

The Contribution of Trees, Woods and Forests to Quality of Life

'An evaluation of quality of life at three case study sites'

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The Contribution of Trees, Woods and Forests to Quality of Life

A 'Monitoring & Evaluating Quality of Life' Report

By Jake Morris, Kieron Doick & David Cross

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Contents

		Chapter title	Page
	Exec	utive summary	3
	List o	of Figures	7
	List o	of Tables	8
1.	Intro	oduction	9
	1.1	Project context	9
	1.2	Report structure	11
2.	Proj	ect methodology	13
	2.1	National survey	14
	2.2	On-site survey	16
	2.3	Catchment definition	18
	2.4	Catchment profiles	25
	2.5	Catchment survey	26
	2.6	Site management data	28
3.	Head	dline indicators	31
	Chap	oter 3 Summary	31
	3.1	Use	32
	3.2	Engagement	34
	3.3	Quality of experience	36
	3.4	Personal and social benefits	38
4.	Furt	her evidence	45
	Chap	oter 4 Summary	45
	4.1	Visit profiles	46
	4.2	Visitor profiles	52
	4.3	Non-use	61
5.	Disc	ussion and lessons learnt	70
	Chap	oter 5 Summary	70
	5.1	Broad project conclusions	71
	5.2	Lessons learnt	73
	5.3	Operational value of 'Quality of Life' project	76
	Refe	80	
	Арре	endices	81-91



Executive Summary

This report provides a detailed account of the 'Monitoring and Evaluating Quality of Life' project: concluding 3-years of research delivered by Forest Research on behalf of Forestry Commission England. The project developed and implemented a broad monitoring and evaluation framework to capture the contribution of England's trees, woods and forests to the nation's quality of life.

Traditionally, measuring the social contribution of woods has focused on the creation of woodland in 'priority' places. Such approaches provide limited information on the quality of the resource and its value to people. New indicators were required to gain a better understanding of the contribution of woods to communities and places. These indicators would be grouped under two closely related themes:

- **Quality of Place**: indicators to track the proportion of the population in priority areas who have access to an agreed benchmark provision of accessible woodland
- **Quality of Life**: indicators to measure the range of benefits that individuals and communities derive from their local woodlands.

This report documents the results of the Quality of Life indicators: i) Use, ii) Engagement, iii) Quality of Experience, iv) Personal benefit and v) Social benefit implemented at three 'Flagship' sites between 2008 and 2011:

- **Bentley Community Woodland** in Doncaster, a 93 ha community woodland on a former deep mine colliery, managed by Sherwood and Lincs. Forest District for the Land Trust;
- **Birches Valley Forest Centre** a 442 ha pine plantation in the Cannock Chase Area of Outstanding Natural Beauty, owned and managed by West Midlands Forest District; and
- Ingrebourne Hill Community Woodland in the London Borough of Havering, a 74 ha community woodland on former landfill managed by East Anglia Forest District.

Method

Reflecting the data requirements of a multi-indicator framework, the project adopted a mixed-method approach, including a national survey; catchment definition, profiling and surveying; on-site surveys and the recording of site management data.

Results

The data demonstrate that use, engagement and quality of experience of a woodland visit, and the personal and social benefits derived from woodland are important



contributors to quality of life and that there is an existence value to woodland that is recognised by users and non-users alike.

Use: The results show that, nationally, about 77% of the English population had visited a woodland or forest in the past few years. At Birches Valley, the proportion of the 2.5 mile (4 km) catchment population who had visited the site ranged from 64% in 2008 to 74% in 2010. This equates to 35,000-40,000 people and highlights that, in comparison to national visitor numbers, Birches Valley is an extremely well used site. At Bentley, the proportion of the 2.5 mile catchment population who had visited the site ranged from 10% (2008) to 14% (2010). Results for Ingrebourne Hill were 13% (2008) and 17% (2010). Whilst these proportions are significantly lower than at Birches Valley, the results may reflect the newness of these sites (both opened within the last 10 years). In addition, the 2.5 mile catchment populations of the community woodlands are larger. As such, by 2010, over 10,000 people had visited Bentley and just under 23,000 people had visited Ingrebourne Hill.

Visitor profiles: Whilst many social groups within each catchment population are well represented amongst visitors, there is some evidence of some under-representation: females are well represented at Bentley and Birches Valley, under-represented at Ingrebourne Hill. Young people (16–25 year olds) are well represented at Birches Valley, but under-represented at Bentley and Ingrebourne Hill. The results suggest that people with disabilities are under-represented at all three sites, although these findings should be treated with caution. Similarly, people belonging to ethnic groups other than 'White British' appear to be well-represented at all three sites, although analysis is required to determine the level of representation of specific ethnic groups.

Visit profiles: Visit profiles constructed for each site reveal:

- Visits to all three sites are highly social (few people visit alone). This suggests that sites perform an important social function for communities.
- There was little seasonal variation in the frequency of visits to the sites.
- Exercise was the most popular activity at all three sites, indicating an important contribution to health and wellbeing. Many people use the sites for multiple activities, indicating that woodlands offer a range of values.
- Greater than 90% of visitors to Bentley and Birches Valley (70% at Ingrebourne Hill) rate their overall quality as either 'excellent' or 'very good'.
- People visit Bentley and Ingrebourne Hill more frequently than Birches Valley, whilst visit duration tends to be longer at Birches Valley than at the two community woodlands. These results suggest important variations in how different sites are used and valued by their local communities.



Engagement: Reasonably high proportions of people within each catchment population are getting involved in management-related activities (e.g. volunteering). Levels of engagement are particularly high at Bentley, where about 8% of the catchment population had been involved in 2010, equivalent to nearly 6,000 people.

Quality of experience: The analysis of quality of experience at each site relates specifically to the net promoter score (NPS), calculated as the net proportion of visitors who said they would recommend each site as a place to visit to friends or family. The results show that despite a fall in NPS over three years, all three sites are returning high NPS relative to other attraction sites. In 2010, Bentley, Birches Valley and Ingrebourne Hill returned a NPS of 56%, 67% and 42%, respectively. The National Trust's national net promoter score for 2009/10 was 36%. Across all survey years, at least 79% of visitors said they would either 'definitely' or 'probably' recommend the site in question.

Personal and social benefits: Results reveal that a broad range of personal benefits accrue to high proportions of visitors to all three sites and a broad range of social benefits are derived by the catchment populations of all three sites. Significant increases in the number of people deriving social benefits were observed at each of the three sites.

Lessons Learnt

The project has established a framework for capturing the contribution of trees, woodland and forests to people's quality of life. The framework enables comparison between the perceptions of woodland users, non-users living within a defined catchment area of a woodland, and the perceptions of the nation as a whole. The framework's methodology is applicable to different types of woodland site. Future work may consider the way in which the different methodological components of the framework are applied to different site types to advance understanding of the contribution of types of woodland to quality of life.

Through the definition of a woodland's catchment, the profiling and surveying of the catchment population, and subsequent evaluation of the validity of catchment definition, this project has significantly advanced our understanding of the 'zone of influence' around different types of woodland site. The results demonstrate that a widely advertised large woodland site (such as Birches Valley) draws in 75% of its visitors from within a 30 mile (48km) radial boundary of the site. The two smaller community woodland sites attracted 75% of their visitors from within a 2.5 mile (4 km) radial boundary. Future work should:

- test the validity of these catchment area definitions across other sites and
- develop a system to characterise and categorise woodland sites.



The results clearly highlight the need for different types of woodland sites and that each is highly valued; whether a national forest used by a high percentage of the 2.5 mile (4 km) catchment population and drawing users from further afield or a community woodland used by a comparatively lower percentage of its 2.5 mile catchment population. Birches Valley Forest Centre, a tourist attraction within the Cannock Chase AONB, contributes in different ways to people's quality of life than smaller community woodlands, especially with respect to the 'use' indicator.

The project offered 'Flagship' site managers the opportunity to obtain data that they could not normally gather locally. Site manager expressed satisfaction with the indicators used, observing that data gathered were relevant and interesting, particularly the demographics of the user population relative to the catchment area. The managers stated they would engage in similar future projects given adequate staffing resource and expressed a desire to input into future project design.

The data demonstrated a surprising degree of variability over the 3 years (2008/09-2010/11). The project concludes that, whilst all data are useful, data from more than one year are particularly valuable. Where possible, conclusions and important decisions should be based on longitudinal research into a site's performance.



List of Figures

FIGURE 1.	The analytical framework of the 'Monitoring and Evaluating Quality of Life' project 14
FIGURE 2.	VISITOR DISTRIBUTION MAP FOR BENTLEY
FIGURE 3.	VISITOR DISTRIBUTION MAP FOR BIRCHES VALLEY
FIGURE 4.	VISITOR DISTRIBUTION MAP FOR INGREBOURNE HILL
FIGURE 5.	BIRCHES VALLEY (SITE AREA) AND THE 30 MILE CATCHMENT AREA AROUND
FIGURE 6.	COMPARATIVE ANALYSIS OF VISITOR NUMBERS
FIGURE 7.	COMPARATIVE ANALYSIS OF ENGAGEMENT
FIGURE 8.	Would you recommend the site to friends and family?
FIGURE 9.	FREQUENCY OF VISITS TO BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL (ON-SITE SURVEYS) 47
FIGURE 10.	FREQUENCY OF VISITS TO BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL (CATCHMENT SURVEYS)
FIGURE 11.	MEAN VISIT DURATION (ON-SITE SURVEYS)
FIGURE 12.	Who do you tend to visit with?
FIGURE 13.	Activity types – on-site surveys & POFS
FIGURE 14.	OVERALL QUALITY RATINGS FOR BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL (2008, 2009,
	2010)
FIGURE 15.	DYNAMIC GENDER PROFILE OF CATCHMENT POPULATIONS AND VISITORS TO BENTLEY, BIRCHES VALLEY
	AND INGREBOURNE HILL (2008 & 2010)
FIGURE 16.	Age profiles of informal visitors to Bentley, Birches Valley and Ingrebourne Hill55
FIGURE 17.	Age profiles of formal visitors to Bentley, Birches Valley and Ingrebourne Hill 56
FIGURE 18.	INCOME PROFILE OF VISITORS TO BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL
FIGURE 19.	VISITOR DISABILITY PROFILE BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL
FIGURE 20.	ETHNICITY PROFILE OF VISITORS TO BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL
FIGURE 21.	Ethnicity profile of formal visitors to Bentley, Birches Valley and Ingrebourne Hill 61
FIGURE 22.	GENDER AND NON-USE AT BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL
FIGURE 23.	Age profile of non-visitors to Bentley, Birches Valley and Ingrebourne Hill
FIGURE 24.	INCOME AND NON-USE AT BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL
FIGURE 25.	DISABILITY AND NON-USE AT BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL
FIGURE 26.	ETHNICITY AND NON-USE AT BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL
FIGURE 27.	BARRIERS TO VISITING BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL MORE OFTEN
FIGURE 28.	BARRIERS TO VISITING BENTLEY, BIRCHES VALLEY AND INGREBOURNE HILL(NON-VISITORS) 69



List of Tables

TABLE 1.	NUMBER OF INTERVIEWS CONDUCTED AT FLAGSHIP SITES DURING THE 3-YEAR PROJECT	. 16
TABLE 2.	COMPARISON OF FACILITIES OFFERED AT EACH FLAGSHIP SITE	. 19
TABLE 3.	DISTANCES TRAVELLED BY FLAGSHIP SITE VISITORS	. 20
TABLE 4.	Total activity and events held at the Flagship sites in $2009/10$ and $2010/11$, and the	
	TOTAL NUMBER OF PARTICIPANTS RECORDED.	. 33
TABLE 5.	NET PROMOTER SCORE AT FLAGSHIP CASE STUDY SITES.	. 36
TABLE 6.	QUALITY OF EXPERIENCE RATINGS FOR FORMAL EVENTS	. 37
TABLE 7.	PERSONAL BENEFITS (ON-SITE SURVEYS AND POFS 2009).	. 39
TABLE 8.	PERSONAL BENEFITS (CATCHMENT SURVEYS AND POFS 2009).	. 41
TABLE 9.	SOCIAL BENEFITS (ON-SITE SURVEYS AND POFS 2009)	. 42
TABLE 10.	SOCIAL BENEFITS (CATCHMENT SURVEYS AND POFS 2009)	. 43
TABLE 11.	FORMAL VOLUNTEERING AT FLAGSHIP CASE STUDY SITES IN 2009/10 AND 2010/11	. 44
TABLE 12.	GENDER PROFILE OF FORMAL VISITORS	. 54
TABLE 13.	DISABILITY DIVERSITY PROFILE OF FORMAL VISITORS	. 59



1. Introduction

This report provides a detailed account of the 'Monitoring and Evaluating Quality of Life' project – a three year research project delivered by Forest Research (FR) on behalf of Forestry Commission England (FCE) to develop and implement a broad monitoring and evaluation (M&E) framework to capture the contribution of England's trees, woods and forests to the nation's quality of life.

England's forests, woodlands and trees cover about 9% of the total land area. They not only represent an important source of more 'traditional' forestry resources, such as timber, but also constitute important natural components of rural and urban landscapes, performing vital functions and delivering a wide range of ecosystem services. All of these functions and services, in turn, make important contributions to the well-being of individuals and communities.

The 'Monitoring and Evaluating Quality of Life' project started from the recognition that England's trees, woods and forests make important contributions to the population's quality of life and that this contribution needs to be described and evaluated in order to support evidence-based forestry policy development and to underpin the design and delivery of sustainable forest management.

1.1 Project context

Traditional approaches to monitoring the contribution of trees, woods and forests to social and community development have focused on measuring and mapping the area of new woodland created in 'priority' places, generally defined through broad measures of need and opportunity, such as the Index of Multiple Deprivation (IMD). While this approach has provided useful snapshots of the outputs of targeted woodland creation programmes, it has provided only limited information about the quality, distribution and accessibility of the resource, and its impact on and value to individuals and communities.

As part of an ongoing process of sustainable forestry policy development in England, it was agreed that new indicators would be needed to gain a better understanding of the contribution of trees, woods and forests to communities and places. At headline level, these indicators would be grouped under two closely related dimensions of forestry policy, management and planning:

- 'Quality of Place' indicators would be used to track the proportion of the population in priority areas who have access to an agreed benchmark provision of accessible woodland.
- 'Quality of Life' indicators would be used to measure changes in visits to and engagement with local woodland, quality of experience on woodland sites, and the



range of benefits that individuals and communities derive from their local woodlands.

This report documents the development, implementation and results of the Quality of Life indicators.

1.1.1 The 'Monitoring & Evaluating Quality of Life' project

Forestry Commission England's Corporate Plan (2008-2011) outlined a range of targets relating to 'Quality of Place' and 'Quality of Life', including increased provision of accessible woodland (Target 1: Quality of Place), and increased visits to and engagement with local woodland, quality of experience, and personal and social benefits derived from woodland (Target 2: Quality of Life). The Quality of Life target is a compound target, comprising five component indicators each with its own target. The five component indicators are i) Use, ii) Engagement, iii) Quality of Experience, iv) Personal benefit, v) Social benefit. The component indicators, their definition and associated methodology ('the framework') were developed as part of the 'Monitoring & Evaluating Quality of Life' project and implemented across a suite of three Forestry Commission managed 'Flagship' sites between 2008 and 2011:

- **Bentley Community Woodland** in Doncaster, a 93 ha community woodland on a former deep mine colliery, managed by Sherwood and Lincs. Forest District for the Land Trust;
- **Birches Valley Forest Centre** a 442 ha pine plantation in the Cannock Chase Area of Outstanding Natural Beauty, owned and managed by West Midlands Forest District; and
- Ingrebourne Hill Community Woodland in the London Borough of Havering, a 74 ha community woodland on former landfill managed by East Anglia Forest District.

1.1.2 Introduction to Flagship Case Study sites

Bentley Community Woodland (hereafter: Bentley) in South Yorkshire is a 93 hectare woodland established on the disused Bentley Colliery site. Bentley is part of the South Yorkshire Community Forest, falling within the Sherwood Forest District and is situated on the edge of Bentley, near Doncaster. The site is owned by the Land Trust and managed by the Forestry Commission. Staffing for Bentley Community Woodland comprises of a Community Ranger, a Forester and a Forest Works Supervisor; each of whom also attend other sites managed by the Forestry Commission in the area. A Community health ranger, funded by NHS Doncaster, holds events promoting health at Bentley and other sites in the area. The site, its location and the 2.5 mile (4 km) catchment area defined as part of the catchment profiling exercise are presented in Figure 2 on page 16 (for further information on catchment definition see Chapter 2.3, page: 18). The definition of the catchment enabled the estimation of Bentley's total catchment population at 74,146 persons, using data from the 2001 Census.



Birches Valley Forest Centre (hereafter: Birches Valley) is located on Cannock Chase in Staffordshire, close to the towns of Rugeley, Cannock, Lichfield and Stafford. Cannock Chase is the smallest mainland Area of Outstanding Natural Beauty (AONB) at just 64 square kilometres and is situated within 30 minutes drive of 4 million people, including the diverse communities of Birmingham and Stoke-on-Trent. Staffing for Birches Valley comprises of the Education team (2 part time education assistants, 2 part time education rangers and 1 part time education manager), a recreation ranger, visitor services manager and part time weekend forest warden. The site, its location and the 2.5 mile (4 km) catchment area defined as part of the catchment profiling exercise are presented in Figure 3 on page 22. The definition of the catchment area enabled the estimation of Birches Valley's total catchment population at 54,976 persons, using data from the 2001 Census.

Ingrebourne Hill is a former gravel extraction and landfill site. Originally poorly restored, the current owners and a civil engineering firm (C J Pryor) set up Ingrebourne Valley Ltd to undertake a second restoration and convert it into a country park during the 1990s. The Forestry Commission (FC) subsequently entered into a long-term management lease of the site as part of the Thames Chase Community Forest. In 2006, the Department for Communities and Local Government (DCLG) provided £1m funding to develop the site beyond its existing planning regulations.

Today, Ingrebourne Hill has a wide range of facilities on offer, including play areas, a view point, picnic tables and benches, and a mountain bike track. Staffing for Ingrebourne Hill comprises of a Community Ranger, a Community Forester and a Team Leader. The site, its location and the 2.5 mile (4 km) catchment area defined as part of the catchment profiling exercise are presented in Figure 4 on page 20. The definition of the catchment area enabled the estimation of Ingrebourne Hill's total catchment population at 134,498 persons, using data from the 2001 Census.

1.2 Report structure

This report has been structured to provide an update and final evaluation of the methodology employed, to present the major findings across three years of data gathering, and appraise the overall project conclusions. The report is structured as follows:

- **Methodology**: provides a detailed description of the research methods used, followed by some critical discussion and reflection on each method.
- Headline Indicators: presents a comparative analysis of the 'use', 'engagement', 'quality of experience' and 'personal benefit' and 'social benefit' profiles for each of the Flagship sites over the duration of the project. Some comparisons with national data are also presented.



- **Further evidence**: presents a comparative analysis of `visit' and `visitor' profiles from each of the Flagship sites over the duration of the project.
- **Discussion and conclusions**: presents the broad conclusions drawn over the 3year project, including the lessons learnt and an appraisal of the policy and operational (site level) value of the project.

Annex Reports

Annex reports have been produced for each Flagship case study site providing detailed presentation of the data arising from on-site surveys, catchment surveys & management records. In addition, annex reports have been produced presenting a wider picture of the activities and events in England's woodland¹ and reporting performance of Forestry Commission England's Quality of Life Corporate Target for the period 2008-2011².

¹ Doick, K., Morris, J. (2011). Activities and Events in England's Woodland. 'Monitoring and Evaluating Quality of Life'. An Annex Report: March 2011. Forest Research, Farnham.

² Doick, K., Morris, J. (2011). The Contribution of Trees, Woods and Forests to Quality of Life. Forestry Commission England Corporate Target Report. A 'Monitoring & Evaluating Quality of Life' Annex Report. March 2011. Forest Research, Farnham.



2. Project methodology

The project adopted a 'mixed methods' approach to data gathering, reflecting the analytical requirements of a multi-indicator M&E framework (see Appendix 1). Methods included a national survey, catchment surveys, on-site surveys, catchment definition, catchment profiling, and site management data capture. Each of these methods is described in detail below. Using a number of data sources improves understanding and aids evaluation through cross-validation of findings. A multi-indicator framework requiring a 'mixed methods' approach to data gathering ensures that robust quantitative data can supported with descriptive, qualitative information that adds depth and clarity to the analysis.

Essentially, data gathered through the various methods within the M&E framework are used to build up a number of 'profiles' that describe the relationship between each site and its surrounding population. These include user and non-user profiles, use (informal and formal³) profiles, quality of experience profiles, benefit profiles, input profiles and catchment population profiles. These can be linked through various forms of data analysis. Details regarding each of the profiles and the lines of analysis between profiles are illustrated in Figure 1. For example, the combination of user, use and benefit profiles can be used to show how different kinds of people (male, female, age, ethnicity etc.) use each site and what kinds of benefit they derive. Similarly, input, benefit and user profiles can be combined to show how different kinds of interventions affect different sections of the population and the benefits they derive from them. The comparison of user with catchment population profiles can reveal whether a site is being used by a representative cross-section of the local population, or whether some social groups are under-represented. Each method's contribution to the various profiles is set out alongside the method descriptions below.

³ Informal use refers to normal 'unorganised' visits to a site, whereas formal use refers to visits as part of an organised activity or event. Formal use normally signifies the input of resources (e.g. ranger time).



Figure 1. The analytical framework of the 'Monitoring and Evaluating Quality of Life' project.



2.1 National survey

Profiles: enables production of national user, non-user, use (informal), quality of experience and benefit profiles that can be compared to site-level equivalents.

Description of method

A national survey was included in the design of the Monitoring and Evaluating Quality of Life project framework to enable comparisons between site-level and national results to be carried out, thereby supporting the interpretation of site-level findings. To achieve a cost effective means of surveying the population of England, project specific questions were inserted into the established biannual Public Opinion of Forestry Survey (POFS), which is implemented through a Random Location Omnibus survey. The national survey was carried out between the 5th and 10th March 2009 (i.e. during the 2nd year of the 3-year Monitoring and Evaluating Quality of Life project). The POFS achieved a



representative sample of 1,685 adults (aged 16 or over) across England. Project specific questions inserted into the POFS covered use, engagement, quality of experience, and personal and social benefit indicators. Survey respondents were also asked a number of questions covering a range of socio-demographic descriptors, enabling the analysis of the social distribution of use, engagement, quality of experience, and personal and social benefits. Furthermore, non-users (respondents who responded negatively to the question 'In the last few years have you visited woodlands or forests for walks, picnics or other recreation?') could also be profiled, using the same socio-demographic descriptors.

Discussion and reflections on method

A summary of the results of the national survey is presented in the project's 2nd annual report (Morris and Doick 2010⁴), covering the 5 key indicators: use, engagement, quality of experience and personal and social benefits. In addition, significant socio-demographic user and non-user categories were identified, and discussed.

The national survey was included within the design of the Monitoring and Evaluating Quality of Life project to provide national data as the basis for comparisons with site-level results, highlighting differences and similarities. Where site-level results were at variance with national results, plausible explanations could be sought. For example, while the national survey revealed that $77 \pm 2.0\%$ of the population had visited woodlands in the last few years, the 2010 catchment surveys revealed much lower levels of use of Bentley and Ingrebourne Hill ($14 \pm 3.4\%$ and $17 \pm 3.4\%$, respectively). Relatively low levels of use are perhaps unsurprising given that these two sites are relatively new and are yet to become part of the fabric of everyday life for a significant proportion of the local population, who may be using other woodlands in the area. Contrastingly, the 2010 catchment survey at Birches Valley revealed that $74 \pm 4.1\%$ of the population had visited, illustrating the high level of local usage of this long-established and popular site.

A key value of the national survey was that it enabled an analysis of the social distribution of visits to woodlands and forests that could then be compared with assessments of the 'representativeness' of visitors to the three Flagship sites. The national use profile was compared with demographic data for the national population, revealing the relative under-representation of a number of social groups, including young people (16-24 yrs), older people (65+ yrs), people with social grade C2DE, disabled people, and people belonging to black and minority ethnic (BME) groups. At site level, the comparison of user with catchment population profiles also revealed some under-representation. For example, women are shown to be under-represented at Ingrebourne Hill (see sub-section 4.2.1). However, site-level results also illustrate some

⁴ Morris, J., Doick, K. (2010). Monitoring and Evaluating Quality of Life for CSR 07. Final annual report 2009/10 & Deliverable 7.1.2 to Forestry Commission England. Forest Research, Farnham.



significant successes in attracting social groups who emerge as under-represented at the national level. For example, BME groups are shown to be well represented at all three sites.

2.2 On-site survey

Profiles: contribute to the construction of user, use (informal), quality of experience and benefit profiles for each site.

Description of method

On-site visitor surveying was conducted every year (2008, 2009, 2010) at each Flagship site. Surveying was carried out from July to October and was conducted on week days, weekends and public holidays, and involved early morning, morning, midday, afternoon and early evening sessions to ensure the capture of a representative sample of site users and uses. The surveying strategy was consciously inclusive and comprehensive, capturing as many visitors as possible. Surveys were conducted by Forestry Commission staff at Bentley and Birches Valley. At Ingrebourne Hill, professional contractors were employed to supplement surveying by Forestry Commission staff.

The on-site questionnaires contained a range of questions covering use, engagement, quality of experience, personal and social benefit indicators, as well as demographic descriptors. A copy of the on-site questionnaire can be found in Appendix 2 (see also: Morris and Doick, 2009)⁵. Completed questionnaires were sent to Forest Research for data digitalisation and analysis (conducted in the statistical software package: SPSS). The number of interviews conducted across the 3-year project is presented in Table 1.

Voar		Flagship site		Total
Tear	Bentley	Birches Valley	Ingrebourne Hill	Total
2008/09	84	114	151	349
2009/10	43	166	116	325
2010/11	66	327	151	544
Total:	193	607	418	1,218

Table 1. Number of interviews conducted at Flagship sites during the 3-year project.

Discussion and reflections on method

⁵ Morris, J., Doick, K. (2009). Monitoring and Evaluating Quality of Life for CSR 07. Final annual report 2008/09 & Deliverable 7.1.1 to Forestry Commission England. Forest Research, Farnham.



On-site visitor surveying proved to be an effective method for capturing a broad range of information about site users, use, quality of experience and benefits. However, a number of problems were identified with the method during the 3-years of implementation:

- The method is not always cost effective. For example, staff or contractor time can be inefficient is only a low number of respondents are interviewed due to bad weather or if there are low numbers of people using the site (as was the case at Bentley in year 2 of the project). This is compounded where surveying is undertaken by pairs of staff (a health and safety precaution on quiet secluded sites, etc.).
- The scope for the analysis of results and the ability to demonstrate statistically significant changes (at the 95% confidence level) was limited for those sites where it proved difficult to obtain sufficiently large sample sizes (e.g. Bentley).
- Due to legal restrictions covering the involvement of minors in research, the method omitted young people (under 16 yrs). Young people are likely to be a key user group at some sites (for example, at Ingrebourne Hill, which has purpose-built mountain bike trails and rough-grass football area).
- The method is limited in terms of the quantity and detail of qualitative feedback that it can capture because respondents are limited to providing brief statements to qualify their responses to a limited number of closed questions. In turn, this limits the extent to which some of the quantitative data can be interpreted and explained. The addition of qualitative research methods (e.g. interviews or focus groups) to the mixed methods approach would have enabled a greater level of interpretation and analysis.
- The method can demonstrate the presence of key user groups and, through comparison with the results of catchment population profiling, infer the absence of some social groups. It cannot indicate why a group is under-represented.

The problems listed above are, largely, inherent features of a closed-question survey methodology. These issues could not have been addressed within the project period without a major overhaul to the wider methodology that would have led to inconsistencies in data capture over the 3 years. However, some refinements to the on-site questionnaire were made. Two questions were removed from the questionnaire following the surveying period in year one because they were felt to be redundant by Project Board members and site staff ⁶.

⁶ Q12: How would you rate the site regarding: Feeling safe; Happy to leave the car in the car park; Solitude, peace and quiet; Spending time with friends and family; Enjoying the scenery/views; Being able to enjoy wildlife; Offering a visit that is value for money; Being able to keep fit?

Q15: How did your visit today compare with your expectations: Much better; A little better; As expected; A little worse; Much worse?



The on-site survey method also proved to have key operational as well as analytical value. Site staff, who actually conducted the survey on site, reported that interviewing visitors provided an effective way to meet members of the public and to discuss aspects of the site and obtain feedback. Staff members all felt that this first-hand communication with visitors had been extremely useful for directing future work. They also sensed that visitors themselves valued this opportunity to meet site staff and often felt reassured by their presence on-site. The operational value of on-site surveying is discussed in more detail in Chapter 5.3.

2.3 Catchment definition

Profiles: Catchment definition provides the starting point for the production of catchment population profiles for each site.

Description of method

Standards for access to greenspace, and to woodlands specifically, have been provided by Natural England and the Woodland Trust, respectively. Natural England's published accessible natural greenspace standards (ANGSt) state that:

- no person should live more than 300 metres from their nearest area of natural greenspace of at least 2 ha in size
- at least 1 ha of Local Nature Reserve should be provided per 1,000 population
- there should be at least one accessible 20 ha greenspace site within 2 km (1.25 miles) from home
- there should be one accessible 100 ha greenspace site within 5 km (3.13 miles)
- there should be one accessible 500 ha greenspace site within 10 km (6.16 miles).

Building on ANGst, the Woodland Trust has developed Woodland Access Standards (WASt), which state that:

- no person should live more than 500 metres from at least one area of accessible woodland of no less than 2 ha in size
- there should also be at least one area of accessible woodland of no less than 20 ha within 2.5 miles (4 km) of people's homes (5 mile/8 km round-trip).

Aligned to the WASt, and complementary to the ANGSt, the working definition for the catchment area of a woodland adopted by the project was the area within a 2.5 mile (4 km) radius of a site's boundary. A sub-division was made at 500 m⁽⁷⁾.

The population living within a 2.5 mile (4 km) radius of a particular site's boundaries is described as the site's 'catchment population', comprising users, non-users and potential

⁷ See Morris and Doick (2009), *ibid*.



users. In purely spatial terms, the woodland is considered accessible to this **population**. This definition is a working model, a simplification that excludes physical, social, cultural and economic barriers to access; it provides a simple basis for defining spatial catchments for any given woodland.

Woodland has impacts upon users (those who have visited and who benefit through direct and indirect forms of use) and non-users (those who have not visited, but may benefit through indirect forms of use). It is necessary to engage with non-users in order to evaluate the wider impacts of woodlands on individuals and the local community. The catchment area definition provides a basis to examine a woodlands influence.

Discussion and reflections on method

The 2.5 mile (4 km) radius definition was a working definition adopted in year one of the project. It was recognised that, in reality, the effective catchment may be larger or smaller and one aim of the project was to test the validity of this catchment definition.

Ostensibly, the Flagship sites represent two different types of woodland. Birches Valley is a large site with many attractions that appeal to tourists and day visitors (see Chapter 1.1.2: Introduction to the Flagship case study sites). Bentley and Ingrebourne Hill sites are community woodlands, much smaller than Birches Valley, and designed and located to appeal to frequent (daily) users and those who can access the site by foot or bicycle. A comparison of facilities offered at each flagship site is presented in Table 2. Inherent differences between these two types of sites became apparent in year 1 of the project, suggesting that revisions to the working catchment definition may be required, or that a number of catchment definition models might be required to suit different site types.

Facility	Bentley	Birches	Ingrebourne
		Valley	Hill
Visitor Centre / Café		Y	
Toilets		Y	
Franchises (e.g. Go-Ape™, cycle hire)		Y	
Designated off-road cycle trails		Y	Y
Designated wildlife areas	Y	Y	Y
Mixed ability footpaths and trails	Y	Y	Y
Picnic tables / benches	Y	Y	Y
Natural and /or formal play equipment	Y	Y	Y

Table 2. Comparison of facilities offered at each flagship site.

Table 3 presents a comparison of the relative proportion of visitors to the Flagship sites based upon distance travelled (respondents to the on-site surveys were asked how far they had travelled). The data demonstrates that, in each year of the project, 66% of the

visitors to Bentley and Ingrebourne Hill travelled less than 2 miles (3.2 km). In contrast, 71% of visitors to Birches Valley travelled 7 miles (8.4 km) or more.

	Flagship site									
Distance	Bentley			Birches Valley			Ingrebourne Hill			
	`08/09	`09/10	`10/11	`08/09	`09/10	`10/11	`08/09	`09/10	`10/11	
< 1/3 rd mile	30%	43%	35%	2%	1%	1%	34%	23%	26%	
(< 0.5 km)	0070	1070	0070	270	170	170	01/0	2070	2070	
$^{1}/_{3}^{rd}$ -2 miles	40%	24%	31%	5%	7%	7%	42%	45%	47%	
(0.5 - 3.2 km)										
3 - 6 miles	23%	10%	20%	16%	21%	19%	21%	23%	19%	
(4.8 - 9.6 km)										
7 - 20 miles	6%	12%	12%	41%	41%	33%	1%	5%	6%	
(8.4 - 32 km)										
> 20 miles $(2, 22, 4m)$	1%	12%	2%	35%	30%	39%	1%	3%	2%	
(> 32 KIII)										

Table 3. Distances travelled by Flagship site visitors

Figure 2 - Figure 4 on pages 20 - 23 show a spatial representation of the Flagship sites, their 2.5 mile (4 km) catchment area and the locations from which on-site survey respondents had travelled during years 1, 2 and 3 of the project. Maps of England demonstrating where people travelled from to access Bentley, Birches Valley and Ingrebourne Hill are also presented for 2009/10 and 2010/11.

A larger catchment for Birches Valley

Using data from the Yr 1 and Yr 2 on-site surveys, an analysis of the distances travelled by visitors demonstrated that 75% (the 3rd quartile) of visitors to Bentley and Ingrebourne Hill had travelled from within the project's 2.5 mile (4 km) working definition catchment area. Further investigations of on-site visitor survey data revealed that 75% of visitors to Birches Valley travelled from within 32.1 miles (51.7 km). The catchment area for Birches Valley was subsequently re-profiled based upon an area within a 30 miles radius of the site's boundaries, for completeness and for future comparisons between the user and catchment profiles at Birches Valley. Comparisons are made to the 2.5 mile (4 km) catchment profile throughout this report for consistency across the 3-year project. Birches Valley's 30-mile catchment area is ca. 70 times larger by area than the 2.5 mile (4 km) catchments of Bentley and Ingrebourne Hill, and is presented in Figure 5.



Figure 2. Visitor distribution map for Bentley (n=55; i.e. 36+ 7+ 12 project years 1, 2 and 3, respectively. With 2.5 mile (4 km) catchment boundary also shown.





Figure 3. Visitor distribution map for **Birches** Valley (n=275; i.e. 41+ 87+ 147 project years 1, 2 and 3, respectively. With 2.5 mile (4 km) catchment boundary also shown.





Figure 4. Visitor distribution map for Ingrebourne Hill (n= 357; i.e. 145+ 82+ 130 project years 1, 2 and 3, respectively. With 2.5 mile (4 km) catchment boundary also shown.





Figure 5. Birches Valley (site area) and the 30 mile (48 km) catchment area around the site boundary from within which 75% of the visitors to Birches Valley travelled.





2.4 Catchment profiles

Profiles: Enable production of catchment population profiles for each site.

Description of method

The spatial definition of a woodland's catchment area (see Chapter 2.3) provided the basis for quantifying and profiling the population of 'potential' site users, referred to as the 'catchment population'. Full details on the development of a procedure for catchment profiling, including collection of appropriate statistics, preparation and matching of the data to the catchment areas, statistical calculation of profiles, and issues encountered are presented in Morris and Doick (2009)⁸.

The quality criteria set for statistics used in the catchment profiling were:

- available on a comparable basis for all of England so that the data would be useable for any woodland site anywhere in England;
- high quality, robust and defendable;
- available at a very detailed spatial resolution in order to be suitable for use with catchment areas as small as 500m;
- timely and likely to be updated in future;
- widely used and respected by data users;
- free of charge at point of use.

The single data source best able to fulfil these criteria was the Census of Population 2001. Based upon this data source, **catchment populations were profiled for the descriptors**:

•	Index of Multiple Deprivation	•	approximated social grade	•	rural and urban classification	•	area classification (at super group &
•	(2005)	•	ade	•	(2004) gender		group level) disability
•	quantity	•	uge	·	gender	•	alsability

population
income estimates
ethnic group
religion

NB. Data sets are 2001 Census derived except for the Index of Multiple Deprivation (IMD). Income estimates are Model-Based Estimates 2004/05 (Office for National Statistics) based on the Family Resources Survey and administrative sources. The Census Area Statistics are Crown copyright 2003. This Crown copyright material is produced with the permission of the Controller of HMSO and the Queen's Printer for Scotland. Reproduced under the terms of the Click-Use licence.

⁸ Morris and Doick (2009), *ibid*



Discussion and reflections on method

Methods for profiling a potential user population were developed as part of previous research undertaken by Forest Research (O'Brien and Morris, 2009). Catchment profiling within this earlier research, as with the Quality of Life project, was hampered by the lack of an accepted definition for the catchment area of a woodland. For example, as noted in Chapter 2.3, the three Flagship sites broadly represent two different types of woodland site: Birches Valley is designed and advertised to appeal to tourists and day visitors; Bentley and Ingrebourne Hill are designed as community woodlands that appeal more to local residents. The project represented an opportunity to set, test and refine definitions of woodland catchment areas. Further validation of the 2.5 and 30 mile catchment areas will be required through testing at other sites. The Quality of Life project results suggest that a catchment can be usefully defined as the buffer that includes 75% of the users of a site.

Generating baseline profiles presented a number of mathematical and definitional challenges. A detailed discussion on the challenges of quantifying profiles is presented in Morris and Doick (2009)⁹. Some key issues were encountered with the use of the 2001 Census as the basis for catchment profiles for the whole project period. An advantage of effectively 'fixing' the catchment population in this way was that the analyses only had to be conducted once for each defined catchment. Furthermore, with the baseline fixed, any changes apparent in visitor profiles obtained through the on-site and catchment surveys, were directly comparable across the project's three years. However, with the project starting in late 2008, the 2001 Census data were already over seven years old, introducing the possibility that they were no longer wholly accurate summaries of population demographics for each catchment area. As a result, conclusions about representativeness of site visitors in comparison to the catchment population should be treated with some caution.

2.5 Catchment survey

Profiles: Enable production of user, non-user, use (informal), quality of experience and benefits profiles for each site.

Description of method

Surveys of a site's catchment population are a means of assessing the relationship between a woodland site and its local population. They are a useful complement to onsite surveying because they allow visit and visitor numbers to be accurately quantified. Furthermore, they enable an analysis of the benefits that come from 'indirect' (e.g.

⁹ and ⁶ Morris and Doick (2009), *ibid*



aware of a site without actually visiting it) as well as 'direct' forms of use (e.g. visits to a site). Critically, they also provide an opportunity to gather information about local people who have not visited a site (so-called 'non-users'). Information about non-users can provide a useful input into the design of appropriate interventions to encourage more inclusive site usage.

For the Quality of Life project, catchment survey questionnaires were designed with a range of questions covering use, engagement, quality of experience, personal and social benefit indicators and a number of key socio-demographic descriptors (a copy of the catchment questionnaire can be found in Appendix 3 (See Morris and Doick (2009)¹⁰ for development details).

A specialist market research company was contracted to undertake the catchment surveys. Interviews were conducted using CATI (computer assisted telephone interview). To achieve a representative sample of each catchment population, 2001 Census data was used to devise interview targets (known as quotas) based on gender, age and employment status (working and not working). Catchment surveying was conducted in project year-1 (the baseline year – 2008/09) and repeated in project year-3 (2010-11).

Approximately 400 interviews were conducted for each Flagship site during each survey year, targeted within the 2.5 mile (4 km) catchment areas. A sample size \geq 380 is required per catchment to be statistically representative of the total catchment population. Statistically significant (at the 95% confidence level) changes measured between data from years 1 and 3 can be taken as a reliable indication of changes within the wider catchment population. Data analysis was conducted using the software package SPSS and reported in Case Study Annex reports.

Discussion and reflections on method

Catchment surveys were a very important and novel component of the Quality of Life project's methodology. They offered:

- Reliable quantitative estimates of site use (visitor numbers).
- A means of cross-checking the results of the on-site surveys (through comparison of concurrent and directly-related data sets).
- the opportunity to capture non-woodland users' perceptions of the benefits and contributions of each site to the quality of life of the local population.

Like all interviewing methodologies, CATI represents a significant cost (ca. £27k per year, 1200 respondents). However, The CATI approach adopted for catchment surveying had a number of advantages over face-to-face interviews (either as cold-calling 'door

step' interviews or as high street interviewing). Firstly, the CATI approach is relatively cost-effective (door-step interviewing is significantly more expensive to administer). Secondly, daily reviews of the survey sample enable regular adjustments to the respondent selection process, increasing the efficiency with which the sample quotas are achieved.

An inherent weakness of the catchment surveying methodology is the limited sample size (\approx 400 respondents per catchment), which places limitations on the subsequent analysis of the results. This is not a problem for those questions that are answered by the total sample; however, certain questions are only answered by a proportion of the total sample (e.g. questions relating to use are only answered by respondents who have visited the site in question). For those sites that have been visited by a relatively small proportion of the catchment population (for example, in 2008 only 14% of Bentley catchment survey respondents had visited the site), this places a number of limitations on the subsequent analysis because it effectively widens the margin for error associated with each piece of analysis. The same is true for the analysis of non-use at sites where a high proportion of the catchment population have visited (e.g. Birches Valley). In these cases, the 95%-confidence intervals calculated were large and a major change in behaviour is required to register as statistically significant.

2.6 Site management data

Profiles: Enable the production of input and formal use profiles for each site.

Description of method

A significant and varied range of monitoring is undertaken at Forestry Commission sites via routine management practices. A review of these practices conducted in project year-1 revealed two monitoring opportunities relevant to the Quality of Life project:

- activities and events monitoring
- facilities management monitoring and exception reporting (incident, hazards and random reports).

Activities and Events Database

The activities and events database was constructed in MS Access to support Flagship site staff to manage and coordinate:

- activities: organised and led by a group or an individual from outside the Forestry Commission (FC) on FC land. The group, or individual, request permission (a permit) to hold the activity on FC land.
- events: organised and led by FC staff. These may take place on or off FC land.



The database has a user-friendly interface to facilitate fast efficient data input, as well as search and query options. A range of support documents were generated including:

- database manual
- event booking forms
- feedback forms for event organisers, event attendees, FC rangers
- diversity monitoring forms
- guidance notes for staff on differentiating community, recreation and education activities¹¹, and ranking groups using Index of Multiple Deprivation (IMD).

At the end of project years 2 and 3, copies of the database from each Flagship site were collated, amalgamated, interrogated and reported in Case Study Annex reports.

Facilities and Incidents Database

The facilities and incidents database, constructed in MS Access, is a software tool for digitally formalising:

- site inspection monitoring: the routine surveying of facilities and furniture, conducted by staff to identify defects
- incident and exception reporting: the recording of an issue noted outside of the routine site inspection regular process, either by staff or by a member of the public.

The facilities and incidents database was developed through engagement with Flagship site staff during year 2 of the Quality of Life project. The database includes facilities to:

- print customised inspection sheets
- record details of facility inspections and incidents
- create inspection schedules
- view outstanding actions associated with inspections and incidents
- create a variety of management reports
- create resumption schedules
- send emails to staff with details of forthcoming checks and outstanding actions

Discussion and reflections on method

The activities and events database has the capacity to store a wide range of information per event, including: numbers of rangers and event type; volunteering; accidents reported; event finance; partner organisation contributions; number of visits per group;

- A recreation event aims to promote and/or encourage participation in sports or leisure activities; it may have an event plan to manage people safely for an enjoyable visit

¹¹ A community event aims to encourage participation at, feedback or consultation on a site; it may have an engagement plan with defined objectives

⁻ An education event aims to disseminate specific knowledge; it may have an education or lesson plan, with associated learning aims, objectives and/or outcomes



group type; diversity – disability, age, ethnicity; feedback – by staff, organisers, individuals. All events are stored on the database by date and allocated a unique reference number.

Functionality of the activities and events database is severely compromised by inaccurate and inconsistent data entry by users, within the same office or across several offices, and the absence of data significantly weakens the statistics reported. For example, if users habitually do not correct event status from 'provisional' to 'confirmed' the number of events reported will be inaccurate. Equally, if users neglect to enter participant feedback forms, demographic profiles of participants cannot be reported and an 'events net promoter score' can not be calculated. The lack of feedback forms used at Birches Valley events throughout the Quality of Life project noticeably reduced the scope of reporting in the Case Study Annex reports. Inconsistency of data entry may prove a significant issue for inter-site and inter-year comparisons.



3. Headline indicators

Chapter 3 Summary

Use

Respondents to the 2008 and 2010 catchment surveys were asked if they had ever visited the relevant site. Respondents to the POFS in 2009 were asked if they had visited forests or woodlands in the last few years. The results show that, in comparison to national visitor numbers ($77 \pm 2.0\%$), Birches Valley is well used by its catchment population ($74 \pm 4.0 \%$ had visited in 2010). This also marks a slight increase in visitor numbers at Birches Valley since the baseline year (2008). In 2010, Bentley ($14 \pm 3.4\%$) and Ingrebourne Hill ($17 \pm 3.7\%$) had been visitors tend to visit Bentley and Ingrebourne Hill more frequently than visitors to Birches Valley.

Engagement

Respondents to the on-site surveys (2008, 2009, 2010) and catchment surveys (2008, 2010) were asked about their involvement in management-related activities at each of the sites. Respondents to the Public Opinion of Forestry Survey (POFS) (2009) were also asked about their involvement in the same management related activities at woodlands and forests. The results show a significant increase in the proportion of the catchment population at Bentley getting involved in management-related activities between 2008 ($3 \pm 1.7\%$) and 2010 ($8 \pm 2.7\%$), bringing the site in line with national levels of engagement ($9 \pm 1.4\%$). At Birches Valley ($5 \pm 2.0\%$) and Ingrebourne Hill ($5 \pm 2.1\%$) in 2010, engagement was slightly lower than the national average.

Quality of Experience

The research demonstrates that, based upon net promoter score (NPS - calculated as the net proportion of visitors who would definitely recommend each site to friends or family), quality of experience has declined at all three sites. However, all three sites consistently obtained higher NPS than the national target set for National Trust properties. Furthermore, while the proportion of respondents saying that they would definitely recommend each of the sites has fallen, the results also show an increase in the proportion who would probably recommend each site (those who respond 'probably' are discounted from the NPS calculation).

Personal Benefits

Respondents to the on-site surveys and catchment surveys (only those who had heard of the sites) were asked about ways in which each site benefits them



Chapter 3 Summary (continued)

Personal Benefits (cont.)

personally. Results from the on-site surveys reveal that consistently high proportions of respondents benefit personally from the sites. Some increases in personal benefit at Bentley (1 benefit category) and Ingrebourne Hill (1 benefit category) were observed. However, some decreases were also observed at Birches Valley (2 categories) and Ingrebourne Hill (2 categories). Results of the catchment surveys reveal that personal benefits accruing to catchment populations at all three sites have been largely maintained over the monitoring period.

Social Benefits

All respondents to on-site and catchment surveys were asked about ways in which the sites are important to their local community. The on-site survey results show that there have been some increases in social benefit accruing to catchment populations at Bentley (2 benefit categories) and Birches Valley (1 benefit categories). The catchment survey results show significant increases for a number of categories of social benefit: Bentley (8 categories) and Ingrebourne Hill (7 categories).

In this section, a comparative analysis of the results across the three years of research activities at each of the three 'Flagship' case study sites is presented. Comparisons are also drawn between data from the case studies, the 2.5 mile (4 km) catchment area profiles and data from the national survey carried out in 2009. The analysis focuses on evidence of critical relevance to the headline indicators, namely: use (3.1); engagement (3.2); quality of experience (3.3); and personal and social benefits (3.4).

3.1 Use

3.1.1 Informal use

Respondents to the 2008 and 2010 catchment surveys were asked if they had ever visited the relevant site (Bentley, Birches Valley and Ingrebourne Hill). Respondents to the POFS in 2009 were asked if they had visited forests or woodlands in the last few years for walks, picnics or other recreation.

At Bentley, $10 \pm 2.9\%$ (2008) and $14 \pm 3.4\%$ (2010) of the catchment population said that they had visited. At Birches Valley, $64 \pm 4.7\%$ (2008) and $74 \pm 4.1\%$ (2010) of the catchment population said that they had visited. At Ingrebourne Hill, $13 \pm 3.3\%$



(2008) and $17 \pm 3.7\%$ (2010) of the catchment population said that they had visited. At the national level, $77 \pm 2.0\%$ of the population said they had visited woodlands in the last few years. These results are presented in Figure 6, below. They show that, in comparison to national visit numbers, Birches Valley emerges an extremely well used site, especially considering that the question in the POFS relates to visits to any woodland and the catchment survey question relates to visits to a specified woodland. Furthermore, visitor numbers have increased significantly between 2008 and 2010 at Birches Valley (working at the 95% confidence level).



Figure 6. Comparative analysis of visitor numbers

3.1.2 Formal use

Formal use of the Flagship sites by groups was recorded in project years 2 (2009/10) and 3 (2010/11) through the activities and events database. Table 4, below, demonstrates the changes in the number of activities and events delivered by each site across the two years and the total number of participants recorded.

Table 4. Total activity and events held at the Flagship sites in 2009/10 and 2010/11, and the total number of participants recorded.



	Bentley		Birches	/alley	Ingrebourne Hill			
	2009/10*	2010/11	2009/10* 2010/11		2009/10* 2010/11			
Number of Activities & Events	50 (75)	84	38 (57)	214	2 (3)	2		
Number of participants	402 (603)	963	1,545 (2,318)	10,708	270 (405)	2,050		

* data for 2009/10 was collected over an 8-month period only (1st April to 30th November 2009). To aid comparison across the delivery periods 2009/10 and 2010/11, year 2 data has been extrapolated for a 12-month period and the data presented in parenthesises.

The formal visits data (Table 1) demonstrates that for each of the 3 Flagship sites, although differing in size and staffing resource, hosting formal ranger and self-led group can facilitate hundreds (even thousands) of users to access the site. At each site, the number of events and participants increased in 2010/11, in comparison to project year-2 (2009/10). The numbers of staff (full time equivalents) supporting formal group visits to each of the sites was: 1.18 and 0.74 at Bentley (2009/10 and 2010/11, respectively); 2.5 Birches Valley (2009/10 and 2010/11) and 0.44 at Ingrebourne Hill (2009/10 and 2010/11) (NB. as staff support activities and events across a number of sites, all figures are approximate. Furthermore, these allocations are based upon the total amount of time a ranger allocates to a site; rangers perform other duties on-site in addition to running events, for example, health and safety checks on facilities.)

3.2 Engagement

Respondents to the on-site surveys (2008, 2009, 2010) and catchment surveys (2008, 2010) were asked about their involvement in management-related activities at each of the sites in the last 12 months, including being involved in, or consulted about plans for the site, organised tree planting events, or voluntary work. Respondents to the POFS (2009) were also asked about their involvement in the same management related activities at woodlands and forests. The results (see Figure 7) show a significant increase in the proportion of the catchment population at Bentley getting involved in management-related activities between 2008 and 2010, bringing the site in line with national levels of engagement. The results also suggest that higher proportions of visitors to Bentley are engaged than at the other two sites. However, the results should be treated with caution, due to the small sample sizes obtained through on-site surveying at Bentley. At Birches Valley and Ingrebourne Hill in 2010, engagement was lower than the national average measured in 2009 through the POFS. However, the POFS does not specify a particular woodland when enquiring about involvement in management related activities, rather it asks about involvement at any woodland; therefore the national average figure is predictably higher than a site specific average.





Figure 7. Comparative analysis of engagement in management related activities

3.2.1 Formal engagement

The extent of formal engagement in management-related activities varied between the Flagship sites across project years 2 and 3. At Bentley, there were 23 formal community engagement events, with 154 participants, during an 8-month reporting period (April-November) in project year 2, decreasing to 16 formal events, with 196 participants, in the 12-month recording period of project year-3. There were no formal community engagement events at either Birches Valley or Ingrebourne Hill in project years 2 or 3, with the implication that those visitors who said they had been involved must have done so outside the reporting period (before April 2009) or at an alternative woodland. The results highlight that there is a degree of unreliability and potential inaccuracy, associated with the responses of survey participants that may be associated with lack of memory/confusion or misunderstanding of the question.


3.3 Quality of experience

In this sub-section, values for the key quality of experience indicator are compared across the three sites. Across the three years of monitoring, on-site survey (all respondents) and catchment survey respondents (visitors only) were asked if they would recommend each site as a place to visit to friends and family. The analysis of the results relates specifically to the net promoter score (NPS)¹² for each site, calculated as the net proportion of visitors (from on-site and catchment surveys) who said they would recommend each site as a place to visit to friends or family. Table 5 shows the NPS for each site across the three years, and reveals that the NPS has fallen at all three sites between 2008 and 2010. It should be noted that survey responses to the NPS question exhibited a high degree of volatility during the course of the three year monitoring period. In particular, there was a lack of consistency in the proportion of respondents choosing between the 'definitely' and 'probably' response categories (those saying that they would 'probably' recommend a site are effectively discounted from the NPS calculation). This may go some way to explaining the decline in NPS for each site (see also discussion of results displayed in Figure 8, below).

Elagohin sito		Year	
Flagship site	2008/09	2009/10*	2010/11
Bentley	65%	88%*	56%
Birches Valley	71%	84%*	67%
Ingrebourne Hill	69%	43%*	42%

Table 5. Net promoter score at Flagship case study sites.

* Results obtained from on-site survey only

NB. National Trust's national net promoter score for 2009/10 was 36%. Their target score for 2012/13 is 40%

Figure 8, below, displays a breakdown of responses to the question in 2008 and 2010 (on-site and catchment surveys (visitors only)). The results show, across all three sites, a slight decline in the proportion of respondents saying that they would definitely recommend each of the sites. The results also show a slight increase in the proportion who would probably recommend each site.

¹² Net promoter score is a proxy indicator for quality of experience. Based upon the interview question "would you recommend this site as a place to visit to friends or family?" it is calculated as the percentage of 'promoters' (those who would 'definitely' recommend the site to friends or family) minus the percentage of 'detractors' (those who would 'fairly likely' 'probably not' or 'definitely not' recommend the site).





Figure 8. Would you recommend the site to friends and family?

3.3.1 Quality of experience ratings for formal events

Quality of experience at formal events can be measured via organiser and participant feedback forms. The use of feedback forms varied across the Flagship sites: not used at Bentley in 2009/10 or 2010/11; used at Birches Valley in 2010/11 (but not 2009/10); and used at Ingrebourne Hill in both 2009/10 and 2010/11. The data is summarised in Table 6.

Flagship site	Year	Definitely	Probably	Fairly likely	Probably not	Definitely not	Don't know	n ² =	No. of Events	NPS ³
Birches	2009/10	-	-	-	-	-	-	n/a	n/a	-
Valley ¹	2010/11	100%	-	-	-	-	-	2	2	100%
Ingrebourne	2009/10	83.3%	11.5%	1.0%	0.0%	0.5%	0.0%	209	14	81.8%
Hill	2010/11	85.3%	11.3%	2.4%	0.2%	0.0%	0.7%	573	19	82.0%

Table 6. Quality of experience ratings for formal events

¹ Data presented in table is cumulative total for activities and events monitored

 2 n = number of feedback forms received from organisers and participants

³ NPS = net promoter score for activities and events



Table 6 presents the net promoter score for activities and events at Birches Valley (year 2010/11 only) and Ingrebourne Hill (years 2009/10 and 2010/11). Ingrebourne Hills net promoter score marginally increased between 2009/10 and 2010/11. For both Flagship sites, the net promoter score is considerably higher that the respective 'visitor' net promoter score calculated through on-site and catchment surveying: 67% at Birches Valley and 42% at Ingrebourne Hill (2010/11 figures; see Table 5).

3.4 Personal & social benefits

In this sub-section, results from the analysis of personal and social benefits delivered by each of the Flagship case study sites are presented and compared. The analysis involves a summary presentation of results from the on-site surveys (all respondents) and catchment surveys (only those respondents who had heard of the sites) where respondents were asked about ways in which each site benefits them personally and their local community. For each category of benefit, respondents were asked whether they strongly agreed, agreed, disagreed or strongly disagreed with statements relating to the delivery of each benefits. For the sake of simplicity, we present the proportion who either strongly agreed or agreed with each statement. Comparisons are also drawn between data from each case study site and relevant national data derived from the POFS 2009, when respondents were asked about benefits delivered by England's trees, woods and forests.

3.4.1 Personal benefits

Respondents to the on-site surveys were asked about ways in which they personally benefit from the relevant site. The proportion of visitors deriving personal benefits from each site can be calculated, using positive responses (strongly agree / agree) for each benefit category. The results of this calculation for all three sites and across all three survey years are presented in Table 7, below. Statistically significant changes in the proportion of respondents who strongly agree / agree with the statements relating to personal benefits between 2008 (baseline year) and 2010 are highlighted. Cells are coloured green (increase), red (decrease) or amber (no change). The results from the POFS 2009 are also shown to allow comparison between site-level and national data.

The results show that there have been some increases in personal benefit at Bentley (1 benefit category) and Ingrebourne Hill (1 benefit category). There have been some decreases in personal benefit observed at Birches Valley (2 categories) and Ingrebourne Hill (2 categories).

	POFS	Bentley			Birches Valley			Ingrebourne Hill		
Categories of	Strongly agree/Agree	Stro	ngly agr Agree	ee /	Stror	ngly ag Agree	ree /	Stror	ngly ag Agree	ree /
benefit	2009	2008	2009	2010	2008	2009	2010	2008	2009	2010
It helps me to earn a living or make ends meet	12% ± 1.8%	12%	5%	3%	10%	1%	6%	1% ± 1.6%	2%	14% ± 5.5%
It's a place where I can relax and de- stress	94% ± 1.3%	99%	100%	97%	95%	94%	95%	99%	72%	96%
It's a place where I can exercise and keep fit	84% ± 2.0%	99%	100%	98%	100%	99%	97%	95%	65%	94%
It's a place where I can have fun and enjoy myself	91% ± 1.6%	96%	100%	97%	100%	99%	100%	95%	67%	90%
It's a good place to socialise	51% ± 2.7%	76% ± 9.1%	68%	92% ± 6.6%	91%	85%	86%	76%	53%	67%
It's a place where I can learn about the environment	80% ± 2.2%	83%	82%	92%	75%	72%	70%	59%	47%	71%
It's an important place for wildlife	97% ± 0.9%	98%	100%	98%	86%	92%	89%	95%	65%	90%
It brings the community together	52% ± 2.7%	54%	37%	71%	75% ± 7.9%	62%	61% ± 5.3%	66%	48%	64%
It makes this area a nicer place to live	93% ± 1.4%	95%	93%	100%	85%	82%	75%	97% ± 2.7%	63%	81% ± 6.3%
It gets me involved in local issues	34% ± 2.6%	34%	20%	56%	48% ± 9.2%	31%	32% ± 5.0%	36%	24%	48%
It's a place where I feel at home	69% ± 2.5%	81%	93%	87%	73%	76%	67%	93% ± 4.0%	51%	70% ± 7.3%



Respondents to the catchment surveys (only those who had heard of the site in question) were also asked about ways in which they personally benefit from the relevant site. The catchment survey samples were sufficiently large to be representative of each site's catchment (confidence level = 95%). As such, statistically significant changes in the proportion of the survey samples who strongly agree / agree with the statements relating to personal benefits delivered by each site can be taken to represent changes within the wider catchment population. The results of this calculation for all three sites and across the two survey years are presented in Table 8, below.

The results show that personal benefits accruing to catchment populations at all three sites have been largely maintained over the monitoring period. At Bentley, there has been a significant increase in one benefit category (wildlife).

3.4.2 Social benefits

All respondents to the on-site surveys were asked about ways in which the sites are important to their local community. As with personal benefits, the proportion of visitors who feel that the relevant site delivers benefits to the community can be calculated, using positive responses (strongly agree / agree) for each benefit category. The results of this calculation for all three sites are presented in Table 8, below. Statistically significant changes in the proportion of respondents who strongly agree / agree with the statements relating to personal benefits between 2008 (baseline year) and 2010 are highlighted. Cells are coloured green (increase), red (decrease) or amber (no change). The results from the POFS 2009 are also shown to allow comparison between site-level and national data.

The results show that there have been some increases in personal benefit accruing to visitors at Bentley (2 benefit categories) and Birches Valley (1 benefit categories).

All respondents to the catchment surveys were asked about ways in which the sites are important to their local community. The results from the 2008 and 2010 surveys are presented in Table 8, together with the results of the POFS 2009. The catchment survey samples were sufficiently large to be representative of each site's catchment (confidence level = 95%). As such, statistically significant changes in the proportion of the survey samples who strongly agree / agree with the statements relating to social benefits delivered by each site can be taken to represent changes within the wider catchment population. The results show significant increases for a number of categories of social benefit: Bentley (8 categories) and Ingrebourne Hill (7 categories). Interestingly, the results show that the proportion of respondents agreeing with nearly all benefit statements is lower at Ingrebourne Hill and Bentley than at Birches Valley, perhaps suggesting that recognition of the wider community benefits of a woodland is likely to be lower for sites that are relatively young and where the relationship between community and woodland is developing over time.

Table 8. Personal benefits (catchment surveys and POFS 2009).

	POFS	Bentley		Birches	s Valley	Ingrebourne Hill		
Categories of personal benefit	Strongly agree / Agree	Strongly Agı	agree / ree	Strongly Agi	agree ∕ ree	Strongly Agı	agree / ree	
20110111	2009	2008	2010	2008	2010	2008	2010	
It helps me to earn a living or make ends meet	12% ± 1.8%	10% ± 5.7%	6% ± 4.3%	10% ± 3.4%	6% ± 2.4%	5% ± 4.3%	5% ± 3.9%	
It's a place where I can relax and de- stress	94% ± 1.3%	70% ± 8.6%	77% ± 7.4%	88% ± 3.6%	88% ± 3.3%	73% ± 8.8%	74% ± 7.9%	
It's a place where I can exercise and keep fit	84% ± 2%	68% ± 8.8%	81% ± 7.2%	82% ± 4.3%	88% ± 3.3%	68% ± 9.2%	77% ± 7.5%	
It's a place where I can have fun and enjoy myself	91% ± 1.6%	69% ± 8.7%	76% ± 7.8%	91% ± 3.2%	91% ± 2.9%	68% ± 9.2%	81% ± 7.0%	
It's a good place to socialise	51% ± 2.7%	43% ± 9.3%	56% ± 9.1%	83% ± 4.2%	75% ± 4.4%	50% ± 9.9%	62% ± 8.7%	
It's a place where I can learn about the environment	80% ± 2.2%	58% ± 9.3%	69% ± 8.5%	88% ± 3.6%	87% ± 3.5%	60% ± 9.7%	70% ± 8.2%	
It's an important place for wildlife	97% ± 0.9%	75% ± 8.2%	90% ± 5.5%	93% ± 2.8%	96% ± 2.0%	75% ± 8.4%	86% ± 6.2%	
It brings the community together	52% ± 2.7%	51% ± 9.3%	66% ± 8.7%	69% ± 5.2%	75% ± 4.4%	55% ± 9.8%	63% ± 8.6%	
It makes this area a nicer place to live	93% ± 1.4%	73% ± 8.4%	86% ± 6.3%	91% ± 3.2%	94% ± 2.4%	79% ± 8.0%	89% ± 5.6%	
It gets me involved in local issues	34% ± 2.6%	37% ± 9.1%	32% ± 8.5%	43% ± 5.5%	34% ± 4.9%	32% ± 9.2%	37% ± 8.6%	
It's a place where I feel at home	69% ± 2.5%	53% ± 9.4%	57% ± 9.0%	80% ± 4.5%	78% ± 4.2%	55% ± 9.8%	61% ± 8.7%	

Table 9. Social benefits (on-site surveys and POFS 2009).

	POFS	Bentley		Bir	Birches Valley			Ingrebourne Hill		
Categories of	Strongly agree / Agree	Strongly agree / Agree			Strongly agree / Agree			Strongly agree / Agree		
social benefit	2009	2008	2009	2010	2008	2009	2010	2008	2009	2010
It contributes to the local economy	57% ± 2.4%	15%	17%	12%	57% ± 9.1%	99%	86% ± 3.7%	35%	72%	30%
It's a place where people can relax and de-stress	94% ± 1.1%	100%	100%	100%	98%	99%	96%	95%	100%	97%
It's a place where people can exercise and keep fit	n/a	99%	100%	100%	99%	100%	97%	94%	99%	98%
It's a place where people can have fun and enjoy themselves	94% ± 1.1%	97%	100%	100%	98%	100%	96%	93%	97%	91%
It's a place where people can learn about environment	91% ± 1.4%	92%	93%	100%	85%	97%	92%	75%	92%	81%
It's an important place for wildlife	97% ± 0.8%	95%	100%	100%	91%	99%	95%	92%	99%	90%
It brings the community together	52% ± 2.4%	58% ± 10.7%	42%	84% ± 8.8%	81%	91%	76%	68%	87%	61%
It makes this area a nicer place to live	93% ± 1.2%	95%	95%	100%	87%	99%	89%	92%	98%	84%
It gets people involved in local issues	63% ± 2.3%	46% ± 10.7%	36%	70% ± 11.1%	80%	91%	69%	49%	72%	57%

Table 10. Social benefits (catchment surveys and POFS 2009).

	POFS	Bentley		Birches	s Valley	Ingrebourne Hill		
Categories of social benefit	Strongly agree / Agree	Strongly Agi	agree / ree	Strongly Ag	∕ agree / ree	Strongly Agi	agree ∕ ree	
	2009	2008	2010	2008	2010	2008	2010	
It contributes to the local economy	57% ± 2.4%	46%	55%	75%	80%	50%	55%	
It's a place where people can relax and de- stress	94% ± 1.1%	67% ± 4.6%	83% ± 3.7%	91%	94%	74% ± 4.3%	85% ± 3.5%	
people can exercise and keep fit	n/a	70% ± 4.5%	87% ± 3.3%	91%	95%	73% ± 4.4%	87% ± 3.3%	
people can have fun and enjoy themselves	94% ± 1.1%	70% ± 4.5%	87% ± 3.3%	91%	95%	74% ± 4.3%	86% ± 3.4%	
people can learn about environment	91% ± 1.4%	62% ± 4.8%	82% ± 3.8%	90%	94%	68%	76%	
important place for wildlife	97% ± 0.8%	69% ± 4.5%	88% ± 3.2%	92%	95%	74% ± 4.3%	86% ± 4.4%	
It brings the community together	52% ± 2.4%	48% ± 4.9%	65% ± 4.7%	76%	79%	57% ± 4.9%	68% ± 4.6%	
It makes this area a nicer place to live	93% ± 1.2%	68% ± 4.6%	87% ± 3.3%	91%	92%	73% ± 4.4%	86% ± 3.4%	
It gets people involved in local issues	63% ± 2.3%	49% ± 5.0%	64% ± 4.7%	64%	70%	54% ± 4.9%	64% ± 4.7%	



3.4.3 Formal volunteering

Volunteering is an indicator of personal and social benefit. Volunteering is measured two ways through the Activities and Events database:

- number of events promoting volunteering on site and attendance at these events
- contribution of volunteers through support in the running of events.

Table 11 demonstrates the extent of formal volunteering at the Flagship sites in project years 2 and 3. A programme of 'Green Gym' events at Bentley (wherein participants undertake site works such as vegetation clearance under the guidance of a ranger as a means of physical activity and voluntary work) resulted in a high level of volunteering being maintained over the project period. Volunteering is comparatively low at Ingrebourne Hill. However, this is partly because the site is not long established (only fully opened to the public in 2007) and therefore the volunteering opportunities present at Bentley are not currently applicable at Ingrebourne Hill. Furthermore, the number of events held at Ingrebourne Hill (representing the main opportunity for volunteering) is small as events in the Thames Chase Community Forest are evenly distributed between Ingrebourne Hill and its neighbouring 9 sites.

Table 11.	Formal	volunteering	at Flagship	case st	tudy	sites in	2009/10	and
2010/11		_			-			

		2009/1	LO [#]	2010/11				
Flagship site	No. of	No. of	No. of volunteer	No. of	No. of	No. of volunteer		
	events	volunteers	days*	events	volunteers	days*		
Bentley	24	155	62.8 (£3,140)	16	167	67.7 (£3,385)		
Birches Valley	3	4	44.0 (£2,200)	214	21	92.9 (£4,645)		
Ingrebourne Hill	1	4	1.1 (£50)	1	1	0.5 (£25)		

[#] 2009/10 figures based upon an 8-month reporting period, only

* number in parenthesises = monetary value of volunteering contribution based upon the Heritage Lottery Fund's 'Guidance for Landscape Partnerships' unskilled labour rate of £50 a day.



4. Further evidence

Chapter 4 Summary

This section presents a comparative analysis of 'visit', 'visitor' and 'non-use' profiles from each of the 3 Flagship sites, drawing on data gathered over the 3 year monitoring period.

Visit profiles

Significant results reveal:

- Little seasonal variation in the frequency of visits to any of the three sites
- More frequent visits are made to the community woodlands than to Birches Valley
- Visits to Birches Valley tend to be much longer than visits to either Bentley or Ingrebourne Hill
- Mean visit duration has increased significantly at Birches Valley and Ingrebourne Hill
- Visits to all three sites are highly social, with a high proportion of visits made with friends, family, or part of an organised group
- Exercise was the most popular activity at all three sites
- Multiple activities are also popular, particularly at Birches Valley
- The vast majority of visitors to Bentley and Birches Valley rate the sites as either 'excellent' or 'very good'.

Visitor profiles

Significant results reveal:

- Both males and females are well represented at Bentley and Birches Valley; women are slightly under-represented amongst visitors to Ingrebourne Hill.
- There is low representation of certain age groups amongst visitors 16-25 yrs age category (Bentley), 65+ yrs age category (Birches Valley), 16-25 yrs age category (Ingrebourne Hill)
- At all three sites either a) the representation of low income visitors is falling , or
 b) incomes have risen
- People with disabilities may be under-represented amongst visitors to all three sites
- People from 'other ethnic background' appear to be adequately represented at all three sites.



Chapter 4 Summary (continued)

Non-use profiles

Significant results reveal:

- Low income is a stronger determinant of non-use at Birches Valley than at Bentley or Ingrebourne Hill
- People with disabilities have a higher representation amongst non-visitors than amongst visitors, suggesting that disability is an important determinant of non-use at all three sites
- Ethnicity is significant in relation to non-use at Ingrebourne Hill
- `Lack of time' appears to be the most significant barrier to more frequent use at all three sites
- 'External' factors such as busy lifestyles, poor health and lack of transport emerge as more significant barriers to non-use than aspects of the sites themselves
- Non-visitors are more likely than visitors to experience multiple barriers.

In this section a comparative analysis of 'visit' (sub-section 4.1) and 'visitor' (4.2) profiles from each of the 'Flagship' sites, drawing on data gathered over the 3 year monitoring period. Where relevant, national data is also presented to enable comparisons between site-level and national results. In addition, and with the aim of informing interpretations and explanations of current limitations to the use of the sites by certain social groups (and, therefore, to the benefits derived by the local / regional population), a comparative analysis of 'non-use' is presented in sub-section 4.3, focusing on the 'barriers to more frequent use' cited by visitors surveyed. For non-use, comparisons are also made with the national survey results.

4.1 Visit profiles

This sub-section presents a comparative analysis of 'visit profiles' for each site. First comparisons between basic visit characteristics for each site are drawn, focusing on frequency and duration of visits, the social character of visits (who people visit with) and activity types (4.1.1). The second sub-section (4.1.2) presents an analysis of visitors' actual experiences of each site, focusing on feedback provided in relation to particular features, facilities and other factors that shape the visitor experience, with the intention of providing explanations for the overall quality of experience measures presented in Chapter 3.3.

4.1.1 Comparison of basic visit characteristics

On-site survey respondents (all) and catchment survey respondents (visitors only) were asked how often they tended to visit each of the sites during spring/summer and



autumn/winter. The comparative analyses of the results are displayed in Figure 9 (onsite surveys) and Figure 10 (catchment surveys).

The results of the on-site surveys show that there is little seasonal variation in the frequency of visits to any of the three sites. The results also show that more frequent visits are made to the community woodlands than to Birches Valley, where the majority of visitors visit a few times a month, or a few times a year.



Figure 9. Frequency of visits to Bentley, Birches Valley and Ingrebourne Hill (onsite surveys)

The catchment survey results also show that there is little seasonal variation in the frequency of visits. More frequent visits are made to Ingrebourne Hill than to the other two sites. Across both survey years, more than 20% of visitors visit Ingrebourne Hill at least once a week. At Bentley and Birches Valley, most visitors visit a few times a year or less often.



Figure 10. Frequency of visits to Bentley, Birches Valley and Ingrebourne Hill (catchment surveys)



Respondents to the on-site surveys were asked how long a typical visit lasts. The results (Figure 11) show that visits to Birches Valley tend to be much longer than visits to either Bentley or Ingrebourne Hill. The results also show that mean visit duration has increased significantly at Birches Valley and Ingrebourne Hill during the three year monitoring period.





Figure 11. Mean visit duration (on-site surveys)

Respondents to the on-site surveys were asked who they tend to visit a site with (multiple responses were permitted). The results shown in Figure 12, below, provide a dynamic picture of the social character of visits to each site. They show the highly social nature of visits to all three sites, where a high proportion of visits are made with friends, family, or part of an organised group. This is particularly true at Birches Valley where over 90% of respondents said that they tend to visit with friends or family across all three survey years. Solitary visits are relatively uncommon at Birches Valley and Bentley, but quite common at Ingrebourne Hill. Visits with a dog are also relatively popular, particularly at the two community woodlands (Bentley and Ingrebourne Hill).





Figure 12. Who do you tend to visit with?

On-site survey respondents were asked what they tend to do at each of the sites. Respondents to the POFS (visitors only) were also asked what they tend to do when visiting forests and woodlands in England. The proportion of visitors engaging in each of the activity types can be calculated (Figure 13). The results show that, at all three sites, exercise was the most popular activity and that multiple activities are also popular, particularly at Birches Valley. This is also reflected nationally. Taking exercise and visiting the café have been consistently popular at Birches Valley throughout the project. Dog walking has been consistently popular at the two community woodlands.





Figure 13. Activity types - on-site surveys & POFS

4.1.2 Comparison of visitor experiences

Visitors surveyed on-site were asked to give an overall quality rating for the sites as a place to visit, using the following quality scale: Excellent, Very good, Fair, Poor, Very poor, Don't know. The results from all three sites across all three survey years are compared in Figure 14 (below) and show that the vast majority of visitors to Bentley and Birches Valley rate the sites as either 'excellent' or 'very good'. At Ingrebourne Hill there was a slight fall in the number of people rating the site as either 'excellent' or 'very good' in 2009 (81% in 2008, 71% in 2009, 83% in 2010). This corresponds with an increase in Ingrebourne Hill visitors rating the site as 'fair' in 2009. These results accord with a drop in net promoter score at Ingrebourne Hill in the same year.





Figure 14. Overall quality ratings for Bentley, Birches Valley and Ingrebourne Hill (2008, 2009, 2010)

4.2 Visitor profiles

This sub-section presents a comparative analysis of the 'visitor profiles' for each site, drawing on the results from the on-site and catchment surveys and the activities and events database. The discussion is oriented towards a comparative analysis of the socio-demographic make-up of informal and formal visitors to each site, focusing on gender, age, household income, disability and ethnicity. For each socio-demographic category, comparisons are also made with the baseline visitor profiles established in 2008. Comparisons are also made with the estimates presented in the profile of each site's catchment population carried out in 2008, in order to assess changes in the 'representativeness' of each visitor profile. Analysis relates to Indicator 9: 'Extent to which use reflects diversity within local community'.

4.2.1 Gender profiles

The gender profile of catchment populations and visitors to each site is presented in Figure 15 (below) and demonstrates approximate parity between the genders for all



three catchment populations (females: Bentley 51%, Birches Valley 51%, Ingrebourne Hill 52%).





The results of the POFS (2009) reveal that females (51%) are just as likely to visit woods and forests as males (49%).

At Bentley, the gender profile of visitors from both on-site and catchment surveys closely reflects the gender profile of the catchment population, suggesting that men and women are well represented at the site.

At Birches Valley the gender profiles of visiting respondents to the catchment surveys closely reflects that of the catchment population. However, the results of the on-site surveys in 2008 and 2010 were that male visitors outnumber female visitors. This discrepancy might be because catchment survey respondents are asked if they have ever visited the site. Therefore, if men visit the site more frequently, this may result in them being more likely to be approached for an interview and, consequently, exhibit a relatively higher representation in the on-site survey.



At Ingrebourne Hill results from both on-site surveys and catchment surveys suggest that male visitors outnumber female visitors, indicating that women are underrepresented as visitors to Ingrebourne Hill.

4.2.2 Gender profile of formal visitors

The gender diversity of participants of activities and events at the Flagship sites is presented in Table 12. Males were generally under-represented at Bentley in the current reporting period (Table 12), although both genders were well represented in the previous reporting period. Both genders were well represented at Birches Valley in the current reporting period. The apparent under-representation of males at Birches Valley events in 2009/10 is likely to be a consequence of one all-female event that strongly biased the small sample (n=3 events); excluding this event, the gender diversity was noted to be 50:50 male: female.

Table 12. Gender profile of formal visitors

	Year						
Flagship site	20	09/10*	2010/11*				
	M F		М	F			
Bentley	49.1%	50.9% (15)	38.2%	61.8% (64)			
Birches Valley	28.6%	71.4% (3)	53.5%	46.5% (45)			
Ingrebourne Hill	-	-	52.5%	47.5% (1)			

* Data in parenthesises = number of activities and events where gender diversity monitoring was carried out

4.2.3 Age profiles

The age profile of visitors to each site is presented in Figure 16, together with the age profile of visitors to woods and forests in England, as derived from the POFS (2009). For each site, the approximate age profile of the catchment population (adjusted to exclude the under 16 year old category) is also presented, enabling comparisons between visitor and catchment profiles. The results suggest that the proportion of visitors from the 26-64 yrs age category is slightly higher than the representation of the same age group with the catchment populations. At Bentley, representation of the 16-25 yrs age category is low, especially amongst respondents to the on-site survey in 2010. At Birches Valley, representation of the 65+ yrs age category is low, especially amongst respondents to the on-site survey in 2008 and 2010. At Ingrebourne Hill, representation of the 16-25 yrs age category is low, especially amongst respondents to the on-site survey in 2008 and 2010.



Figure 16. Age profiles of informal visitors to Bentley, Birches Valley and Ingrebourne Hill.

4.2.4 Age profile of formal visitors

The age profile of event participants at the Flagship sites is presented in Figure 17. For each Flagship site, the age profile of the sites catchment area is also presented. Age diversity data was not gathered at the Birches Valley or Ingrebourne Hill sites in 2009/10. The data (Figure 17) demonstrates the under 16's were over-represented at Bentley and Birches Valley, in comparison to their respective catchment statistics, and that 16-25 year olds were under-represented as formal visitors at all Flagship sites in 2009/10 and 2010/11. Broadly speaking, formal visitors to Bentley were of an even distribution range in 2010/11 (34% under 16s; 35% 26-60 year olds and 31% 60+ year olds). The predominance of under 16 year olds to Birches Valley events highlights the Flagship site's focus on delivering educational trips to schools and youth groups. Similarly, the predominance of under 26-59 year olds at Ingrebourne Hill events, illustrates the Flagship site's focus on large scale, free admission community events. The ability to programme an event or series of events at a specific age group (or groups) can be an effective tool for site managers to redress under-representativeness amongst informal sites users where, for example, this has been highlighted via on-site or catchment surveys.





Figure 17. Age profiles of formal visitors to Bentley, Birches Valley and Ingrebourne Hill.

4.2.5 Income profiles

Respondents to the on-site and catchment surveys (visitors only) were asked to state their approximate household income. Refusals within the catchment survey sample were too high (circa 40%) to validate any subsequent analysis. The results of the on-site surveys in 2008 and 2010 are presented in Figure 18 (below). They show that in 2008 respondents from low income households (20k or less) accounted for 55% of visitors to Bentley, 15% of visitors to Birches Valley, and 31% of visitors to Ingrebourne Hill. In 2010 respondents from low income households accounted for 45% of visitors to Bentley, 17% of visitors to Birches Valley, and 24% of visitors to Ingrebourne Hill.

The profiling of the three sites' catchment populations revealed an indicative average household income of £23,806 (Bentley), £30,539 (Birches Valley) and £33,586 (Ingrebourne Hill).

For Bentley, in 2008, more than 50% of respondents to the on-site survey recorded a household income lower than the mean average for the catchment, whereas this proportion had dropped to just over 30% in 2010.

June 2011



For Birches Valley, in 2008, just over 33% of respondents to the on-site survey recorded a household income lower than the mean average for the catchment, whereas this proportion had dropped to just over 30% in 2010.

For Ingrebourne Hill, in 2008, over 55% of respondents to the on-site survey recorded a household income lower than the mean average for the catchment, whereas this proportion had dropped to just over 43% in 2010.

These results suggest that at all three sites i) the representation of low income visitors is falling , or ii) incomes have risen.





4.2.6 Disability profiles

The disability profiles of visitors to each site, based on results of the on-site and catchment surveys in 2008 and 2010, are compared in

Figure 19 below. The results show that in 2008 people with disabilities accounted for about 17%, 14% and 7% of visitors to Bentley, Birches Valley and Ingrebourne Hill respectively. In 2010, people with disabilities accounted for about 14%, 11% and 6% of visitors to Bentley, Birches Valley and Ingrebourne Hill, respectively.



The socio-demographic indicator 'Disability' was not used to profile the site catchment populations, so direct comparisons with catchment profiles are not possible. However, the catchment profiling does show that approximately 23%, 20% and 18% of the catchment populations of Bentley, Birches Valley and Ingrebourne Hill, respectively, suffer from limiting, long-term illness. The research results allow a tentative conclusion to be drawn, therefore, that people with disabilities may be under-represented amongst visitors to all three sites. It should be noted, however, that all three sites have active programmes to engage disabled groups and that low representation at woodland sites may be a result of preference and choice, rather than a result of exclusion.



Figure 19. Visitor disability profile Bentley, Birches Valley and Ingrebourne Hill

4.2.7 Disability profile of formal visitors

Table 13 presents the disability diversity profile data for visitors to Activities and Events at the Flagship sites in 2009/10 and 2010/11. The table demonstrates that no disability data was recorded for event participants at Bentley in the 2009/10 reporting period, or



at Ingrebourne Hill in the 2009/10 and 2010/11 reporting periods. At Flagship sites where disability diversity was monitored it was not monitored at all events. Figures are, therefore, adjusted for the fraction of events where disability diversity was monitored.

The site catchment populations were not profiled for the socio-demographic indicator 'Disability'. Direct comparisons to catchment profiles are therefore not possible. However, the catchment profiling does show that approximately 23%, 20% and 18% of the catchment populations of Bentley, Birches Valley and Ingrebourne Hill, respectively, suffer from limiting, long-term illness. The research results allow a tentative conclusion to be drawn that people with disabilities may be strongly represented amongst formal visitors to Bentley, but under-represented at Birches Valley.

Disability	Ber	Bentley		s Valley	Ingrebourne Hill	
Disability	09-10	10-11	09-10	10-11	09-10	10-11
Physical	-	6.0%	2.3%	1.0%	-	-
Visual	-	0.0%	0.0%	0.9%	-	-
Hearing	-	0.0%	2.3%	0.0%	-	-
Mental	-	28.2%	0.0%	0.3%	-	-
Learning	-	10.1%	2.3%	3.4%	-	-
Other	-	0.0%	4.6%	0.2%	-	-
Total	n/d*	44.4%	11.5%	5.9%	n/d	n/d

Table 13. Disability diversity profile of formal visitors

* n/d = no data

4.2.8 Ethnicity profiles

Results from on-site and catchment surveys in 2008 and 2010 have been used to present dynamic ethnicity profiles of visitors to each site (see Figure 20, below). Due to the low numbers of respondents falling within ethnic categories other than 'White British', broad categories of 'White British' and 'Other ethnic background' are used. For each site, the indicative ethnic profile of the catchment population (adjusted to exclude the under 16 yrs category) is also presented, enabling comparisons between visitor and catchment profiles. Working with a 95% confidence level, there is no statistically significant difference between the ethnic profiles of catchment and visitor populations at Bentley, Birches Valley or Ingrebourne Hill, leading to the conclusion that people from 'other ethnic background' are adequately represented at all three sites.





Figure 20. Ethnicity profile of visitors to Bentley, Birches Valley and Ingrebourne Hill

4.2.9 Ethnicity profile of formal visitors

The ethnic diversity profile of formal visitors to the Flagship sites in 2009/10 and 2010/11 is presented in Figure 21. Due to the low numbers of respondents falling within ethnic categories other than 'White British', broad categories of 'White British' and 'Other ethnic background' are used. For each site, the indicative ethnic profile of the catchment population (adjusted to exclude the under 16 yrs category) is also presented, enabling comparisons between visitor and catchment profiles.

Working with a 95% confidence level, there is no statistically significant difference between the ethnic profiles of the catchment and the formal visitor populations at Bentley (in 2009/10 and 2010/11), or Ingrebourne Hill (in 2010/11), leading to the conclusion that people from 'other ethnic background' are adequately represented at these sites. The data also demonstrates that there was no statistically significant difference between the ethnic profiles at Birches Valley in 2009/10. In 2010/11, the proportion of 'other ethnic background' formal visitors at Birches Valley was statistically greater than that of the 2.5 miles (4 km) catchment population, suggesting that 'other



ethnic background' participants were over-represented during the 2010/11 reporting period.

The validity of a 2.5 mile (4 km) catchment definition for Birches Valley is raised in Section 2.3, as the project data indicates that ca. 75% of visitors to Birches Valley travel from with a 30 mile (48 km) radius of the site. The ethnic background profile for the larger catchment area is 87.8% White-British, 12.2% 'other ethnic backgrounds'. Based upon these figures, the ethnic profile group 'other ethnic backgrounds' was overrepresented amongst formal visitors to Birches Valley during the 2010/11 reporting period.





4.3 Non-use

In this sub-section, an analysis of `non-use' is presented with the aim of informing interpretations and explanations of current limitations to the use of each of the sites by certain social groups. By looking at non-use and its distribution, the analysis directly engages with the current emphasis placed on the equitable social distribution of benefits



within forest policy and management. Firstly, drawing on the results of the catchment surveys, which enable the socio-demographic characterisation of non-visitors (those who said that they had not visited the sites), a comparative analysis of the 'non-user' profiles for each site is presented to explore whether there are any socio-demographic determinants of non-use for each of the sites, focusing on gender, age, household income, disability and ethnic background. Secondly, the 'barriers' to more frequent use cited by visitors surveyed through the on-site and catchment surveys for all three sites is presented, illustrating those factors that could be addressed to encourage greater frequency and/or duration of visits amongst the current visitor base. Thirdly, a comparative analysis of the 'barriers' to the use of local green space cited by non-visiting respondents to the catchment surveys is presented, illustrating those factors that could be addressed in order to increase use of the sites.

4.3.1 Comparison of non-user profiles

Respondents to the catchment surveys in 2008 and 2010 were asked if they had visited the site in question, allowing the distinction of visitors from non-visitors within the sample. Non-use can then be cross-tabulated with socio-demographic categories, producing a non-user profile for each site. This non-user profile can also be compared with each site's catchment profile to explore the relationship between socio-demographic categories (gender, age, household income, disability, ethnic background) and non-use. Comparisons between the three sites can also be made to show the relative influence of socio-demographic categories over non-use.

4.3.1.1 Gender and non-use

Figure 22 (below) presents a gender profile of non-users and the catchment population for each site. At the two community woodlands (Bentley and Ingrebourne Hill) the gender profile of non-use closely resembles that of the catchment population, leading to the conclusion that there is no significant relationship between gender and non-use. At Birches Valley there appears to be a slightly higher representation of men amongst non-users than within the catchment population, leading to the conclusion that gender may have some influence. Working with a 95% confidence level, however, there is no statistically significant difference between the gender profile of non-visitors and the catchment population.





Figure 22. Gender and non-use at Bentley, Birches Valley and Ingrebourne Hill

4.3.1.2 Age and non-use

Figure 23 (below) presents an age profile of non-users and the catchment populations for each site. The results show that the proportion of non-users aged 16-25 yrs closely matches the background catchment population. At Birches valley, the proportion of non-users aged 65+ yrs is slightly higher amongst non-users than within the catchment population, however the difference is not significant at the 95% confidence level. At Ingrebourne Hill, the proportion of non-users aged 26-64 yrs is slightly higher amongst non-users than within the catchment population, however the difference is not significant at the 95% confidence level. At Ingrebourne Hill, the catchment population, however the difference is not significant at the 95% confidence level. As a result, we conclude that age is not a determinant of non-use at any of the sites.





Figure 23. Age profile of non-visitors to Bentley, Birches Valley and Ingrebourne Hill

4.3.1.3 Household income and non-use

In both catchment surveys (2008 and 2010), respondents were asked to state their approximate household income. From the total number of non-visitors who answered this question (2008: Bentley=211, Birches Valley=73, Ingrebourne Hill=184; 2010: Bentley=178, Birches Valley=48, Ingrebourne Hill=178), the proportion falling within each income category can be calculated, revealing the income profile of non-users to each site (see Figure 24, below).

The results show that at Bentley the proportion of non-visitors from low income households (household incomes of 20K or less) was 45% in 2008 and 33% in 2010. For Birches Valley, the proportion of non-visitors from low-income households was 45% in 2008 and 40% in 2010. For Ingrebourne Hill, the proportion of non-visitors from low-income households was 31% in 2008 and 27% in 2010. We conclude that low income is a stronger determinant of non-use at Birches Valley than at Bentley or Ingrebourne Hill.





Figure 24. Income and non-use at Bentley, Birches Valley and Ingrebourne Hill

4.3.1.4 Disability and non-use

The disability profiles of visitors to each site in 2008 and 2010, are presented in subsection 4.2.4 (above), based on results of both on-site and catchment surveys. They show that in 2008 people with disabilities accounted for about 17%, 14% and 7% of visitors to Bentley, Birches Valley and Ingrebourne Hill respectively, changing to 14%, 11% and 6% in 2010.

Based on the results of the catchment surveys in 2008 and 2010, the disability profiles of non-visitors show that people with disabilities account for 21%, 20% and 17% (2008) and 21%, 26% and 17% (2010) of visitors to Bentley, Birches Valley and Ingrebourne Hill respectively (see Figure 25). This illustrates that people with disabilities have a higher representation amongst non-visitors than amongst visitors, suggesting that disability has an influence over visiting habits at all three sites.





Figure 25. Disability and non-use at Bentley, Birches Valley and Ingrebourne Hill

4.3.1.5 Ethnicity and non-use

The ethnic profiles of visitors to each site, based on results of both on-site and catchment surveys, are presented in sub-section 4.2.5 (above). The results show that there is no statistically significant difference between the ethnic profiles of catchment populations and visitors at Bentley, Birches Valley or Ingrebourne Hill.

The ethnic profiles of non-visitors, based on the results of the 2008 and 2010 catchment surveys can also be compared with the ethnic profile of the catchment populations (see Figure 26, and show that people from 'Other ethnic background' account for $7 \pm 2.6\%$, $6 \pm 3.9\%$ and $13 \pm 3.5\%$ (2008) and $5 \pm 2.3\%$, $3 \pm 3.1\%$ and $16 \pm 3.9\%$ (2010) of non-visitors to Bentley, Birches Valley and Ingrebourne Hill respectively. The results illustrate that at Ingrebourne Hill people from 'Other ethnic background' have a higher representation amongst non-visitors than amongst the catchment population, suggesting that ethnicity is significant in relation to non-use at this site.





Figure 26. Ethnicity and non-use at Bentley, Birches Valley and Ingrebourne Hill

4.3.2 Comparison of barriers (visitors)

Respondents to the on-site surveys in 2008, 2009 and 2010 were asked about factors that prevent them from visiting each of the sites more often. The results in Figure 27 (below) show that 'lack of time' emerges as the most significant barrier to more frequent use. In 2008 and 2009 24% of visitors to Bentley ticked the 'other' category. The explanation provided in the majority of cases was that respondents were already visiting daily, or at least 4 times a week. Few visitors thought of aspects of the sites themselves as barriers to more frequent use. As such, the research results suggest that factors **external** to each site and its management (busy lifestyles, poor health, lack of transport) are the most significant limits on visit frequency. One conclusion to draw is that although improvements to on-site facilities and infrastructure may deliver some gains in visitor numbers, visit frequency and duration, perhaps more significant gains may be delivered by focusing attention on those off-site factors (lifestyles, health, transport) that seem to have a stronger determining influence over visiting habits.





4.3.3 Comparison of barriers (non-visitors)

All respondents to the catchment surveys were asked about factors that prevent them from visiting local parks, woods and green spaces more often. The responses given by all respondents who had not visited in 2008 (Bentley (90%, n=360), Birches Valley (36%, n=143) and Ingrebourne Hill (87%, n=350)) and 2010 (Bentley (86%, n=339), Birches Valley (26%, n=117) and Ingrebourne Hill (73%, n=332)) are presented in Figure 28 below.

The results show that, as with on-site visitors, 'lack of time' is cited as a barrier by a large proportion of non-visitors from each catchment. Lack of information emerged as an important barrier, particularly in 2010. In general, a higher proportion of respondents in 2010 than in 2008 identified with almost all barrier categories. The relatively high response rate across all barrier categories suggests that non-visitors are more likely than visitors to experience multiple barriers. A recent review of research into this topic has also shown that many people face multiple barriers to access, and that

many of the barriers they face lie outside what might be thought of as the conventional remit of forestry policy and management (Morris et al. in press).



Figure 28. Barriers to visiting Bentley, Birches Valley and Ingrebourne Hill (non-visitors)



5. Discussion and lessons learnt

Chapter 5 Summary

The Quality of Life project provides a framework to describe woodland sites' contribution to Quality of Life, establishes a data foundation for future assessments, and provides evidence that Forestry Commission England successfully met their Quality of Life Corporate target for 2008-11.

Nineteen Quality of Life indicators were considered within the project. The data demonstrate that use, engagement and quality of experience of a woodland visit, and the personal and social benefits derived from woodland are important contributors to quality of life and there is an existence value to woodland that is recognised by users and non-users alike. The greatest barrier to non use was 'too busy' implying that more people would use woodland given the opportunity.

Lessons Learnt

Data consistency requirements led to uniform application of the framework across all Flagship sites. Despite inherent practical and analytical advantages of this approach, a 'one size fits all' approach leads to compromise when applied to different types of woodland sites. Thus, at Birches Valley, a large site, $74 \pm 4\%$ of the catchment population visited, though infrequently. At the community woodlands, $14 \pm 3\%$ (Bentley) and $17 \pm 3\%$ (Ingrebourne Hill) of the catchment population visited, and frequently. This raises the question of whether a site's performance should be measured in terms of popularity (number of visitors), or in terms of its value to individual visitors.

Several indicators relied upon the definition of a catchment area (e.g. use). Data revealed that a 2.5 mile (4 km) catchment area captured 75% of visitors to the community woodlands; a catchment area of 30 mile (48 km) was required to capture a similar proportion of visitors to Birches Valley, calling into question the validity of performance measurements reliant on fixed distance catchment definition. A system to characterise and categorise woodland sites, providing a systematic basis for case study selection and M&E design, is urgently required.

The Quality of Life project sought to identify areas where further research is required; a number of key questions have been identified:

- Some sites have relatively low numbers of visitors from the catchment population. What can be done to increase use and engagement?
- Is there an optimal level of visitor numbers, visit frequency and duration?
- What determines the level of a community's engagement?



Chapter 5 Summary (continued)

- In terms of personal and community development, what are the wider outcomes of woodland provision?
- What interventions would further improve quality ratings at a given site?
- What are the appropriate responses to under-representation of groups?
- Given cited barriers to use that lie outside the conventional remit of forestbased service provision, what are the most appropriate policy and management responses?

These research questions require additional analytical capabilities in the form of supporting, qualitative research.

Operational value of project

The project offered Flagship site managers the opportunity to obtain data that could not normally be gathered locally, due to a lack of staff time or expertise. The evidence base gathered has helped to demonstrate:

- local need
- fulfilment of project requirements to funding bodies
- value and impact of a site to delivery partners
- the work of the Forestry Commission to local and national agencies.

The Quality of Life project adopted a predominantly top-down approach to indicator and methodology selection. All Flagship site managers expressed their satisfaction in the indicators used and that data gathered were relevant and interesting. However, they noted that the opportunity for close involvement of site staff in refining local data collection methods was important and should be extended in future projects.

All Flagship site managers said they would engage in similar future projects given the opportunity and adequate staffing resource, whilst re-iterating their desire to be more engaged from earlier on in the design process of any new projects.

5.1 Broad project conclusions

The 3-year Quality of Life project came about because Forestry Commission England recognised that trees, woods and forests play an important role in contributing to people's quality of life and that this contribution needs to be described, quantified, evaluated and assessed for spatial variation in order to support delivery. This project has provided a framework to describe a site's contribution to Quality of Life, leading to quantitative measures of the contribution of trees, woods and forests to quality of life.


The project establishes a data foundation upon which future assessment may be made and compared and raises the profile of social monitoring within the Forestry Commission.

Monitoring and evaluation has been an established practice within forestry for many decades and has played a vital role in assessing sustainable timber production and the contribution of woodlands to national biodiversity targets. Monitoring also plays a role in assessing the economic importance of woodland in regional regeneration and mitigating the impacts of climate change. Monitoring as part of the Quality of Life project has established a benchmark methodology for assessing how use and engagement with trees, woods and forests contribute to people's quality of life, and to quantifying quality of experience and the extent to which individuals and communities derive a range of benefits from woodland.

The Quality of Life project was set up in response to Forestry Commission England's Corporate Plan (2008-2011) which set out a 'Quality of Life' target to develop a methodology, set a target and then measure an increase in:

- visits to and engagement with local woodland,
- quality of experience; and,
- personal and social benefit

for a series of selected sites, as an indicator of woodlands' contribution to Quality of Life. The data presented in this report and in the Annex Reports (see Doick & Morris, 2011) demonstrate that Forestry Commission England has successfully met this corporate target, with twelve of fifteen headline indicators measured across three Flagship sites statistically maintained or increased across the 3-year project period.

The application of 19 'Quality of Life' indicator measures provided opportunity to understand the roles of trees, woods and forests in contributing to quality of life. The data demonstrate that use of, and engagement with, woodland, the quality of experience of a woodland visit, and the personal and social benefits derived from woodland are each important contributors to quality of life and that there is an existence value to woodland that is recognised by users and non-users alike across all three Flagship sites. For example, at Bentley, Birches Valley and Ingrebourne Hill 46, 67 and 41% of respondents, respectively, said that they would 'definitely' recommend the site as a place to visit to friends or family. At Bentley and Birches Valley, \geq 96% users across the 3 years of the Quality of Life project 'strongly agreed' or agreed' that the sites where a place where people can "relax and de-stress" and "exercise and keep fit" (\geq 91% at Ingrebourne Hill). Furthermore, across all 3-Flagship sites, the greatest barriers to non use are being 'too busy' and being 'too far way' implying that more people would use woodland given the opportunity.



5.2 Lessons learnt

As stated above, the Quality of Life project has successfully delivered valuable measures of the contribution of trees, woods and forest to quality of life. As with all research, however, the experience of research design, implementation and reporting provides the opportunity for critical reflection on the approach taken. As a consequence, a number of important lessons relating to project methodology and implementation have been drawn during the 3-year project period. These are discussed here in order to inform future processes of M&E design and implementation.

Early stages of framework design were influenced by the decision to apply indicators and methods consistently across all case study sites. However, a tension emerged within the project between the need to develop a consistent approach to evaluating quality of life outcomes, and inherent differences between sites which caused a number of problems in terms of the application and results of the M&E framework.

The need for consistency is both practically and analytically driven. In practical terms, a consistent approach is much more efficient to design and implement across selected case study sites, and also maximises the potential for the framework to be taken up at other sites because a single approach can be clearly described and understood. In analytical terms, a consistent approach is considered advantageous because it allows the comparison of results between case study sites by eliminating the possibility of design effect influencing the outputs of the research. Some tailoring of methods to sites was allowed, but this was limited to individual questions within questionnaires, some of which, for example, were adjusted to avoid asking questions about non-existent features or facilities. Despite the practical and analytical advantages of the consistent application of the framework, some of the results of the project do call into question the validity of a 'one size fits all' approach. Issues were encountered with respect to the consistent application of indicators and methods. Examples of the issues are discussed below.

The project sought to quantify and to monitor changes in the direct use of sites through the application of the headline indicator: "% population which regularly use woodlands and forests". To apply the indicator, survey respondents were asked if they had ever visited the relevant site (catchment survey only) and how often they visited at different times of the year (on-site and catchment surveys). The consistent application of the indicator reveals markedly different results from within the two broad groupings of sites represented by the three case studies. At Birches Valley, which is a large site with many attractions that appeal to tourists and day visitors as well as local people, the results reveal that while the site is visited by a high proportion of the local community (74 \pm 4.0 % in 2010), people tend to visit relatively infrequently (see Chapter 4.1.1). Contrastingly, at Bentley and Ingrebourne Hill, which are community woodlands designed and located to appeal to a more local audience, the results reveal that while the site is visited by a proportion of the local community (in 2010, 14 \pm



3.4% (Bentley) and $17 \pm 3.7\%$ (Ingrebourne Hill)), people tend to visit much more frequently (see Chapter 4.1.1). This discrepancy in results raises the question of how to interpret the results. Should a site's performance be judged in terms of the extent of its popularity within the wider community (measured in terms of visitor numbers), or in terms of its implicit value to a perhaps smaller core of visitors (expressed in terms of more regular visits)?

The issue of how to accommodate inherent differences between sites and the behaviours of visitors and non-visitors also reads across to some of the methods within the framework. For example, and as discussed in Chapter 2, quantifying and monitoring changes in direct use relied upon the definition of catchment areas and the estimation of each site's total catchment population. Gathering data about where visitors had actually come from, however, revealed that while the 2.5 mile (4 km) catchment area captured the majority (\approx 75%) of visitors to the community woodlands, around 70% of visitors to Birches Valley had travelled more than 5 miles (8 km) to visit the site. This calls into question the validity of a number of performance measurements that relied upon the 2.5 mile catchment definition for Birches Valley.

Similarly, a number of limitations were placed on the analysis of catchment survey results due to the relatively low representation of visitors (at Bentley and Ingrebourne Hill) and non-visitors (at Birches Valley) within the total sample. In both cases, the 95%-confidence intervals calculated were large due to the small samples, with the result that apparent changes in behaviour had to be discounted as statistically insignificant.

All of these issues cause us to reflect critically upon the early decision taken to apply indicators and methods consistently across sites. We conclude that the outputs of a 'one size fits all' approach to M&E will always be compromised in the ways we have set out. We would like to draw attention to the urgent need for a system to characterise and categorise woodland sites allowing the development of a valid and recognised woodland typology that would provide a systematic basis for case study selection and M&E design. To be clear, we are not arguing that every site requires a bespoke M&E approach, rather that future M&E frameworks should be able to accommodate and be sensitive to the inherent differences between different site types. This approach would strike the necessary compromise between practical efficiency and analytical validity.

One of the key objectives of the Quality of Life project was to identify areas where further research is required to enhance understanding of the potential of trees woods and forests to help meet social need. The framework's ability to construct dynamic visit profiles, visitor and catchment population profiles, non-visitor profiles, quality of experience profiles and benefit (personal and social) profiles and, critically, to examine the relationships between them, has provided a strong basis for generating research



questions of direct relevance to forest policy and management. Reflecting on the project outputs presented in this report, it is possible to identify a number of key questions:

- Sites tend to be highly valued by their visitors (high quality ratings and strong evidence of benefits). However, some sites have relatively low numbers of visitors from the catchment population. In these cases, what can be done to increase use and engagement? (NB. In the absence of an accepted definition, engagement within the Quality of Life project was defined as "%... involved in or consulted about forestry planning & management")
- For a given site, is there an optimal level for visitor numbers, visit frequency and duration, beyond which the level of use becomes detrimental to visitor's quality of experience?
- What factors determine the level of a given community's engagement and what could be done to increase engagement?
- All sites provide valuable space for exercise, relaxation and contact with nature. What are the wider outcomes, in terms of personal and community development, of this provision?
- Most visitors rate the overall quality of sites as either 'very good', or 'excellent'. What specific interventions or investments would further improve quality ratings at a given site?
- What are the appropriate and effective management responses to evidence of under-representation of certain social groups?
- Given that most people cite barriers to use that lie outside the conventional remit of forest-based service provision (lack of time, poor health, transport), what are the most appropriate policy and management responses?

While the project has provided a useful basis for identifying important research questions, the nature of these questions, many of which are oriented either towards the need for explanations of results, or towards the design of appropriate policy and management responses to them, highlight the need for analytical capabilities that lie outside the capacity of the existing framework. The framework constitutes a predominantly quantitative orientation to monitoring and evaluation. To address the research questions it has generated and, thereby, to maximise utility to forest management and policy, will require additional analytical capabilities to be developed and implemented, in the form of supporting research that builds on the foundations laid down by the project. This will be of central importance if the potential inherent within the framework to provide evidence that drives innovation in policy and practice is to be realised.



5.3 Operational value of 'Quality of Life' project

The following section is based upon interviews with the Flagship site managers. Conducted in February 2011, the interviews sought to receive site manager feedback on the value of the Quality of Life project for local delivery and provide recommendations for future projects.

Benefits of being a Flagship site

A major aspiration within the Quality of Life methodology was that the project would be more than just a national corporate target measurement exercise; it was also to support and inform local delivery. Indeed, this opportunity to gain enhanced knowledge of a site was an influential factor for many site managers in volunteering their sites to be project case studies. Site managers wanted a better understanding of what their sites were delivering and to whom, and how large the impact was. Similarly, site managers wanted to identify gaps in their delivery, evidence of where site users wanted investment and an indication of the impact of previous investments. The project offered an opportunity to obtain data that could not normally be gathered locally due to a lack of staff time or expertise, or both.

The Quality of Life project methodology provided site managers with the opportunity to test and reflect on local data gathering methods, and to compare these against other sites in their district as well as across the country. Involvement in the project provided site managers with a diverse and comprehensive evidence base to:

- demonstrate local need (a vital component in funding applications, justifying proposed project);
- demonstrate to funding bodies completion of project requirements as well as the value and impact of the investment;
- demonstrate to delivery partners the value and impact of a site;
- highlight to local and national agencies the work of the Forestry Commission and the specific local value of a site.

Data generated through the Quality of Life project has already been used in support of grant applications, in disseminating information about the function of the sites to local stakeholders, and to raise the profile of the sites with the public.

In addition to the kudos of being a 'Flagship' site for a national monitoring programme, site managers expressed a desire to ensure that the national project embraced a wide compliment of woodland types, and to show the differences in delivery styles and impact between the difference woodland site types.

When questioned on whether they would, in theory, engage in similar future projects or stay involved if the Quality of Life project was extended the Flagship site managers all responded positively, whilst re-iterating their desire to be more engaged from earlier on



in the design process of any new projects. Managers also noted that any future involvement would have to be considered in the light of current staffing resource to ensure adequate support for the project.

Project design and indicators

The Quality of Life project adopted a predominantly top-down approach to indicator selection; this was a consequence of i) a need to get the project defined and operational quickly in order to gather quality data in all three project years, ii) a need to ensure data would adequately inform the Corporate target, and iii) selection of the Flagship sites was being conducted in parallel to indicator identification. All the Flagship site managers expressed their satisfaction in the approach and that data gathered were relevant and interesting to them. There was a desire from some managers for additional information to have been collected through the project, notably economic indicators and further analysis of visitors' quality of experience. However, managers recognised the limitations and restrictions of the project, noting that it was predominantly set up to fulfil corporate and research needs and that it was, therefore, appropriate that Forestry Commission England and Forest Research select the indicators before consulting Flagship site staff.

The Quality of Life project aimed to adopt a joined-up thinking approach to project design and delivery and this was recognised by Flagship site managers in interview. For example, the opportunity for close involvement of site staff in refining local data collection methods was appreciated. Flagship site managers noted that this approach was very important and should be extended in future projects. They noted that the project may have developed in a slightly different way if local representatives had been involved from the outset, as this would have afforded more opportunities to marry the corporate priorities with local knowledge gaps and issues. Flagship site managers expressed a desire for greater input into project definition, design (e.g. indicator selection) and development in similar future projects.

Project methodology

The Quality of Life project methodology was primarily dictated by the data requirements of the indicators. The decision to use methods including on-site and off-site surveying, catchment profiling and site management records was, again, a primarily top-down process. Implementation of the methods sought to provide operational as well as analytical value, in keeping with the project's aspiration to inform local delivery. For example, surveys had questions for indicators, as well as questions that would generate supporting evidence of key value to managers. The impressions of Flagship site managers on the methods are presented below:

 On-site visitor surveying: some concerns expressed initially over the length of the questionnaire and whether this would impact the overall quality of responses. Another concern centred on the size and representativeness of sample, where surveying time was impacted by weather or lack of visitors' willingness to take



part. Further, the method requires a significant investment in terms of ranger days to undertake the surveys. Overall, the questionnaires were recognised as a very useful means of making contact with site users. At Birches Valley this was especially helpful for rangers new in-post. At all sites, it provided a unique opportunity to receive first-hand feedback about the site, which was highly valued by rangers and site managers alike. Flagship site managers suggested that future work may benefit from the collection of some qualitative data, in support of the primarily quantitative information generated by the on-site surveys.

- Catchment profiles and catchment surveys: both methods required no direct input from Flagship site staff. Of direct relevance to evaluating site delivery impact, the data from these methods were highly valued by Flagship site managers. The data were used to confirm locally held assumptions about the socio-demographics of the catchment area and the representativeness of the visitor profile. The data proved highly valuable at Ingrebourne Hill in developing their Community Engagement Strategy and, consequently, catchment profiling was replicated by local staff for the whole of the Thames Chase Community Forest area.
- Site management data: data collection and analysis tools developed through the Quality of Life project represent a tangible legacy of the project. Commenting on the Activities and Events database, Flagship site managers noted it would be "used well into the future" and that it would be "used as an ongoing tool, genuinely useful at the site level". Commenting on the Facilities and Incidents database, one manager stated that it was being considered alongside other options for rolling out across the District; another noted "it's working really well ...especially in terms of resumption... the Facilities aspect of the tool is used across the Beat, and the Incident/hazard exemption reporting has been rolled out across the Region". Development of the tools was not without complications. Computer hardware and software limitations restricted development opportunities (for example, it could not be a web-based tool), and in some locations this limited the use of the tools to the Flagship site only (i.e. preventing uptake at other sites in the Beat/District). Initial resilience amongst some staff to adopt a new software tool required consistent and dedicated leadership until the system had proven itself. By the end of the 3-year Quality of Life project, the Activities and Events database had been adopted by 7 teams, covering in excess of 30 sites (see Doick and Morris, 2011).

Flagship site managers all agreed that the investment of ranger time in gathering project data (whether as on-site visitor surveys or in using the activities and events database) was justified by the quality and usefulness of the data obtained. Managers reflected that opportunities did not exist locally to gather such comprehensive data, due to a lack of staff time or expertise, or both, and hence were grateful to the project for the information gained and the lessons learnt.



Finally, a mixed method approach offers confidence in the data not afforded by single approach methodologies. Use of more than one method offers cross-verification opportunities and the ability to evaluate the pros and cons of each individual method. Each method is prone to statistical and non-statistical variation. For example, with on-site surveying, statistical variation arises through the number of questionnaires completed each year. Non-statistical variation may arise through interviewer-respondent interaction or external influences on the interviewee, such as the weather. Changes observed in the numbers of respondents recognising the personal and social benefits provided by woodland may also arise through the educational impact of news coverage on woodland management and climate change, or through heightened awareness caused by the Quality of Life project across its 3-years of delivery – each of these are further examples of non-statistical variation and may be flagged up through comparison with data collected via the different project methods. Further reflections on each of the methods are set out in Chapter 2.



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Appendix 1. Indicators devised for the methodology

Indicators to measure an increase in visits to and engagement with local woodland										
Indicator		Visi	ts		Engagement					
	National survey	Catch- ment survey	On- site survey	Site record	National survey	Catch- ment survey	On-site survey	Site record		
 % of woodland actively managed by community groups % population involved in or consulted about forestry planning 					×			х		
& management 3. Number of community groups/ members involved in planning &					X			×		
management 4. % population which regularly use WF	x	x						X		
5. Number of community groups / members involved in use of WF				x						
Indicators to measure an increa	ase quality	y of expe	rience							
6. Net promoter score given to site / feature	x	x	x	x						

Indicators to measure an increase in personal & social benefit

		Persona	al			Social		
3. Number of community groups /								
members involved in planning &				х				х
management								
7. Number of WF-based								
volunteers	x			x	x			х
8. Extent to which participation in								
WF planning & management								х
reflects community diversity								
9. Extent to which use of WF								
reflects diversity within local							х	
community								
10. % population aware of								
services & functions provided by	х	х			х	х		
TWF								
11. % population involved in WF-								
based informal health activities	x	Х	х		х	x	х	
12. % population involved in								
formal health activities	x			x	x			х
13. Number of events / initiatives								
using TWF to promote learning				x				х
14. % population involved in led								
TWF-based learning events /	х			х	х			х
initiatives								
15. % population involved in								
informal TWF-based learning	х	Х	Х		х	х	Х	
activities								
16. Number of WF-based cultural				×				v
sites and features				~				~
17. Number of visitors to WF-	×	v	v		×	v	v	
based cultural sites/ features	~	~	~		~	~	~	
Number of WF-based cultural				v				×
events				^				^
19. Number of participants in WF-	v	v	v	v	v	v	v	v
based cultural events	^	^	^	~	~	~	~	^

Key: T= trees; W = woods; F = forest



Appendix 2: Visitor (on-site) questionnaire used in project years 2 and 3.

Page 1:

NB. For differences to questionnaire used in Year 1, see section 2.2.

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.

1.	Have you visited this sit	e before?		5	What is the main activity you have or will tak				
		(If 'no', go to	Q.5)	5.	part in during your visit here today?				
2.	How often would you sa	y that you c	ome here?						
		In spring / summer	In autumn / winter	6.	How long do you typically stay	here for?			
	Everyday				Up to 1 hours				
	4 to 6 times per week				1-2 hours				
	1 to 3 times per week				2-4 hours				
	A few times a month				Over 4 hours				
	A few times a year								
	Less often			7.	Who did you come with today? (tick all that apply)				
3.	If you have children, how	w often do tl	ney visit		Family				
this site, on average		ith or witho	ut you)		Friends	_			
		In spring / summer	In autumn / winter		An organised group				
	Evervdav				On your own				
	4 to 6 times per week	П			With the dog				
	1 to 3 times per week				Other (specify)	—			
	A few times a month								
	A few times a year			8.	How did you get here today?				
	Less often				Walk				
			•		Private car	П			
4.	(tick all that apply)	at this place	97		Public transport				
	Exercise e a walk run				Organised trip				
	mountain biking				Bicycle				
	Dog walking		П		Other (specify)				
	Horse riding				Other (specify)				
	Organised activities			9.	How far away do you live from	the site?			
	Visit the cafe			•••	Less than 1/3 rd of a mile				
	Picnic or barbecue				$1/2^{rd}$ mile to 2 miles				
	Play with the children								
	Watch nature				3 to 6 miles				
	Relax / think				7 to 20 miles				
	Volunteering				Over 20 miles? If yes, are you:	_			
	Prefer not to say				On a day trip from nome On a holiday?				
	Other (specify)				Please provide your road name	and town. or			



10. How we site as a pla	ould you ace to vi	ı rate isit?	the c	overall q	uality of	f this		13 continued - Do you comments?	ı have	any f	urthe	r	
Excellent	Very Good	Fair	P	oor V P	ery oor	Don't know							
			I										•••
11. How wo	ould you	ı rate t	the f	following	g facilitio	es?		14. What, if anything, w changed to make future	vould y visits	ou lil more	ke to e enjo	see yable	?
I	Excelle M nt C	Very Good	Fair	Poor	Very Do poor kno	n't r ow r	n/a						••
Car park													
Design of site]							
Site maintenance]		15. This site is importa	nt to m	e be	cause	:	••
Trails and paths									≥	0	e	≥ă	1
Visitor facilities]			strong ag ree	Agree	lisagre	s trong isagr€	
Nature									0)			0.0	ć
Children						ב		It helps me to e arn a living or make ends meet					
Sports								It's a place where I can relax and de-stress					
Information								It's a place where I can exercise and keep fit					
If you were r	not satisf	fied wi	th ar	nv facilitie	es please	9		It's a place where I can have fun and enjoy myself					
explain belo	W:			.,	o prodet	-		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					
12. Would y visit to a frie	you reco end or a	omme i relati	nd t ve?	his site a	as a plao	ce to		It brings the community together					
Definitely F	Probably	Fairl	у	Probably	Definite	ely D	Don't	It makes this area a nicer place to live					
			у			N		It gets me involved in local issues					
13. Did any affect your	of the f	follow entdu	ing ring	potentia thevisi	l probler t?	ns		It's a place where I feel at home					
	-		σ	כ		>		16. Can you think of ad	ditiona	al ber	nefits	that t	ni
	ecte d	lot	ttle	ot affe yment	d not ounter	t knov		site provides to you?		VES	п	NC	
	Aff	Y Affe	enjoy	Did n enjo	eno Di	Don		If ves, please specify those	se hene	-fits			•
Litter or fly								ii yes, piease speeli y triot		sinto.)
tipping])
tipping Dogs and dog dirt		נ)
tipping Dogs and dog dirt Muddy tracks		נ נ נ)
tipping Dogs and dog dirt Muddy tracks Vandalised or missing signs		נ נ נ נ נ)
tipping Dogs and dog dirt Muddy tracks Vandalised or missing signs Forestry operations sud as felling	C C Ch))))									· · · · · · · · · · · · · · · · · · ·		•
tipping Dogs and dog dirt Muddy tracks Vandalised or missing signs Forestry operations sur as felling Disturbance fi motorised spo	ch C												
tipping Dogs and dog dirt Muddy tracks Vandalised or missing signs Forestry operations sur as felling Disturbance fi motorised spo Disturbance fi other uses	Ch C rom C rom C rom C												



Page 3:

activities, il di	. .				
		c you	v	FS	NO
en involved in or consulted	about pl	ans for			
anaging this site	tree nlar	ntina		-	
vent	acc plai	iting			
een involved in voluntary wo ith this site	k in conr	nection			
. I think this site is in	portar	nt to t	he co	mmu	nity
cause:					
	igly ee	Ð	ree	ngly Iree	cnow/ evant
	Stror agre	Agre	Disag	S tror disag	on't k ot rele
conomy					
s a place where people can elax and de-stress					
s a place where people can kercise and keep fit					
s a place where people can ave fun and enjoy nemselves					
s a place where people can arn about the environment					
s an important place for ild life					
brings the community ogether					
makes this area a nicer ace to live					
gets people involved in cal issues					
	dition	l hen	efits	that th	vie
Can you think of ad	niriona				
. Can you think of ad e provides to the com	munit	y?	_	ulut u	

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	
l do not have a car	
lťs 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)	



Page 4:

A FEW QUESTIONS ABOUT YOURSELF:	How would you describe your ethnic background?
Sex: Male O Female O	(Please tick one box only)
Age: 16-19 O 19-25 O 26-34 O	White
35-44 O 45-54 O 55-64 O	British
65-75 O 75+ O	Irish
What is the approximate total annual income in	Any other white background
your household?	Chinese
Under 10K	Mixed race
10 to 20K	
21 to 30k	white and black Caribbean
	White and black African
51 to 75K	White and Asian
756+	Any other mixed background
	Asian or Asian British
Working full time (30+ hrs per week)	Indian
Working part time (less than 30 hrs per week)	Pakistani
Retired	Bangladeshi
Parent or carer	Any other Asian background
In full time education	Black or British Black
Unemployed	
Not working due to illness/disability	Calibbean
Self employed	African
Other (specify)	Any other ethnic background
	Do not wish my ethnic background
	to be recorded
that apply)	Other ethnic group (specify)
	Would you be willing to be contacted again by the
	Forestry Commission (for example about events or
Mental health	activities they are undertaking)?
Physical health	Yes
Other 🗆	No
	If yes take address, phone number or email
Does your disability affect your use of this site or	
other greenspaces?	
Yes O No O No answer O	



Appendix 3: Catchment (off-site) questionnaire used Years 1 & 3

Page 1:

QOL for CSR07 – Catchment area Questionnaire

INTRODUCTION

Good morning/afternoon/evening. I am undertaking a survey on behalf of the Forestry Commission regarding your local area.

This interview should take around 10 minutes and all of your answers will treated in the strictest confidence. The information gathered for this survey will not be used for anything other than research purposes.

My name is xxx and I am phoning from research company TNS.

Recruitment questions

Sex:	Male	0	Femal	е	0											
Age:	16-19	0	19-25	0	26-34	0										
0	35-44	0	45-54	0	55-64	0										
	65-75	0	75+	0												
Are y	ou?															
Working full time (30+ hrs per week)																
Working part time (less than 30 hrs per week)																
Retire	Retired															
Paren	t or care	r														
In full	time edu	catio	n													
Unem	ployed															
Not w	orking du	ie to	illness/d	isabil	ity											
Self e	mployed															
Other	(specify)															
1. P	rior to th	is in	terview	had	you hea	rd of [inse	ert site r	name]?)							
	YES 🗆]	NO 🗆]												
2. H	ave you	ever	visited	[inse	rt site na	ame] ? (IF '	NO', SI	KIP TC) Q8)							
ΥI	ES 🗆	Ν	0 🗆													
3. H	ow often	wou	ild you :	sayt /	hat you In spring summe	visit [inse In autu r winte	e <i>rt site i</i> mn / er	name]'	? REA	D OU	Τ ΟΡΤΙΟ	NS				
1	Everyday															
4	to 6 tim	es pe	er week													
	1 to 3 tim	es pe	er week													
	A few tim	es a	month													
	A few tim	es a	year													
	_ess ofte	n														
4. W	ould yo	u rec	ommen	d [ins	sert site	name] as a	a place	to vis	it to a	frien	d or a rel	ative?	READ	OUT	ορτιο	NS
Defi	nitely Pro	bably	Fairly	Ρ	robably	Definitely	Don't									
_	-															



Page 2:

1.	Who do you usually visi	it [insert site n	ame] with? I	READ OUT LIST. ROTATE ORDER (Allow multi-code)
	Family			
	Friends			
	An organised group			
	With the dea			
	Other (anality)			
	Other (specify)			
2.	What do you usually do	at [insert site	name] ?	READ OUT LIST. ROTATE ORDER (Allow multi-code)
	Exercise e.g. walk, run,			
	mountain biking		-	
	Dog walking			
	Horse riding			
	Viginised activities			
	Picnic or barbecue			
	Play with the children			
	Watch nature			
	Relax / think			
	Volunteering			
	Prefer not to say			
	Other (specify)			
3.	How do you usually get SELECTS MORE THAN	to [insert site ONE METHO	name]? REA D OF TRANS	AD OUT OPTIONS. SINGLE CODE ONLY. IF RESPONDENT SPORT, PLEASE ASK FOR MAIN ONE USED.
	Walk			
	Private car			
	Public transport			
	Organised trip			
	Bicycle			
	Other (specify)			
4.	Have you visited any otl respondent does not visit	her local parl other local sit	ks, woods or es, go to Q.1	r greenspaces during the last twelve months? (If 0).
	1			
	2			
	3			
5.	How often would you sa	iy that you vi	sit local parl	ks, woods and greenspaces other than [SITE NAME]?
		In spring / summer	In autumn /	
	Fyeryday			
	4 to 6 times per week			
	1 to 3 times per week			
	A few times a month			
	A few times a year			
	Less often			



Page 3:

 Which of the following, if any, stops you from visiting local parks, woods and greenspaces more often? (tick all that apply) READ OUT. ROTATE ORDER
 I'm too busy / not enough time
 Cost of visiting

They're difficult to get to	
My poor health	
I don't like them	
They're badly maintained	
I do not have a car	
They're too far away	
I don't feel safe there	
Lack of public transport	
Lack of information	
Lack of facilities	
Not interested (in visiting more often)	
Other (specify)	

IF RESPONDENT HAS NOT HEARD OF [SITE NAME] ('NO' At Q1) SKIP TO Q13. OTHERWISE, CONTINUE.

Now thinking specifically about [SITE NAME] and why it is important to you personally please indicate whether you strongly agree, agree, disagree or strongly disagree with the following statements.

2. [insert site name] 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					



Page 4:

1. Can you think of any additional benefits that [insert site name] provides you personally?										
YES D NO D										
If yes, please specify those benefits:										
2. During the past 12 months, which of ROTATE ORDER.	the follow	ving activitie	es, if a	any, hav	e you taken part in? READ OUT.					
	YE	S	NO							
Been involved in or consulted about plans site name]										
Been involved in an organised tree plantin										
Been involved in voluntary work in connec name]										
Become, or are a member of a community based woodland										
 Now I am going to read you some fur <u>community</u>. I think [insert site name] is important READ OUT. ROTATE ORDER. 	ther ways	s in which [\$ <u>mmunity</u> be	SITE I	NAME] m e:	iight be important <u>to your local</u>					
	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										



Page 5:

1. Car YES □	n you th N	ink of a IO □	addition	al benefits that	it [insert site name] provides to the community?
If yes, please specify those benefits:					
CLASS Finally	IFICATI please p	I ON provide t	the follow	wing informatior	n about yourself. These details will only be used for analysis purposes.
What is	s the ap	proxim	ate tota	l annual incom	ne in your household?
Under ?	10K				
10 to 20	ЭK				
21 to 30	Ok				
31 to 50	ЭK				
51 to 7	5K				
75K+					
Do you	have an	ny illnes	s, disab ⁱ	ility or infirmity t ⁱ	hat has troubled you over a period of 12 months or more? If so, does this
affect y	our RI	EAD OL	JT OPTI	ONS. ALLOW M	MULT-CODE
Mobility	,				
Vision					
Hearing					
Mental health					
Physical health					
Other					
Does y	our disa	ability a	affect yc	our use of [inse	ert site name] or other greenspaces?
Yes	0	No	0	No answer	0



Page 6:

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 email. If unsure of or does not have email address, ask them to confirm which telephone number it is best to reach them on.



The Research Agency of the Forestry Commission