogs in this study is very similar to the 59% in the data presented in Liley *et al.* (in press).

The questionnaire was designed to show why people choose to visit particular sites, and how an ideal site might look. These are two separate questions, as it is possible that people currently select sites from a limited choice, and if new sites were to be created, then their choice of site could change.

People were asked to score different criteria as to why they selected sites. Few people appear to walk to sites and therefore the need for sites to be within easy walking distance was consistently given a low score. Dog walkers scored criteria differently from other users. Dog walkers tended to make particularly brief visits and to visit more frequently, they therefore gave high scores for ease of access (parking provision and short, quick journey time from home). The ability to let the dog off lead was clearly also an important factor in dog walkers' choice of site. Over half the respondents said they were willing to keep their dogs on a lead when requested; in fact, many people said that they do so already. However, if there was a requirement to keep dogs on leads over an entire site, many people stated that this would defeat the object of their visiting a site and would go elsewhere instead. Also, in connection with this issue, visitors often remarked on the need for adequate signs informing them where and when it was necessary to put dogs on leads. Other users scored the presence of water, presence of view points and presence of way-marked routes within a site more highly than dog walkers. The presence of way-marked routes was not rated highly by dog walkers; people often commented that they were not necessary as, being regular visitors, they knew their way around.

Photographs were used to identify the kind of sites people would prefer to visit. There was little difference between user groups as to which photographs were selected. Ideal sites, as described by the photographs, would include gravelled paths, contain deciduous woodland, have gently undulating topography and would contain open water. More non dog walkers identified their ideal as having water present – such as a lake or pool. The attitude of dog walkers to the presence of water varied greatly. Many people mentioned that the dogs themselves would choose sites with water where they could splash about and swim, but that the owners would happily avoid such features because they were the ones who had to clean the dogs afterwards! Preference for presence and type of water body also depended on the nature of the dog and its response to wildlife. For instance, some dog walkers would

like the presence of water, but opted for the smaller pond (Photograph R) as there were no ducks or swans for their dogs to chase.

There are some apparent conflicts, which are clarified by some of the responses given by the interviewees. For example, personal safety was given a high score, yet also a photograph of narrow path through trees was selected by many people as showing an ideal site they would visit. However, when prompted, some people suggested that the path through the trees looked "more interesting" or "more intriguing". The adjacent photograph, photo L also shows a narrow path, surrounded by thick cover. The difference between K and L is that K has branches meeting over the top of the path, whereas L is through gorse, and the vegetation is low. It would seem, therefore, in selecting photographs, people were responding to the attractiveness and level of perceived 'interest' in a given route. This is perhaps matched by consistent selection of the photograph showing undulating topography (photo H). The adjacent photograph (photo I), that is used to represent flat terrain, is actually a very similar environment. Both photographs show rough grassland on historic ancient monuments (earthworks). Photograph H clearly has undulating topography and lots of visual interest, yet the path itself is actually flat. It is perhaps visual interest and variety within a small area that is attractive to people, rather than specific features. Given that most of the people interviewed visit sites very regularly, it may be that variety is important in maintaining their interest and therefore their likelihood to return to sites. In fact, some respondents found it difficult to select individual photographs for this reason. They would visit all the sites depicted, perhaps at different times and for different reasons, and mentioned that the reason they visited a particular site was that all the landscape features shown in the photographs, e.g. woodland, open grass, heathland, were present somewhere along their route. The importance of variety within sites has been recognised in studies of urban green space (see Burgess *et al.* 1988, Dunnett *et al.* 1992).

There were some clear, significant differences, between visitors to the SPA when compared to visitors to non SPA sites. This suggests that alternative sites, designed to attract people away from the SPA, should differ from the sites already in existence. Dog walkers select SPA sites for the ability to let their dog off a lead, no requirement to clear up after their dog and they select sites with no livestock present. The fact that they also spend longer on SPA sites might suggest they take longer walks, possibly therefore with dogs that require more exercise. There were some suggestions that visitors to the SPA preferred 'wilder' sites, for example those with sandy paths.

The results of this study suggest the characteristics that would be necessary on alternative sites in order to attract people away from the SPA. The results also suggest characteristics that would deter visitors from visiting the SPA. Using certain features to attract particular users to given sites and at the same time, potentially try to reduce the attractiveness of other sites has been identified as an approach in other countries (see Hunter 2001). In summary we would suggest the following:

- Alternative sites do not need to be within walking distance of new housing
- Sites should have convenient vehicle access and good parking, and be located a short distance, and short journey time, from centres of population
- Personal safety on sites is important, especially for women, so new sites should be designed to account for this. Various guidelines for safe designs are widely available (for example see RTPI 1995, Dunnett *et al.* 2002) and should therefore be applied.
- The actual habitat and landscape would seem to be of less importance, especially for dog walkers. However, ideal sites would contain semi-natural habitats, with woodland preferred, and the results appear to suggest ideal sites would have water (such as a lake or pool) and have varying topography.
- Alternative sites should not be modelled on existing green space, such as urban parks, but should be 'wilder' and contain a variety of habitats and interest.
- Dog walkers could be deterred from visiting sites where they were not able to let their dog off the lead at all. The presence of livestock on SPA sites might be a useful deterrent. The removal of car-parking provision would also be a means to reduce visitor pressure at given locations.
- Alternative sites should be large enough to accommodate the length of visit typical of visitors to the SPA, especially in respect of accommodating a long dog walk.

A further method to ensure that alternative sites were meeting the needs and requirements of visitors would be to establish a consultative committee or group to advise on the design and development of these sites. If these groups were to include a cross section of potential visitors they may be able to assist in developing a design that is appropriate to the community.

Further work

An alternative way to investigate the features of particular sites would be to look at total visitor numbers (which could be expressed as visitors per day) to a wide range of sites. By controlling for the numbers of people living within driving distance of the sites, it would be possible in the analysis to identify which sites receive more visitors than would be expected. Were the sample size large enough, it would then be possible to explore what factors of these sites account for these higher numbers of visitors. Sites could be categorised according to habitat, presence of water, size of site etc. This approach could potentially be achieved with simple spot counts conducted for relatively short time periods, and would allow a quantitative comparison with the results presented here.

If alternative sites were to be created within this area, some degree of access monitoring would be recommended. Whether conducted using automatic means (such as infra-red beams or treadle counters) or actual counts, the monitoring could provide a means of checking that sites were getting visited and would also allow some experimental manipulation. Features such as path type, vegetation cover and

topography could be manipulated to further quantify their importance in attracting people to sites.

The importance of site size merits further exploration. The size of site necessary to accommodate different user activities would be difficult to be determine, and a number of different approaches would probably be best combined to suggest suitable figures. Theoretical approaches using existing data on visitor pressure and knowledge of the length of routes typically taken by visitors (see Liley *et al.* 2006, Clarke *et al.* 2005) could give some indications. These could be further supplemented with actual data from existing sites and potentially, further questionnaire studies.

Two features of sites could also be explored in further work. Site safety for visitors and variety within sites appear to be important elements of site quality and these issues almost warrant further work in their own right.

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Appendix 1

If refusal tick here and go to question 15 □

1. Why are you visiting this site today ? (*record any quotes and interviewer to categorise users according to following groups (multiple ticks are fine).*

……

Exercise / keep fit		Dog walking	
Taking children out		Cycling	
Horse-riding		Jogging	
Walking		Other	

2. How frequently do you visit this site ?

At least once a day	
At least once per week	
At least once per month	
Less than monthly	
Don't know / first visit to site	

3. Why you choose this site.
We would like to know which of the following are important reasons in attracting you to visit this site today. Can you please indicate the importance of each of the following criteria by rating them on a score of 1 – 5 with 5 being very important and 0 being irrelevant.

ID which criteria do not apply to a given site and do not ask where not applicable

	Does not apply to this site	*SCORE*
Transport Issues		
Convenient car access from home		
Easy walking distance from home		
Quick journey time from home		
Provision of parking		
Site Quality		
You feel safe visiting the site		
Surfaced paths		
Way-marked routes		
Range of different length routes possible		
Mixture of broadleaf and coniferous woodland		
Presence of water (such as lakes or ponds)		
Presence of viewpoints		
Absence of slopes or hills on routes		
Presence of slopes or hills on routes		
If dogs are present		
Ability to let dog off lead		
No requirement to clear-up after your dog		
No livestock or grazing animals		

4. How long was your visit today ?

Less 20 minutes	
20 minutes – 40 minutes	
40 - 60 minutes	
More than 1 hour	

5.
I would now just like to show you some photographs. Which of the following best matches the kind of site that you would most like to visit (assuming car-parking, distance from home etc was the same for each site). Please give your reason for the choice.

						Reasons – then prompt if necessary
A		B		C		prompt: anything about the types of path ?
D		E		F		prompt: anything about the tree cover ?
G		H		I		prompt: anything to do with the slopes ?
J		K		L		prompt: anything about the path widths ?
M		N		O		prompt: anything about the feel of the sites ?
P		Q		R		prompt: anything about the water ?

For dog walkers only:

6. How willing would you be to keep your dog on the lead during the spring and summer to protect ground nesting birds?

Very willing	
Somewhat willing	
Reluctant	
Unwilling	

7. How willing would you be to clear up after you dog had fowled one of these sites?

Very willing	
Somewhat willing	
Reluctant	
Unwilling	

8. What is your home postcode *(ensure full postcode given):*

9. Which of the following best describes the work you do ?
If asked why, prompt:
(We are interested in why people visit at different times of day and why they prefer certain kinds of sites):

Employed/self-employed full-time	
Employed/self-employed part-time	
Looking after family/home	
Retired	
Student	
Other	

10. Which of the following best describes where you live ?
If asked why, prompt:
(We are interested in whether people who live in certain kinds of housing are more or less likely to visit these sites):

	With access to private garden	Without access to private garden
Detached house		
Semi-detached house		
Terraced house		
Bungalow		
Flat		
Maisonette		
Other		

11. Are you a member of any environmental group or organisation

Yes		No	

12. Could I just ask which of the following age groups you fall into ?

16-24	25-35	35-44	45-54	55-59	60-64	65-74	75+

13. Can I just check, how many people and dogs there are in your group ?

	1	2	3	4	5	6	7	8+
Adults								
Children (<16 yrs)								
Dogs								

That is the end. Thank you very much for your time.

Appendix 2

Summary of background data

Reason for visiting site

A variety of answers were given to why people were visiting the site (Table 20), but dog walking was clearly the most common reason, with 57% of all people visiting to walk their dogs.

Table 20: Reasons given for visiting the sites. A proportion of people gave more than one reason for their visit, and the totals reflect this (474 people gave just one reason, 54 people gave two reasons and 4 people gave three reasons, therefore the total number of reasons given is 594, from 532 interviews)

	Count (no. interviews)	Total Adults	Total children	Total people
Exercise	21	27	1	28
Taking children out	55	105	109	214
Horse riding				0
Walking	52	112	46	158
Dog walking	426	562	67	629
Cycling	13	15	11	26
Jogging	9	12	0	12
Other	18	31	18	49
TOTAL	594	864	247	1116

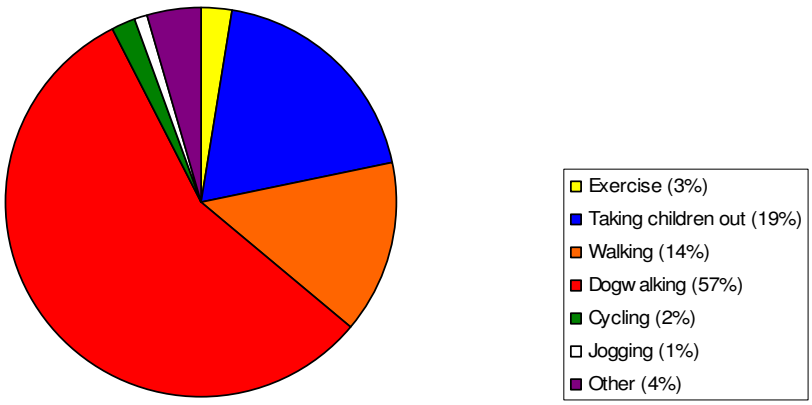

Figure 5: Proportions of people according to activity type. The percentages are calculated from the total number of people interviewed.

Frequency of visit

A high proportion of the people interviewed visited the site regularly. Of the 532 interviews, 440 (79%) were with people who visited once a week or more regularly. A high proportion (38% of interviews, involving 28% of people) visited the site at least once per day (Table 21).

Table 21: Frequency of people's visit

	Count (no of interviews)	Total Adults	Total children	Total people
At least once a day	200	248	19	267
At least once per week	220	305	61	366
At least once per month	60	107	68	175
Don't know / first visit to site	12	24	16	40
Less than monthly	40	73	28	101
TOTAL	532	757	192	949

Dog walkers were the user group visiting most frequently (40% of dog walkers visited at least once a day). Most dog walkers (45% of dog walkers) visited at least once per week. Most walkers (29% of walkers) visited less than monthly, while with those visiting for exercise or to jog, most (54% & 67% respectively) visited at least once per week (Table 22).

Table 22: Frequency of visit according to user group. As people were able to give up to three reasons for their visit (i.e. some people would be visiting to both walk their dog and take the children out etc), totals do not match the number of interviews. Numbers refer to total number of people (and percentage of user group).

	At least once a day	At least once per week	At least once per month	Less than monthly	Don't know / first visit to site	Total
Exercise	6 (21)	15 (54)	6 (21)	1 (4)	0 (0)	28 (100)
Taking children out	8 (4)	75 (35)	76 (36)	36 (17)	19 (9)	214 (100)
Walking	16 (10)	38 (24)	42 (27)	46 (29)	16 (10)	158 (100)
Dog walking	249 (40)	284 (45)	65 (10)	25 (4)	6 (1)	629 (100)
Cycling	4 (15)	4 (15)	15 (58)	0 (0)	3 (12)	26 (100)
Jogging	2 (17)	8 (67)	0 (0)	2 (17)	0 (0)	12 (100)
Other	0 (0)	16 (33)	20 (41)	13 (27)	0 (0)	49 (100)
Total	285	440	224	123	44	1116

Length of visit

Only a small proportion (5%) of all people undertook visits of less than 20 minutes (Table 23). A total of 98 people (18% of people actually interviewed) said that their visit was for more than one hour. Accounting for group size, one quarter (25% of all people) visited for more than one hour, suggesting that people that visited for longer periods were within larger groups.

Table 23: Duration of visit on the day interviewed.

	Count (no of interviews)	Total Adults	Total children	Total people	*% of total people*
less than 20 minutes	31	36	8	44	5
20 - 40 minutes	156	211	26	237	25
40 minutes - 60 minutes	247	348	86	434	46
more than 1 hour	98	162	72	234	25
TOTAL	532	757	192	949	100

Distances travelled to reach sites (from postcode)

A total of 470 people gave full, valid postcodes, which were used to calculate the distance people travelled to reach the sites. For all people interviewed, the average distance travelled was 3.8 km (± 0.3 km). There was a significant difference between user groups, with those people taking children out travelling the shortest distance to reach sites and dog walkers and 'other' travelling the furthest (Table 24).

Table 24 Distance travelled to reach sites. The difference between groups is significant (taking just those who gave a single reason for visiting, Kruskall Wallis test, H = 13.97, 6df, p = 0.03; note the small sample sizes for some groups).

	Purpose for visiting sites							
	exercise	taking children out	walking	dog walking	cycling	jogging	other	People visiting for more than one purpose
mean distance travelled	3.0	3.1	3.3	4.0	3.7	2.9	6.6	3.2
median	2.5	1.9	2.6	2.4	3.0	2.1	5.0	2.5
max	6.8	26.8	8.4	100.3	6.5	6.2	16.2	12.5
min	0.3	0.2	0.3	0.1	0.4	0.5	1.9	0.3
count	10	40	38	407	7	3	5	60

Type of employment

The people interviewed represented a range of different employment types. Just under half of all people interviewed were in full time employment (Table 25).

Table 25: Employment of people interviewed

employment	*count of ads*	*% of ads*	*sum of ads*	*sum of kids*
Full-time	263	49	384	104
Part-time	113	21	159	37
Looking after family / home	38	7	54	26
Retired	102	19	137	8
Student	6	1	3	9
Other	9	2	18	8
declined to answer	1	0	2	0
Totals	532	100	757	192

Accommodation and access to garden

Half of all people interviewed lived in detached houses with gardens and only a very small proportion of those people interviewed lived in accommodation without gardens (Table 26). Of the people interviewed, similar proportions living in detached, semi-detached, terraced houses and bungalows all had similar numbers of dogs per household. A total of 3% of all visitors came from flats, and some of the visitors living in flats also kept dogs.

Table 26: Accommodation of the people interviewed

House type	Count (no. interviews)	%	No with at least one dog	Mean no. of dogs per house
With garden				
Detached	266	50	222	1.19
Semi-detached	159	30	128	1.19
Terraced	56	11	41	1.16
Bungalow	25	5	23	1.24
Flat	5	1	4	0.80
Maisonette	0	0	2	0.67
Other	3	1	8	0.61
Total	514	97	428	
Without garden				
Detached	0	0	0	
Semi-detached	1	0	1	2
Terraced	1	0	1	1
Bungalow	1	0	1	1
Flat	11	2	3	0.27
Maisonette	2	0	0	0
Other	0	0	0	
Total	16	3	6	
Declined to answer	2	0		
TOTAL (all)	532	100		

Membership of environmental groups

One person declined to answer the question about membership of any environmental groups. A total of 388 of the people interviewed (73% of interviews) were not members of any environmental group.

Age

The people interviewed were of a range of ages, although most interviews were conducted with people in their late 30s, 40s and 50s (Table 27).

Table 27: Age range of people interviewed

Age of person interviewed	No. of interviews	% of interviews	Total adults in group	No. of children in group
0 < 16	4	1	1	6
1 16 - 24	12	2	17	2
2 25 - 35	59	11	89	38
3 35 - 44	129	24	204	118
4 45 - 54	141	27	192	16
5 55 - 59	66	12	91	5
6 60 - 64	40	8	60	3
7 65 - 74	67	13	85	4
8 75 +	13	2	16	0
declined to give age	1	0	2	0
Total	532	100	757	192

Group size

Group size ranged from 1 to 18 people per group. The majority of interviews (85% of interviews) were conducted with people in groups of 2 or less people (Table 28).

Table 28: Size of groups with the people interviewed (only one person per group was interviewed)

Group size (no people)	*count*	*% interviews*	*total adults*	*total kids*	*total people*
1	314	59	312	2	314
2	136	26	248	24	272
3	37	7	66	45	111
4	25	5	60	40	100
5	7	1	20	15	35
6	4	1	9	15	24
8	3	1	9	15	24
9	2	0	7	11	18
10	2	0	9	11	20
13	1	0	5	8	13
18	1	0	12	6	18
	532	100	757	192	949

Gender

More women than men were interviewed (284 women compared to 248 men), but the difference is not significant (chi-square with Yates correction = 0.13, $p>0.05$).