Estimating visitor and visit numbers to woodlands

Liz O'Brien & Jake Morris

2010

Contents

1. Introduction

This summary sets out the different methods that have and can be used by forest managers and practitioners to estimate visitor, visit and total numbers of visits to woodlands. This document builds on guidance on visitor monitoring produced by the Forestry Commission Economic and Statistics Group which provides important and useful information (FC, 2009a).

There are a range of methods that have and are being used to estimate visitor, visit and total visit numbers. However, accurate estimates are either notoriously difficult or expensive to obtain, not least because publicly accessible woodlands tend to have multiple formal and informal entry points where visitors can enter, often at all hours of the day and on any day of the week. As such, counting people on-site presents a number of practical challenges. Estimates of numbers can be obtained by surveying a representative sample of people living within range of a given site; this is not only expensive but also requires the careful definition of a site's catchment area. For some sites, few visitors may live locally (e.g. tourists may visit from long distances) and therefore catchment surveys will not be appropriate. Therefore, it must be stressed that there is no perfect method for measuring visitor and visit numbers – all methods will only provide estimates. In this document we outline the advantages and disadvantages of different approaches. However, we purposefully leave the selection of methods to operational staff and site managers who can make informed choices based on their knowledge of a given site, its visitors and the local context.

From the outset it is important to highlight the distinction between visitor, visit, and total visit numbers. Visitor numbers focus on how many individuals visit a woodland over a given time period, whilst visit numbers refers to the quantity of individual visits. Visit numbers are likely to be higher than visitor numbers for any given site because some people will visit repeatedly over a given period of time e.g. dog walkers. Total visit numbers is a combination of visitor numbers and the frequency of visits within a given time period (Table 1). As part of a visitor monitoring programme it will be important to collect data not only on the numbers of visitors but also on the characteristics of those visitors and the types of activities they undertake (Kajala, 2007).

Table 1: Visitor and visit numbers

Visitor, visit and total visit numbers	Definition and questions
Visitor numbers	Definition: Numbers of people who visit forest/s. You will need to ask people if they have visited woods/this wood within the past month, year (depending on the time scale you are interested in) etc.
Visit numbers	Definition: Frequency of people's visits to forest/s. You will need to ask people how often they visit – every day, every week, every

Visitor, visit and total visit numbers	Definition and questions
	month etc.
Total visit numbers	Definition: A combination of the number of visitors and the frequency of their visits provides information on the total number of visits within a specified time frame e.g. year/month. If using population or catchment survey data, you will need to multiply the number of visitors by the number of times they visit to get total visit number within a given time frame. Estimates of total visit numbers can also be derived from data from car or people counters combined with manual observations.

This review explores the importance of gathering data on visitor and visit numbers, the methods that can and have been used, and provides some examples of studies that have sought to produce accurate estimates, as well as gathering other relevant data on visitors. Recommendations are offered for some methods, albeit with some cautionary notes covering data interpretation.

2. Why do we want to know visitor and visit numbers?

The United Kingdom (UK) government and the devolved administrations in Wales and Scotland have each developed woodland and forest strategies and implementation plans, setting out the aims, objectives and key delivery mechanisms for policy and management over the next ten years (Scottish Government, 2006; Defra, 2007; Welsh Assembly Government, 2009). All three strategies identify increases in woodland use as a principal aim, establishing increases in visit and visitor numbers as key measures of performance. Policy makers often also need an overall view of numbers at a national or regional level so that they can make a case for highlighting how people use and enjoy woodlands and to show where potential future investment might be needed.

Forestry policy and management in the UK is also bound by equality and diversity legislation and the Forestry Commission (FC) is legally obliged to provide equality of access for all, with a particular focus on nine so-called 'Protected Characteristics'; age, disability, race, gender (or sex), sexual orientation, religion/belief, gender reassignment, pregnancy & maternity, marriage & civil partnership (HMSO 2010). As such, there is an increasing drive not just to obtain accurate estimates of visit and visitor numbers, but also to analyse the social make-up of those numbers. The ability to demonstrate that these aspects of diversity are well represented amongst woodland visitors will become increasingly important to the FC and its partners.

Knowing visitor, visit and total visit numbers is also important for staff operating at a forest management level. Data gathering can highlight what days of the week and potentially what seasons of the year people use particular woodlands. Predicting times of heavy use can inform appropriate levels of staff and resource deployment and strategies can be introduced to try and encourage users to visit throughout the year. Furthermore, assessing trends and changes in numbers of people over time can be used to evaluate a particular project, investment or marketing campaign by showing whether they have been effective in attracting more people to visit. Visit, visitor and total visit numbers are an important component of scientific evidence about the benefits of woodlands and forests to society. National surveys can provide useful data on overall outdoor recreation visits and visitors (Box 1).

One of the ways of quantifying these benefits is to estimate the proportion of a given population who have visited woods over a given time period and the total number of visits in that period. Measuring visitor and visit numbers as an indicator of social benefit has certain limitations as it assumes that all visits by all people have the same value to each individual even though there is no explicit or implicit indication of visit quality. However, tracking trends in visit and visitor numbers over time is often used as a key performance indicator for the forestry sector in relation to the delivery of social benefit.

Box 1: National surveys

At a Great Britain level there are 3 key national surveys concerned with monitoring outdoor recreation which provide useful national pictures of activity and use. These include the:

Scottish Recreation Survey – this is a 10 year programme of monitoring participation in, and attitudes to, outdoor recreation amongst the Scottish adult population. It is run by Scottish Natural Heritage and results are available from 2003 onwards. http://www.snh.org.uk/publications/on-line/comm-reports/srs_10.asp

Welsh Outdoor Recreation Survey – measures participation in outdoor recreation amongst residents in Wales and is commissioned by the Countryside Council for Wales and FC Wales. Results from 2008 are available. http://www.ccw.gov.uk/enjoying-the-country/welshoutdoor-recreation-survey.aspx

Monitoring engagement in the natural environment survey (MENE) – is run in conjunction with the Department for Environment, Food and Rural Affairs, Natural England and FC England. It started in 2008/9 and will provide data on visits to natural environments at a regional and national level. The first year's results are available at: http://www.naturalengland.org.uk/ourwork/enjoying/research/monitor/default.aspx

If focusing on particular site/s then it will be necessary to tailor the monitoring of visitor and visit numbers to the characteristics of the site/s in question. You could think about classifying forest sites into three different groupings, for example:

1. High visitor volume sites e.g. those that account for about 80-100% of FC visitors in the district/region
2. Medium visitor volume sites e.g. those that account for over half of FC visitors in the district/region
3. Low visitor volume sites e.g. those with approximately 0-20% of FC visitors in the district/region.

If a site receives specific funding for a project e.g. Lottery funding then a certain proportion of that funding can be allocated to the monitoring and evaluation of the project's impacts. In these cases, changes in visitor, visit and total visit numbers over time are often monitored as part of a much wider programme of data gathering and analysis (for an example, see section 4.4 for Forest Research's evaluation of the Active England projects).

3. What methods can be used to estimate and monitor numbers?

Surveys, observation and counters can be used to estimate visitor, visit and total visit numbers to a site, group of sites, or to woodlands and forests within a defined geographical area (Table 2). Other relevant operational data can provide useful information on specific groups of forest users.

Table 2: Methods for collecting data on visitor, visit and total visit numbers

Methods used	Visitor numbers	Visit numbers (frequency)	Total visit numbers
Population survey -sample of all people of a particular population e.g. a county, region, country etc. Will not include anyone outside the specified population chosen.	✔	✔	✔
Catchment survey -sample of population within a given distance of a site. Will only cover those living within the catchment not visitors who visit from outside of the catchment area.	✔	✔	✔
Site survey - will include question on how frequently people visit the site.	Cannot provide estimates of overall visitor numbers.	✔	Cannot provide estimate of visitor numbers therefore

Methods used	Visitor numbers	Visit numbers (frequency)	Total visit numbers
			cannot provide estimates of total visit numbers.
Operational data - all visitors • Counter data: people/car etc. (counts each body past the counter; .e.g. this could be one person passing by 5 times or 5 different people. It is not possible to say which) • Manual observations by site staff. • Car parking charges (need to establish how many people on average there are in each car) • Site charges (these may be charges per person or per car)	Cannot distinguish between visitors and how often they visit	Cannot distinguish between visits and visitors	✔
Operational data – specific groups Relevant supporting operational data (this is data collected at some sites, usually with facilities, through a variety of activities) • season tickets (for parking) • membership schemes. • concession schemes (aimed at particular groups such as those in deprived area) • permissions system (groups who seek permission to organise activities at particular sites) • event numbers (number of events and number of people attending events can be counted) • equipment hire e.g. bike hire • education service activities with school children	✔ *Can only provide estimates of visitor numbers for specific groups (e.g. those attending events).	Cannot provide information about frequency of visits	Cannot estimate total visit numbers as can only provide estimates of visitor numbers from specific groups (e.g. those arriving by car, those participating in particular activities).

It is important to note the distinction between what are sometimes referred to as 'informal' and 'formal' visits to woodlands. Informal visits are made by individuals or small groups who come to a woodland site to take part in unorganised activities such as walking or cycling, whereas formal visits involve groups of people who come to a site to participate in organised activities, such as health walks and education events. Formal

visits can either be self organised, in which case the group are encouraged to seek formal permission to use the site, or they can be organised by FC ranger staff or staff from partner organisations. The distinction is important because estimating formal and informal visit numbers often requires different data gathering methods.

3.1 Surveys

Surveys using questionnaires are a popular method of trying to estimate visitor, visit and total visit numbers (see FC 2009b 'Running statistical surveys – a guide to best practice' for more detailed information). Surveys can be repeated to explore changes over time. Questions used in surveys need to be carefully chosen. There are two main survey approaches: site surveys and population level surveys which can be undertaken by using a variety of methods (Table 3). The key differences between these approaches are that site surveys take place *in-situ* on an individual site or group of sites, whilst population level surveys take place *ex-situ* by telephone, household interview or postal survey and involve a sample of the national, regional or local population.

3.1.1 Population level surveys

These surveys can be administered to a representative sample of:
- A regional or national population e.g. Wales or south east England.
- A 'catchment' population – i.e. the people living within a defined distance of an individual woodland or group of woods e.g. 4Km (see appendix 7.1 for catchment surveying protocol).

A key benefit of population surveys at whatever level is that they will include people who do not use woodlands as well as those who do. It can be extremely useful to gain a better understanding of some of the barriers to accessing and enjoying woodlands by asking specific questions of those who do not visit woods or only visit infrequently.

Population surveys can be postal, administered by telephone, or can involve interviewing individuals in their home (so-called 'household' surveys). Omnibus surveys are surveys that are run regularly (often every month) by companies with expertise in this area. Omnibus surveys usually consist of questions covering a range of topics and organisations such as FC can effectively buy space in the survey to add their own questions. The advantage of this approach is that a standardised sampling strategy is already in place so that respondents are representative of a particular population, and these surveys are cheaper than other stand alone surveys. Furthermore, the company running the survey will typically offer to carry out data analysis as well as data collection. A profile of woodland visitors can also be obtained through the inclusion of socio-demographic questions. If representative samples are used, if respondents are asked about visit frequency, and if the total adult population (aged 16+yrs) for the relevant region or country is known, an estimate can be made of the total number of visitors and the total number of visits to woodlands within a given time period (see 4.2 for an example of this approach).

Table 3: Advantages and disadvantages of different survey methods

Survey method	Advantages	Disadvantages
Telephone	Personal vocal contact with respondents. Interviewer can clarify questions or misunderstandings.	Cannot use maps or photos for illustration. Response rates may be lower than for household or site surveys. Show cards cannot be provided so questions need to have options that are easy to remember.
Household	Face to face contact with the interviewer allowing personal contact which can increase response rates. Computer assisted approaches are often used which ensures greater survey accuracy. These surveys can usually be more detailed and a bit longer than other survey approaches.	Resource intensive and expensive.
Postal	People can fill in forms when they want. Cheaper approach as no interviewer needed.	Often low response rates as people forget to complete or throw survey away. Introduces self-selection bias that can be minimised by weighting the sample.
Internet	Easy to set up with on-line survey approaches available e.g. survey monkey. Can be easy for respondents to complete. Cheaper as no interviewer needed. Can use panels set up by Market Research companies to get a more representative (quota) sample.	There can be limitations with the formatting of questionnaires. Will not reach those without access to a computer. If a link to the survey is made from an organisation's website then only those who visit the website will have the chance of getting involved. Introduces self-selection bias that can be minimised by weighting the sample.
Email	Can gain responses reasonably quickly. Little cost involved. You can attach pictures if needed.	Need a list of email addresses. People may dislike receiving unsolicited emails. Will only reach those with an email address.
Site – Interviewer administered	Face to face contact with the interviewer allowing personal contact which can increase response rates. Can provide staff with an opportunity to make contact with visitors.	Site crowding can bias the sample as on busy days a smaller proportion of the visitors are sampled, however this can be corrected by weighting the sample. No information provided on non site users.
Site – self administered	The survey can be taken away and completed. Respondents may feel more able to comment when not watched or asked by an interviewer. Good way to get information on visitors to a	Response rate may be lower than for an interviewer administered questionnaire. If the respondent has any confusion about the questions they have no one to ask for

Survey method	Advantages	Disadvantages
	specific site. Cheaper as no interviewer needed.	clarification. Introduces self-selection bias that can be minimised by weighting the sample. No information on non site users.

Internet-based surveys are becoming increasingly popular, primarily because they are relatively cheap to administer. However, they tend to introduce an element of bias because responses will be limited to those who were interested enough to complete the survey (self-selection bias), those with access to the internet, or those who visit the host website (e.g. FC website). As such, it can be difficult to gain a representative sample of a given population through an internet survey.

3.1.2 Site surveys

These are surveys that are carried out at a particular woodland site or group of sites. They are useful for providing a range of information about a site, including who is using it, when, and for what kinds of activity. FC staff, students or a contractor may administer the survey, which is usually delivered face to face at different points within the forest. These surveys are usually used to gather visitor profile data. Questions relating to quality of experience and to the benefits derived by visitors can be included, thus providing important data on a site's performance in relation to given social objectives (see Appendix 7.2: Protocol for on site surveying).

3.1.3 What needs to be considered when taking these approaches?

For both population and site surveys a range of issues such as questionnaire design, sampling strategy, administration and data input and analysis need to be considered.

Questionnaire design

Development of an appropriately designed questionnaire for a survey, whether undertaken at a population or site level, is crucial; questions need to be clear, easily understood and unambiguous. Ensure that the FC Economics and Statistics website is checked as many of the surveys organised by the FC are outlined here with details of the questions asked and the sampling approach taken (see: http://www.forestry.gov.uk/website/forestry.nsf/byunique/infd-7aqd6f). If you want to compare your data to other sites, then using some of the same questions is advised (see example 4.6 for the Quality of Experience surveys which have been run every year since 2003 at selected forest sites in England and Wales). An example is given in Box 2 of a potential issue to consider concerning frequency of visits. It is advisable to pilot questions with a small number of people before running the survey to expose any questions that are ambiguous or might cause confusion. Even asking the apparently

simple question 'How often do you visit woodland', for example, can lead to different responses as people may have different definitions of what qualifies as a wood.

Think about structuring your questionnaire, for example you might focus on the following:

- What motivated them to visit – why did they visit, what benefits did they derive.
- About their visit – how long was their visit, how often do they visit, what they did, who did they visited with, have they visited before.
- About your visitor – age, gender, employment status, ethnicity.

Demographic questions about age, ethnicity etc. are generally positioned at the end of a questionnaire; while questions about visits to a site and activities are placed at the beginning. Keep your questionnaire short and to the point, ten or fifteen minutes to complete the questionnaire (face to face on site, by phone, or at a respondent's house) is a reasonable length of time. Any longer, then people may refuse to participate, or they may get frustrated and rush their responses, making the data less reliable. Start the questionnaire with an introduction/welcome that says who you are and what information you require. Make the layout of your questionnaire attractive and easy to read. Reassure people of anonymity stating that data will be aggregated and therefore no individual will be able to be identified.

Box 2: Question and analysis issue example

The Public Opinion Survey of Forestry questionnaire (which is run on a biennial basis) asks people how frequently they visited woodlands in winter (March-October) and in summer (April-September) by the following categories:
- Several times per week
- Several times per month
- About once a month
- Less often
- Never

If using a question such as this and if you wanted to develop total visit numbers you would need to decide a standard for what 'several times per week' means e.g. twice a week, three times a week. See section 4.2 for an example of how the Forestry for People study approached this issue.

Sampling and sample size

It is important to choose an appropriate sampling strategy for any survey you undertake.

For a population survey (whether national, regional or catchment level) you will probably need to contract out the data collection to a market research organisation. These organisations will be able to advise on sampling, sample size and how representative samples can be achieved. This will often include a quota sample which incorporates a

range of people of different ages, sex and socio-economic status so that your sample reflects the social make-up of the wider population. The more you are interested in breaking down the data by specific groups, the larger the sample will need to be. Booster samples are regularly undertaken, for example, in national health surveys if more detail and information is required about particular groups of people, such as black and minority ethnic populations.

If carrying out a site survey then gaining information from site staff about who uses the woodland and when will be important in developing an appropriate sampling strategy. You will need to decide where in the forest data will be collected, at what time of day and on which days of the week (see section 7.2: Table 7). If there are multiple entry points into the forest then sampling a number of these will be necessary. For example, visitors should be interviewed not only in the car park, but also at other less formal entry points into the woodland. Ensure that you sample the early morning and evening dog walkers as well other visitors, and that you capture week day as well as weekend visitors.

The seasonal timing of data collection is also important. Ideally, surveying should be carried out in each month of the year to explore any seasonal change, but if this is not possible it is important to survey in spring / summer as well as autumn / winter. If carrying out a survey once a year, then data should be collected at the same time each survey year. The ideal of surveying at all times of the year needs to be balanced with the high costs per interview of surveying at locations and/or at times when no or very few visitors are likely to appear e.g. in winter.

It is important to consider the total size of the sample and how it is selected rather than the proportion of the total population represented by the sample. One hundred is considered a reasonable minimum sample size, for gathering information on the characteristics of visitors, if you are only looking to analyse responses across the total sample. 50 is the minimum sample size if you want to look at the responses given by certain sub-groups (e.g. retired visitors, female visitors). As a general rule of thumb, a 200-300 sample size would provide good quality data for a large scale FC site such as Alice Holt Forest or Bedgebury Forest. This is an indicative sample size for generating visitor characteristics, but not for visitor numbers.

To achieve a random sample of individuals all those who come past the survey point are potentially eligible to be interviewed. A good technique is to approach the next person you see after you have finished with the previous interview. If a group of people arrive together then the best approach is to ask the person with the next birthday to be the respondent. If you wanted to know about only women or people within a certain age group then a stratified sampling approach can be taken. A stratified sample is when a

given population is divided into sub-populations and often a random sample is taken from these sub-populations e.g. women aged 20-40.

Administrating the questionnaire

When administering any questionnaire the interviewer should introduce him/herself politely and explain what they are doing and why they want to find out the information. A friendly and supportive attitude (verbal or written) is important in motivating visitors to contribute. Tell them how long it will take to fill in the form. For site surveys, if the site is very busy the questionnaire can be given to visitors to complete themselves rather than the interviewer filling in the answers and this can be handed in to the visitor centre or at an agreed collection point. However this does change the survey method from an interviewer administered survey to a self administered one and response rates may be lower for self completion questionnaires (see example 4.6).

Cost and resources

The Market Research Society (http://www.mrs.org.uk/) provides information about surveys and companies that will undertake them. There is a research buyer's guide section of the website which provides names of companies accredited to carry out market research. If a site questionnaire takes approximately 10-15 minutes to administer then a data collector could probably complete about 20-25 questionnaires per day at a busy site but may not be able to do this at a quieter site. Contractors may charge a rate per day from approximately £250-£500 or they may charge a rate to reach a particular number of responses e.g. 300 completed for a site. National omnibus surveys tend to charge an amount per question e.g. approximately £400-500 (this price rises if the question is complicated or there are sub-questions or sub-categories within the question e.g. a list of the types of activities people might undertake in a forest). For example the Forestry for People survey in 2007 (of a representative sample of 1,000 adults in Scotland) cost approximately £11,000 plus VAT for 9 questions although this included a range of sub-categories within some questions. Sub-categories not only mean a questionnaire will take longer to complete but it will also take longer for data entry and analysis. Costs will change over time, so only approximate indications are given here. Costs can also be reduced if only a subset of respondents are asked a particular question e.g. only those who have visited woodland are asked a further question about what activities they undertake.

3.2 Operational data – all visitors

In selecting methods to count visits a clear goal is needed. Counting, observation and other similar approaches need to be systematic, and sources of error need to be recognised. Data can be collected continuously or divided into intervals on a continuous basis e.g. hourly or daily. Sites that are new, growing, or changing may need the more frequent scheduling of monitoring than older, more stable sites where change is more gradual.

A range of electronic and mechanical counting devices are available, or manual counting methods can be applied (see Table 5). Advice on installation of counters can be given by those organisations that supply suitable outdoor counters. Counters need to be dependable and work regardless of the weather conditions. Mechanical counters include stroke counters which can be built into doors, turnstiles, under steps or boardwalks. These are more simple and cheaper than electronic counters which require a power source (e.g. battery) and a movement sensor. Most modern electronic devices have an integrated data collection unit that saves and sorts the data. These data collectors can be programmed with start times and measurement intervals spanning periods relevant to a specific site e.g. days, hours or minutes. Data can often be read from the counter or transferred to a computer. Some of the software packages provided with the counters permit exporting the data to spreadsheets or other software for statistical analysis.

Table 5: Methods for counting visits to woodland sites

Method	Type of site	Advantage	Disadvantage
Manual observations made by staff	Well used sites with relatively stable visit frequency.	Can provide additional data on age, gender etc. as staff can make rough visual estimates.	Time consuming for staff. Potential bias in sample as observations might only be undertaken when staff are not busy.
Vehicle counters	For sites where most visitors arrive by car.	Continuous measurement over time and can provide values per time interval.	You will need to gather additional information (usually through observations) to estimate the average number of people in each car. Will not capture visitors who do not arrive by car.
People counters	For sites with many visitors and where the majority of visitors use paths where counters can be placed.	Continuous measurement over time and can provide values per time interval. Counters can be used that can distinguish between walkers, cyclists and horse riders.	Rough estimates of visit numbers are needed to be able to validate the measurements. Technical failure due to weather or damage can occur. Have been known to count wild animals as well as people.
Self registration e.g. through trail logs located at the beginning of walks.	More commonly used in Scandinavia or the United States in large wilderness areas.	Inexpensive.	Not everyone will complete and therefore there will be a self-selection bias.
Car Parking	Well used large	Collecting charges to	Not everyone will arrive by car

Method	Type of site	Advantage	Disadvantage
charges e.g. pay and display. Site admission charges e.g. manned booths.	sites where most visitors arrive by car.	help fund site management also provides useful data on numbers of visitors.	so will not capture those who arrive on public transport, foot or bicycle. You will need to gather additional information (usually through observations at different times) to estimate the average number of people in each car and multiply this by the number of cars to get an estimate of visitor numbers.
Permissions system (for groups that want to carry out a group activity in a specific wood e.g. fun run)	All Forestry Commission sites that accept self led groups.	Systems in place in Forest Districts to gather data.	A group may not always ask permission to use the forest for group activity. Only captures data about formal visitors / visits.

Choosing where to install counters is important. They should be placed in locations passed by the majority of visitors to a site. Existing staff should be consulted about where visitors go and which areas of a site they use. Each counter will need to be calibrated as each counter calculates visits differently depending on installation of the counter, where the counter is placed and the quality of the counter. After calibration it will be possible to calculate the estimated total number of visits to a certain area. Calibration can be done by observing the counting area at different times of the day and at different times of the year. Use of a standardised observation form is recommended and instructions for using the devices should be read carefully (see Appendix 7.3).

3.2.1 Manual observation counts by staff

Site staff can make their own observation counts to estimate visit numbers. This can be combined with site surveys if further information is needed about frequency of visits. Observations can also be made by staff about the types of people they are observing e.g. male/female, approximate age grouping, however this approach might be prone to some error as staff will need to make assumptions about visitor types e.g. age of a person. Developing a suitable sampling strategy is important to ensure adequate coverage of different entry and exit points, at different times and days of the week and weekend. Taking advantage of existing staff knowledge of site use and suitable sample points will be important.

3.2.2 Vehicle and people counters

Vehicle counters can be used in woodlands where most visitors arrive by car. Counters will count each car that passes a given point at the entrance to the car park. Some people counters can distinguish between cyclists, people and horse riders. Problems may occur with, for example, equipment failure (due to weather), and vandalism or people walking side by side past the counter.

All counters used at sites will need to be calibrated by observing the counting places at different times of day and at different times of year and checking counter readings against observations. The use of a standardised observation sheet is advisable so that all counters are calibrated on the same basis.

For car counters, observations should be made to derive an average passenger number for each car so that a reasonably accurate estimate of visitor numbers can be calculated. For example, cars arriving at Haldon Forest Park in Devon have been estimated to contain an average of 3 people. Forests Districts often use an average of 2.5-2.7 people per car.

Costs and resources

There are a number of companies that provide different types of vehicle and people counters. Some internet addresses are given in Box 3. Using companies that make outdoor counters will be important as their devices will be more resilient to inclement weather and extremes of temperature. The cost of devices will depend on the package required.

Box 3: Examples of counter manufactures and their websites (see also FC, 2009a)

Car counters - http://www.chambers-electronics.com/car_counters.htm
Outdoor people counters - http://www.chambers-electronics.com/people_counters_out.htm
Eco counter, counting people, analysing data - http://www.eco-compteur.com/
Outdoor people counters- http://www.sensourceinc.com/outdoor-people-counters.htm
Visit Count Outdoors – visitor counters http://www.visit.fi/uk/index.html
Trail master, trail monitors http://www.trailmaster.com/
Tracker count http://www.islandresearch.com.au/
Vehicle count and classification - http://www.islandresearch.com.au/

3.2.3 Car parking and site admission charges

Large sites with specific attractions (e.g. Westonbirt) may charge a site admission fee. Large sites that do not charge admission fees may however operate pay and display car park charging. Both of these approaches can provide reasonable data on visitor numbers. For car park charging sites observations will need to be made to calculate the

average number of people arriving in a car. Car parking and site admission charging will only include those who visit sites in cars and who arrive at the main entrance to a forest. They may not capture all those arriving by foot, public transport, bicycle, or those who enter the site through informal access points.

3.3 Operational data – specific groups

Many of the larger FC sites with visitor centres, cafes, bike hire facilities, Go Ape trails, and education services will need to gather data about visitors to specific activities and those who use certain facilities. For these sites, recording information about the take-up of concession schemes for deprived groups, activity attendance, club membership, equipment hire etc. may be important. However, this will only capture data on specific types of visitors, such as those who participate in particular activities, organised events, or those who visit a particular site frequently. For example:

- Membership schemes – e.g. the discovery pass (an annual parking pass with additional benefits such as an e-newsletter and discounts on certain activities) can provide useful information on regular visitors who enjoy a particular site.
- Season tickets (usually annual tickets) – purchased for particular forests by visitors who visit the site frequently and wish to save money by not paying car-parking charges at each visit.
- Education service – school visits to sites by primary and secondary school children to participate in nature trails, mini beast hunts etc. Sites that run an education service will have data collection methods in place to record information about each formal visit.

Data from these sources can be used effectively to explore trends in numbers of people participating in specific activities over time. However, to add figures from these activities to site, population or catchment surveys may lead to double counting.

3.4 Analysis

When designing your survey careful consideration needs to be given to how data from the questionnaire will be entered into an appropriate software package (SPSS[1], SAS[2] or, for basic analysis, MS Excel) and how it will be analysed and by whom. If contracting a survey to an organisation the contract might include data entry and analysis. If undertaking a survey in-house, staff training may be required. When reporting, key data should be presented with confidence levels and confidence intervals (see below – data analysis).

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[1] SPSS – Statistical Package for the Social Sciences
[2] SAS - Statistical Analysis System

Data entry/cleaning

For site or population surveys each survey should be numbered consecutively. Data entry is labour intensive and setting out the columns for the data variables in a logical manner is important. Once data is entered it should be checked as mistakes in entry may have occurred. This is often done by checking a sample of the data against the original completed questionnaires. Software such as SAS can allow for range checking during data entry and it can often be programmed to carry out other validation checks between data fields.

Data analysis

In the majority of cases, descriptive statistics will be used to build up visitor and visit profiles for a given site (looking, for example, at the proportion of visits involving particular activities, or the proportion of visitors from different socio-economic groups). Assistance with data entry and analysis may be available from the FC Economics and Statistics team at Silvan House. Advice may also be available from Forest Research.

For site surveys where surveying has taken place at different intensities and different times of the day and on different days, the data will need to be weighted to produce unbiased results. For example if surveying is carried out on one weekday and one weekend day the weekday data would need to be multiplied by 5 (e.g. 5 days of the week) and the weekend data would be multiplied by 2. This is a simplistic example because many more variables exist beyond days of the week e.g. time of day, weather, time of year etc. Advice can be sought from FC Economic and Statistics Group on this topic.

In population surveys, where the total population size is known, data is presented with 'confidence levels' and 'confidence intervals' to indicate the range of accuracy of the analysis presented. It can also be desirable to present confidence levels and intervals for site surveys. In population surveys where your sample does not represent the socio-demographics of the wider population then the sample will need to be weighted. Population surveys are usually contracted out to market research organisations who will apply the appropriate weightings as part of data analysis.

The following useful explanation of these terms, along with a handy online tool for calculating confidence intervals is provided by Creative Research Systems (source: http://www.surveysystem.com/sscalc.htm)

'The **confidence interval** (also called margin of error) is the plus-or-minus figure usually reported in newspaper or television opinion poll results. For example, if you use a confidence interval of 4 and 47% percent of your sample picks an answer you can be "sure" that if you had asked the question of the entire relevant population between 43% (47-4) and 51% (47+4) would have picked that answer.'

The **confidence level** tells you how sure you can be. It is expressed as a percentage and represents how often the true percentage of the population who would pick an answer lies within the confidence interval. The 95% confidence level means you can be 95% certain; the 99% confidence level means you can be 99% certain. Most researchers use the 95% confidence level. When you put the confidence level and the confidence interval together, you can say that you are 95% sure that the true percentage of the population is between 43% and 51%. The wider the confidence interval you are willing to accept, the more certain you can be that the whole population answers would be within that range.'

4. Examples of approaches taken by the Forestry Commission and Forest Research

Here we provide some examples to illustrate how different techniques and methods have been used by the FC and Forest Research on a national, multi-site and individual site basis. These examples highlight some of the issues that can/should be considered when thinking about gathering data relating to visitor and visit numbers and shows how different approaches will be required depending on the objectives of the monitoring. All of these examples provide much more than visitor/visit numbers. They also provide other useful information, such as perceptions of forests, activities undertaken, feedback on the quality of facilities etc.

4.1 Public Opinion of Forestry Surveys

Aim/objective

These surveys are biennial and run to gain the opinion of the public to forestry and forestry related issues in the UK. Samples are taken in Scotland, Wales and on a UK or GB (which includes England) basis to gain country specific as well as UK/GB wide results. See this web link for survey results over the past decade:
http://www.forestry.gov.uk/website/forestry.nsf/byunique/infd-5zyl9w and FC (2009c). The Public Opinion of Forestry (POF) survey has been run since 1995.

Methods

The POF survey is a household survey using the omnibus approach. The method used in the 2009 survey was developed by GfK NOP, the previous POF surveys were undertaken by other Market Research companies and methods differ slightly. The sample is a quota approach of individuals with randomly selected sampling points. First stage sampling units for the survey are parliamentary constituencies which are stratified by government

office region. Within each region constituencies are classified into four urban/rural types: 1) metropolitan county, 2) other 100% urban (greater than 7 persons per hectare), 3) mixed urban/rural, 4) rural. Quotas are set for interviewing within each area and the variables are controlled for age, sex and working status. No quota is set for social grade as the selection areas ensure that the sample is balanced in this respect.

Challenges and methodological issues

The POF provides estimates of visitor numbers by showing the proportion of the adult population that visit woodlands. The survey also asks about frequency of visits, so the results can be used to calculate total visit numbers for a given time period.

The POF provides useful data on forestry opinion over time. However, as with other longitudinal surveys, specific questions may become more or less relevant over time. This means that questions may be added or taken from the questionnaire. While surveys are flexible enough to allow this it does mean that not all questions will necessarily be asked over a period of time consistently or in the same way. For example, questions about climate change and wood as fuel were added to the POF in 2007. The POF has now included questions on whether people visit woods in the countryside or woods in and around towns. This has come about due to an increased focus on urban forestry.

Table 6 shows the number of adults interviewed over the last few years, note that the UK survey had 4,000 adults in 2003 and 2007 but only 2,000 in 2009. Confidence intervals were estimated to be +/- 3.3% in 2009 but in previous years with a larger sample of about 4,000 the range of uncertainly was said to be no more than +/- 2.3%. The surveys also had a different design which means that any comparison between years needs to be treated with care.

For responses of sub-groups i.e. questions not posed to the whole sample of respondents the range of uncertainty increases. For example, for questions asked to only those who visits woods (1,500 respondents in the 2009 survey) the confidence interval rises from +/- 3.3% to +/- 3.8%.

Table 6: Summary of previous PoF surveys and numbers of adults interviewed in each country (FC, 2009c).

	2003	2005	2007	2009
UK	4,000 adults	No survey	4,000	2,000
GB	No survey	4,000	No survey	No survey
England	3,412	3,367	3,339	1,685
Wales	1,000	1,000	1,000	1,000
Scotland	1,000	1,000	1,000	1,000
Northern Ireland	No survey	1,000	1,000	No survey (but run in 2010)

Link to national strategies and policy

As outlined above some of the questions in the POF have changed over time to accommodate changes in FC policies, illustrating a need to gather new data to inform FC about public opinion relating to relevant issues of the day, such visits to woods in and around towns.

4.2 Valuation of the economic and social contribution of forestry for people in Scotland

Aim/objective

Forest Research was asked by FC Scotland (FCS) to provide estimates of the value of the economic and social contribution of forestry for people in Scotland. The project originated with the Forestry for People panel, an independent group of forestry stakeholders established in 2000 to advise FSC on how to address the social agenda in forestry. In its final report the group highlighted the lack of evidence available to decision makers of the benefits of forestry and they recommended that FCS commission a piece of research to assess the value of the social forestry sector in Scotland.

The research was based on a typology of seven themes: 1) employment and volunteering, 2) contribution to the economy, 3) recreation and accessibility, 4) learning and education, 5) health and well-being, 6) culture and landscape, 7) community capacity (see: http://www.forestry.gov.uk/fr/INFD-6S8CSP and Edwards et al. 2009).

Methods

This study (with its shortened name 'Forestry for People') was undertaken by Forest Research between 2006 and 2008. Questions were added by Forest Research in two Omnibus Surveys in 2006 and 2007 each with a representative sample (approximately 1,000 adults for each survey) of the Scottish population. This was delivered through a household survey of adults aged 16 years and older.

The surveys provide useful sets of estimates of visit, visitor, and total visit numbers for Scotland based on the following two measures:
  1. The percentage of adults who visited forests in the previous 12 months, from which an estimate can be derived for the total number of adults who visit forests annually.
  2. The frequency of visits (for those who had visited forest in the previous 12 months), from which an estimate can be derived for the total annual number of visits.

In August 2006 56% (+/-5% 95 confidence interval) said they had visited woods in the past 12 months. The Scottish adult population size was obtained for the mid-point in the year (i.e. 30 June) for the different years from the General Register Office for Scotland.

From these data it is possible to estimate the population for the mid-point for each survey period discussed (www.groscotland.gov.uk/statistics/population/index.html). For example, for the F4P Omnibus Survey 2006 a population size of 4,180,000 adults was estimated. Therefore the total number of Scottish adults who visited Scottish forests in the previous 12 months (i.e. from mid-August 2005 to mid-August 2006) was estimated to be 2.3 million visitors making a total of 68 million visits. In August 2007 the question was repeated, and a substantially lower figure of 41% was obtained. Using an updated figure for the population size (4,195,000), the total number of Scottish adults who visited Scottish forests in the previous 12 months (i.e. from mid-August 2006 to mid-August 2007) was estimated to be just 1.7 million visitors. The most likely explanation for this apparent decline of visitors is the weather during the summer of 2007, which had unusually high rainfall. Data from the Meteorological Office show that there were 110 fewer sunshine hours, and 150 mm more rainfall, in the summer of 2007 (June to August) compared to the summer of 2006. The decline in numbers of people visiting between 2007 and 2006 could be seen across all social groups.

It is difficult to compare the above with the Scottish Recreation Survey, which has a larger sample of 1,000 adults per month, and asks about visits to the outdoors for recreation not just about woodlands. However when taking the estimated total number of visits to the outdoors in 2004/5 which was 214 million and identifying that 16% of trips were to woods as the main destination and 23% included time spent in woods, then the total number of visits is estimated at 49 million. Therefore differences can occur between surveys if questions are different, if the sample is slightly different and if the surveys occur in different years.

Challenges and methodological issues

To identify total numbers of visits respondents who had visited forests in the previous 12 months were asked how frequently they had visited between October and March (winter) and between April and September (summer). For both winter and summer (October 2005- August 2006) respondents were asked to respond by choosing one of five frequency classes e.g. several times per week, several times per month (outlined in Box 2). From this data is was possible to calculate the total number of visits by choosing/assuming a conservative estimate for each frequency class e.g. several times per week became twice a week, several times per month became twice per month. As the total number of visitors was estimated at 2.3 million then the total number of visits using these frequencies was estimated at 68 million.

As the total number of visits was highly dependent on the assumptions made to interpret each frequency class the 2007 survey included additional questions that sought to overcome this uncertainty. For example for those who stated they visited several times a week they were then asked to provide a single figure for the average number of times that they visited per week. The results we obtained were substantially higher than the

original conservative estimates at 4.2 times per week and 3.5 times per month. Using these frequencies the total number of visits between September 2006 and August 2007 increased to 72 million. It should be noted that the increased detail of these estimates involved additional questions in the survey raising its overall cost.

Links to national strategy and policy

The research can be used by FCS as a baseline for exploring the value of forestry for people in Scotland in the future. The data gathered in the two surveys on visitor and visit numbers were also, very usefully, used in the study as a multiplier in the analysis of other indicators of social and economic value. Some of the indicators developed in the study are being used by FCS to report on its corporate delivery.

4.3 All Forests Monitoring in Scotland

Aim/objective

The All Forest Monitoring work was set up to develop a new visitor monitoring system to provide more accurate estimates of the number of visits to FC woodlands in Scotland (TNS Travel and Tourism, 2008). The approach was also used in Wales but we focus on Scotland in this example. The main objectives were 1) to measure the volume of visitors across FCS forests, 2) to obtain data on visitor profiles (see: http://www.forestry.gov.uk/website/forestry.nsf/byunique/infd-5wcmr4).

Methods

All forest districts in Scotland were surveyed over a three year period from June 2004-June 2007. In each forest district blocks were chosen to be included in the study as a stratified representation of all FCS forests in terms of usage and size of the surrounding population within 15km of the sites. To obtain an estimate of total number of visits the average number of total visits to forests included within the survey were applied to other similar forests in the district. The forest blocks represented a range of facilities and activities available in FCS woodland. Interviewing and counting took place in each identified forest block and fieldwork was undertaken fairly evenly over 12 months to take account of seasonal variation.

Challenges and methodological issues

A relatively small number of hours surveying were undertaken at each access point. The results were weighted to cover all daylight hours. The estimate total visits ranged from 7.3-9.1 million per annum (e.g. +/- 912,000 visits), working to a 95% confidence interval. The surveying indicates that forest entrances experience significant variation in numbers of visitors, for example, entrances range from highly developed facilities with visitor centers and car parks to remote rural access points.

For the method of sampling used in the survey it is likely that most of the overall variation in the number of visits is due to selection of forest blocks and access points rather than variations caused by the small number of hours spent sampling at each access point.

Links to national strategies and policy

The report on this piece of work (TNS Travel and Tourism, 2008) states that the work is primarily relevant to the 'Access and Health' theme of the Scottish Forestry Strategy which aims to:

- Make access to woodlands easier for all sectors of society
- Use woodland access to help improve physical and mental health in Scotland
- Provide a greater range of ways for people to enjoy woodlands.

One of the ways in which this will be measured (among other measures) will be total numbers of visits to woodlands.

4.4. Evaluation of Active England woodland projects

Aim/objective

Five woodland sites across England successfully bid for funding under the Active England programme administered by Sport England. These included Great Western Community Forest in Wiltshire, Greenwood Community Forest in Nottinghamshire, Rosliston Forestry Centre in Derbyshire, Bedgebury Forest in Kent and Haldon Forest Park in Devon. In 2005 the Social and Economic Research Group at Forest Research initiated a programme of research to monitor and evaluate these five projects (see: http://www.forestry.gov.uk/fr/INFD-6W8KLM).

This research aimed to:

- Monitor changes in visitor and visit profiles across the five projects
- Evaluate each project's ability to increase participation amongst target groups and to explore the barriers to using forests and woodlands for physical activity
- Offer recommendations for future programme and project delivery.

Due to the focus on under-represented groups and their participation in health-related activities, the evaluation was less focused on total visitor and visit numbers per se, and more focused on the social make-up of visitors (visitor profile) and the nature of activities undertaken by these groups (visit profile).

Methods

The evaluation adopted a multi-method approach, involving:

- On-site surveying over two years for the analysis of visitors characteristics and visit numbers.

- Spatial, demographic profiling of the catchment of each site to reveal the extent of target group (under-) representation.
- Shared activities and focus groups of both 'users' and 'non-users' to examine attitudes to health, physical activity, forests and woodlands and the barriers to increased use.
- Semi-structured interviews with site representatives to explore their experiences of project delivery and lessons learnt.

Challenges and methodological issues

The on-site survey developed for this evaluation was more appropriate to the site based projects (Rosliston, Haldon and Bedgebury). Surveys at the site based projects were able to evaluate the impacts of infrastructure improvements through changes in visit profiles (e.g. increases in cycling and use of play equipment, and increased visit duration). However, on-site surveys were not able to measure the impact of more focused group activities and outreach work. Furthermore, because of the dispersed nature of project activities within the Community Forests (Great Western and Greenwood), it was not possible to gauge the full impact of these projects on visitor and visit profiles. The adoption of a multi-method approach proved essential in achieving a rounded evaluation of the projects.

Links to national strategies and policy

The link between various forms of ill-health and sedentary lifestyles is widely recognised. It is also now widely acknowledged that opportunities for healthy exercise and recreation are not equally distributed across society. A current focus of UK policy, therefore, is to address so-called health inequalities through targeted interventions that encourage the take-up of opportunities for healthy exercise amongst under-represented groups.

Increasingly, there is a move within the UK forestry sector both to facilitate the use of woodlands for health-related physical activity, and to encourage use amongst people from a wide range of social, cultural and economic backgrounds. This is a stated focus of policy and delivery within the forestry strategies of England, Wales and Scotland.

4.5 Monitoring and Evaluating Quality of Life for CRS'07

Aim/objective

As part of the delivery of ' A Strategy for England's Trees, Woods and Forests' (ETWF), FC England (FCE) contracted Forest Research to develop a broad research framework to measure performance against corporate Quality of Life targets, giving rise to the 'Monitoring and Evaluating Quality of Life for CSR 07' project (see: http://www.forestry.gov.uk/fr/INFD-7TGBUC).

The project has the following main objectives:

- To establish a sample set of social demonstration sites
- To develop and test an effective methodology for measuring the character and quality of visitor experience
- To review relationships between sample sites and their local populations

Methods

The framework is made up of the following key research methods:

- On-site 'visitor' and off-site 'catchment' surveys at three 'flagship' case study sites to analyse use (including visitor and visit numbers), engagement, quality of experience and personal and social benefits at a case study level.
- Catchment profiling - involving the spatial definition of each site's catchment area (using 500m and 4km boundaries) and using available socio-demographic descriptors to characterise the corresponding catchment population.
- National survey – delivered through the Public Opinion of Forestry survey to analyse use (including visitor and visit numbers), engagement, quality of experience and personal and social benefits at national level.
- Site management records – harnessing routine on-site monitoring practices in order to gather data relating to 'activities and events' and 'site observations/incidents and hazards'.

Challenges and methodological issues

On-site surveys have been administered by existing FCE staff. In some cases, it has been difficult to free up enough staff time to carry out the survey and external contractors have had to be brought in to achieve an adequate sample size. However, staff have reported that administering the survey and interviewing visitors on-site has provided them with a valuable opportunity to communicate with visitors and to gain important feedback.

Links to national strategies and policy

A strategic aim for FCE is to use the evidence generated by the framework to demonstrate delivery of the ETWF as part of its contribution to the Defra-led Public Service Agreement 28 'securing a healthy natural environment for today and the future'. The framework will also enable FCE and delivery partners to demonstrate the effects of forest-related inputs on societal wellbeing, to learn from past successes and failures and to critically apply this learning to ongoing service delivery.

4.6 Quality of experience

Aim/objective

The aim for these surveys was to develop a methodology to measure the quality of visitors' experiences at specific woodland sites. Quality of experience surveys have been run at 3-5 different sites in England and Wales every year from 2003, allowing for comparisons to be made between sites and over time. Results of these surveys can be found at: http://www.forestry.gov.uk/forestry/infd-5wwjpt. TNS, a market research company, have carried out the surveys.

Methods

For the 2009 surveys at three sites (Kielder, Haldon, and Dalby Forests) just over 300 people completed a questionnaire survey at each site. CAPI (computer aided personal interviewing) was used on all the sites. All visitors were 16+ years old. Between 2003 and 2009, 25 sites have been surveyed, with approximately 7,000 forest visitors interviewed. On site surveying is generally carried out between July and October each year at the chosen sites. The surveys capture factors such as visitor profile, frequency of visits, trip profile, favourite aspects of the forests, suggested improvements, and expenditure levels.

Challenges and methodological issues

Some changes to the methodology have been necessary due to declining response rates. Prior to 2008 visitors who used the sites (that were being surveyed) at least once a month were asked to rate levels of importance of different aspects of woodlands and forest visits. Visitors who came less often were interviewed for a shorter time before being given a self-completion questionnaire with questions about levels of satisfaction. This was completed and returned after the visit using a pre-paid envelope. Due to declining response rates amongst infrequent users, in 2008 it was decided that all respondents should be given the full CAPI interview. In 2009 amendments were made to the questionnaire to reduce its length.

As part of the methodology, development of a TRI*M system was produced by TNS. It is a weighted calculation based on responses to the following four questions (these were taken from the Kielder survey):

1. How would you rate your visit to Kielder Water and Forest Park overall? (Overall performance)
2. Based on your experience, would you recommend Kielder Water and Forest Park as a place to visit to a friend or relative? (Recommendation)
3. Based on your experiences on this trip, how likely are you to visit Kielder Water and Forest Park again in the next few months? (Repurchase)

4. How would you rate Kielder Water and Forest Park as a place to visit compared to the other forests, parks or outdoor recreation sites you could have gone to today instead? (Competitive advantage)

These four questions provide the TRI*M index score for overall visitor satisfaction and this can be compared across the sites that have been surveyed.

Links to national strategies and policies

The Forestry Commission Corporate Plan for Wales and Great Britain in the early 2000s identified a need for further evidence to demonstrate the benefits that woodlands and forests bring to society, leading to the development of the Quality of Experience study.

5. Conclusions

This document provides advice and ideas for estimating visitor, visit and total visit numbers to woodlands. Specific examples given from the FC and Forest Research studies highlight some of the difficulties and challenges of estimating these numbers. They also provide useful information relating to broader questions about visitor profile and satisfaction with sites and facilities. Automatic counters are a useful way of counting total visits to a specific site. While household surveys undertaken throughout the year can be rated up to produce estimates of total visits as well as provide information about demographics and outline the types of activities people undertake. Links to useful resources and surveys are given to aid practitioners and forest managers in making decisions about what is appropriate for their area or site and what resources they may need to estimate visitor, visit and total visit numbers. Having clear objectives and knowing how any data that is collected can contribute to national, regional or site strategy targets will be particularly important.

6. Resources, advice and references

Useful links for information and advice

Forestry Commission: Economics and Statistics Group
http://www.forestry.gov.uk/forestry/ahen-5gcdvl

Forest Research: Social and Economic Research Group
http://www.forestresearch.gov.uk/fr/infd-5stbz2

National visitor use monitoring program US Forest Service
http://www.fs.fed.us/recreation/programs/nvum/

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7. Appendices

7.1 Protocol for catchment surveying

Contact: Jake Morris – jake.morris@forestry.gsi.gov.uk

Surveys of the local 'catchment' population will be used to gather key information about general use of local green space and perceptions of the site in question. They will also be used to capture data about informal use (both direct and indirect[3]) of each site, access and accessibility, the quality of the visitor experience and the perceived benefits

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[3] Woodland sites can benefit individuals and communities both directly (involving visits) and indirectly (by seeing a site during daily activities, by being part of a community that uses the site, or by simply knowing that the site exists).

delivered by the site to individuals and communities. Critically, catchment surveying will be used to estimate total visitor numbers to a given site.

Baseline off-site surveys should be conducted prior to any intervention, so that its impact on the wider community can be evaluated using repeat surveys. Baseline off-site surveys are essential for newly established sites and should be conducted prior to the site being opened to the public. The scheduling of repeat surveys will depend on the specific intervention that is being evaluated, but previous experience has shown that an interval of 2 or 3 years between surveys works well.

A number of different approaches to off-site surveying are possible, including interviewing members of the public in public spaces such as a high street or supermarket car park, household interviewing, or telephone interviewing. Interviews in public spaces could be conducted by site/project staff, although this will require the allocation of sufficient staff resources.

The preferred and recommended approach is to use household or telephone interviewing and to use a qualified contractor. This will mean increased efficiency and accuracy because suitable contractors will use specialist in-house data capture equipment and will be able to implement a carefully designed sampling strategy to ensure a representative sample of the catchment population. Furthermore, contractors will input the raw data and present detailed data tables, providing a useful resource for analysis and reporting. A sample tender for contractors is provided below.

The survey will require interviews with a sample of the population within the site's 'catchment area'. The 'catchment area' needs to be defined for example in the Monitoring Quality of life study the area within a 4 kilometre radius of the boundary of the sites was chosen. The contractor should be provided with a map for each site's catchment area, as defined, upon the award of the contract.

Sample specification for social surveys of site catchment populations

INSTRUCTIONS FOR TENDERING

The work being commissioned is for carrying out surveys among residents and the wider population in the catchment area of the specified XXXX site. The work will be directed by [*insert organisation name*]. All enquiries relating to this work shall be addressed, in the first instance, to: [*insert contact details*]

The Services to be provided will be as per the details in this document, together with any amendments to that brief issued as supplementary documents. Tender documentation as detailed below should be returned to [*insert name*] at the above address by [*insert date*]. Tenders can also be emailed to [*insert email address*], but a hard copy must also be received.

The Consultant shall have Professional Indemnity Insurance policy with a limit of indemnity of not less than £1,000,000 for each and every claim and shall maintain such insurance for a year. The Consultant shall also have a limit of not less than £5,000,000 for each and every claim against their Public Liability Insurance. Evidence of cover shall be provided with the Form of Tender.

The Contract is to be a fixed price for survey work and data processing.
[*insert organisation name*] reserves the right to negotiate a reduced fee with the Consultant. Please address replies to [*insert name*] at the above address and mark envelopes clearly with the following: E.G. QUOTE FOR: XXX SITE catchment surveys.

PURPOSE OF THE INVESTIGATION

The objective of this work is to evaluate the use, public perception, and benefits of [*insert site name*]. In order to provide the above information the consultants will be required to conduct surveys. The survey will require interviews with a sample of the population within the 'catchment area'. The 'catchment area' is defined as the area within a 4 kilometre radius of the boundary of the sites. Consultants will be provided with a map for each site's catchment area, as defined, at the start date of the work.

PROGRAMME

The work will be completed within 10 weeks of receipt of the Letter of the Award (Start Date). A proposed timetable is given below. If very detailed analysis of data is needed then more time can be negotiated to carry out the work.

Task	Proposed completion date
Catchment survey	6 weeks after start date
Data input	8 weeks after start date
Send initial results to [*insert organisation name*]	8 weeks after start date
Discuss with [*insert organisation name*]further requirements	9 weeks after start date
Delivery of results	10 weeks after start date

SURVEY METHODOLOGY

The survey will follow standard methodologies for surveys. The Consultants should provide a summary of their interviewer training and interviewing procedures. Consultants should familiarise themselves with the site location and function. Surveys should be conducted without detriment to the normal functioning of the site and in agreement with the site manager.

The sample will be drawn from selected sample points within the catchment area that the contractor should propose as part of the tender for this contract. Sample points should be agreed with the [*insert organisation name*] at the start of the project and before any surveying is undertaken. Different cost estimations must be provided according to different sample sizes (up to 500 respondents).

The questionnaire to be implemented is provided in an accompanying document.

THE OUTPUTS

Data collected should be codified and input in SPSS.

Alongside the data, the consultant should provide basic tabulation results.

The data will be accompanied by a short report on methodological issues including: methods for conducting the survey; sampling strategies; sampling size justification, ethical aspects of the research. All text should be written in plain English, avoiding jargon and technical terms where possible

The original records must be provided to [*insert organisation name*], alongside the electronic data.

TENDER FORMAT

The tender must include a description of the methodologies to be followed.

The methodology description must include the following:

- A description of the sampling strategy including methods for determining the sample points and a justification of the sample size.
- Cost estimation for different sample sizes (e.g. 100 respondents, 200 respondents…) up to 500 respondents.
- An explanation of how to approach the problem of drawing a balanced sample representative of the demographic profile of the local area.
- An explanation of how the surveys will be conducted (i.e. which days; which time of the day; interview protocol; etc)
- An outline of the presentation of results and contents (e.g. executive summary, contents page, format of the basic tabulation results, how the data will be presented to make it accessible to the end user).
- An indication of methodological and ethical issues. Consultants will need to follow standard procedures to obtain informed consent from the interviewees. Indicative information can be downloaded from the pages on Ethical Practice from the British Sociological Association (http://www.britsoc.co.uk/equality/Statement+Ethical+Practice.htm).

The tender should also include:
- Any potential problems and how they might be solved
- A project timeline for the stages of the work
- Details of the research team members, including specific skills, relevant experience and their role in the project

- A schedule identifying the number of days allowed for each member of the research team at each stage
- Evidence of similar previous contracts
- A breakdown of costs for each part of the research, including identification of costs for permission and access to data.
- Costs should state on which items VAT will be charged.

COPYRIGHT

The copyright of the data collected and any subsequent reports will rest with [*insert organisation name*]

MANAGEMENT

The project will be managed under [*insert organisation name*]'s standard consultancy contract. The contractor will be supervised on a day-to-day basis by [*insert name*], who will act as Contract Manager. [*Insert organisation name*] expect a named member of the contractor's staff to be our main point of contact.

CRITERIA FOR EVALUATING TENDERS

Tenders will be judged on performance against the following value for money criteria:
- How well they address the project objectives and how far requirements for the work are demonstrably understood.
- The robustness and suitability of the proposed approach in meeting the requirements of the specification.
- The relevant skills and experiences of the research team.
- The adequacy of the proposed project management arrangements.
- The track record of the tenderer in delivering quality reports to schedule.
- Value for money.

7.2 Protocol for on-site surveying

Contact: Jake Morris – jake.morris@forestry.gsi.gov.uk

On-site (visitor) surveys can be used to gather key information about informal use of a site, access and accessibility, the quality of the visitor experience and the benefits delivered by the site to individuals and communities. In addition, this method involves gathering data about visitors themselves, allowing the construction of a visitor profile for a site, which, when compared with the catchment population profiles, provides the basis for evaluating a site's performance in relation to specific diversity groups.

For established sites where monitoring and evaluation is targeted at scheduled interventions (projects/programmes), baseline surveys will be conducted prior to the intervention, so that its impact can be evaluated using repeat surveys. Normally, repeat

on-site surveys are conducted on an annual basis if suitable and funding and resources allow and should be scheduled for the same time of year as the baseline survey. For new sites, baseline data will be gathered using the catchment survey method (see Appendix 7.1). Once the site is open to the public, on-site surveys can also be conducted and then repeated annually.

Guidance for interviewers is provided below. A sample Batch Cover Sheet is also provided as well as a questionnaire used in the 'Monitoring and Evaluating Quality of Life for CSR 07' project.

INTERVIEWING GUIDANCE

The following guidance is intended for use by FC staff interviewers, but may also be made available to contractors.

1.0 General information

Before starting the survey each interviewer should be thoroughly briefed and should carry out several practice interviews. Section 2.0 ('Running the survey') should be read by all interviewers. This explains how the survey should be carried out and how the questionnaires should be completed.

2.0 Running the survey

2.1 Where to interview

For sites where there is a single point of access, such as a car park, interviewing will take place at this point and visitors will be interviewed as they leave the forest to their car or out of the access point. For sites with multiple access points (both formal and informal) it is important that interviewing takes place at as many of these points as possible. This may require interviewers to move around the site during a given interviewing shift.

2.2 When to interview

Surveying should be conducted on week days, weekends and public holidays, and should involve early morning, morning, midday, afternoon and early evening sessions to ensure the capture of a representative sample of site users and uses (Table 7).

Table 7: Example site sampling survey strategy (times and days of the week to cover)

Time	Sat	Sun	Mon	Tue	Wed	Thu	Fri
7-11		X		X		X	
11-3	X	X	X	X	X	X	X
3-7	X		X		X		X

2.2 Who / how many to interview

The sampling strategy will be consciously inclusive and comprehensive, capturing as many visitors as possible. The interviewer should interview the next group of people to pass after completing the previous interview. If at a car park, a "group" will normally be those who have travelled together in a car. If the party came by coach or minibus, the "group" is whatever number are together when you see them (e.g. this could be a family group of three from a coach party or could be a complete minibus load if they all remain together).

The interviewer should choose one person from the group to interview. This should be an adult, to be selected at random. An effective way to randomise the selection is to approach the first adult that you saw when you looked at the group. If you choose one person but the group would prefer someone else to answer then that is acceptable; the benefits of having a willing interviewee outweigh the possible bias that could be caused by the person being self-selected. Try to take all the answers from the one person you are interviewing.

If an individual has been interviewed before for the same survey, then they should not be interviewed again. If he/she declines to be interviewed do not press them. Typically refusals add up to fewer than 5% of visitors so omitting them does not make the sample too unrepresentative. However it would be useful to keep a note of the number of refusals; if this is relatively high then it may suggest that a different survey location might be better.

There are no hard-and-fast rules for deciding how many people need to be interviewed. Basically, the more people interviewed, the more reliable the results of the survey. The size of the sample (i.e. the number of people interviewed) depends, in part, on the volume of visitors at a given site. Often, operational staff are best placed to decide when they have interviewed enough people (staff working at sites that are not very busy will find that they are starting to approach people they have already interviewed – this is probably a good indication that you have an adequate sample). As a rough guide, busy sites should aim to interview at least 300 visitors. Sites that are not very busy should try to get at least 150 completed questionnaires.

2.3 Questionnaire layout

Before starting the survey, the interviewer should be familiar with the questionnaire layout and any conventions used. If the interviewer finds any of the wording awkward then report this in feedback so that the wording can be improved for future surveys. It is important that interviewers know when a question should be skipped and whether a question seeks one or several answers. If a question allows for more than one response and the respondent only gives one answer, then the interviewer should prompt to see if there is anything else.

2.4 Batch covering sheet layout

Each batch of interviews covers a single period of interviewing at one location. The interviewer should fill in a batch sheet for each period. This sheet gives information that applies to the whole period of interviewing to save having to record this on each questionnaire.

The batch sheet should be placed on the top of the pile of questionnaires in the batch and the whole bundle should be fastened together. In case the batches are separated, each questionnaire should have the batch number written in the top right hand corner. Each questionnaire is also given a form number; in each batch start again with form number 1 for the first interview carried out. The combination of batch number and form number gives a unique identifier for any questionnaire at the location. This is essential for data checking and analysis.

2.5 Storing/sending completed questionnaires

Carrying out a survey is time-consuming and the data contained within completed questionnaires is valuable and can be sensitive. Completed questionnaires should be stored safely, ideally in a locked cabinet. To minimise the risk of losing significant numbers, completed questionnaires should be sent for analysis in batches of less than 50. They should be sent recorded delivery.

On-site questionnaire – batch cover sheet
SAMPLE

BATCH COVERING SHEET   **Batch number** [   ]

1. Site and Location [   ]

2. Forest District [   ]

3. Interviewer (initials) [   ]

4. Date (dd/mm/yy) [   ][   ][   ]

5. Day of week [   ]

6. Time batch   Started [   ] am / pm   Ended [   ] am / pm

7. Number of groups passing but not interviewed [   ] (complete at end of day)

You can use this grid to tally groups passing [   ] [   ] [   ] [   ]

[   ] [   ] [   ] [   ]

To be completed at the end of day :-

8. Weather   (circle one number on each row; 2 = mixed)

Dry	1	2	3	Wet
Sunny	1	2	3	Overcast
Calm	1	2	3	Windy

Temp. (approx) _____ ^{o}C

9. Number of completed interviews [   ]

10. Interviewer (signature) [   ]

.

11. Additional comments [   ]

7.2.1 Example on-site survey questionnaire from QoL project

Contact: Jake.morris@forestry.gsi.gov.uk

See end of document

7.3 People counter calibration check form

A standardised form can be used for people counter calibration. Observe visitors and their direction of movement and other factors that might affect the counter's results such as people going round, or passing the counter several times, or walking side by side with another person. The calibration should include different weekdays/weekends and times of the day. Visits that are registered by personnel or service staff or animals should be excluded as they are not classed as visitors.

Site name………………………………………………….

Name of observer			Date		
Counter location			Time		
Weather			Form number		
Time	**Direction of travel**		**Counter reading**	**Service, personnel etc. e.g. non visitors**	**Exceptions**	**Notes**
	In	Out				

ETWF – Visitor Questionnaire

Good morning/afternoon. I am helping to conduct a survey on behalf of the Forestry Commission to look at the public's use of woodlands and forest in England. We hope to learn more about the people who visit *[site name]* and how they use it. We also want to know what benefits people gain from this site, so that we can improve the quality of our services in the future.

Would you mind answering a few questions – it'll only take about *ten* minutes of your time? The information gathered for this survey will not be used for anything other than research purposes. None of the questions are compulsory and the responses you give will not be attributed to you personally.

Time of day ……………… **Weather Conditions:** …………………… **Interview Location** ………………………...

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1. Have you visited this site before?

    YES ☐   **NO** ☐ (If 'no', go to Q.5)

2. How often would you say that you come here?

	In spring / summer	In autumn / winter
Everyday	☐	☐
4 to 6 times per week	☐	☐
1 to 3 times per week	☐	☐
A few times a month	☐	☐
A few times a year	☐	☐
Less often	☐	☐

3. If you have children, how often do they visit this site, on average? (with or without you)

	In spring / summer	In autumn / winter
Everyday	☐	☐
4 to 6 times per week	☐	☐
1 to 3 times per week	☐	☐
A few times a month	☐	☐
A few times a year	☐	☐
Less often	☐	☐

4. What do you usually do at this place? (tick all that apply)

Exercise e.g. walk, run, mountain biking	☐
Dog walking	☐
Horse riding	☐
Organised activities	☐
Visit the cafe	☐
Picnic or barbecue	☐
Play with the children	☐
Watch nature	☐
Relax / think	☐
Volunteering	☐
Prefer not to say	☐

Other (specify) …………………………………………

5. What is the main activity you have or will take part in during your visit here today?

…………………………………………………..

6. How long do you typically stay here for?

Up to 1 hours	☐
1-2 hours	☐
2-4 hours	☐
Over 4 hours	☐

7. Who did you come with today? (tick all that apply)

Family	☐
Friends	☐
An organised group	☐
On your own	☐
With the dog	☐

Other (specify) ………………………….……..

8. How did you get here today?

Walk	☐
Private car	☐
Public transport	☐
Organised trip	☐
Bicycle	☐

Other (specify) ………………………….……..

9. How far away do you live from the site?

Less than 1/3rd of a mile	☐
1/3rd mile to 2 miles	☐
3 to 6 miles	☐
7 to 20 miles	☐

Over 20 miles? If yes, are you:
On a day trip from home ☐
On a holiday? ☐
Please provide your road name and town, *or* postcode ………………………………………

10. How would you rate the overall quality of this site as a place to visit?

Excellent	Very Good	Fair	Poor	Very Poor	Don't know
☐	☐	☐	☐	☐	☐

11. How would you rate the following facilities?

	Excellent	Very Good	Fair	Poor	Very poor	Don't know	n/a
Car park	☐	☐	☐	☐	☐	☐	☐
Design of site	☐	☐	☐	☐	☐	☐	☐
Site maintenance	☐	☐	☐	☐	☐	☐	☐
Trails and paths	☐	☐	☐	☐	☐	☐	☐
Visitor facilities	☐	☐	☐	☐	☐	☐	☐
Nature conservation	☐	☐	☐	☐	☐	☐	☐
Children facilities	☐	☐	☐	☐	☐	☐	☐
Sports facilities	☐	☐	☐	☐	☐	☐	☐
Information available	☐	☐	☐	☐	☐	☐	☐

If you were not satisfied with any facilities please explain below:

………………………………………………………………

………………………………………………………………

12. Would you recommend this site as a place to visit to a friend or a relative?

Definitely	Probably	Fairly likely	Probably not	Definitely not	Don't know /
☐	☐	☐	☐	☐	☐

13. Did any of the following potential problems affect your enjoyment during the visit?

	Affected enjoyment alot	Affected enjoyment a little	Did not affect enjoyment	Did not encounter	Don't know
Litter or fly tipping	☐	☐	☐	☐	☐
Dogs and dog dirt	☐	☐	☐	☐	☐
Muddy tracks	☐	☐	☐	☐	☐
Vandalised or missing signs	☐	☐	☐	☐	☐
Forestry operations such as felling	☐	☐	☐	☐	☐
Disturbance from motorised sports	☐	☐	☐	☐	☐
Disturbance from other uses	☐	☐	☐	☐	☐

Please specify: ……………………………………………

13. - continued - Do you have any further comments?

……………………………………………………………

……………………………………………………………

14. What, if anything, would you like to see changed to make future visits more enjoyable?

………………………………………………………..

………………………………………………………..

………………………………………………………..

15. This site is important to me because:

	Strongly agree	Agree	Disagree	Strongly disagree	Don't know/ not relevant
It helps me to earn a living or make ends meet	☐	☐	☐	☐	☐
It's a place where I can relax and de-stress	☐	☐	☐	☐	☐
It's a place where I can exercise and keep fit	☐	☐	☐	☐	☐
It's a place where I can have fun and enjoy myself	☐	☐	☐	☐	☐
It's a good place to socialise	☐	☐	☐	☐	☐
It's a place where I can learn about the environment	☐	☐	☐	☐	☐
It's an important place for wildlife	☐	☐	☐	☐	☐
It brings the community together	☐	☐	☐	☐	☐
It makes this area a nicer place to live	☐	☐	☐	☐	☐
It gets me involved in local issues	☐	☐	☐	☐	☐
It's a place where I feel at home	☐	☐	☐	☐	☐

16. Can you think of additional benefits that this site provides to you?

YES ☐   NO ☐

If yes, please specify those benefits:

……………………………………………………………………

……………………………………………………………………

……………………………………………………………………

……………………………………………………………………

(PTO)

17. During the past 12 months, which of the following activities, if any, have you taken part in?

	YES	NO
Been involved in or consulted about plans for managing this site	☐	☐
Been involved in an organised tree planting event	☐	☐
Been involved in voluntary work in connection with this site	☐	☐

18. I think this site is important to the community because:

	Strongly agree	Agree	Disagree	Strongly disagree	Don't know/ not relevant
It contributes to the local economy	☐	☐	☐	☐	☐
It's a place where people can relax and de-stress	☐	☐	☐	☐	☐
It's a place where people can exercise and keep fit	☐	☐	☐	☐	☐
It's a place where people can have fun and enjoy themselves	☐	☐	☐	☐	☐
It's a place where people can learn about the environment	☐	☐	☐	☐	☐
It's an important place for wildlife	☐	☐	☐	☐	☐
It brings the community together	☐	☐	☐	☐	☐
It makes this area a nicer place to live	☐	☐	☐	☐	☐
It gets people involved in local issues	☐	☐	☐	☐	☐

19. Can you think of additional benefits that this site provides to the community?

YES ☐   NO ☐

If yes, please specify those benefits:

…………………………………………………………………

…………………………………………………………………

…………………………………………………………………

20. Which of the following stops you from visiting this site more often? (tick all that apply)

I'm too busy / not enough time	☐
Cost of visiting	☐
It's difficult to get to	☐
My poor health	☐
I don't like this site	☐
It's badly maintained	☐
I do not have a car	☐
It's too far away	☐
I don't feel safe here	☐
Lack of public transport	☐
Lack of information	☐
Lack of facilities	☐
Not interested (in visiting more often)	☐
Other (specify) …………………………….……..	

(PTO)

A FEW QUESTIONS ABOUT YOURSELF:

Sex: Male   O   Female   O

Age: 16-19 O   19-25 O   26-34 O

35-44 O   45-54 O   55-64 O

65-75 O   75+   O

What is the approximate total annual income in your household?

Under 10K   ☐

10 to 20K   ☐

21 to 30k   ☐

31 to 50K   ☐

51 to 75K   ☐

75K+   ☐

Are you?

Working full time (30+ hrs per week)   ☐

Working part time (less than 30 hrs per week) ☐

Retired   ☐

Parent or carer   ☐

In full time education   ☐

Unemployed   ☐

Not working due to illness/disability   ☐

Self employed   ☐

Other (specify)   ☐

Do you consider yourself to have a disability? (tick all that apply)

Mobility   ☐

Visual impairment   ☐

Hearing impairment   ☐

Mental health   ☐

Physical health   ☐

Other   ☐

Does your disability affect your use of this site or other greenspaces?

Yes   O   No   O   No answer   O

How would you describe your ethnic background?
(Please tick one box only)

White   ☐

British   ☐

Irish   ☐

Any other white background   ☐

Chinese   ☐

Mixed race

White and black Caribbean   ☐

White and black African   ☐

White and Asian   ☐

Any other mixed background   ☐

Asian or Asian British

Indian   ☐

Pakistani   ☐

Bangladeshi   ☐

Any other Asian background   ☐

Black or British Black

Caribbean   ☐

African   ☐

Any other ethnic background   ☐

Do not wish my ethnic background to be recorded   ☐

Other ethnic group (specify) ……………….………..

Would you be willing to be contacted again by the Forestry Commission (for example about events or activities they are undertaking)?

Yes   ☐

No   ☐

If yes take address, phone number or email

…………………………………………………………………

…………………………………………………………………

Where to find more information about this site: