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Summary

This visitor report has been commissioned by the City of London Corporation as Conservators of Epping Forest, Epping Forest District Council and four other local authorities, to better understand the visitor use of Epping Forest Special Area of Conservation (SAC). The survey results will underpin the preparation of a joint strategy that will address avoidance and mitigation measures relating to increased recreation from local plan-led development.

Survey work (during October and November 2017) involved counts of people passing ('tallies') and interviews with a random selection of people. The surveys took place at 15 locations, carefully selected to provide a good geographical spread across Epping Forest and to include a range of different types of access points, from large 'honey-pot' car-parks within the Forest to paths around the edge of the Forest with little opportunity to park. Survey work was similar across all survey locations, allowing direct comparison.

Key findings from the survey included:

- 1,065 groups of people were counted entering at the surveyed locations, and the survey point with the most people entering or passing was, by some considerable margin, Connaught Water.
- Average group size across all locations from the tallies was 2.07 people (including 0.4 children) and 0.5 dogs per group.
- 462 interviews were conducted, with Connaught Water, Chingford Plain and Pillow Mounds car-parks the locations with the most interviews conducted.
- Virtually all (99% of interviewees) had come for a short visit directly from home (i.e. as opposed to being on holiday or staying away from home in the area).
- Dog walking was the commonest activity (49% of interviewees), with other activities including walking (22%), outing with the family (9%), cycling/mountain biking (8%) and jogging/running/power walking (5%).
- Dog walking was the most frequent activity among interviewees at all but two survey points and dog walkers accounted for over 80% of interviewees at Lakeside and St. Peters.
- Walking was the main activity for a relatively high proportion of interviewees at Long Running Car-Park, Strawberry Hill Car-Park and Connaught Water.
- Cyclists were particularly notable at Pillow Mounds Car-Park (where they accounted for 36% of interviewees).
- A high proportion of interviewees were frequent visitors to Epping Forest, with 24% visiting daily and 32% visiting 1-3 times per week.
- Visits were typically relatively short, either 30 minutes to an hour (33% of interviewees) or 1-2 hours (43%).
- The morning was the main time period that people indicated they tended to visit, with 82% of interviewees indicating they visited either late morning or around midday.
- The majority (86%) of interviewees visited equally all year round and did not tend to visit more at a particular time of year.

- Many interviewees had been visiting Epping Forest for many years, with 64% of interviewees indicating they had been visiting for more than 10 years.
- Locations where a relatively high proportion of interviewees were on their first visit included Barn Hoppitt and Buckhurst Hill.
- More than three-quarters (77%) of those interviewed had arrived by car. A further 14% had arrived on foot and 5% by bicycle. Car was the main mode of transport at all survey locations apart from St. Peters.
- The two most commonly cited reasons underpinning site choice (i.e. why interviewees had chosen to visit the specific location where interviewed) were scenery/variety of views and closeness to home.
- Over half of those interviewed (52% interviewees) only visited Epping Forest or visited Epping Forest at least 75% of the time for their chosen activity; indicating a strong affinity to the site for many.
- Alternative destinations (i.e. if the interviewee couldn't have visited the location
 where interviewed) were wide ranging, encompassing a mix of locations and a
 number of other European sites, even as far afield as Cannock Chase and Thetford
 Forest. Besides other locations within Epping Forest (cited by 16% of
 interviewees), the most commonly named alternatives were the Lee Valley,
 Wansted, Chingford, the Roding Valley and Walthamstow Marshes/wetlands.
- Around two-thirds (68%) of interviewees indicated they would use a new area of expansive countryside for people to visit near to Epping Forest, were such a site to be created. Key features for such a location would need to be refreshments, free parking, better path surfacing and toilets.
- Around half (47%) of interviewees had visited one of the visitor centres at Epping Forest over the past year, dog walkers were notable in that relatively few (37%) had visited a centre in the past year.
- Median route length for interviewees (i.e. how far they typically walked, cycled or rode) was 3,917m (3,417m if cut to the SAC boundary only, i.e. within the SAC).
 Route length varied between activities and for dog walkers (the most common activity) the median route length (within the SAC) was 2.2km.
- A range of factors influenced the choice of route, including previous experience/knowledge of the site (32% interviewees), activity undertaken (10%), time available (9%), the weather (9%) and muddy paths/tracks (8%).
- Interviewees' home postcodes were largely in a broad wedge to the north-east of London, between the A12 and the A10.
- Interviewees had come from furthest afield to visit Pillow Mounds (median distance from home postcode to survey point = 6.7km) and Claypit Hill (median = 5.2km). Among the different main activity groups cyclists tended to come from further afield (median 5.2km). Across all interviewees the median was 3.1km and 75% of interviews had come from within 6.2km.
- The latter distance, 6.2km, when drawn around the periphery of the SAC clips the southern edge of Harlow and extends to the south as far as West Ham.

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1. Introduction

1.1 This visitor report has been commissioned by the City of London Corporation as Conservators of Epping Forest and five local authorities¹ in order to better understand the visitor use of Epping Forest Special Area of Conservation (SAC). The survey results will underpin the preparation of a joint strategy that will address avoidance and mitigation measures from local plan-led development.

Epping Forest

- 1.2 The former royal forest of Epping Forest is London's largest open space, covering 2400 hectares, framed by Walthamstow to the south, the Lee Valley to the west, the M11 to the east and the M25 to the north. The Forest is run by a charity owned and managed by the City of London Corporation (CoL), with a team of just under 80 (full-time equivalent) staff, including Forest Keepers, grounds and other officers led by a Superintendent.
- 1.3 Epping Forest is wood-pasture with habitats of high nature conservation value including ancient semi-natural woodland, old grassland plains, wet and dry heathland and scattered wetland. The woodland represents one of the largest continuous semi-natural blocks in the country, characterised by groves of overmature pollards. The plains contain a variety of unimproved acid grasslands uncommon elsewhere in Essex and the London area. The Forest supports a nationally outstanding assemblage of invertebrates, major amphibian interest and an exceptional breeding bird community.
- 1.4 The Forest lies on a ridge of London clay overlain in places by Claygate Beds, and in the highest areas by Bagshot Sand and Pebble Gravel. The varied geology gives rise to a mosaic of soil types from neutral soils to acidic loams and from impervious clays to well-drained gravels. To a large extent the soil patterns have dictated the pattern of vegetation.
- 1.5 Historically Epping Forest was managed as wood-pasture through coppicing and latterly pollarding, which declined during the 19th century and eventually ceased in 1878 under the Epping Forest Act. Recently pollarding has been reinstated in some places along with extensive grazing.

Summary of ecological interest

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¹ East Hertfordshire District Council, Epping Forest District Council, Harlow District Council, Uttlesford District Council and the London Borough of Waltham Forest

- 1.6 Much of the woodland is dominated by veteran pollards of pedunculate oak, beech and hornbeam, with some of coppice origin indicating an even older management system. These exemplify the three main wood-pasture types found in Britain: oak-beech, oak-hornbeam and mixed oak. The understorey is often holly, which can form dense stands, and more rarely hazel or rowan. The ground flora is generally acid grassy heath. Dead and decaying wood in the old pollards, particularly those which are still standing, is valuable to many invertebrates and in particular to beetles.
- 1.7 Open grassland areas vary from acid grassland with relict heathland to more neutral grassland, with varying mixtures of fine grasses, sheep's sorrel, tormentil, rush and ling. In marshier areas purple moor-grass becomes dominant, with rushes and cross-leaved heath, and rarer species such as cotton-grass and sundew. The Forest supports an outstanding bryophyte flora numbering 177 species, and over 720 species of fungi. There are many bogs, pools and ponds in the Forest, some of high botanical and entomological interest. The botanical quality and size of many of the open grassy areas has declined owing to cessation of grazing and subsequent scrubbing up, though this has been partly reversed by recent management.
- 1.8 The invertebrate fauna of Epping Forest is of outstanding national significance, notably for communities associated with over-mature trees and dead wood. The subcortical and dead wood fauna, and that associated with sap runs and water filled rot holes, is exceptional including 66 Red Data Book and nationally notable species of beetle, fly and spider. Other well represented communities are those occurring in bracket fungi of old trees, and the inquiline fauna of ants' nests in old stumps and rotting logs.
- 1.9 Although the prime interest for invertebrates is associated with the trees, the fauna associated with waterbodies and wetland is also of considerable note.

 More than 65 nationally notable species of dragonfly, water-bug, beetle and fly associated with various wetland habitats have been found in the Forest. In total, over 360 Red Data Book and nationally notable invertebrate species have been recorded from Epping Forest.
- 1.10 The wetland habitats in the Forest support an outstanding assemblage of amphibians including smooth newt and great-crested newt, and the Forest supports four reptiles: adder, grass snake, slowworm and common lizard. The Forest contains at least 48 breeding bird species.

Status, conservation and setting

- 1.11 Epping Forest was included in the Nature Conservation Review (Ratcliffe 1997).

 Two thirds is designated, 1,728ha as SSSI and 1,605ha as SAC. The site hosts three Annex I habitats, together with the Stag Beetle, a species listed on Annex II.
- 1.12 The Forest is of great historical interest both for the history of its land use as a royal forest and wood pasture, and for specific historical features including two Scheduled Ancient Monuments: Ambresbury Banks and Loughton Camp.
- 1.13 The Forest is subject to the Epping Forest Act of 1878, which includes local byelaws under which Forest Keepers are entitled to act as 'attested constables' in prosecuting infringements.

Concerns relating to recreation

- 1.14 Epping Forest provides an attractive, extensive area of open semi-natural habitat and is the largest open space in London. As such it is a popular destination for recreation and provides an important function as a greenspace on the outskirts of London. There are 52 different car-parks and four visitor centres and estimates of visitor use indicate around 4.2 million visitors each year². Since Epping Forest was entrusted to the City of London, the provision of the space for public recreation and enjoyment has been a legal obligation and one of the key priorities for the Conservators. There is however a considerable challenge to balance the needs of the high (and growing) numbers of visitors with the natural aspect of the Forest and the nature conservation interest.
- 1.15 Growing numbers of visitors can result in conflict for space among users and demand for more facilities, such as parking, refreshments and toilets. There are also a number of potential ways recreation could have an impact on the nature conservation interest of the site. These include:
 - Eutrophication from dog fouling
 - Trampling/wear, leading to soil compaction, vegetation wear, erosion and damage to veteran tree roots
 - Increased fire risk (and potentially difficulties in access for emergency vehicles if gates etc. are blocked)
 - Difficulties in establishing the best grazing management due to interactions between visitors and livestock
 - Direct damage to veteran trees, for example from climbing on them
 - Harvesting, for example fungi, deadwood
 - Disturbance to invertebrates and other wildlife
 - Spread of disease
 - Spread of alien plants

² This figure is from the Management Plan consultation and is from 2014

- Staff time taken away from necessary management due to the need to deal with vandalism, breaches of byelaws etc.
- Direct damage and vandalism of infrastructure
- 1.16 SACs are within the top-tier of nature conservation sites within the UK. European legislation, which is transposed into the domestic Conservation of Habitats and Species Regulations 2017 (the Habitats Regulations), and also stipulated within the National Planning Policy Framework (NPPF), affords European sites the highest levels of protection in the hierarchy of sites designated to protect important features of the natural environment.
- 1.17 The impacts of recreation listed above may not necessarily all be relevant to the SAC interest, nonetheless they represent a complex mix of potential risks from recreation and they may interact/act synergistically. The impacts are linked to the scale of recreation use, and with more visitors, the issues are likely to be exacerbated.
- 1.18 The Conservators of Epping Forest currently undertake on-going assessments of access and options, including focussing on the popular areas to determine whether they can cope with current access levels. The Conservators manage 33km of surfaced trails to support all-year round use (thereby reducing pressure on other areas) and each year temporary signage is put in place where there are concerns. Despite these measures, there is growing concern about the challenges of coping with the high visitor numbers and the potential for damage to the SAC interest if access levels keep increasing³. Increased housing development around the SAC will result in more people living nearby and as such is likely to increase recreation use.
- 1.19 The legislation sets out that where a land use plan, either alone or in combination, is likely to have a significant effect on a European site, the planmaking authority must undertake a Habitats Regulations Assessment (HRA). This applies to Local Plans produced by local authorities. Such plans set out a broad quantum of housing growth. HRA work must therefore consider the overall impacts of such growth in-combination with neighbouring authorities and where there are any likely significant effects, adverse effects on the integrity of the site must be ruled out⁴.
- 1.20 As a result of concerns relating to recreation pressure on Epping Forest SAC, the neighbouring authorities of East Hertfordshire District Council, Epping Forest District Council, Harlow District Council and Uttlesford District Council have established a joint Memorandum of Understanding (MOU) relating to Epping

³ See the most recent <u>Management Plan consultation</u>.

⁴ Unless there are imperative reasons of overriding public interest

Forest. Other signatories on the MOU include the relevant County Councils, CoL and Natural England. The MOU represents a positive step by the authorities to cooperate. The four district local authorities make up a Housing Market Assessment (HMA) area and as such are working jointly to deliver housing targets. The aim of the Epping Forest MOU is to ensure the parties work together:

- to collect and analyse data and evidence related to the impacts of proposed development and growth under the Local Plans to provide sufficient and robust evidence on which to base a strategy for the protection of Epping Forest SAC; and
- to commit to prepare a joint strategy, based on relevant available data and evidence and to an agreed timetable.
- 1.21 The joint strategy will address both the requirement to avoid, or effectively mitigate, adverse impacts on the integrity of the SAC from Local Plan-led development and the requirement to prevent further deterioration of the SAC features. The MOU sets out the need for visitor survey work.

Aims

- 1.22 This survey has therefore been commissioned by CoL as The Conservators in partnership with other signatories of the MOU to provides the visitor data necessary to underpin the development of a strategy. Existing visitor survey information held by The Conservators relates to work undertaken between 2010 and 2014, when a considerable volume of visitor survey work was undertaken at Epping Forest, involving staff and volunteers with specialist consultancy support. The results are set out in a series of annual reports. The work was undertaken as part of the Branching Out project and funded through the Heritage Lottery Fund. These surveys provide information on overall visitor numbers and the spatial distribution of access within Epping Forest, however the work did not generate home postcodes from a robust sample of visitors (much of the data were collected through on-line surveys and direct observation).
- 1.23 This survey was therefore commissioned to supplement and update existing visitor data and:
 - Identify where visitors originate from in order to understand where new development may result in an increase in use to the SAC;
 - Understand the activities taking place in different parts of the SAC and the relative draw of the Forest for people undertaking particular activities.
 - Inform mitigation measures, i.e. to gather information on what measures might be effective in changing behaviour, influencing where people go and what they do.

2. Methods

Overview

2.1 Visitor survey work involved interviews and counts of people at a sample of locations across Epping Forest. The counts provide an overview of visitor flows at each point and the visitor interviews, involving a random sample of people, provide data on visitor origins, visitor profile and factors that influence behaviour.

Selection of survey points

- 2.2 Survey points were selected to provide a sample of locations that:
 - Represented a good geographic spread across Epping Forest SAC
 - Included foot-only access points and car-parks
 - Included locations used for a range of activities, such as dog walking, horse riding etc.
 - Included main honeypot and well promoted sites with a range of facilities such as cafes and visitor centres
 - Included less well known or publicised locations
- 2.3 The available budget provided the potential to survey 15 points. Our process to selecting survey points was as follows:
 - 1. Using GIS data from the CoL website, we mapped all car-parks;
 - 2. These data were checked against car-park descriptions provided by The Conservators that provided details of parking capacity, types of use etc.;
 - 3. We excluded any car-parks outside the SAC boundary and any that had anti-social behaviour issues (i.e. that might affect use and make conducting interviews challenging);
 - 4. High Beach, Connaught Water and Lakeside were included following discussion with The Conservators: these sites are well-promoted, large carparks that are well known, honeypot sites with potentially a unique draw;
 - 5. We ranked the remaining car-parks by car-park size, from high to low and selected ten car-parks based on this ranking, starting with the largest and selecting at regular intervals to ensure a good spread of car-park size;
 - 6. A further two access points that were foot only were then selected, one from each side (east and west) of the SAC. These were selected by identifying major paths that entered the site in areas where no car-parks were surveyed.

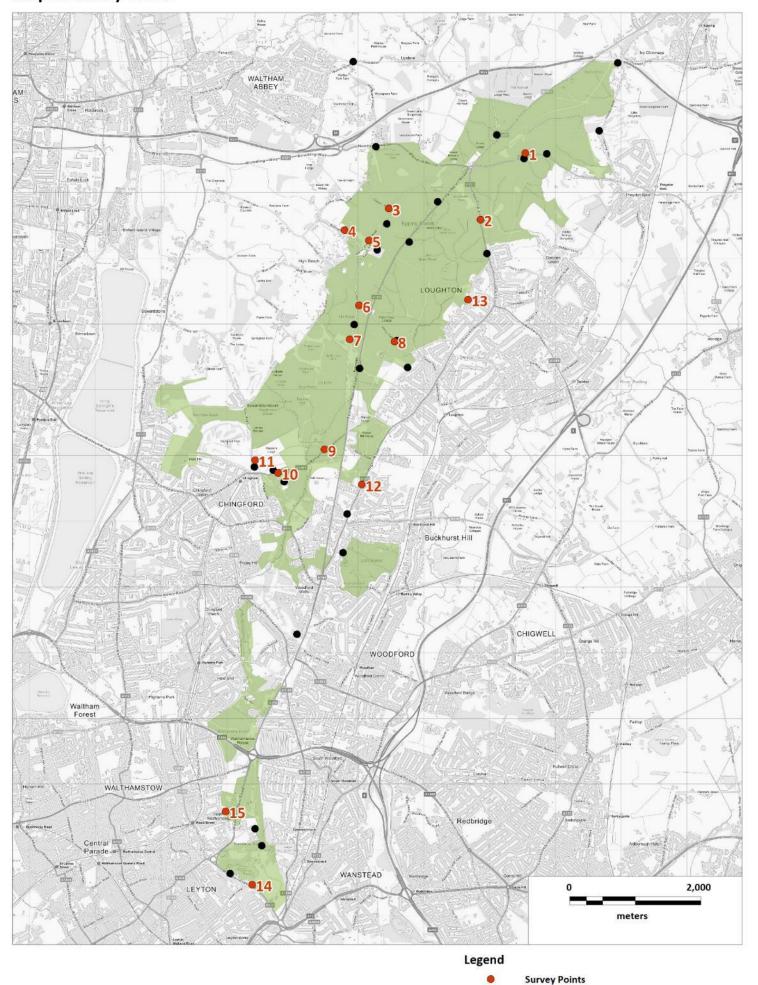
- 7. The locations were reviewed to ensure a good geographical spread, and all locations were visited to check that they were suitable locations to intercept visitors and conduct interviews.
- 2.4 The final choice of survey locations is summarised in Table 1 and Map 1. Table 1 describes each location and explains how the counts at each location were undertaken and where the surveyor stood. Map 1 also shows the other main parking locations around the SAC that are managed by The Conservators, and therefore provides an overview of how the selected locations represent the distribution as a whole.

Table 1: Summary of survey points

Map Ref	Location	Description of location	Tally details	Gated/not
1	Long Running Car Park	Survey point in car-park on north side of road	Count of people passing through/in/out of carpark	Gated
2	Broadstrood	Survey point in car-park	Count of people passing through/in/out of carpark	Gated
3	Claypit Hill Car Park	Very muddy car-park with some recent fly-tipping, open to road. If safe to cross road interviews also conducted on other side of road	Count of people passing through/in/out of carpark	
4	Wellington Hill Car Park	Small car-park next to Duke of Wellington pub	Count of people passing through/in/out of carpark	
5	Pillow Mounds Car Park	Long car-park with kiosk café. Visitor centre nearby. Interviews conducted on grass. Roam around perimeter of car-park (from kiosk to bin) in order to intercept people.	Tally people in/out of car-park between kiosk and bin	
6	Hill Wood Tea Hut CP	Car-park next to small café, fine to interview people around café perimeter	Count of people passing through/in/out of carpark	Gated
7	Fairmead Oak Car Park	At end of track running past Hill Wood Tea Hut car-park. Bumpy track.	Count of people passing through/in/out of carpark	Gated
8	Strawberry Hill Car Park	Car-park next to pond. Potential to interview people at car- park at other side of road too, if safe to cross.	Count of people passing through/in/out of car- park (Strawberry Hill CP only)	
9	Connaught Water Car Park	Car-park next to lake. Survey point at back of car-park, next to interpretation panel, between lake and car-park	Tally solely along path from back of car-park, i.e. people on path from car-park to Lake (i.e. past survey point)	

Map Ref	Location	Description of location	Tally details	Gated/not
10	Barn Hoppitt Car Park	Car-park opposite Butler's Retreat, large grassy extension area at back of car-park	Tally people passing through open grassy area (extension car-park) and main car-park. Include people who cross road to use café etc.	
11	Chingford Plain Car Park	Large car-park north of golf club. Survey point at back of car-park, next to finger post and interpretation board.	Tally solely along path from back of car-park, i.e. people passing interpretation panel and finger post	Gated
12	Buckhurst Hill Cricket Ground Car Park	Longish car-park between road and cricket pitch. Survey point at back of car-park where track heads off into the Forest	Tally people using path and car-park, that cross- boundary of car-park. No need to count people on the cricket pitch	Gated
13	Clay Ride, Baldwin's Hill	Pedestrian access point with path running down slope beside houses	Tally people entering/leaving down path	
14	Lakeside Car Park	Two connected car-parks, one next to Lakeside diner. Roam between back of café and gate with no barbeques or fires sign at back of other car-park.	Tally people passing to/from car-park onto open grass or towards lake	
15	St Peters	Tarmac path running from Community Centre towards other road, other paths heading off. Survey point at first junction, just down path from Community Centre	Tally all people along path (don't count people on pavement)	

Map 1: Survey Points



Other (unsurveyed) CoL car-parks

Epping Forest SAC

Contains Ordnance Survey Data. © Crown Copyright and Database Right 2016. SAC boundary file downloaded from the Natural England website. © Natural England.

Interviews

2.5 The questionnaire was conducted using tablet computers running SNAP survey software. Potential interviewees were selected at random, based on the next person seen by the surveyor (if not already conducting an interview). The interviewee's route within Epping Forest would be plotted in the field as lines on paper maps, cross referenced to the questionnaire data. Experience has shown us that paper maps work best for recording this information in the field (as opposed to use of touch screens for example).

Visitor counts ('tallies')

Alongside the interview data, surveyors maintained a tally of all people passing, recording groups, individuals and dogs. The tallies also logged the number of minors, horses and bicycles. The counts enable us to compare sites in terms of visitor volume/footfall, and to identify what proportion of visitors were interviewed at each location. The counts are approximate as they were maintained while interviews were being conducted and, at busy sites in particular, it is difficult to maintain an accurate count simultaneously while talking to someone. Nonetheless the totals broadly capture the level of busyness at each location and are comparable. Details of how the counts were undertaken are summarised in Table 1.

Survey timing and logistics

- 2.7 Each surveyor carried a name badge, wore a branded hi-vis jacket and provided information cards for when members of the public wished to see identification or requested further information. Where parking was available, interviewers also had a poster clearly displayed in their car-window to indicate that the visitor surveys were taking place. No unaccompanied minors were approached or interviewed.
- 2.8 Surveyors undertook counts and visitor interviews within standard two-hour periods with survey effort stratified across weekdays and weekends, and standardised across survey points. Sixteen hours of survey work were conducted at each location, covering different times of day and evenly split between weekends and weekdays. Survey times were: 0700-0900; 0930-1130; 1200-1400; 1430-1630, with each period undertaken during a weekend day and a weekday. Surveyors did however terminate the survey work earlier if it was particularly dark to ensure people were not approached in the dark to be interviewed. Survey effort was spread over the period 21st October to the end of November. Eight hours of survey work were conducted at each location in late October and a further eight hours during November. This break-down meant survey effort included the half-term period at the end of October and also the period outside half-term, during November.

- 2.9 Some car-parks are gated, with the gates opening from approximately 0830-1530. The gates in some car-parks allow cars to leave after 1530 but not to enter. Even when closed to vehicles all car-parks could have people passing through them on foot, bicycle or horse, and therefore the survey times were still relevant and consistently used. The keepers were aware of visitor surveys taking place and every effort was made to ensure gates were not locked early.
- 2.10 Every effort was made to avoid adverse weather conditions. A total of 9 sessions (out of 120) included continuous rain; these sessions were spread across survey points 1,4,6,12,13 and 15.

Analysis and data presentation

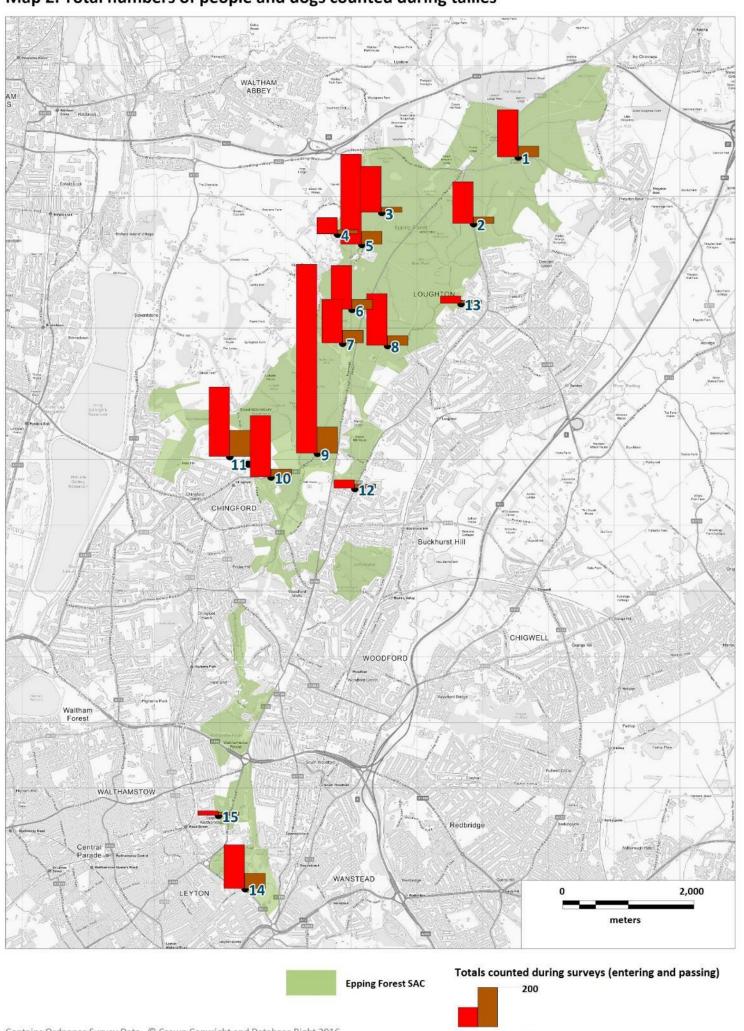
- 2.11 Route data were digitised within GIS (QGIS 2.18) as polylines, based on the mapped routes recorded on paper maps in the field. Routes were truncated to the SAC boundary to provide a route length within the SAC as well as the overall route length (total polyline length).
- 2.12 Home postcodes were geocoded using Royal Mail Postzon postcode data, from 2017. Only full, valid postcodes were used in analysis of visitor origins, part postcodes or named towns/villages were not included in any analysis due to the variation in precision.
- 2.13 Within analyses we refer to means where the data are normally distributed, and we use non-parametric tests and median values where the data are not normally distributed. In particular, data relating to routes on site or distances from home postcode to survey point tend to be positively skewed, with a small number of very high values. Box plots show median values (horizontal lines), interquartile range (boxes) and the upper and lower limits of the data (whiskers). Outliers are shown with an asterisk.

3. Results

Tally data: numbers of people counted during surveys

- 3.1 People were counted during the survey work, with a tally maintained while the surveyor was in place at each access point. Only a selection of people were interviewed at each location, and at very busy sites the proportion interviewed was relatively small (as only one person could be interviewed at a time). When very busy the counts are approximate, but do they provide an indication of the overall visitor flow at the surveyed access points.
- 3.2 Across all the surveys a total of 1,065 groups of people were recorded passing the surveyor and entering, for example leaving their car at the car-park to go for a walk. This total of 1,065 included 112 groups on bicycles and 7 groups on horseback. In addition, there were a further 743 groups (including 196 on bicycles and 24 on horseback) that passed the surveyor but were not entering or leaving the site, i.e. groups who accessed the SAC elsewhere and passed by.
- 3.3 By far the busiest location was Connaught Water Car-Park, survey point 9, where the combined total of 361 groups either entering or passing (i.e. using the circular path around the lake) was 79% higher than the next busiest survey point (which was location 5, Pillow Mounds).
- 3.4 Taking just those recorded entering, the 1,065 groups included 2,207 people, of which 489 were recorded as minors, giving an average group size of 2.07 people (with 0.5 minors per group). The 2,207 people were also accompanied by 552 dogs, giving an average of 0.5 dogs per group. These data are summarised in Map 2, which gives the overall totals of people and dogs entering the site or passing by during the surveys at each survey point. As each survey point was subject to similar survey effort the totals are directly comparable.

Map 2: Total numbers of people and dogs counted during tallies



People

Dogs

Interview data: overview

3.6 Interviews took an average of 10 minutes to complete (9 minutes median). In total 462 interviews were conducted, equivalent to 43% of the total number of groups counted entering the site during the survey work. A total of 149 people declined to be interviewed and 61 people were approached who had already been interviewed as part of the survey (and these people were not re-interviewed). The number of interviews at each survey point ranged from 10 to 53; Connaught Water, Chingford Plain and Pillow Mounds Car-parks were the locations where the most interviews were conducted (Table 1).

Table 2: Number (%) of interviews, refusals and people already interviewed, by survey point.

Survey Point ID	Survey Point Name	Number of interviews (%)	Number of refusals	Number already interviewed
1	Long Running Car Park	30 (6)	22 (15)	4 (7)
2	Broadstrood	40 (9)	3 (2)	4 (7)
3	Claypit Hill Car Park	34 (7)	15 (10)	8 (13)
4	Wellington Hill Car Park	22 (5)	3 (2)	1 (2)
5	Pillow Mounds Car Park	45 (10)	1 (1)	3 (5)
6	Hill Wood Tea Hut CP	34 (7)	11 (7)	7 (11)
7	Fairmead Oak Car Park	27 (6)	4 (3)	6 (10)
8	Strawberry Hill Car Park	41 (9)	8 (5)	3 (5)
9	Connaught Water Car Park	53 (11)	25 (17)	3 (5)
10	Barn Hoppitt Car Park	28 (6)	10 (7)	1 (2)
11	Chingford Plain Car Park	47 (10)	11 (7)	6 (10)
12	Buckhurst Hill Cricket Ground Car Park	11 (2)	6 (4)	4 (7)
13	Clay Ride, Baldwin's Hill	15 (3)	2 (1)	4 (7)
14	Lakeside Car Park	25 (5)	20 (13)	2 (3)
15	St Peters	10 (2)	8 (5)	5 (8)
Total		462 (100)	149 (100)	61 (100)

3.7 Group size (i.e. number of people in the party with the interviewee, including the interviewee) ranged from 1 to 18 (the latter being a rambling group). Median group size was 2 people (mean 2.06). Overall there were 462 males, 487 females and 147 minors (i.e. those thought by the surveyor to be under 18) in the interviewed groups. The number of dogs per group ranged from 0 to 5 with a median of 1 (average 0.93). A total of 365 dogs were observed associated with the interviewees, 230 (63%) of these were seen by the surveyor to be off-lead.

- 3.8 Virtually all (456 interviewees, 99%) were on a short visit and had come directly from home (based on the responses to Q1). No interviewees were on holiday and staying in holiday accommodation, but 5 interviewees (1%) were staying away from home, with family and friends. One interviewee was wild camping in the forest. Given the lack of holiday makers and very small proportion of interviewees staying away from home, for all analysis and data presentation within the report we do not filter the data to exclude any of the interviewees staying away from home.
- 3.9 For four interviews it was noted that the interviewee had some difficulty understanding the questions as English was not their first language. In all cases some, if not all, questions were answered.

Interview results: activities (Q2)

Interviewees' responses reflected a range of main activities (Q2) during their visit (Figure 1). Around half of all interviewees were visiting to walk their dog (49% of interviewees), and other common responses included walking (22%), outing with the family (9%), cycling/mountain biking (8%) and jogging/power walking/running (5%).

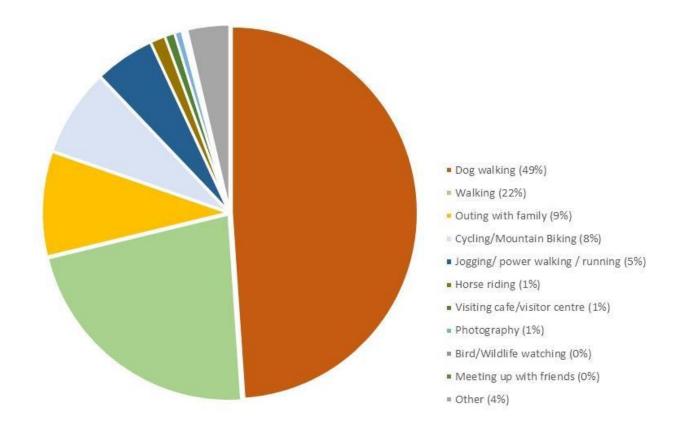


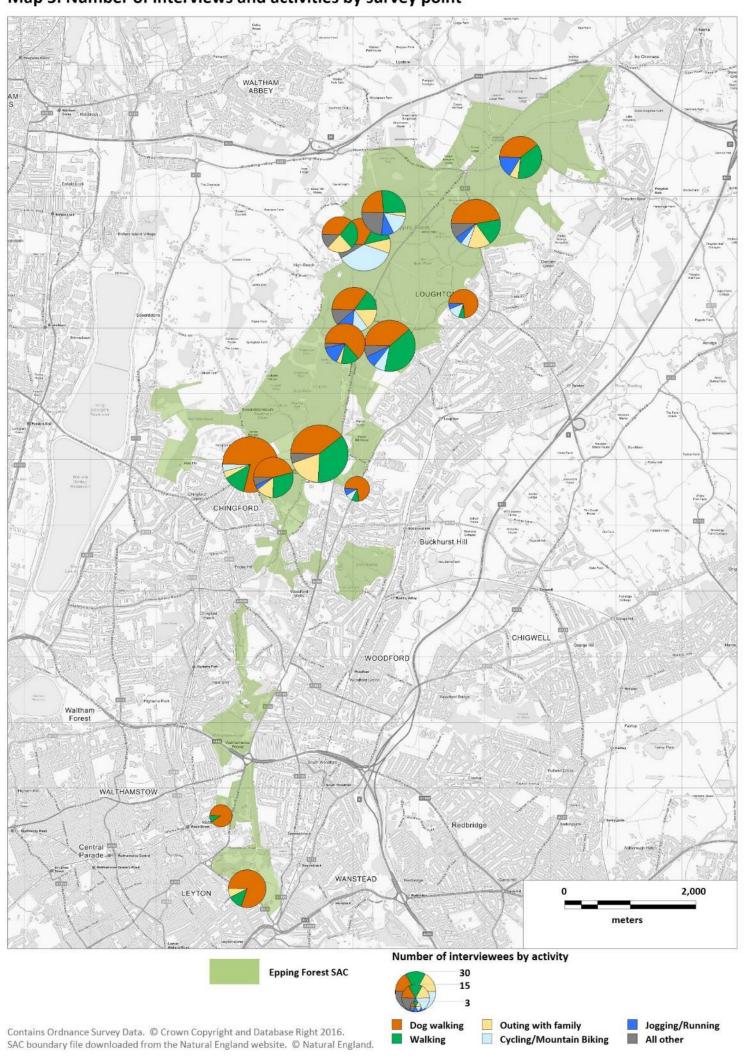
Figure 1: Main activities undertaken by interviewees (from Q2). Data from all interviews (n=462).

- 3.11 Responses are summarised by survey location in Table 3 and Map 3. In Map 3, the size of the circle indicates the number of interviews, while the coloured segments indicate the different activity types.
- 3.12 Some locations were notable for certain activities. Dog walkers were the most frequently interviewed activity type at all survey points apart from Claypit Hill Car-park (survey point 3) and Strawberry Hill Car-park (survey point 8). At Lakeside Car-park (survey point 14) and St. Peters (survey point 15) dog walkers accounted for 80% and 90% of all interviewees. Survey points with relatively high percentages of walkers interviewed included Long Running Car-Park (survey point 1; 37% walkers), Strawberry Hill Car-park (survey point 8, 39%) and Connaught Water Car-park (survey point 9, 36%). Cyclists were particularly notable at Pillow Mounds where they accounted for 36% of the people interviewed.
- 3.13 There was no significant effect of half-term in terms of the proportions of interviewees undertaking different activities. Across all survey points combined, the proportion of dog walkers, walkers, those undertaking outings with the family, cyclists, joggers and all other activities combined was similar for interviews conducted in October compared to November (X^2_5 =8.098, p=0.15).

Table 3: Numbers (%) of interviewees by main activity (Q2) and survey location. Percentages are calculated separately for each column.

A	Survey location											T . 1				
Activity	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Total
Dog walking	12 (40)	19 (48)	8 (24)	8 (36)	15 (33)	12 (35)	17 (63)	16 (39)	21 (40)	13 (46)	37 (79)	8 (73)	11 (73)	20 (80)	9 (90)	226 (49)
Walking	11 (37)	7 (18)	9 (26)	6 (27)	6 (13)	5 (15)	4 (15)	16 (39)	19 (36)	8 (29)	6 (13)	1 (9)	1 (7)	3 (12)	1 (10)	103 (22)
Outing with family	2 (7)	6 (15)	1 (3)	5 (23)	4 (9)	5 (15)	1 (4)	0 (0)	10 (19)	4 (14)	2 (4)	0 (0)	0 (0)	2 (8)	0 (0)	42 (9)
Cycling/Mountain Biking	0 (0)	2 (5)	5 (15)	0 (0)	16 (36)	4 (12)	0 (0)	3 (7)	0 (0)	0 (0)	2 (4)	1 (9)	2 (13)	0 (0)	0 (0)	35 (8)
Jogging/power walking	5 (17)	2 (5)	3 (9)	0 (0)	0 (0)	4 (12)	4 (15)	3 (7)	0 (0)	1 (4)	0 (0)	1 (9)	1 (7)	0 (0)	0 (0)	24 (5)
Horse riding	0 (0)	1 (3)	3 (9)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (1)
Visiting cafe/visitor centre	0 (0)	0 (0)	2 (6)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (1)
Photography	0 (0)	0 (0)	1 (3)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (1)
Bird/Wildlife watching	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
Meeting up with friends	0 (0)	0 (0)	0 (0)	1 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)
Other	0 (0)	3 (8)	2 (6)	2 (9)	2 (4)	4 (12)	0 (0)	2 (5)	2 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	17 (4)
Total	30 (100)	40 (100)	34 (100)	22 (100)	45 (100)	34 (100)	27 (100)	41 (100)	53 (100)	28 (100)	47 (100)	11 (100)	15 (100)	25 (100)	10 (100)	462 (100)

Map 3: Number of interviews and activities by survey point



Interview results: temporal visiting patters

Frequency of visit (Q3)

- 3.14 Around a third (32%) of interviewees had visited roughly 1-3 times per week over the past year and nearly a quarter (24%) of interviewees had visited daily, indicating a high proportion of interviewees were frequent visitors to Epping Forest (Table 3). Joggers were the most frequent visitors, with 97% of those interviewed having visited at least 3 times per week. Dog walkers were the activity type with the highest proportion of daily visitors (42%).
- 3.15 There were some slight differences between half term and outside half-term in terms of the frequency of visit (X^2_6 =23.877, p=0.001; those visiting for first time or not falling within other categories merged into single group to avoid small sample size). The data are summarised in Figure 2. It appears that outside half term there were a lower proportion of those who visited 'most days' and a higher proportion of those who visit 1-3 times a week. During half-term there were a higher proportion of interviewees who visited once a month.

Visit duration (Q4)

3.16 Most interviewees were visiting for relatively short visits, either 30 minutes to an hour (33% of interviewees) or 1-2 hours (43%) (Table 5). Few (5%) interviewees were visiting for less than 30 minutes. Few (5%) of the dog walkers interviewed were visiting for more than 2 hours, but for other activities interviewees were visiting longer, for example 60% of those interviewees that were mountain biking/cycling and 67% of horse riders were visiting for more than two hours.

Time of day (Q5)

3.17 Interviewees were asked about the time of day they tended to visit. Responses were categorised as early morning (before 7am), late morning (7am – 10am), around midday (10am-2pm), early afternoon (2-4pm), late afternoon (4-6pm) and evening (after 6pm). These categories were approximate, and interviewees could give more than one response. Interviewees tended to visit in the morning, either late morning (47% of all interviewees) or around midday (35% of all interviewees). Few visited in the early morning (3%). There were some differences between activities (Figure 3), with bird/wildlife watching5, horse riding and jogging showing a strong peak in the late morning and tailing off during the day. Dog walkers also tended to visit more in the late morning but then were relatively even during the other time periods later in the day. Photography was the one activity were interviewees showed a strong preference

⁵ Note only one interviewee was bird/wildlife watching

for early morning, with two of the three photographers interviewed visiting before 7am.

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Table 4: Frequency of visit (Q3) by activity (Q2). Table gives number (row %) of interviewees. Grey shading highlights the highest two values in each row

Activity	Daily	Most days (180+ visits)	1 to 3 times a week (40- 180 visits)	2 to 3 times per month (15-40 visits)	Once a month (6-15 visits)	Less than once a month (2-5 visits)	First visit	Other	No response	Total
Dog walking	92 (41)	40 (18)	59 (26)	13 (6)	11 (5)	7 (3)	2 (1)	2 (1)	0 (0)	226 (100)
Walking	5 (5)	12 (12)	35 (34)	20 (19)	9 (9)	13 (13)	8 (8)	1 (1)	0 (0)	103 (100)
Outing with family	1 (2)	0 (0)	9 (21)	12 (29)	13 (31)	6 (14)	0 (0)	0 (0)	1 (2)	42 (100)
Cycling/Mountain Biking	2 (6)	4 (11)	20 (57)	5 (14)	1 (3)	2 (6)	1 (3)	0 (0)	0 (0)	35 (100)
Jogging/ power walking / running	3 (13)	3 (13)	17 (71)	0 (0)	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)	24 (100)
Photography	1 (33)	1 (33)	0 (0)	1 (33)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (100)
Horse riding	0 (0)	3 (50)	3 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (100)
Visiting cafe/visitor centre	1 (25)	0 (0)	1 (25)	1 (25)	1 (25)	0 (0)	0 (0)	0 (0)	0 (0)	4 (100)
Bird/Wildlife watching	1 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)
Meeting up with friends	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)
Other	3 (18)	4 (24)	3 (18)	5 (29)	0 (0)	1 (6)	1 (6)	0 (0)	0 (0)	17 (100)
Total	109 (24)	67 (15)	148 (32)	57 (12)	35 (8)	30 (6)	12 (3)	3 (1)	1 (0)	462 (100)

Table 5: Visit duration (Q4) by activity (Q2). Table gives number (row %) of interviewees. Grey shading highlights the highest two values in each row

Activity	Less than 30 minutes	Between 30 minutes and 1 hour	1-2 hours	2-3 hours	3-4 hours	4 hours +	No response	Total
Dog walking	15 (7)	107 (47)	93 (41)	6 (3)	0 (0)	4 (2)	1 (0)	226 (100)
Walking	7 (7)	22 (21)	45 (44)	17 (17)	8 (8)	4 (4)	0 (0)	103 (100)
Outing with family	0 (0)	8 (19)	25 (60)	8 (19)	0 (0)	1 (2)	0 (0)	42 (100)
Cycling/Mountain Biking	0 (0)	1 (3)	13 (37)	12 (34)	9 (26)	0 (0)	0 (0)	35 (100)
Jogging/ power walking / running	0 (0)	10 (42)	13 (54)	1 (4)	0 (0)	0 (0)	0 (0)	24 (100)
Horse riding	1 (17)	0 (0)	1 (17)	4 (67)	0 (0)	0 (0)	0 (0)	6 (100)
Visiting cafe/visitor centre	0 (0)	2 (50)	0 (0)	0 (0)	0 (0)	1 (25)	1 (25)	4 (100)
Photography	0 (0)	0 (0)	2 (67)	1 (33)	0 (0)	0 (0)	0 (0)	3 (100)

Activity	Less than 30 minutes	Between 30 minutes and 1 hour	1-2 hours	2-3 hours	3-4 hours	4 hours +	No response	Total
Bird/Wildlife watching	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	1 (100)
Meeting up with friends	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)
Other	2 (12)	4 (24)	7 (41)	4 (24)	0 (0)	0 (0)	0 (0)	17 (100)
Total	25 (5)	154 (33)	200 (43)	53 (11)	17 (4)	11 (2)	2 (0)	462 (100)

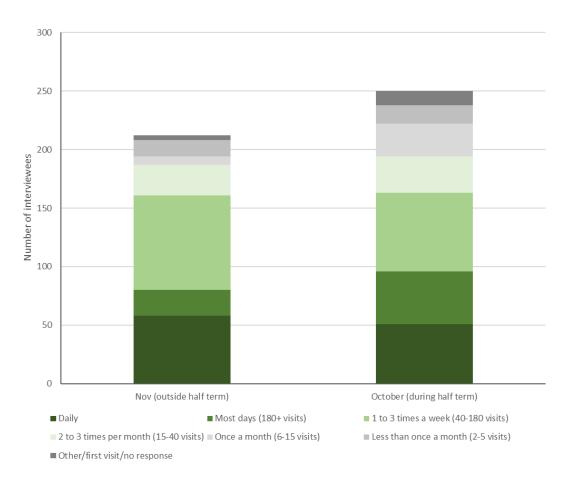


Figure 2: Percentage of interviewees and frequency of visit, comparing those interviewed during half term and those outside half term

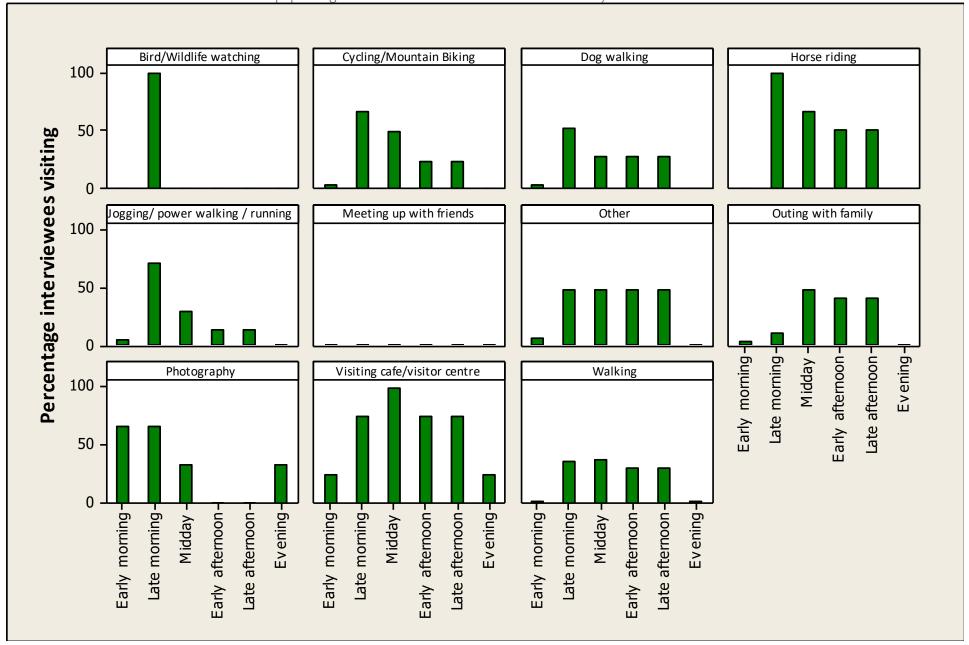


Figure 3: Percentage of interviewees visiting at different times of day (q5) by activity (Q2). Time categories are approximate

Time of year visiting (Q6)

3.18 The majority (86%) of interviewees visited equally all year round and did not tend to visit Epping Forest more at a particular time of year (Table 6). Of those who did indicate a preference, summer was the season with the most responses (10% of all interviewees tending to visit more in the summer). Summer seemed to be a particular preference for those undertaking an outing with family: 38% of this group tended to visit more in the summer.

Table 6: Time of year visiting (Q6) by activity (Q2). Table gives number (%) of interviewees. Note that interviewees could give multiple responses; percentages are calculated based on the number of interviewees and therefore do not add up to 100.

Activity	Spring (Mar- May)	Summer (Jun-Aug)	Autumn (Sept- Nov)	Winter (Dec- Feb)	Equally all year	Don't know	Number interviewed
Dog walking	3 (1)	13 (6)	5 (2)	0 (0)	210 (93)	1 (0)	226 (100)
Walking	2 (2)	9 (9)	5 (5)	2 (2)	85 (83)	0 (0)	103 (100)
Outing with family	4 (10)	16 (38)	9 (21)	0 (0)	25 (60)	0 (0)	42 (100)
Cycling/Mountain Biking	2 (6)	6 (17)	5 (14)	0 (0)	28 (80)	0 (0)	35 (100)
Jogging/ power walking / running	0 (0)	1 (4)	0 (0)	0 (0)	23 (96)	0 (0)	24 (100)
Horse riding	0 (0)	0 (0)	0 (0)	0 (0)	6 (100)	0 (0)	6 (100)
Visiting cafe/visitor centre	0 (0)	0 (0)	0 (0)	0 (0)	4 (100)	0 (0)	4 (100)
Photography	0 (0)	0 (0)	0 (0)	0 (0)	3 (100)	0 (0)	3 (100)
Bird/Wildlife watching	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	1 (100)
Meeting up with friends	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	1 (100)
Other	2 (12)	2 (12)	3 (18)	1 (6)	13 (76)	0 (0)	17 (100)
Total	13 (3)	47 (10)	27 (6)	3 (1)	399 (86)	1 (0)	462 (100)

Length of time visiting Epping Forest (Q7)

3.19 Around two-thirds (64% of interviewees) had been visiting Epping Forest for more than 10 years (Table 7). For those who were undertaking an outing with the family, only 29% had been visiting Epping Forest for more than 10 years, and with this group a relatively high percentage (47%) had been visiting less than five years.

Activity	First visit	Less than or c.6 months	Less than or c.1 year	Less than or c.3 years	Less than or c.5 years	Less than or c.10 years	More than 10 years	No response	Total
Dog walking	2 (1)	3 (1)	4 (2)	25 (11)	13 (6)	23 (10)	155 (69)	1 (0)	226 (100)
Walking	7 (7)	0 (0)	2 (2)	5 (5)	10 (10)	9 (9)	70 (68)	0 (0)	103 (100)
Outing with family	0 (0)	0 (0)	0 (0)	11 (26)	9 (21)	9 (21)	12 (29)	1 (2)	42 (100)
Cycling/M. Biking	1 (3)	1 (3)	1 (3)	3 (9)	1 (3)	5 (14)	23 (66)	0 (0)	35 (100)
Jogging/running	0 (0)	0 (0)	1 (4)	5 (21)	2 (8)	2 (8)	14 (58)	0 (0)	24 (100)
Horse riding	0 (0)	0 (0)	0 (0)	0 (0)	1 (17)	1 (17)	4 (67)	0 (0)	6 (100)
Cafe/v. centre	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (100)	0 (0)	4 (100)
Photography	0 (0)	1 (33)	0 (0)	0 (0)	0 (0)	0 (0)	2 (67)	0 (0)	3 (100)
Bird/Wildlife watching	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)
Meeting up with friends	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	1 (100)
Other	1 (6)	1 (6)	0 (0)	1 (6)	1 (6)	2 (12)	11 (65)	0 (0)	17 (100)
Total	11 (2)	6 (1)	8 (2)	51 (11)	37 (8)	51 (11)	296 (64)	2 (0)	462 (100)

There were some differences between survey locations, in particular at survey location 10 (Barn Hoppitt) and at location 12 (Buckhurst Hill) a relatively high proportion of people were on their first visit (Figure 4).

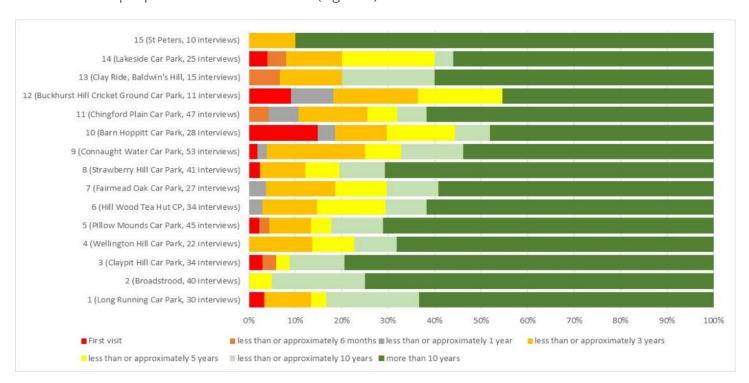


Figure 4: Length of time visiting Epping Forest (from Q7), by survey location.

Interview results: Mode of transport (Q8)

3.21 The majority (77%) of interviewees had arrived by car, with 14% arriving on foot, 5% on a bicycle and 3% by public transport (Figure 5). Five interviewees had arrived by 'other' methods that included on horseback (3 interviewees) and on a scooter (2 interviewees).

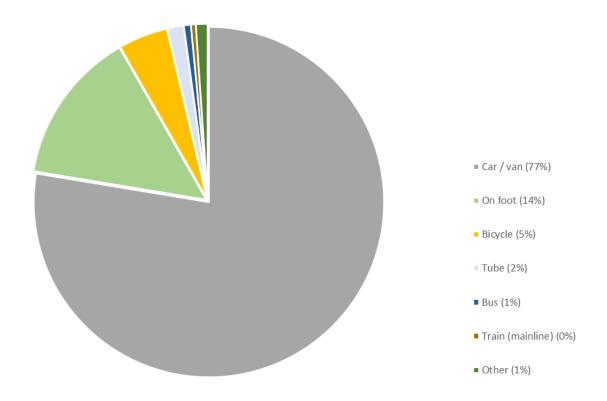


Figure 5: Proportion of interviewees (all interviewees, n=462) arriving by different modes of transport

3.22 Cars were the main mode of transport at all locations apart from location 15, St. Peters where only 2 interviewees (20%) had arrived by car (Figure 6). Foot visitors accounted for relatively high proportions of the visitors at location 15, St Peters (where 80% arrived on foot) and location 13, Clay Ride (47% on foot). The highest number of foot visitors was at location 8, Strawberry Hill (where 12 interviewees – 29% of interviewees at that location - arrived on foot), For those arriving by bicycle, location 5, Pillow Mounds (8 interviewees, 18%) and Location 3, Claypit Hill (5 interviewees, 15%) were the main locations.

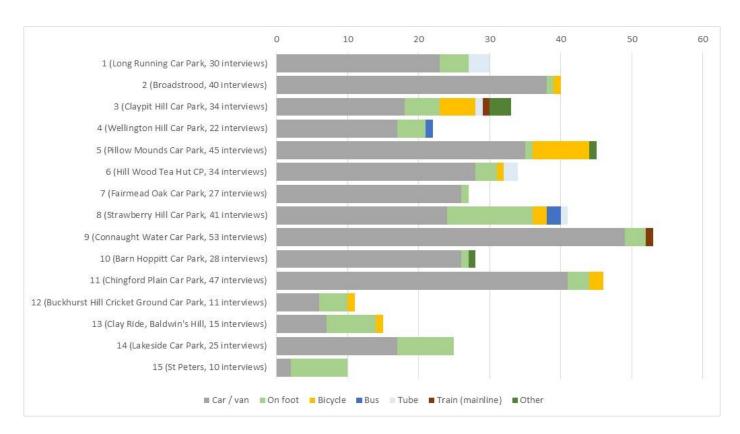


Figure 6: Interviewees by mode of transport (Q8) and survey location.

Interview results: reasons for choosing specific location where interviewed (Q11)

Interviewees gave a wide range of reasons as to why they had chosen the specific location where interviewed as their destination that day. Interviewees could give a single main reason and any number of additional reasons, with responses categorised by the surveyor during the interview. Responses are summarised in Figure 7. The two most commonly given reasons related to the scenery/variety of views (cited by 43% of interviewees) and close to home (39%). Closeness to home was a notable factor in that it was the over-riding main reason, cited by over a third of interviewees (36%) as the main factor influencing their choice of site to visit. A total of 70 interviewees (15% of all interviewees) gave both closeness to home and scenery/variety of views as reasons for site choice, suggesting that both these factors are often important.

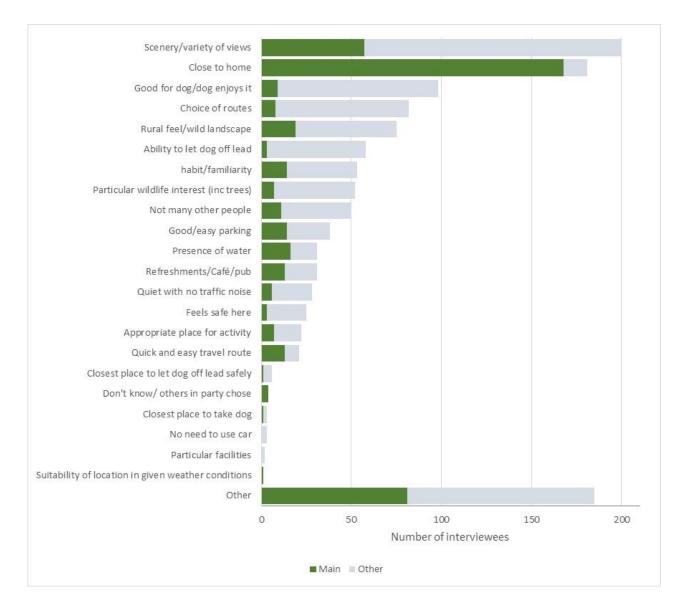


Figure 7: Reasons for site choice (from Q11). Responses ranked according to the total responses (main and other).

3.24 Other reasons were highly varied. At least 21 interviewees referred to fresh air, 12 responses related to the sense of naturalness or lack of urbanisation; for 7 freedom was mentioned, natural history/wildlife/fungi were mentioned by at least 4 interviewees. A range of comments related to trees, leaves or autumn colours while more unusual answers included the proximity to the dentist, climbing trees, plenty of benches (referred to by two interviewees) and one interviewee lived in the forest (camping/sleeping rough).

Other sites visited (Q12-15)

3.25 There was clearly a strong affinity among interviewees for Epping Forest, with around a quarter (21%) of interviewees indicating all their visits (for the chosen activity) took

place at Epping Forest and for a further 31% at least 75% of their visits took place at Epping Forest (Table 8). Over half of those interviewed therefore mainly visited (i.e. 75% or more of their visits) Epping Forest and did not go to other locations (for their chosen activity). Family outing was perhaps the main activity where interviewees tended to currently also visit other sites, for example for those on an outing with the family 29% of interviewees indicated 25% or less of their visits were to Epping Forest.

Table 8: Proportion of visits to Epping Forest compared to other sites for activity undertaken when interviewed (Q12), by activity. Table gives number (row %) of interviewees.

	Proportion of weekly visits for [given activity] taking place at Epping Forest compared to other sites.								
Activity	All take place here	75% or more	50-74%	25-49%	less than 25%	Not sure/ don't know/ first visit/ no respons e	Total		
Dog walking	57 (25)	71 (31)	29 (13)	15 (7)	45 (20)	9 (4)	226 (100)		
Walking	14 (14)	31 (30)	20 (19)	14 (14)	17 (17)	7 (7)	103 (100)		
Outing with family	2 (5)	7 (17)	8 (19)	11 (26)	12 (29)	2 (5)	42 (100)		
Cycling/Mountain Biking	4 (11)	18 (51)	3 (9)	3 (9)	5 (14)	2 (6)	35 (100)		
Jogging/ power walking / running	11 (46)	7 (29)	2 (8)	3 (13)	1 (4)	0 (0)	24 (100)		
Photography	1 (33)	0 (0)	1 (33)	1 (33)	0 (0)	0 (0)	3 (100)		
Horse riding	3 (50)	2 (33)	1 (17)	0 (0)	0 (0)	0 (0)	6 (100)		
Visiting cafe/visitor centre	1 (25)	1 (25)	1 (25)	0 (0)	1 (25)	0 (0)	4 (100)		
Bird/Wildlife watching	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	1 (100)		
Meeting up with friends	0 (0)	0 (0)	0 (0)	1 (100)	0 (0)	0 (0)	1 (100)		
Other	5 (29)	5 (29)	3 (18)	2 (12)	1 (6)	1 (6)	17 (100)		
Total	98 (21)	142 (31)	68 (15)	51 (11)	82 (18)	21 (5)	462 (100)		

- 3.26 Around a quarter (23%) of interviewees, when asked which one location they would have visited (if they could not visit the location where interviewed) stated they would not have visited anywhere else (Q13), and a further 2% of interviewees did not know or did not answer the question. In total 327 interviewees (71%) named another location.
- 3.27 A range of other sites were named, and these ranged from other locations within Epping Forest to sites as far afield as Cannock Chase, Thetford (the latter two sites both named by mountain bikers) and Sussex. The green spaces listed included a wide range of types of space and character from urban parks to rural locations, including a

number of other European sites. Responses were categorised and simplified to allow an overview of the other sites visited. All locations within Epping Forest SAC were grouped and then responses were simplified where it was thought similar locations were being referred to by different people, for example "Lee Valley Canal", "the Lee Valley", "Along the River Lee" and "Lee Valley Tow Path" were all categorised as Lee Valley. We have listed Wanstead (Park and Flats) separately as this is part of Epping Forest but outside the SAC. Our list is summarised in Table 9. A total of 73 interviewees (16% of all those interviewed) named other locations within Epping Forest as alternatives. Other common responses included the Lee Valley (37 interviewees, 8%), Wanstead (17 interviewees, 4%) and Chingford (13 interviewees, 3%). The range of other locations is also shown in Figure 8, a word cloud with the size of the lettering reflecting the number of responses and only locations outside Epping Forest included.

Table 9: Summary of responses to Q13 and the one location interviewee would have visited instead of the location where interviewed. Responses were grouped to generate simplified list in table. Only sites named by at least two interviewees are included. Grey shading highlights sites with at least 5% (or 2 interviewees if 5%<2) of the responses for a given activity.

Site	Dog walking	Walking	Outing with family	Cycling/Mountain Biking	Jogging etc	Photography	Horse riding	Visiting cafe/visitor centre	Bird/Wildlife watching	Meeting up with friends	Other	Total
Other Epping Forest Sites (SAC)	43	18	4	2	1		1	1	1		2	73
Lee Valley	8	14	5	4	3					1	2	37
Wanstead (inc Flats & Park)	6	5	5		1							17
Chingford (inc Cemetery, Golf Course etc)	10	1	1		1							13
River Roding/Roding Valley	7			1	1						2	11
Walthamstow Marshes/wetland	3	3	4	1								11
General roads/local park (unspecified)	6			1			1				1	9
Hampstead Heath	2	6										8
Loughton (inc Brook and Park)	3	3	1		1							8
Hainault	5		1	1								7
Theydon Bois	5	1									1	7
Buckhurst Hill	3		1	1				1				6
Hackney Marshes	3	2										5
Victoria Park	1	1	3									5
Woodford (inc Green, Golf Course)	2	3										5
Broxbourne/Broxbourne Woods	2			2								4
Highams Park	4											4
Knighton Wood	4											4

Site	Dog walking	Walking	Outing with family	Cycling/Mountain Biking	Jogging etc	Photography	Horse riding	Visiting cafe/visitor centre	Bird/Wildlife watching	Meeting up with friends	Other	Total
Waltham (inc Abbey & Forest)	2	1			1							4
Epping (inc Epping Green)	1	1									1	3
Fishers Green	3											3
Gunpowder Park	3											3
Hatfield Forest	1	1									1	3
Leyton Park	2		1									3
Memorial Park	2	1										3
Swinley Forest				2	1							3
Chilterns		1		1								2
Claybury	1		1									2
Harlow Common/Park	1				1							2
Mansfield Hill	1		1									2
Richmond		2										2
Ridgeway Park	2											2
Stonards Hill	1	1										2
Surrey Hills				2								2
Therfield Heath		1				1						2
Thetford Forest				2								2
Thorndon Country Park	1			1								2
Trent Country Park	2											2
Valentines Park	1	1										2
Weald Country Park	1		1									2
Whitewebbs	1	1										2
Total no. naming a site	161	78	34	24	11	2	3	3	1	1	13	331

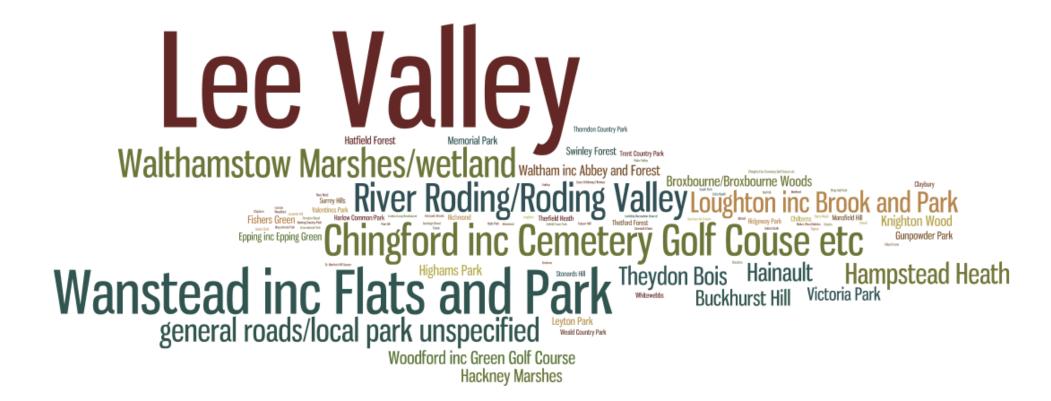


Figure 8: Word Cloud summarising other sites visited (responses to Q13, which one location would you have visited today....). Word Cloud created after removing all other Epping Forest locations (i.e. only sites outside Epping Forest shown) and after simplifying list by grouping similar sites. Word Cloud created using Wordle.

- 3.28 Additional questions addressed two particular sites: the Lee Valley Regional Park (Q14), which is a large greenspace site close to Epping Forest and Walthamstow Wetlands (Q15), a newly created site which was opened around the time the visitor survey was undertaken. 71% of interviewees had visited the Lee Valley Regional Park at some point, and around a quarter (23%) of interviewees had never visited the site (with 7% unsure or with no response).
- 3.29 Around a quarter (23%) of interviewees indicated that, now the Walthamstow Wetlands was opened they may be likely to visit that site instead of Epping Forest. Nearly half (49%) of interviewees indicated they were not likely to visit the Wetlands instead and a further 28% were unsure or did not answer the question. Those that did answer that they may be likely to visit Walthamstow Wetlands instead of Epping Forest included 19% of dog walkers interviewed and 14% of those who visit Epping Forest daily.

Potential for alternative sites (Q16 and 17)

- 3.30 A relatively high proportion of interviewees indicated that, if a new area was created near to Epping Forest that provided an expansive area of countryside for people to visit, they would be likely to go there. Overall 68% of interviewees indicated they would go to such a site (Q16). This included 64% of dog walkers, 73% of walkers and 76% of those on a family outing.
- 3.31 Interviewees were then asked what features they would want to see at such an alternative site. Surveyors categorised responses based on a predetermined list within the questionnaire, and multiple responses were recorded as relevant (i.e. interviewees could give multiple features). Responses (as categorised) are summarised in Figure 9. The most common features listed were refreshments (café, pub etc.) (22% interviewees), free parking (18%), better path surfacing/path network (17%) and toilets (16%).
- 3.32 A wide range of other features or additional details were also recorded.

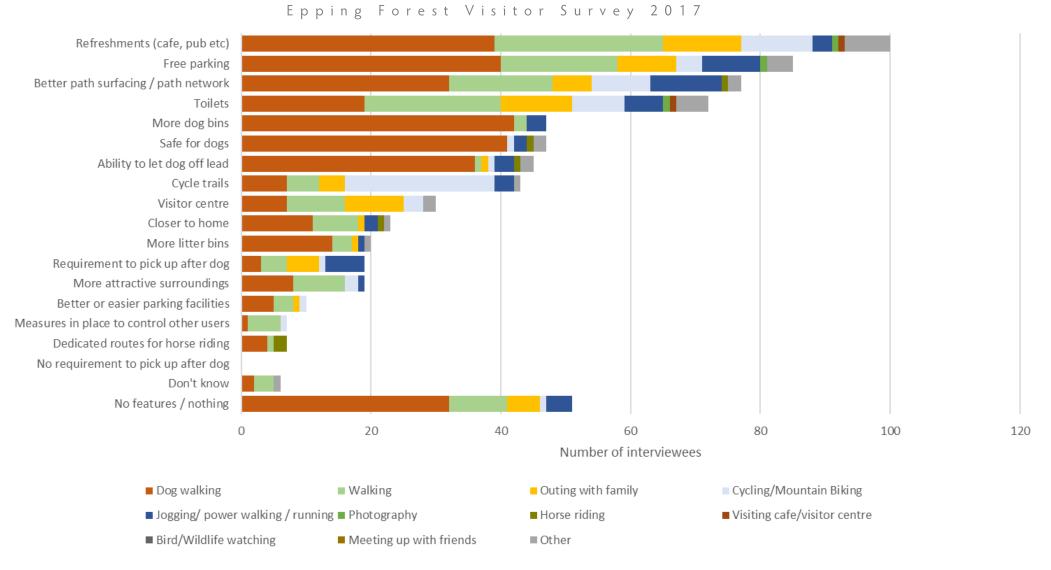


Figure 9: Features relevant for alternative sites (from Q17)

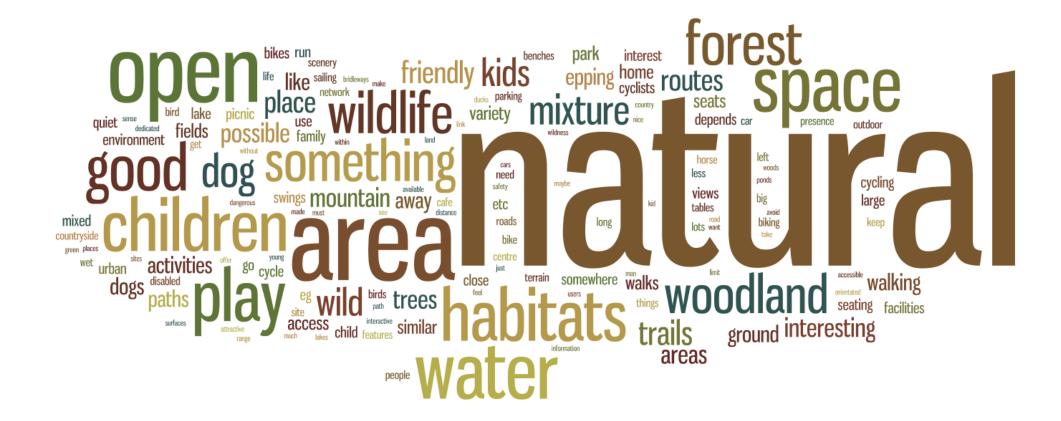


Figure 10: Word Cloud summarising free text responses to Q17 and the additional features interviewees would like to see at an alternative site. The full list of responses is included in Appendix 3. Word Cloud created using Wordle.

Visitor Facilities at Epping Forest (Q18-20)

3.33 Around half (47%) of those interviewed had visited one of the visitor centres at Epping Forest over the past year (Q18). There were significant differences in the proportions of interviewees that had visited a centre, when comparing between dog walkers, walkers, those on family outings, those cycling/mountain biking and those jogging/power walking/running (X^2_4 =20.62; p<0.001). Dog walkers were notable in that relatively few (37%) indicated they had visited a centre in the past year.

Table 10: Number (row %) of interviewees that had visited one of the visitor centres at Epping Forest, such as High Beech or the View, in the last year (Q18)

Activity	Yes	No	Don't know/no response	Total
Dog walking	84 (37)	133 (59)	9 (4)	226 (100)
Walking	51 (50)	50 (49)	2 (2)	103 (100)
Outing with family	27 (64)	13 (31)	2 (5)	42 (100)
Cycling/Mountain Biking	24 (69)	11 (31)	0 (0)	35 (100)
Jogging/ power walking / running	10 (42)	14 (58)	0 (0)	24 (100)
Photography	2 (67)	1 (33)	0 (0)	3 (100)
Horse riding	2 (33)	4 (67)	0 (0)	6 (100)
Visiting cafe/visitor centre	2 (50)	2 (50)	0 (0)	4 (100)
Bird/Wildlife watching	1 (100)	0 (0)	0 (0)	1 (100)
Meeting up with friends	1 (100)	0 (0)	0 (0)	1 (100)
Other	13 (76)	4 (24)	0 (0)	17 (100)
Total	217 (47)	232 (50)	13 (3)	462 (100)

Visitor Routes (Q9-Q10)

- 3.34 A total of 318 interviewees (69%) stated their route on the day when interviewed was their normal length. A further 11 interviewees (2%) were on their first visit and 97 interviewees (21%) did not have a typical visit/weren't sure. For 22 interviewees (5%) the route on the day interviewed was shorter than normal and 7 interviewees (2%) indicated their route was much longer than normal.
- 3.35 Routes of interviewed visitors are shown in Map 4. The interview locations represent only a selection of the potential access points across the SAC, yet it is clear from the mapped route data that use from the surveyed car-parks covers a wide area of the SAC.
- 3.36 In total 459 routes were mapped. These routes had a mean length of 3,917m (± 173m), and ranged from 146m to over 50km. The median value for all routes was 3,274m. A number of routes as mapped included areas outside the SAC. For

interviewees arriving by car and interviewed at one of the locations in the middle of the Forest, it is to be expected that the entire route would be within the SAC, however for those cycling or who had walked to the interview location, the route as mapped will include areas outside the SAC. We therefore also truncated routes so that only those parts that were within the SAC were measured. For these, truncated routes, the mean was 3,417m (± 151m) and the median was 2,774m.

3.37 Comparing these truncated routes between activities, there were significant differences in route lengths (H=100.60; 6 d.f.; p<0.001; activities grouped as dog walking, walking, cycling, jogging, horse riding, outing with the family and other to resolve issues with small sample sizes). Data are summarised by activity in Figure 11. It can be seen that cyclists, horse riders and those jogging tended to have the longer routes, while the most common activity, dog walking, was one of the activities with the shortest routes (median 2.2km).

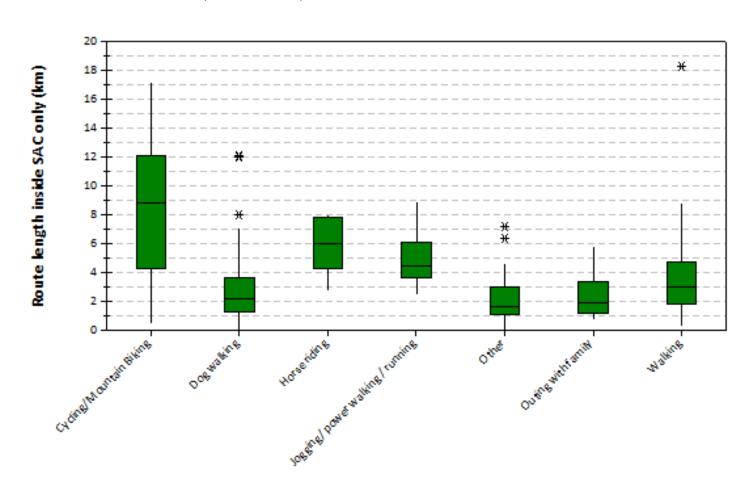


Figure 11: Route lengths by activity. Note one outlier (a cycling route of 46km) lies outside the range shown by the y axis.

3.38 Interviewee's choice of route (Q10) was influenced by a range of factors, which were categorised by the surveyor. Clearly previous experience/knowledge of the site was important for many and was by far the most common response (given by 32% of

interviewees). Other common responses related to the activity undertaken (10% interviewees), time available (9%), weather (9%) and muddy paths/tracks (8%). A range of 'other' responses (30% of interviewees) did not fit the predetermined categories and were varied (see Appendix 2 for full list): for at least 8 interviewees (2%) the route was influenced by the location of refreshments kiosks/cafes or a pub; 6 interviewees (1%) were simply "exploring"; 5 interviewees (1%) were following their dog; for 4 interviewees (1%) the choice was "random" and health (such as bad knees) was a factor for at least 3 interviewees (1%). At least 2 interviewees (<1%) wanted to find open areas or stick to open areas and for at least 2 interviewees (<1%) the route was influenced by the colour of the trees/autumn leaves. Unusual or unexpected responses included finding flat ground to play football and finding squirrels for the dog to chase.

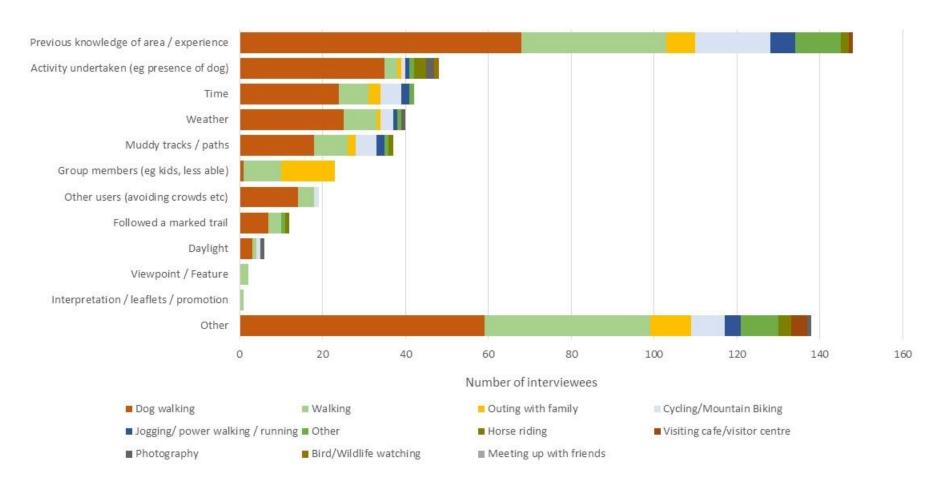
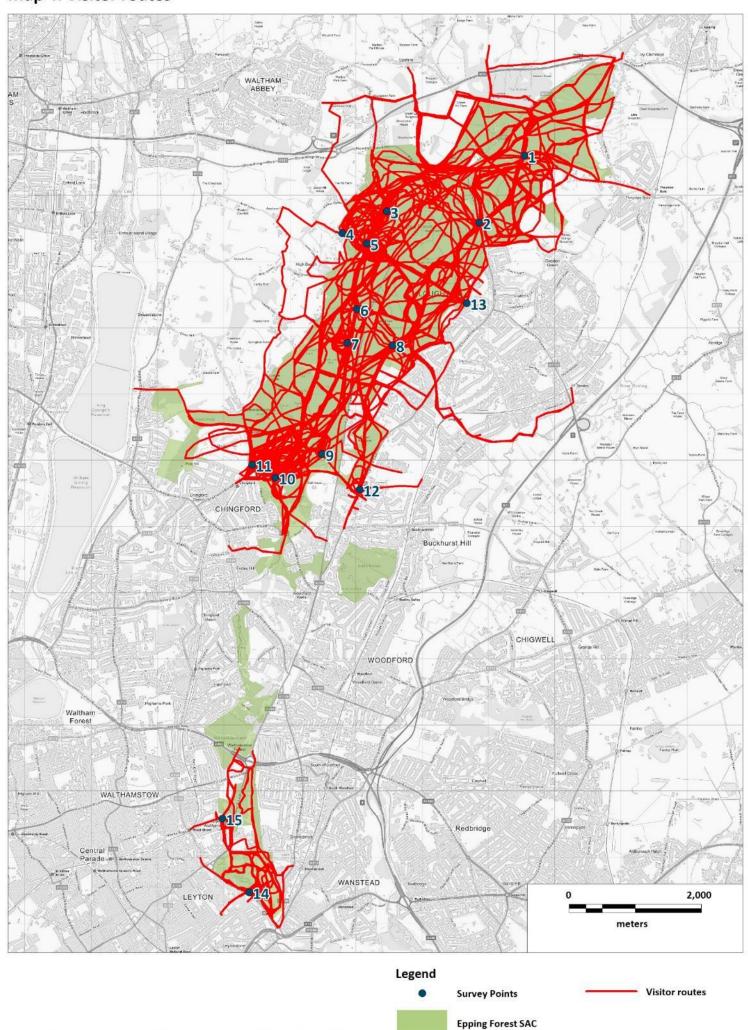


Figure 12: Factors influencing choice of route on the day interviewed, by activity. From Q11.

Map 4: Visitor routes



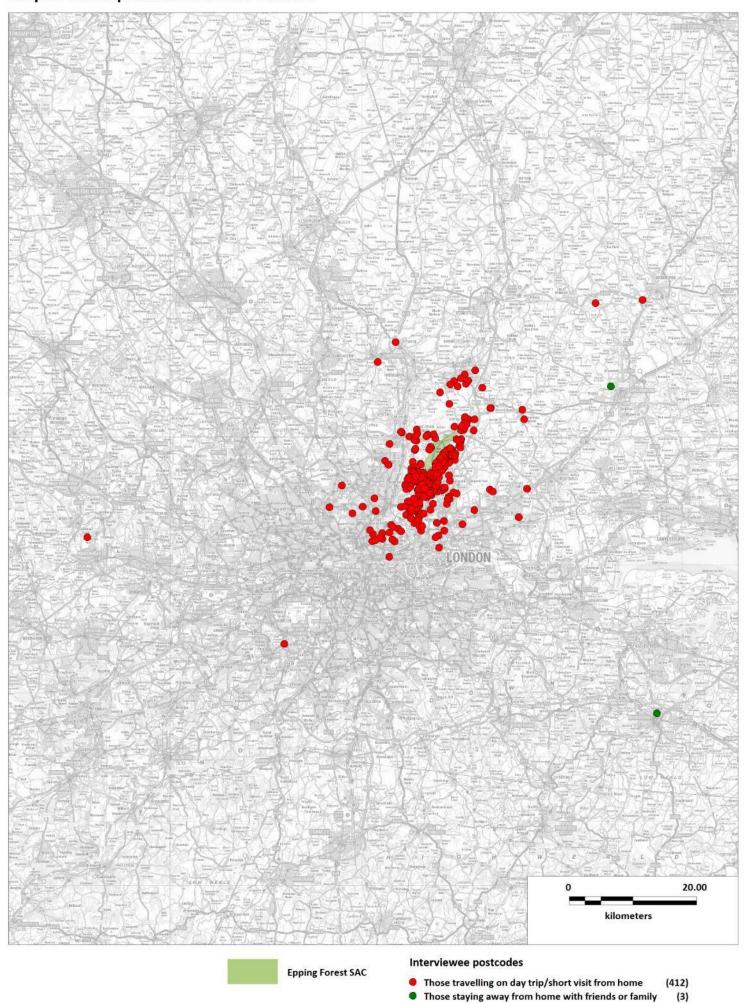
Visitor Origins (home postcodes of interviewees)

- 3.39 In total, 415 (90%) home postcodes were successfully geocoded, i.e. were complete, valid postcodes that could be georeferenced to national postcode data at the full postcode level. A further 5% of interviewees only gave a partial postcode (e.g. "LG10") and the remaining 5% either gave no postcode or a postcode that could not be mapped. The total of 415 were used for further analysis and are plotted on Maps 5-8.
- Map 5 shows all 415 postcodes. It can be seen that the majority lie to the north-east of London, in a broad wedge between the A12 and the A10. Postcodes from further afield included residents of Maidenhead, Maidstone, Surbiton and Braintree⁶. Maps 6-8 show a smaller geographic area and six of the postcodes in Map 5 are not visible (i.e. outside the mapped area). Map 6 shows the same area, with postcodes shaded by survey location. There is little visible in terms of a clear pattern, i.e. there is much overlap suggesting different survey points do not have discrete catchments. Pillow Mounds is perhaps notable in that there is a wide geographic scatter from all directions. Five of the eight visitors from Harlow were interviewed at Broadstrood and Lakeside visitors appeared to be mostly residents living to the south of Epping Forest and relatively local.
- 3.41 Map 7 shows postcodes by activity and Map 8 shows postcodes by frequency, at the same scale as Map 6. In Map 8 the darker the red shading, the more frequent the interviewee reported visiting Epping Forest.
- 3.42 Following the maps, Table 11 and Table 12 summarise the number of interviewees by local planning authority. Nearly half (45%) of all those visitors who gave full, valid postcodes came from Epping Forest District, and nearly a third (31%) came from the London Borough of Waltham Forest.

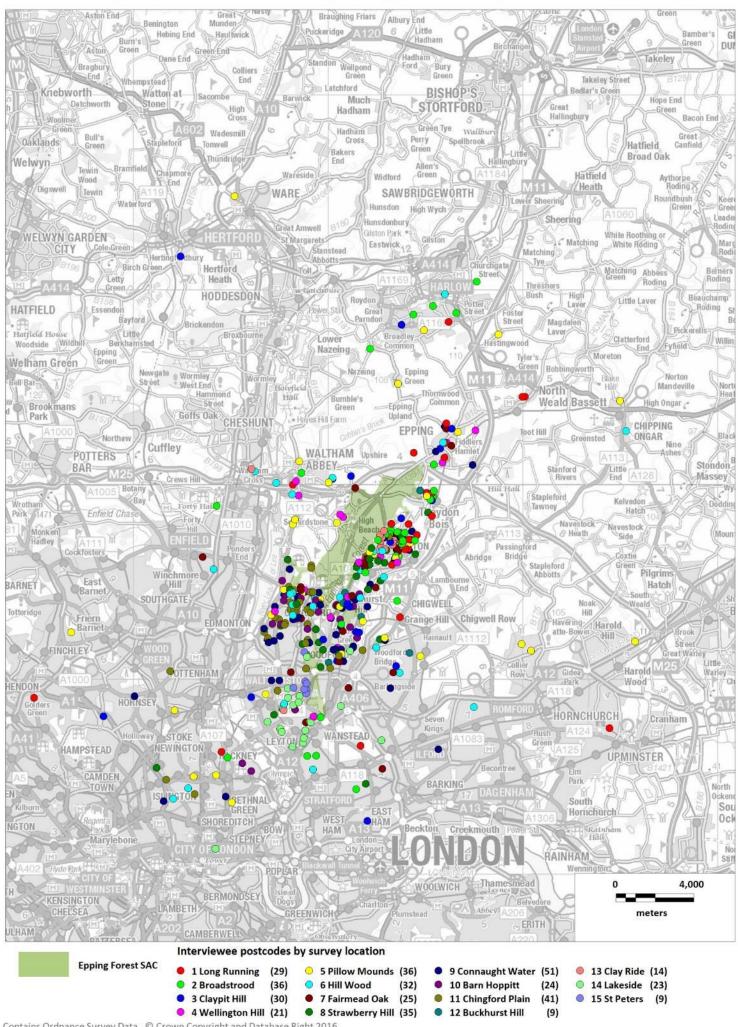
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⁶ There was also one postcode from Peterborough, but this was given by an interviewee wild camping in the Forest and was the 'signing-on' address and this is excluded from the total of 415.

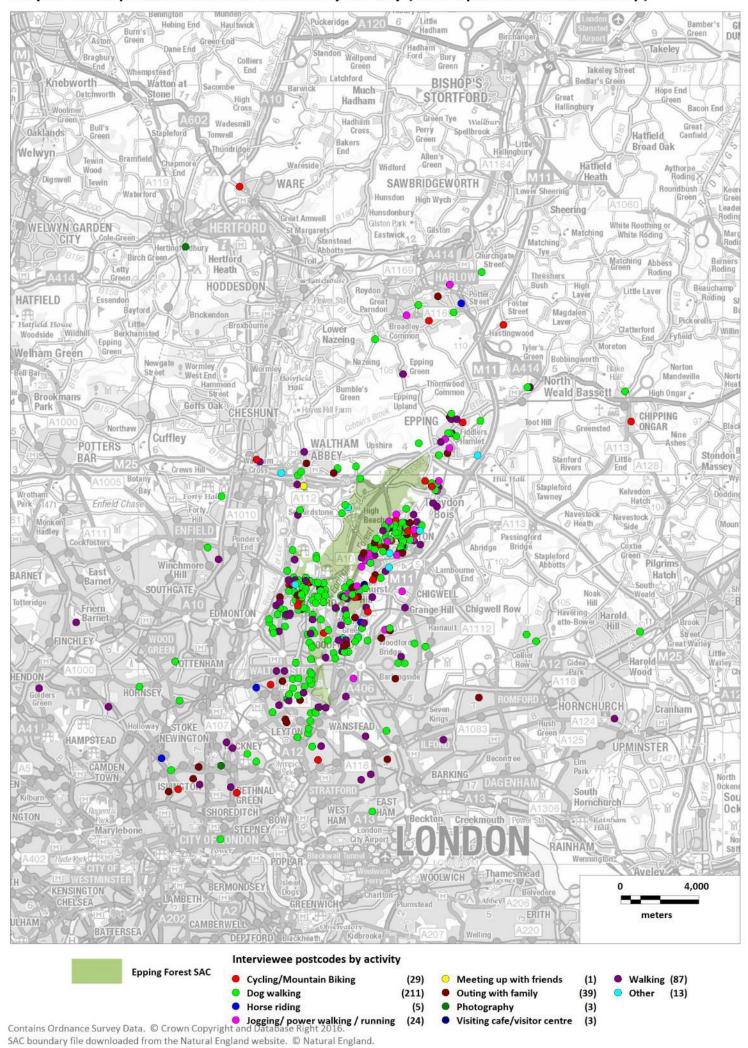
Map 5: Home postcodes of interviewees



Map 6: Home postcodes of interviewees by survey point (note 6 postcodes outside map)



Map 7: Home postcodes of interviewees by activity (note 6 postcodes outside map)



Map 8: Home postcodes of interviewees by frequency of visit (note 6 postcodes outside map)

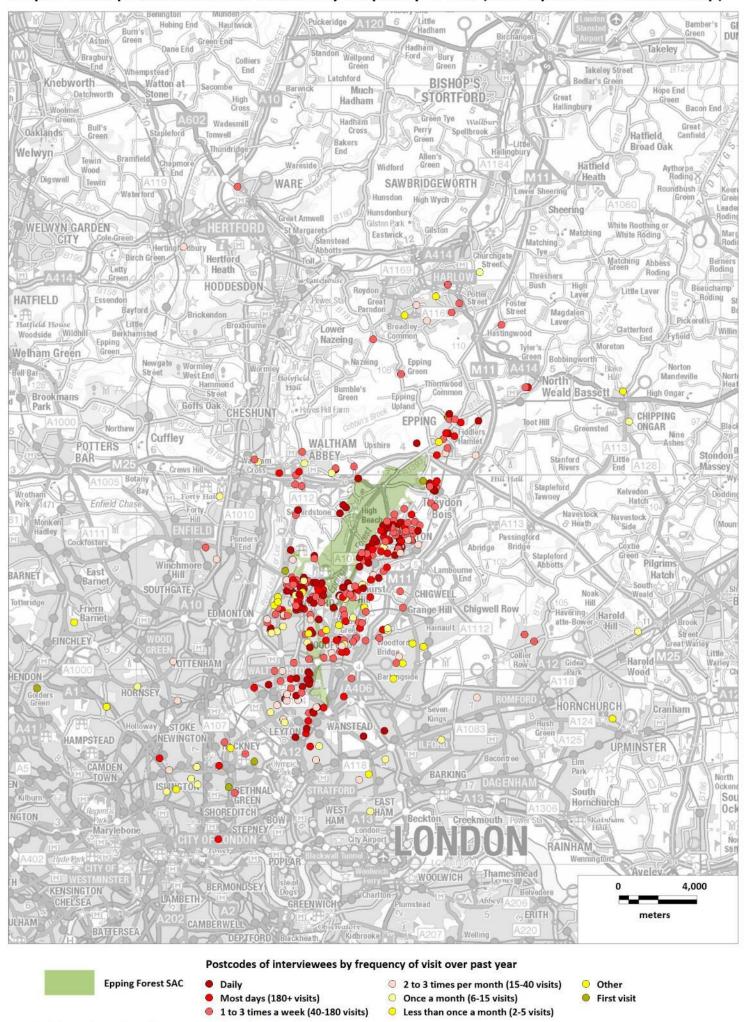


Table 11: Number (%) of visitors by activity and local planning authority (LPA). Only those authorities with at least three full valid postcodes included. Percentages based on the overall total who gave full postcodes (415).

LPA	Dog walking	Walking	Outing with family	Cycling/ Mountain Biking	Jogging/ power walking	Horse riding	Visiting cafe/ visitor centre	Photography	Bird/ Wildlife watching	Meeting up with friends	Other	Total
Epping Forest	89 (21)	34 (8)	19 (5)	15 (4)	19 (5)	1 (0)	2 (0)	0 (0)	0 (0)	1 (0)	7 (2)	187 (45)
Waltham Forest	84 (20)	25 (6)	9 (2)	7 (2)	1 (0)	1 (0)	1 (0)	1 (0)	0 (0)	0 (0)	1 (0)	130 (31)
Redbridge	20 (5)	14 (3)	6 (1)	0 (0)	2 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (0)	45 (11)
Hackney	2 (0)	4 (1)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	1 (0)	0 (0)	0 (0)	1 (0)	9 (2)
Harlow	3 (1)	0 (0)	1 (0)	1 (0)	2 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	8 (2)
Islington	1 (0)	0 (0)	3 (1)	1 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (1)
Newham	1 (0)	2 (0)	1 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	5 (1)
Haringey	3 (1)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (1)
Havering	3 (1)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4(1)
Enfield	2 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (1)
Broxbourne	0 (0)	1 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0)	3 (1)
Total	208 (50)	83 (20)	39 (9)	27 (7)	24 (6)	5 (1)	3 (1)	2 (0)	0 (0)	1 (0)	12 (3)	404 (97)

Table 12: Number (%) of visitors by visit frequency and local planning authority (LPA). Only those authorities with at least three full valid postcodes included. Percentages based on the overall total who gave full postcodes (415).

LPA	Daily	Most days	1 to 3 times a week	2 to 3 times per month	Once a month	Less than once a month	First visit	Other	Total
Epping Forest	55 (13)	33 (8)	67 (16)	15 (4)	11 (3)	4 (1)	1 (0)	1 (0)	187 (45)
Waltham Forest	40 (10)	19 (5)	38 (9)	14 (3)	9 (2)	5 (1)	2 (0)	3 (1)	130 (31)
Redbridge	4 (1)	6 (1)	17 (4)	10 (2)	3 (1)	5 (1)	0 (0)	0 (0)	45 (11)
Hackney	0 (0)	1 (0)	3 (1)	1 (0)	1 (0)	1 (0)	2 (0)	0 (0)	9 (2)
Harlow	0 (0)	0 (0)	3 (1)	2 (0)	1 (0)	2 (0)	0 (0)	0 (0)	8 (2)
Islington	0 (0)	1 (0)	0 (0)	1 (0)	3 (1)	1 (0)	0 (0)	0 (0)	6 (1)
Newham	0 (0)	0 (0)	0 (0)	2 (0)	2 (0)	1 (0)	0 (0)	0 (0)	5 (1)
Haringey	0 (0)	0 (0)	0 (0)	2 (0)	1 (0)	1 (0)	0 (0)	0 (0)	4 (1)
Havering	0 (0)	0 (0)	2 (0)	0 (0)	1 (0)	1 (0)	0 (0)	0 (0)	4 (1)
Enfield	0 (0)	0 (0)	1 (0)	1 (0)	1 (0)	0 (0)	0 (0)	0 (0)	3 (1)
Broxbourne	0 (0)	1 (0)	1 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	3 (1)
Total	99 (24)	61 (15)	132 (32)	48 (12)	34 (8)	21 (5)	5 (1)	4 (1)	404 (97)

There were significant differences in the distance between home postcode and survey point when comparing between activity types (Kruskal-Wallis H=42.93, 9d.f., p<0.001); mode of transport (Kruskal-Wallis H=89.92, 6d.f., p<0.001) and between survey points (Kruskal-Wallis H=101.56, 14d.f., p<0.001). There was no significant difference in distance for those interviewed during half term compared to those outside half term (Mann-Whitney W=38432.5, p=0.9691). Data for key groups are summarised below, in Table 13. The table includes the 75th percentile, i.e. the distance within which 75% of visitors originated. This percentile is a useful measure of the area within which the majority of interviewees originate, and has been used elsewhere to define a zone of influence.

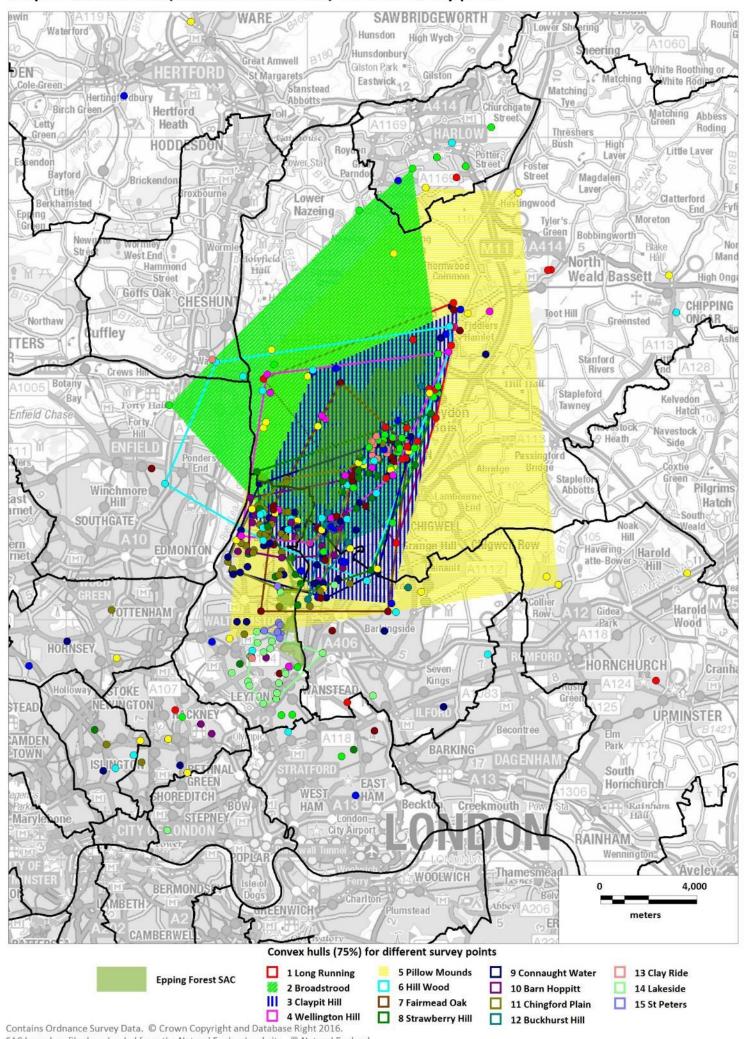
Table 13: Summary statistics for the distance (m) between interviewee's home postcodes and the survey point where interviewed.

Group	N	Mean (<u>+</u> SE)	Min	Max	Median	75 th percentile
All interviewees	415	5030 (<u>+</u> 296)	47	55,781	3084	6176
Those on short trip from home	412	4873 (<u>+</u> 270)	47	55,781	3083	6163
Cycling/Mountain biking	29	7854 (<u>+</u> 1465)	976	39,925	5255	11,196
Dog walking	211	3872 (<u>+</u> 347)	47	52,122	2566	4,396
Jogging/power walking/running	24	3615 (<u>+</u> 615)	315	13,444	2719	4746
Outing with family	39	5196 (<u>+</u> 634)	1488	15,516	3876	6418
Walking	87	6670 (<u>+</u> 840)	979	55,781	3944	8174
Those who travelled by car	325	5300 (<u>+</u> 336)	393	55,781	3388	6395
Those who travelled on foot	56	1501 (<u>+</u> 236)	47	8842	984	1690
1 Long Running Car Park	29	5278 (<u>+</u> 970)	1496	21,386	2955	7236
2 Broadstrood	36	6002 (<u>+</u> 978)	976	27,508	3011	10,709
3 Claypit Hill Car Park	30	7516 (<u>+</u> 1363)	1250	38,998	5169	8670
4 Wellington Hill Car Park	21	4144 (<u>+</u> 584)	97	10,463	3660	6263
5 Pillow Mounds Car Park	36	8742 (<u>+</u> 1218)	758	39,925	6707	13053
6 Hill Wood Tea Hut CP	32	6046 (<u>+</u> 756)	1468	16,122	4398	7348
7 Fairmead Oak Car Park	25	4572 (<u>+</u> 552	1237	11,509	3161	7092
8 Strawberry Hill Car Park	35	5202 (<u>+</u> 1587)	661	55,781	2916	5497
9 Connaught Water Car Park	51	5266 (<u>+</u> 1026)	1030	52,122	3538	4714
10 Barn Hoppitt Car Park	24	2927 (<u>+</u> 503)	808	10,151	2159	3041
11 Chingford Plain Car Park	41	3259 (<u>+</u> 431)	498	12,708	2692	4003
12 Buckhurst Hill Cricket Ground Car Park	9	2041 (<u>+</u> 748)	220	6301	695	4148
13 Clay Ride, Baldwin's Hill	14	4096 (<u>+</u> 2397)	47	33,401	701	2981
14 Lakeside Car Park	23	2061 (<u>+</u> 352)	396	8842	1722	2282
15 St Peters	9	652 (<u>+</u> 218)	171	1837	344	1231
During half term	230	5138 (<u>+</u> 427)	47	55,781	3052	6402
Outside half term	185	4897 (<u>+</u> 411)	97	52,122	3243	5738

3.44 Some additional maps summarising the visitor data are shown in Maps 9 to 11. These maps also include local planning authority boundaries and we use various approaches

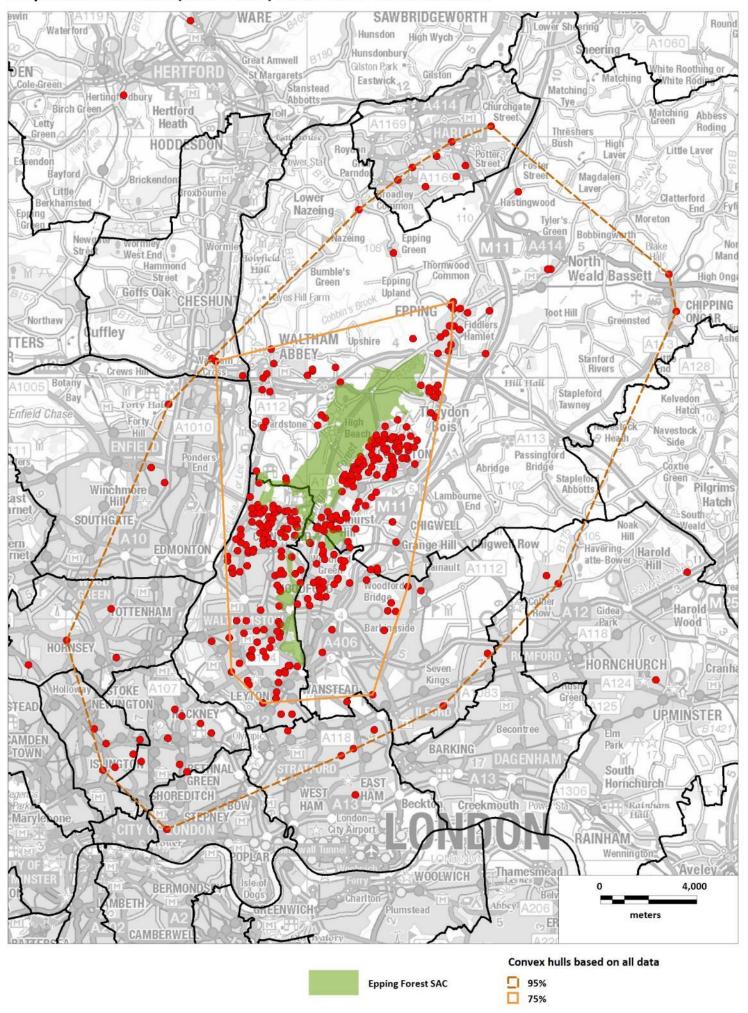
to enclose the data, providing indications of where changes in the numbers of local residents might be expected to result in increased recreational use of the SAC. In Map 9 we show the convex hulls for each survey point, with the convex hulls enclosing the home postcodes of interviewees that lie within the 75th percentile for that survey point. A convex hull is drawn such that it encloses all the points – equivalent to stretching an elastic band to enclose all the selected points. The convex hulls mostly overlap, indicating that residents in particular areas do not necessarily choose to visit particular parts of Epping Forest. The convex hulls do vary markedly in size, with the larger ones (shaded) reflecting the well-known main car-parks such as Pillow Mounds. In Map 10 we show convex hulls based on all the postcode data collected, i.e. the data as a whole. We have drawn two convex hulls, one enclosing all postcodes which were less than 6,176m from the survey point where the interview took place, i.e. the closest 75%. For reference we have also drawn the convex hull for the 95% percentile (based on the distance from survey point to home postcode), i.e. enclosing all but the outer 5% of interviewee postcodes. Finally, in Maps 11-13 we show the 75th percentile as a buffer, drawn around the edge of the SAC. Given that 75% of interviewees came from with 6,176m, we can apply that distance as a consistent buffer around the periphery of the SAC. For reference on the same maps we have included the median distance, i.e. within which 50% of interviewees originated. This median value was 3,084m and it is drawn around the outer perimeter of the SPA. Map 11 shows visitor postcodes by frequency of visit; in Map 12 we show the same data but with the postcodes shaded to reflect activity and Map 13 the shading reflects whether the interview took place during half term (red) or not (blue) while triangles indicate interviews conducted at the weekend. These different maps provide a range of different ways to visualise the data on visitor origins and the locations where changes in housing numbers may well influence visitor numbers to the SAC.

Map 9: Convex hulls (75% of interviewees) for each survey point

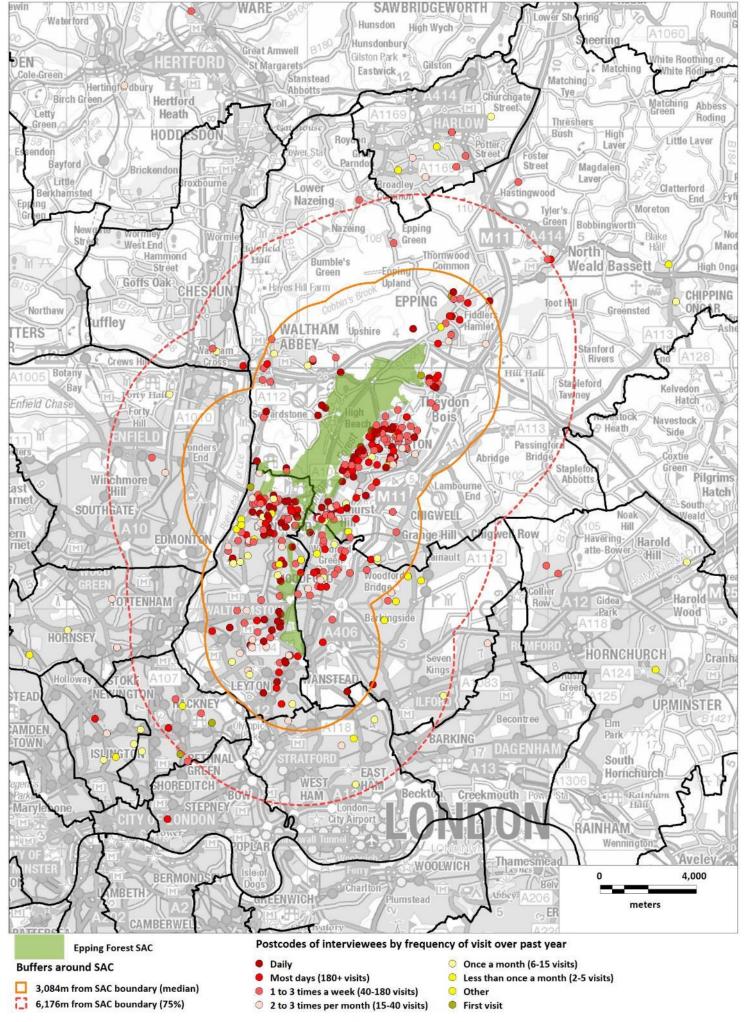


SAC boundary file downloaded from the Natural England website. © Natural England.

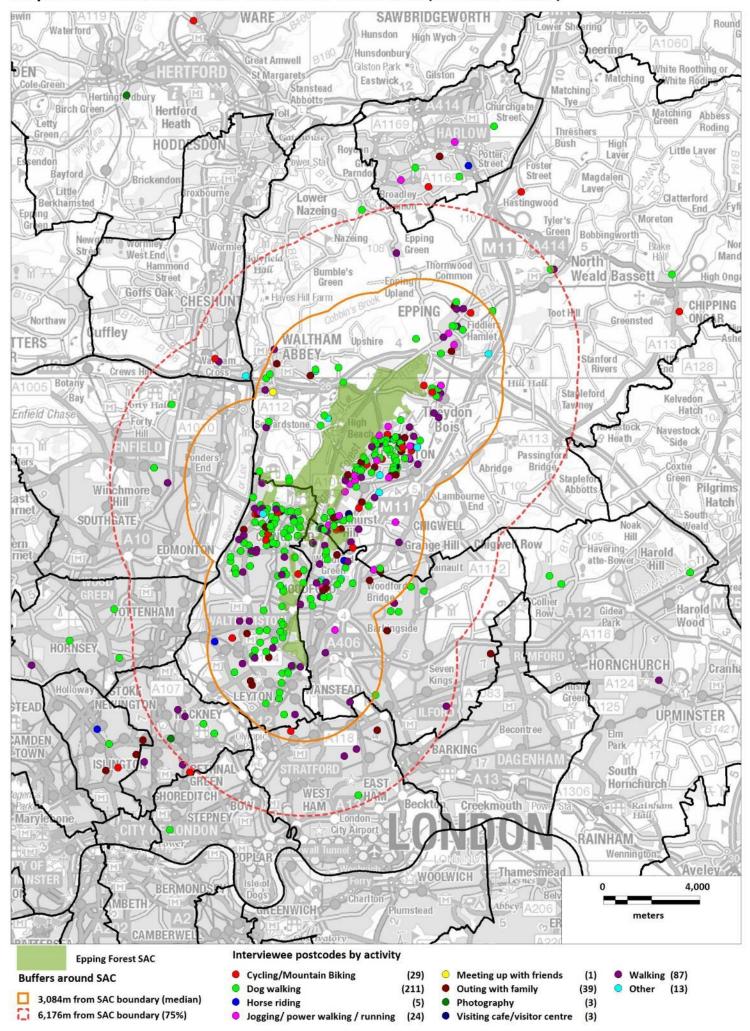
Map 10: Convex hulls (75% & 95%) based on all data combined



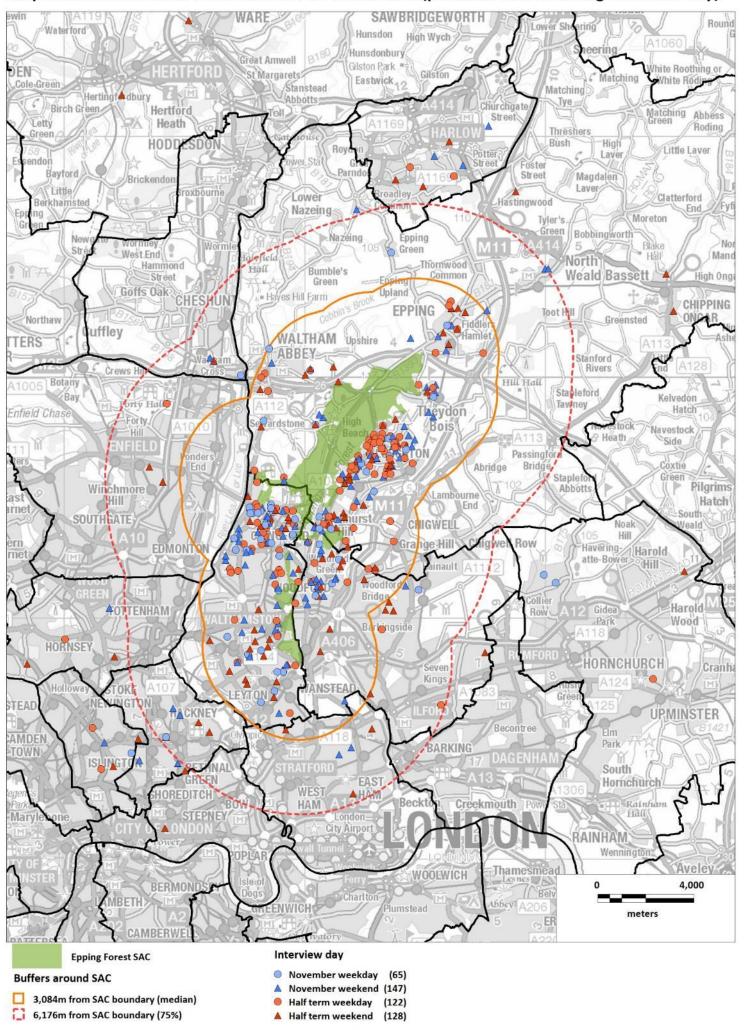
Map 11: Buffers around the SAC based on visitor data



Map 12: Buffers around the SAC based on visitor data (activities shown)



Map 13: Buffers around the SAC based on visitor data (postcode data showing interview day)



- The distribution of interviewee postcodes will be clearly affected by the distribution of housing, i.e. where there are lots of houses in a particular location, the chances of interviewing someone from those houses is higher and conversely, the likelihood of interviewing someone from a very rural area is low, simply because there are few residents. It is to be expected that the closer people live to Epping Forest, the more likely they will be to visit, and that visit rates will decrease with distance away from the Forest. In order to consider this further we drew concentric rings around each survey point within the GIS, creating a series of 1km buffers. For each buffer we calculated the overall number of residential properties⁷ and also calculated the number of interviewee postcodes from each survey point. For each band we then divided the number of interviewee postcodes by the number of residential properties, giving a crude value for the number of interviewees in our survey per residential property.
- 3.47 The data, averaged across survey points, are shown in Figure 13. This essentially shows how visit rate declines with distance from the survey location, and it can be seen that at around 6km visit rate becomes very low and there is little change with distance. This suggests that for locations beyond 6km we would expect a low proportion of residents to visit the SAC compared to closer distances. Figure 14 shows the plots individually for each survey point. It can be seen that locations such as Connaught Water, Broadstrood, Fairmead Oak and Chingford Plain have a wider catchment and draw interviewees from further afield. For all locations, however, the visit rate appears to reach a steady, low level by 6km, and for some of the locations with limited parking, such as St. Peters, visit rates reach a low level by around 2km from the survey point.

⁷ Derived using UK postcode data from 2017 giving the number of residential properties per postcode

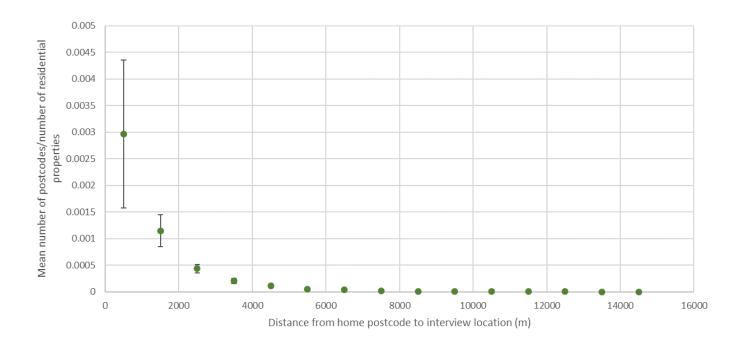


Figure 13: Mean number of interviewee postcodes/number of residential properties and distance from the survey point. Error bars ± 1 S.E.

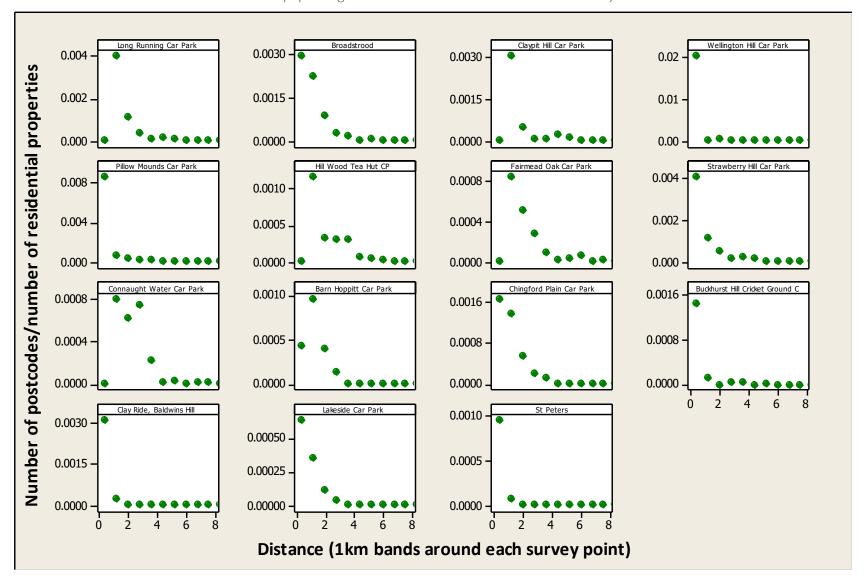


Figure 14: Interviewee postcodes/number of residential properties plotted for 1km bands and separately for each survey point. Note variation in y axis

4. Discussion

Introduction

4.1 The results provide a snapshot of recreation use and access patterns across Epping Forest. The survey included a range of types of access points, including the main 'honey-pot' car-parks, a range of other car-parks and some access points with no dedicated car-park. The results provide information that can be used to underpin a strategy relating to local development and impacts from recreation. In this section of the report we consider limitations to the survey and implications in terms of a strategy.

Limitations

- 4.2 The survey is a snapshot in time, with fieldwork taking place during October and November. While survey work did in part coincide with the half-term period, the weather was generally grey and some days were cold and wet. Clearly survey work during other times of year, such as the summer, may show different patterns of use, perhaps involving people travelling further or visiting for longer.
- 4.3 Survey work was focussed at a selection of access points. These were carefully chosen so as to be representative of the range of access opportunities at Epping Forest. We ensured the sample included the more honey-pot sites (main car-parks with visitor centres, cafes etc.) as well as more informal, local foot-only access points. The sampled survey points also captured a good geographic spread. This ensures the data can be scaled up or filtered to particular types of location relatively easily. The survey was however not designed to gather accurate information on visitor numbers and the overall totals of people visiting the SAC.
- The comparison between the tally count data and the interview data is a useful check on the sampling approach. Interviewees were selected at random, however activities that involve people lingering at access points or activities relatively evenly spread across the day are potentially more likely to be over sampled. Furthermore, at relatively quiet sites, the majority of people passing the surveyor are likely to be interviewed whereas at busy sites, only a small proportion can be interviewed. If there is a marked difference in activity types between busy and quiet locations, then it is the activities that take place at quiet survey locations that may be over-sampled. There is little that can be done to resolve such issues. Comparing the tally data with the interview data does reveal some differences, for example the tally data recorded an average of 0.5 dogs per group yet among the people interviewed there were, on average, 0.9 dogs per group. This would suggest that to some extent dog walkers may feature more within the interviews than would be expected from the counts.

4.5 Question 15 related to the Walthamstow Wetlands site. That site was only just opened when this visitor survey was conducted and as such it is possible that the interviewees who responded that they may visit the wetlands site instead of Epping Forest may not be fully aware of the facilities and experience Walthamstow Wetlands provides. For example, 19% of all the dog walkers interviewed indicated they might visit the wetlands instead, yet no dogs are allowed at Walthamstow Wetlands. Further survey work is therefore necessary, once access patterns are established at Walthamstow Wetlands, to understand how that site may draw access from Epping Forest.

Implications of the results

- 4.6 This report was not commissioned to provide an ecological assessment of the impacts of recreation and the fieldwork does not consider how recreation use may be affecting the SAC. Instead the work was designed to understand recreation use and the links with local development.
- 4.7 In order to develop a strategy, it will be necessary to consider the range of impacts from recreation in detail and relate those impacts to current recreation use and the potential additional use from new development. The data set out here could be used to make predictions of future use at Epping Forest, following new development, but this would require data to be collated on future housing levels (for example within current local plans), combining allocations and likely windfall across a wide area and multiple local authorities. Any estimates of future use would also only apply to the surveyed access points rather than Epping Forest as a whole, although it may be possible to use other survey data on visitor numbers to then extrapolate changes in overall visitor use.
- It is clear from the survey results that Epping Forest has a considerable draw for recreation use and fulfils an important role in providing a greenspace for recreation. The question asking which one location interviewees would have visited if they could not visit the place where interviewed highlighted a wide range of alternative sites; these place Epping Forest's role as a greenspace into context. The wide geographic spread of alternatives and inclusion (by mountain bikers) of sites such as Cannock Chase and Thetford Forest indicates a role at least at a regional level. Many visitors were however also very local and for many Epping Forest is the greenspace that is closest to home and provides their most convenient location for access.
- 4.9 We have included a range of maps within the report showing different lines around postcode data, in particular the convex hulls show the catchment for different survey locations. It is interesting to note these all have a considerable overlap, suggesting that residents of the same areas go to different parts of Epping Forest.

4.10 The results provide information on potential mitigation measures, and these could be used to help inform options for mitigation measures to resolve impacts from recreation linked to new housing.

5. References

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Appendix 1: Questionnaire



Good morning/afternoon. I am conducting a visitor survey on behalf of the Corporation of London, who are interested in gathering visitor's views about Epping Forest and how they use it. Can you spare me a few minutes please?

	n a short trip/short visit & staying away from home with friends or family if no
	taying away from home, e.g. second home, mobile home or on holiday
	the above, How would you describe your visit today?
urther detail	is .
	main activity you are undertaking today? Tick closest answer. Do not le response only.
Og walkin	
Walking	
_	ower walking / running
Outing with	
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	cenery / fresh air
Photograpi	
Meeting up	
Picnic	
Horse ridin	10
Boat hire/b	-
	fe/visitor centre
) Fitness/for	
Other, plea	ase detail;
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	ast year, roughly how often have you visited Epping Forest? Tick gle response only. Only prompt if interviewee struggles.
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C / Other, please detail	
Further details:	

Now I'd like to ask you about your route today. looking at the area shown on this map, can you show me where you started your visit today, the finish point and your route please. Probe to ensure route is accurately documented. Use \underline{P} to indicate where the visitor parked, \underline{E} to indicate the start point and \underline{X} to indicate the exit. Mark the route with a line; a solid line for the actual route and a dotted line for the expected or remaining route.

29	Is / was your route today the normal length when you visit here for [insert given activity]? Tick closest answer, do not prompt. Single response only.
	Yes, normal
	Much longer than normal
	Much shorter than normal
	Not sure / no typical visit
	○ First visit
Q10	What, if anything, influenced your choice of route here today? Tick closest answers, do not prompt. Multiple responses ok.
	Weather
	☐ Daylight
	Time
	Other users (avoiding crowds etc)
	Group members (eg kids, less able)
	Muddy tracks / paths
	Followed a marked trail
	Previous knowledge of area / experience
	Activity undertaken (eg presence of dog)
	Interpretation / leaflets / promotion
	☐ Viewpoint / Feature
	Other, please detail
	Further details:

Q11 Why did you choose to visit this specific location today, rather than another local site? Tick all responses given by visitor in the 'other' column. Do not prompt, tick closest answers. Then ask Which single reason would you say had the most influence over your choice of site to visit today? Tick only one main reason. Use text box for answers that cannot be categorised and for further information.

	Other	Main
Don't know / others in party chose	0	0
Close to home	0	0
No need to use car	0	0
Quick & easy travel route	0	0
Good / easy parking	0	0
Particular facilities	0	0
Refreshments / cafe / pub	0	0
Choice of routes	0	0
Feels safe here	0	0
Quiet, with no traffic noise	0	0
Not many people	0	0
Scenery / variety of views	0	0
Rural feel / wild landscape	0	0
Particular wildlife interest (including trees)	0	0
Habit/familiarity	0	0
Good for dog / dog enjoys it	0	0
Ability to let dog off lead	0	0
Closest place to take dog	0	0
Closest place to let dog safely off lead	0	0
Appropriate place for activity	0	0
Suitability of area in given weather conditions	0	0
Presence of water	0	0
Other, please detail Further details:	0	0

I would now like to ask about other local sites that you visit for [given activity].

	,
Q12	What proportion of your weekly visits for [given activity] take place at Epping Forest compared to other sites. Can you give a rough percentage? Do not prompt
	All take place here
	75% or more
	50-74%
	25-49%
	less than 25%
	Not sure/don't know/first visit
Q13	Which one location would you have visited instead today if you could not visit here? Do not prompt, tick closest answer.
	○ Not sure/Don't know
	Nowhere/wouldn't have visited anywhere
	Site Named
	Record site name:
	necord site name.
Q14	If Lee Valley Regional Park not named above, Have you ever visited Lee Valley Regional Park?
	Yes
	Not sure/don't know/perhaps
	○ No
Q15	Now that the Walthamstow Wetlands facility has opened would you be likely to visit that facility instead of Epping Forest? Yes
	Not sure/don't know/perhaps
	○ No
Q16	If there was a new area created near to Epping Forest that provided an expansive area of countryside for people to visit, would you be likely to go there? Yes
	Not sure/don't know/perhaps
	○ No
Q17	If such a new site were created to provide an alternative location for [name activity], what features would you want to see there? Multiple responses ok. Prompt if necessary.
	No features / nothing
	☐ Don't know
	More dog bins
	Safe for dogs
	Ability to let dog off lead
	No requirement to pick up after dog
	Requirement to pick up after dog
	Better path surfacing / path network
	More litter bins
	Refreshments (cafe, pub etc)
	☐ Visitor centre
	Toilets
	Measures in place to control other users
	Better or easier parking facilities
	Free parking
	Closer to home
	Cycle trails
	Dedicated routes for horse riding
	More attractive surroundings
	Other, please detail
	Further details:

I'd now like to ask you about the visitor facilities at Epping Forest. Q18 Have you visited one of the visitor centres at Epping Forest, such as at High Beech or the View, in the last year? Tick one, do not prompt. O Yes O No O Don't know Q19 Have you spoken to one of the rangers or other Corporation of London staff in the last year? Tick one, do not prompt. O Yes O No O Don't know O20 Are there any changes you would like to see here with regards to how this area is managed for recreation and people? Do not give options Do you have any further comments or general feedback about your visit and access to this area? Q22 Finally, to identify which areas people travel from to visit Epping Forest, what is your full home postcode? This is an important piece of information, please make every effort to record correctly. Q23 If visitor is unable or refuses to give postcode: What is the name of the town or village where you live? Q24 If visitor is on holiday ask: Which town / village are you staying in?

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

Q25	TO BE COMPLETED AFTER INTERVIEW FINISHED.
	Surveyor initials
	Survey location code
	Map Reference Number
	Gender of respondent
	Total number in interviewed group
	Total males
	Total females
	Total minors (under 18)
	Total number of dogs
	Number of dogs seen off lead
Q26	Did the interviewee struggle with answering questions because English was not their first language? Tick yes if you feel this may have influenced the responses.
	Yes, interviewee struggled because English was not their first language
Q27	Surveyor comments. Note anything that may be relevant to the survey, including any changes to the survey entry that are necessary, eg typos/mistakes/changes to answers/additional information.
Q27	changes to the survey entry that are necessary, eg typos/mistakes/changes to
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Appendix 2: Free text comments relating to choice of route

The table below lists all the free text comments recorded for Q10, what if anything influenced your choice of route today. Responses are listed in alphabetical order. Free text responses were recorded by surveyors on tablets in the field and while transcribed as closely as possible, in many cases the responses are in note form and may be a summary of the key points made where a lengthy verbal response was given. Categorised responses are given in the main body of the report.

Ability
Ability
Activity gets heart rate going
Age of dog
Avoid naked men (it happens) so stick to main areas
Avoid roads
Avoiding bikes so went via a no bike zone
Avoiding hills
Away from the road
Bad knees
Clarrying baby
Chance visit
Change between 3 walks
Change it up
Change the route from the norm
Change, different routes each time
Changing it up
Changing the route
Chose a path and followed it
Close to local baker
Convenient and parking
Daughter disabled so need to keep to the accessible tracks
Decent paths surfaces
Depends How energetic we felt.
Dog friendly pub
Dog ill
Dogs selection
Dropping son off near by
Dryish underfoot
Ducks
En route to a pub
En route to cafe
En route to Debden
Exploring

Exploring Exploring Exploring Exploring trails Favourite areas of the forest Feed the ducks Feeling safe taking safe routes Flat area to play football Flat level paths Flat terrain Follow dog
Exploring Exploring trails Exploring trails Favourite areas of the forest Feed the ducks Feeling safe taking safe routes Flat area to play football Flat level paths Flat terrain
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Feeling safe taking safe routes Flat area to play football Flat level paths Flat terrain
Flat area to play football Flat level paths Flat terrain
Flat level paths Flat terrain
Flat terrain
Follow his nose
Follow the dogs
Follow the dogs
Followed bridle path
Following areas with clearings to enjoy sun
For a change
Freedom to go so will choose while riding
Fresh air
Fresh air
Getting to know the forest so exploring Going to Butlers Retreat
Good paths for wet weather Got lost
Ground conditions
Ground conditions - dry
Guessing the route
Habit
Habit
Had to change car park due to gate closure
Health
Health, knee problem
History
How we feel
Internet. Ability to travel by train. Used 'walks and ways' website
Just a wander
Just exploring
Just followed footpaths
Just how I feel at time
Just wandered
Just wandering
Let the dog take the lead
Like to explore the forest

Like to use the tea hut and watch wildlife Like to vary routes Limited by bridleways Litter picking Makes it up as he goes Meeting point for sunday run with 'Loughton runners'. Mixes up routes Most direct route from Loughton to Chingford Need access to a pond. Nice long route Nicest route to supermarket Old dog Old dog On break from work On way to work Open playing area, kicking ball around with child Over social dogs so need to be careful Physical ability Playing games Pregnant Quick lunch at the butlers retreat Random Random Random Random Recent photography Refreshments at pub, and picking up a car in Epping Refreshments at visitor centre Refreshments kiosk Relatively dry tracks Restaurant Revisiting after a long time Scenery and n traffic See the autumn leaves Set walk for health exercise, need level terrain Slightly random Somewhere to buy lunch - restaurant Stay by lake Stayed on paths in the open Staying away from road Staying close to home Stick to same route Takes different paths each day Terrain

To meet friend and good hills
To see the trees
To use hills for exercise
Try different routes on each visit
Trying out an off-road bicycle route through the forest
Trying to deal with stray dogs
Variety
Visiting the tea hut
Walk before work
Wandering
Wanted to go down the hill
When the gates open
Wife broke wrist
Wildlife

Appendix 3: Free text comments relating to features for alternative sites

The table below lists all the free text comments recorded for Q17, recording features the interviewee would like to see at an alternative location. Responses are listed in alphabetical order. Free text responses were recorded by surveyors on tablets in the field and while transcribed as closely as possible, in many cases the responses are in note form and may be a summary of the key points made where a lengthy verbal response was given. Categorised responses are given in the main body of the report.

A lot of space

A natural area

A natural area

A natural space, no urban influences

A range of habitats, a hide, wildlife conservation e.g. hibernation sites for reptiles

Accessibility, more disabled friendly, natural area

Activities for kids to take niece who's a year old eg swings

Activities to do

Actually more into wildlife photography the crawling is secondary

Area similar to epping forest

Areas just for dog walks no bikes or horses

As it is here

As long as it's natural

As natural as possible

As natural as possible for as much flora and fauna as possible

Attractive area with views and mixed habitats

Attractive scenery, woods, rivers, fields, a mixture. As natural as possible, not a country park

Away from a road or a barrier so dogs can't run out and get hit. Parking where the gates aren't locked

Away from cars

Away from road and wild

Beaches and jetties towards water

Big open area

Big space

Big space, bins in middle of park

Bridle ways

Bridleways for cyclists, something educational, car parking but small car parks

Bridleways, good variety of wildlife. Natural open space

Can't replace this site

Car parking accessible routes so not muddy in winter or wet weather. trees, water.

Child friendly. Some well surfaced paths for buggies

Child play area, natural and water

Children friendly

Children's activities, buggy friendly

Clean pond

Climbing facilities and picnic tables

Close to home

Close to home as don't drive

close to tube/train

Countryside

Countryside

Cycle paths that are marked for places you can and can't go

cycling routes would be great

Dedicated routes for mountain biking, mountain bike centre say closer to Epping to take pressure off this area. woodland

Depends on convenience and what it might offer, stocked lakes for fishing

Depends on other users as youths with dangerous dogs go to some site. Presence of clean running water $\frac{1}{2}$

Depends where it is.

Depends where it is. Near Woodford, would probably use it.

Disability paths as mum disabled cafe mixture of terrains and habitats

Disabled access

Diversity of habitats

Dog and children friendly, accessible

Dog poo bag dispenser

Dog zones for dogs and no dog

Drinking water waymarking

Eco friendly natural resources use

Expansive and quiet

Facilities for children, within walking distance, sense of space, tranquil

Family friendly area, outdoor sports

Family orientated, lake for sailing

Fenced in for dogs

Fitness equipment

Forest

Gated area for the dog to run without being able to run away and get lost

Geared up for cycling

Good choice of routes, natural area, avoid features of a country park - too contrived.

Good cycling trails, go ape type facilities

Good for wildlife

Good natural area, lots of interest for children

Good network of paths, lots of interest, varying scenery

Good path network

Good path network, interesting places to visit

Good signage

Good surfaces for child bikes, something for children but not playparks or similar urban facilities.

Good walking in interesting place, woodland, maybe fields, a mixture

Good wheelchair access

Green not urban some hard paths for wet conditions woods

Information board

Interesting for children.

It would need to be unique, something to see

Keep it natural

Keep it natural but available for cycling and walking

Keep it natural, not keen on man made tracks and trails

Kept natural

Kid play areas

Lake for sailing and rowing

Lake, things for children to do

Lakes and ponds. Like to see the ducks and moorhens

Large area of open ground

Large area to avoid people

Large wet area to attract the birds

Laser sailing, something for families

Left natural

Left to be natural and wild

Left wild

Less cars long walks without roads

Less cyclists

Less people and open space

Level walking routes with good dry surfaces. Mixture of habitats.

Lighted footpath

Limit cyclists to cycle trails, prevent them from using footpaths

Long and interesting walks

Lots of space since of safety

Make use of available leave to creatives

Maps

Mixed habitats

Mixture of habitats

Mixture of habitats

Mixture of habitats, woodland, fields

More family orientated, outdoor activities.

More for young children. Need the wildness of epping forest

More information for adults. Mixed habitats

More like a park, with flowers etc, different alternative to here

More of the same. Interesting natural history

More play area for young children around 7 years of age, benches

Mountain bike hills

Mountain bike trail centre, armoured trails resistant to erosion. Could charge a fee. Would be very popular

Mountain biking area

Much same as here forest trails etc

Must be a natural environment

Must be an interesting place, not particularly sophisticated requirements

Natural

Natural

Natural

Natural

Natural

Natural

Natural (a copy of Epping Forest)

Natural and bird hides

Natural and quiet

Natural area

Natural area, lake or water feature, relaxing place, close to home, open grass land to contrast with rhe forest

Natural area.

Natural area. Mixed habitats

Natural as possible, mixture of habitats

Natural aspect and water

Natural countryside. Public transport access

Natural environment

Natural environment

Natural environment like here

Natural features

Natural feel

Natural forest open access woodland like Epping forest

Natural full of wildlife

Natural open space

Natural open space Natural place for kid to play Natural scene, benches Natural terrain Natural wild Natural wildlife Natural, water Naturally play space Naturalness. Nice cafe, natural area, ponds Nice views, things to do for children No bangs from bird scarers or shooting, a range of natural surroundings and somewhere for dog to swim No bikes as they spook the horse No picnic areas etc honey pot areas where horses get distracted by the horse riding routes. No rubbish, litter, variety of habitats Not man made trails, a natural site Only if it includes forest, quiet Only of people respect the forest. Open access and wild Open and natural Open area Open area away from traffic Open forest Open ground Open ground and benches Open land Open space Open space and wood Open space and woodland Open space away from roads Open space to play and wildlife Open space to play with dog Opportunity of providing activities for all sorts of users. Outdoor swimming but wild and natural. Decent cafe Peaceful natural and good scenery Picnic tables Place for kids to play Place for kids to play Place for kids to play eg play ground Place for the kids to play in a natural setting Play for the kids to play and explore Pleasant area to visit Presence of water Presence of water Quite and natural Rich in Wildlife Route orientation, natural area Same as here natural habitat Same as it is here really Sculpture etc for kids Seating Seating Seating Seating, family activities

Seats

Seats

Seats

Seats, no shops

Seats, trees, water

Sense of safety and space for dog to run

Separate area for cyclists, as they can be dangerous and discourteous

Should be as natural as possible.

Should offer a mixture of possible activities from mountain biking to horse riding

Signs for walking routes

Similar to here

Similar to the forest but fewer roads crossing the area

Some areas should protected from mountain bikes so put in dedicated cycle trails to limit damage.

Damaging archaeology

Something for children

Something for children pushchair friendly.

Something for children, learning centre

Something for children, playground

something for kids

Something for the child to do eg feeding ducks, swings

Something of interest for children

Something of interest, not just fields. Mixture of habitats and terrain

Something similar to what we have here, maybe more open space

Somewhere for the kids to play

Somewhere quiet and for dogs and children

Swings for kids; good for dogs

Swings maybe

Tables, routes walks

Themed walks for children

Things to do with children

Trees

Trees

Unlikely to use because would be further from home

Variable habitats

Variety of habitats

Variety of habitats, mixture of paths, large area

Variety of terrain, woodland, fields, undulating, good views

Varied habitats that would make a change from the forest, provide an alternative.

Viewing area for birds, water

Views, not urban features i.e. Playgrounds, theme park

Want it untouched forest

Want to stick to what they know

Wants it to link to Epping Forest and other sites (green link)

Water

Water

Water as dog likes it

Water body for dog and natural landscape

Water but like it here with open space

Water for wild fowl and trees

Water fountains

Water wild

Water, natural, space to picnic

Waterbody bird life good mix of habitats woodland to wetland

Waymarked cycle trails like thetford forest.

Wild life and interactive wildlife unbuilt up Wild life and natural Wilderness Wildlife Wildlife Wildlife and trees Wildlife and trees Wildlife birds Wildness Within walking distance from home, more wildlife Wooded areas, something for children to play and discover Woodland Woodland Woodland Woodland Woodland feel Woodland play ground, interactive museum all natural, play ground Woodland trails and open areas for almost ne time and so dog can play Would have to be an interesting area with variation. Somewhere and something everyone can enjoy Wouldn't need to go elsewhere. This is fine You can't create a forest overnight. Daft idea