Forest Research

Public access to woodlands and forests: a rapid evidence review




A report by Forest Research on behalf of the Independent Panel on Forestry

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1 Executive Summary

Review aims and approach

This report was commissioned as 'a review' of existing literature on public access to woodlands with the aim of identifying the extent of use, motivations and well-being benefits gained from trees, woodlands and forest and highlighting interventions that have been successfully applied to encourage public access and enhance public benefit. A multi-level approach was developed to (a) issue a call for evidence; (b) identify existing relevant literature from academic databases on access, well-being and barriers to access; (c) identify evaluative evidence (academic and grey literature) of mechanisms and interventions that have been used to encourage and enable public access; and (d) identify lessons concerning which mechanisms and interventions are most effective.

Key findings

Access, well-being and barriers

- Two thirds of the population of England has visited woodlands in the last few years.
- Access to woodlands is unevenly distributed across England. Visitors are more likely to be middle to older aged, in a high socio-economic group, white and employed. Walking is the most popular activity undertaken in woodlands. Deprived areas tend to have lower availability and poorer quality woodlands.
- There is a key distinction between 'access' (i.e. the legal right to access land) and 'accessibility' which is a broad concept covering people's perceptions and experiences and the barriers they face.
- There are gaps in evidence relating to the extent of public demand for more accessible woodland (public and private), and to comparisons between woodland access, benefits and barriers as opposed to other types of greenspace.

- The evidence points to a wide range of well-being benefits that people gain from accessing woodlands. A new expanded typology illustrates this.
- The benefits of woodlands is a complex topic. Benefits depend on a number of factors, including interactions between people and woodlands, types of engagement and activity, governance processes and the characteristics of individuals and groups.

- A typology of barriers to access includes: 1) physical and structural; 2) socio-cultural and economic; and 3) personal barriers.
- Disabled people, black and minority ethnic groups, lower socio-economic groups and those with no car are disproportionately affected by barriers.

Interventions for improving access

- There are limitations to the evaluative evidence as the majority is focused on Public Forest Estate woodlands, or the Forestry Commission working in partnership with local authorities and third sector organisations, with little evidence of interventions on privately owned woodland.
- Partnership working is a key feature of interventions aimed at encouraging public access. This reflects the broadly collaborative approach adopted by a diverse range of bodies and sectors including health, education and crime.
- Interventions that combine a range of approaches such as infrastructure improvements, with the provision of organised and led activities targeted at specific groups can be particularly effective.
- A diverse range of interventions is used to encourage public access to woodlands: 1) interventions to increase accessible woodland provision, 2) to improve the physical woodland resource, and 3) to address the needs of individuals and groups that face particular barriers.

- There are barriers to woodland expansion due to increasing competition for land. Grants are available but take up depends on landowners' objectives and appetite for additional administrative burden. Understanding the values and attitudes of woodland owners is of critical importance.
- The provision of advice and support to encourage uptake of grants is essential.

- Improving access and facilities is an expected part of good management on the public forest estate and many projects and programmes have been very effective in encouraging public access.
- Information provision is key and needs to be targeted appropriately at different groups.
- Community groups can play a vital role in helping to keep woodlands well managed and welcoming.
- Accessibility to private woodlands could be improved through small physical changes, such as improved signage and keeping paths clear.

- Making interventions fun, engaging, sociable and providing a welcoming experience is vital.
- Understanding target groups is critical and interventions should be effectively tailored to their needs.
- Some groups require relatively intensive levels of support and encouragement.
- Providing programmes that involve regular, rather than 'one off' activities is crucial in building confidence and familiarity with accessing woodlands.
- Provision of free or low cost activities is especially important for deprived groups.
- Staff and volunteer capacity is important for effective delivery of interventions to encourage public access.

2. How we conducted this review

2.1 Objectives

The aim of this report is to present to the Independent Panel on Forestry (IPF) a review of existing evidence on public access to forests and woodlands, public benefits, and the barriers to increasing woodland access in GB, with a specific focus on England. It is one of three reports commissioned as part of an evidence review on social aspects.

In discussions with the IPF secretariat, it has been agreed that the panel are particularly interested in mechanisms and interventions of change and their impact. International examples have been reviewed where they are of relevance to the GB context, and lessons are drawn out from the GB experience. It is beyond the scope of this report to evaluate the large body of literature covering mechanisms and interventions so we have restricted our review to formal evaluations.

The evidence questions for this report were:

- What is the extent of use (access) of, and what are the motivations and values associated with trees, woods and forests, and how does this compare with other types of greenspace?
- What measures have been successfully applied to encourage public access, to overcome barriers and enhance public benefit?

The specific objectives of this report are to:

- Outline the reasons / motivations for access.
- Identify the range of well-being benefits of access to woodlands, both to individuals and wider society.
- Identify the barriers to increasing public access under different woodland ownership types, including public, private, and third sectors, and community ownership.
- Provide an assessment of what has worked well in delivering greater access through planned programmes of action.

2.2 Definitions

In this report we refer to both **woodlands** and **forests** and we also use the umbrella term **TWF (Trees, woods and forests).** The international literature favours the use of the term forests, which tend to refer to larger areas with some degree of timber extraction. In the UK 'woods' and 'woodlands' are terms used to refer to smaller areas, with less (or no) emphasis on timber production. This is a matter of usage rather than definition and we do not wish to make a formal distinction between the terms, preferring

to use them interchangeably, following the usage in source documents. Many reviews use the broad term of **greenspace** that includes all green areas within urban environments; parks, gardens, cemeteries and green corridors. Trees are often, but not always, a key component of greenspaces. Furthermore, street trees can be important components of urban neighbourhoods. As such, it is not always easy to separate out the benefits that are attributable to TWF. However, we have tried to be as clear as possible about drawing out findings that refer explicitly to TWF.

Table 1: outlines the many ways in which people can engage with TWF. We recognise that the term '**access**' can refer to visual access (i.e. seeing woodlands) and mental access (i.e. knowing that woodlands are part of the landscape) as well as the dominant meaning of direct, physical access (i.e. woodland visits). This report focuses particularly on people visiting woodlands to undertake recreational activities such as walking and cycling, as well as forms of active engagement, such as volunteering, apprenticeships, Forest School, etc. Some of the evidence provided also includes benefits of views of TWF as part of the landscape.

Table 1: Types of engagement with TWF

Types of engagement with TWF	**Examples of activities**
Mental access	Knowing they are part of the landscape
Virtual access	Virtual or mental image, TV, computer, memory
Views of TWF	View from a house, car, work, buildings
Using and being in TWF	Cycling, walking, picnicking, mountain biking, orienteering, using nature trail etc
Active engagement	Volunteering, education approaches such as Forest School, gathering non timber forest products, apprenticeships
Participation in decision making	Involved in decision making about the creation, design and management of TWF e.g. 'Friends of group'
Ownership and / or management	Responsibility for management or ownership of site/s – privately or as part of a community group

With the publication of the UK National Ecosystem Assessment (The UK National Ecosystem Assessment 2011) in 2011, the term **cultural goods** is increasingly being adopted to denote beneficial outcomes to humans from ecosystems. Prior to this, the literature has been using the related term **well-being benefits**. We have chosen to stick with this term in this report to be faithful to the source literature. However, we do discuss the relationship between these terms.

2.3 Methodology

A detailed description of the methodology is provided in Appendix 1.

An evidence review was judged to be more efficient than a more formal REA process in this case, as there was strong existing knowledge of the literature to draw upon within the team. The broad scope of this report has meant that we are drawing upon several related bodies of literature including access, benefits, barriers, and interventions. There have been three strands to the data collection process:

1. Some aspects of the research brief, including social benefits of woodland access and barriers to access, were already well researched by the Social and Economic Research Group (SERG) team within Forest Research and other researchers, so we began the evidence review by summarising existing reviews.
2. We made use of existing networks of professionals through our 'call for evidence' to identify relevant papers and reports. Sixty-one documents of relevance to this review were sent to us in response to our call and around 2/3 of these have been referenced in the report.
3. To complement this we conducted searches of the academic databases using the search terms and criteria detailed in the project proposal document. Our searches produced 10,555 hits, from which 202 were selected on the basis of title. In turn, 70 were selected on the basis of abstract. The full texts of these were sourced and around half have been of direct relevance to the study.

We particularly draw on evidence from evaluations of mechanisms and interventions that try to encourage and increase access in order to learn about what works and about any difficulties that may have arisen. Primarily this has focussed on the Public Forest Estate managed by the Forestry Commission England, the National Forest Estate managed by FC Scotland and the Welsh Assembly woodlands managed by FC Wales as there is little evidence at present of evaluated mechanisms and interventions for other ownership types. However, we did find a small amount of evidence covering issues relating to increasing access to private land and this is reported. Useful international examples of effective mechanisms and interventions to encourage public access are also reported.

Part A: The current picture

3. Access and use of TWF

In this section we review evidence of how woodlands and forests are used in the UK. We begin with a general picture of the resource and use patterns, followed by a more subtle analysis of user groups and woodland types.

Data sources:
National level quantitative surveys:

- Public Opinion of Forestry Survey (POFS) 2007, 2009, 2011
- Monitor of Engagement with the Natural Environment (MENE) survey 2009/2010, 2010/2011
- Scottish Recreation Survey (SRS) 2007, 2008, 2009, 2010
- Welsh Outdoor Recreation Survey (WORS) 2008 (Countryside Council for Wales and Forestry Commission Wales 2009)

There is a good quality, and regular supply of survey data on woodland use in the UK at a national level. ((Forestry Commission 2011b, Natural England 2010) The Natural England survey (Monitoring of Engagement in the Natural Environment) is annual but looks at countryside use in general, as do the Scottish and Welsh Recreation surveys. The biannual Public Opinion of Forestry Survey focuses more specifically on TWF, and includes questions on the importance of forestry to the respondent. Recreation statistics are accessible through the FC website;
(*http://www.forestry.gov.uk/website/forestry.nsf/byunique/ahen-5gcdvl*)

These national level surveys are complemented by site-based studies that give a more in-depth picture of use patterns on a local scale (Morris and Doick 2010). In addition the new FC Quality of Experience Surveys provide qualitative data on visitor experience of forest sites. These are also available via the web link above.

3.1 Woodland in Great Britain

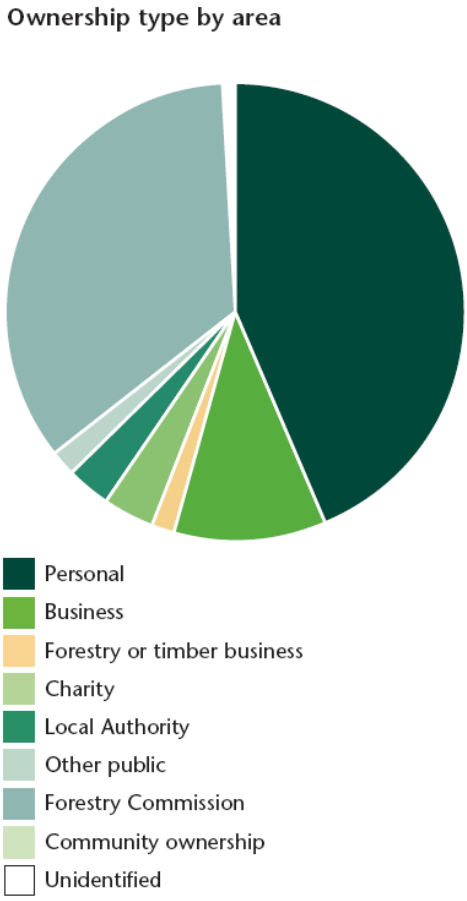
Great Britain is one of least wooded countries in Europe. From a historical low at the start of the 20th Century of 5% woodland cover, this has more than doubled to 13%, (still much lower than the European average of 37% (Peterken 1996) (Forest Research 2003, Forestry Commission 2011a).

The Forestry Commission/ Forest Service owned or managed 28% of the total woodland area in the UK in 2011. This proportion ranged from 16% of the woodland area in England to 69% in Northern Ireland.

Across GB, around a third of woodland is in public ownership under the care of the Forestry Commission, though in England this figure is only 18% (Forestry Commission England).

Table 2: breakdown of woodland cover by ownership type
Figure 1: breakdown of woodland cover by ownership type
(Forestry Commission 2003)

Ownership type	Percentage of woodland cover
Personal	43.6%
Forestry Commission	34.5%
Private businesses	10.7%
Charities	3.6%
Public – Local authorities	3.1%
Other public	1.8%
Forestry or timber business	1.6%
Community ownership	0.2%
Unidentified	0.7%



The ownership picture is different in Scotland where 12% percent of Scotland's rural land is in public ownership and charitable conservation organisations constitute the largest non-public landowner. In 2007, these included National Trust for Scotland (NTS), the Royal Society for the Protection of Birds (RSPB) and the John Muir Trust (JMT). A Scottish study noted that 'private ownership remains the most characteristic and really dominant aspect of land ownership' (Warren and McKee 2011).

3.2 Access Rights in Great Britain

Key Points:

Currently the public in England and Wales have the right to access 90% of FC woodland and an estimated 30% of other woodland.

It is important to distinguish between *access and accessibility.*

Public access to forests is a fundamental right of people in many European countries (Bauer, Kniivila, and Schmithüsen 2004). Legally accessible woodland in England and Wales includes the Public Forestry Estate (PFE), NGO owned woodland, Local authority owned woodland, community woodlands and private woodlands with rights of way or in receipt of woodland improvement grants which have public access as a condition.

The most significant change to access rights in the UK came in 2000 with section 16 of the Countryside and Rights of Way Act (CROW) 2000 which ensures a right of access to uplands downs and commons in England and Wales, but does not include woodland unless voluntarily dedicated (UK Government 2000). The act also allows for owners, or long leaseholders, to dedicate their woodlands voluntarily as access land in perpetuity. In addition, the act updates and amends the law relating to public rights of way. The act also enables an owner to restrict access in some circumstances by a direction granted by a relevant authority (Forestry Commission 2011d).

Currently the public in England and Wales have the right to access 90% of FC woodland and an estimated 30% of other woodland. Following the CROW act, right of access is dedicated on 90% of the freehold area of the PFE in England (Lawrence 2009). An older study estimated that access on foot and access by public rights of way and other tracks may be available on approximately 15-30% of privately owned woods and forests, and 80-95% of those owned by local authorities and public & voluntary organisations in England and Wales (P Scott Planning Services 1997). The UK Forestry Standard (2011) states that 'about 30% of woodland not in public ownership makes special provision for public access and enjoyment in addition to statutory and permissive access' (Forestry Commission 2011d). This is in addition to woodland that is privately owned, but has a public right of way through it, as most studies do not count this as accessible woodland – see section 3.3 below.

Scotland differs, as the 2003 Scottish Land Reform Act granted a 'right of responsible access' to land and inland water, formalising the tradition in Scotland of unhindered access to open countryside (UK Government 2003).

It is important to distinguish between *access and accessibility.* (Woodland Trust 2010, McKernan and Grose 2007,Morris et al. 2011, O'Brien and Tabbush 2005) 'Just as public rights of way do not ensure quality access, a right of responsible access in Scotland does not mean access will be encouraged to all woodland or that it is accessible' (Woodland Trust 2010). Accessibility is a wide-ranging concept integrating site features such as clear paths and welcoming signs, with individuals' perceptions of the woodland and their right to be there.

3.3 Geographical distribution of accessible woodland

Key Points:

England has a lower percentage of accessible woodland area than other country regions – 38% compared to the UK average of 49%.

Only 14.5% of the population in England have access to a 2ha wood within 500m compared with 27.8% in Scotland.

Having woodland within easy reach of one's home significantly increases the likelihood of accessing it, but proximity to woodlands does not guarantee increased access.

Geographical measures provide only limited information about the quality of the resource

The definition of 'accessible' woodland used by the Woodland Trust is 'any site that is permissively accessible to the general public for recreational purposes'. This does not include woods served only by public rights of way. A similar framing is used by Natural England in their report 'An analysis of accessible natural greenspace provision in the South East'. The reasons for this are twofold. Firstly, the quality of rights of way is far from uniform. In the last national survey of the condition of rights of way in England, it was found that walkers could expect to encounter serious problems on a path every two kilometres (Countryside Agency, 2001). Secondly, the poor condition of paths, and inadequate signposting can negatively affect the degree to which a visitor feels 'welcome' in a site, particularly those who are less familiar with the footpath network (McKernan and Grose 2007).

Looking at public and private woodlands together, England has a lower percentage of accessible woodland area than other country regions – 38% compared to the UK average of 49% (Woodland Trust 2004). This includes FC woodland as well as private woodland. A study of accessible greenspace provision in the South East England region (where woodland cover is 15%) conducted by the FC and Natural England shows that woodlands constitute more than half the accessible natural greenspace (McKernan and Grose 2007).

To provide a target for better greenspace provision, Natural England have created a benchmark standard for access aiming for equality in easily reachable greenspace. The Accessible Natural Greenspace Standard (ANGSt) specifies distances and sizes of accessible greenspaces (English Nature 1996).

The ANGSt model states that:

- No person should live more than 300m from their nearest area of natural greenspace of at least 2ha in size
- There should be at least one accessible 20ha site within 2km of home
- There should be one accessible 100ha site within 5km of home
- There should be one accessible 500ha site within 10km of home

Natural England conducted a detailed spatial analysis of the South East and found that only 20% of all households met the first criteria of having access to a site of at least two hectares within 300 metres. A much greater percentage of households met the larger area standard with 66% of all households in the region having access to a site of at least 20 hectares within 2 kilometres and 77% of all households in the region have access to a site of at least 100 hectares within 5 kilometres (McKernan and Grose 2007).

The Woodland Trust have developed a complementary standard for the provision of woodlands based on their organisational standpoint that 'in terms of provision of natural greenspace, woods should be seen as the optimal habitat' (Woodland Trust 2004).

The Woodland Trust's Woodland Access Standard sets the target that:

- No person should live more than 500m from at least one area of accessible woodland of no less than 2ha in size
- There should also be at least one area of accessible woodland of no less than 20ha within 4km (8km round trip) of people's homes

The Woodland Trust's own research found that **only 14.5% of the population in England have access to a 2ha wood within 500m compared with 27.8% in Scotland**. For the larger woodland further away the figures are higher, 63% in England and 83% in Scotland (Woodland Trust 2010). Data collected in 2009 shows a considerable increase from 2004 in all areas but the Woodland Trust state that this is most likely due to a number of recording factors and 'it would be wrong to conclude the figures show a simple increase in accessible woodland in the UK' (Woodland Trust 2010). If anything, this research highlights the difficulties in evaluating accessible woodland.

Urban areas, where pressures on land are greater, need to be assessed differently. The Woodland Trust recommends that where sites of 2ha+ within 500m are not feasible, then alternative criteria of sites of 0.75ha+ within 500m could be used.

The study of accessible greenspace provision in the South East found that 57% of all accessible natural greenspace in the South East is woodland, but that this only represents 30% of the region's woodland area. This suggests that woodland has a key

role to play in providing accessible greenspace recreation, and that there are many woodlands that are currently inaccessible that could be opened for access.

Having woodland within easy reach of one's home significantly increases the likelihood of accessing it, **but proximity to woodlands does not guarantee increased access.** The MENE survey found that two thirds (66%) of outdoor visits were taken within two miles of the respondents home (or other start point e.g. their workplace or holiday accommodation) (Natural England 2010). The evidence is mixed on the extent to which proximity is a key determinant of use. Although the majority of visits are made close to home, ethnographic work has showed that access to the forest is more complex than proximity. In a study of the Thames Chase Community Forest, Kessel et al. (2009) found that residents' access to the forest depended partly on their personal identity, particularly whether they could imagine themselves using the forest (Kessel et al. 2009). Accessibility of urban forests is also very likely related to feelings of safety (O'Brien, Williams, and and Stewart 2010). These are issues we return to in section 5 on barriers.

Geographical measures provide only limited information about the quality of the resource. (Barbosa et al. 2007, Morris et al. 2011). A study in Melbourne, Australia by Crawford et al. (2008) found that public open spaces in the highest socioeconomic neighbourhoods tended to have more features and amenities that would encourage usage, such as paths, lighting, signage etc. than those in lower socioeconomic neighbourhoods (Crawford et al. 2008).

Deprived areas typically have poorer availability and quality of TWF resources. Several studies have reported this association. An example from Scotland found that the most deprived sectors of urban society had the lowest proportion of the population living within 600m of a 2ha+ woodland. Concomitantly, the least deprived sectors were better provided for (Sniffer 2004).

3.4 Current pattern of access to woodlands

Key Points:

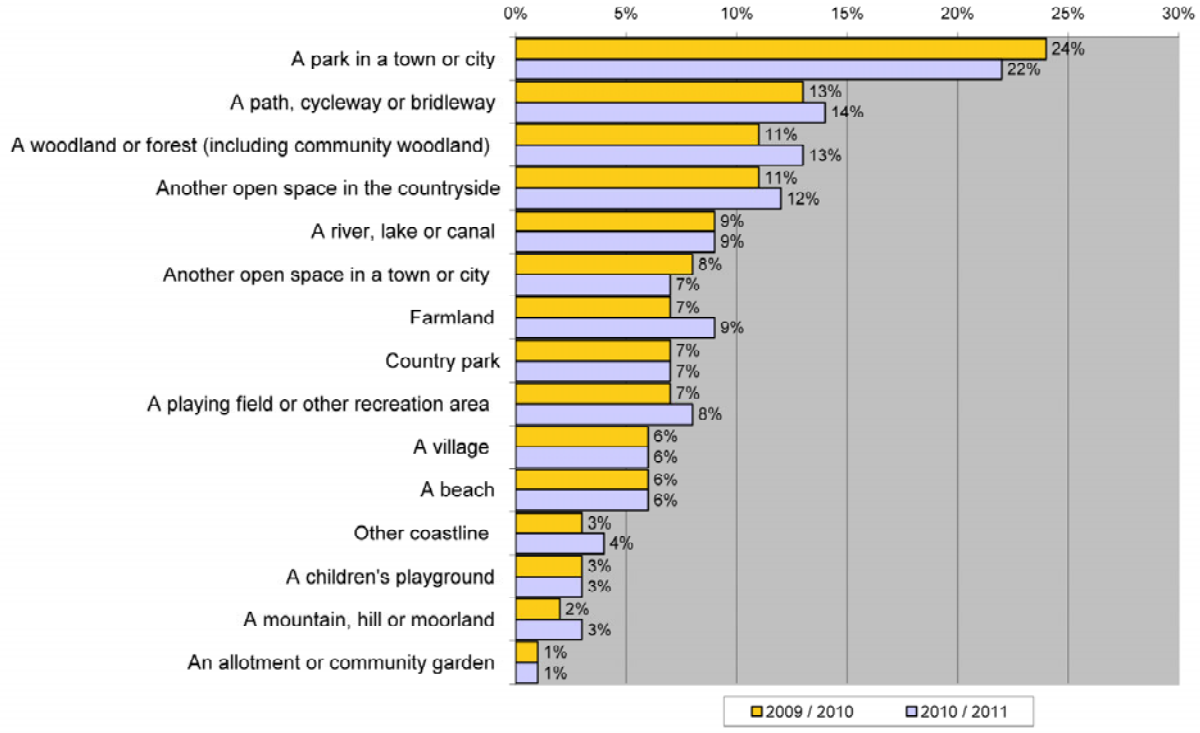
In England, woodland visits accounted for 13% of all visits to the natural environment in 2011.

Frequency of visits is an important indicator of total use of woodland sites and benefit to the users.

The MENE survey shows that visits to woodlands and forests account for between 317 and 326 million in 2009/10 and 2010/11, respectively (Natural England 2011). This makes woodlands and forests the third most visited destination for the English adult population.

In England woodland visits accounted for 13% of all visits to the natural environment in 2011. This finding is confirmed by similar figures from Scotland (10-16%) and Wales (14%). A slight increase is seen from 2010 (11%) but this is within the levels of expected variation (Natural England 2011).

Figure 2: Estimated difference in volume of visits to the natural environment by detailed type of place
(Natural England 2011)

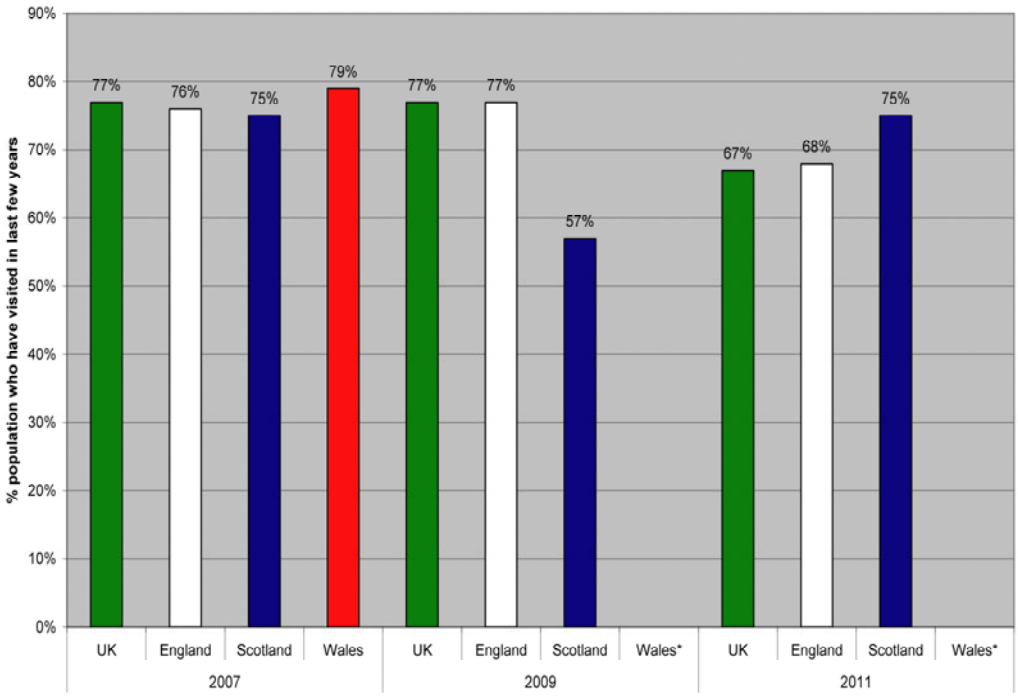


Source: MENE. Base: All respondents who had visited natural environments in the last seven days.

England figures of usage are very similar to UK data as a whole. Results of the biannual POFS show that between 2003 and 2011 a consistent figure of around 2/3 of respondents in the UK had visited woodlands and forests for recreation in the last few years for walks, picnics or other recreation. The latest figures stand at UK (67%) and England (68%) that represents a significant decrease over the results in 2007 and 2009 but is similar to the results in earlier years (Forestry Commission 2011b). As is evident

from figure 3 there was a significant fall in visitor numbers in Scotland in 2009, but numbers recovered for the 2011 survey, and this was largely attributed to a summer of bad weather.

Figure 3: Proportion of the population who have visited woodlands and forests in the last few years
(POFS)



Source: POFS. Base: All respondents
* Relevant question not asked

Seasonality can be a factor but considerable numbers of woodland users continue to visit in winter. 'Of the respondents who had visited woodlands in the last few years, 39% said they visited at least once a month during winter 2010/11 (for both the UK and England)…. almost one third of respondents (29% for both UK and England respondents) said they did not visit during the winter'. (Forestry Commission 2011b) Similarly, an in-depth study of 3 flagship woodland sites found very little variation in use of the woodlands across the seasons (Morris et al. 2011).

Frequency of visits is an important indicator of total use of woodland sites and benefit to the users. Of the forest users identified in the POFS survey, 2/3 are regular visitors, accessing sites at least once a month in the summer period (Forestry

Commission 2011b). Greenspace Scotland's 2009 survey in urban areas in Scotland found that 63% reported that they used their local green space once a week or more often (Progressive Partnership 2009). Frequency of visits is also an important factor as it affects the benefit to the individual. 'Those who visited the natural environment on at least a weekly basis were most likely to record having a very positive experience' (Natural England 2011).

Modelling forest demand

Survey data illuminates past trends in use and has been used to predict future patterns. To complement this, some authors have looked at statistical modelling techniques for predicting future demand for forest recreation. Brainard and Bateman's (2001) work is seminal in this, using readily available site-specific characteristics or simple measures of available population as input (Brainard, Bateman, and Lovett 2001). They have recently extended this work to make it a tool for assessing the annual value of recreational visit flows to different habitat types in Great Britain (Bateman in press). The annual aggregate value for recreation in GB forests has been estimated at £393 million (Willis *et al.* 2003).

3.4.1 Who uses woodlands?

Key Points:

The highest proportion of woodland users come from population groups: age; 45-64, social class; ABC1, ethnicity; white, and in employment.

Under-represented groups include individuals from any of the following: age; 16-24, social class; C2DE, Ethnicity; Black and Minority, and disabled.

Men and women are almost equally represented as woodland users.

The highest proportion of woodland users come from the following population groups: age 45-64, social class ABC1, ethnicity white, and in employment. The highest proportion of respondents who reported having visited FC managed forests and woodlands were in social class AB1 (30%), had access to at least one car (90%) and described themselves as white (96%) (Lawrence 2009). As with the Public Opinion of Forests (2009) results, the English Leisure Visits survey found that the highest proportion of respondents who reported having visited FC woodlands were aged 35+ (76%) and described themselves as white (93%) (Lawrence 2009). Those in the English POFS survey who reported using the Public Forest Estate 'were more likely to be older, male, married, white, have children, be in full-time employment and live in rural areas' (Carter 2009). These findings are supported by the more in-depth Quality of Experience

studies that have interviewed a total of 2566 forest users across 20 high use FC sites in England in 2010 (Forestry Commission 2011c). Ten sites in Wales were also studied where usage levels varied. As well as stratifying data by age, these surveys also grouped users by life stage (see table x). These studies are particularly useful in providing benchmark figures by which individual woodland sites can be compared. The survey programme runs between 2010 and 2013 and will conduct approximately 10,000 surveys across fifty forest sites in England and Wales. Table 3 shows the lifestage distribution of forest users averaged across all sites in the Quality of Experience surveys 2011.

Table 3: Percentage of forest users by life stage.
Average across all England sites (2566 interviewees) (BRM 2011)

Life stage	Percentage of users
Family (Children in household)	54
Empty Nesters (Aged 45-65+ with no children)	23
Young Independents (Aged 16-34 with no children)	15
Other	8

These results are similar for all visitors to the natural environment as found in the MENE survey. This survey reports that 'the population groups with the largest proportions taking visits to the natural environment included people aged between 45 and 64, those in employment, and those in the ABC1 socio-economic groups' (Natural England 2011).

Under-represented groups include individuals from any of the following: age; 16-24, social class; C2DE, Ethnicity; Black and Minority, and disabled. Visitor profiles show that some population groups are under represented as users of TWF in Great Britain. A comprehensive analysis of the data sets generated by the POFS during the last 3 surveys (2005, 2007, and 2009 – 13,284 people) shows this in more detail (Morris et al. 2011). The results for Wales, Scotland and England presented similar significances. The main findings were:

Age: Age is a significant variable with lowest user groups being the youngest (16-24 yrs) and oldest (65+ yrs). In England only 56% of older people had visited woodlands compared with 80% of 35-44 year olds.

Social grade: A significantly smaller proportion of people with social grade C2DE (63%) had visited than those with social grade ABC1 (81%). Inequality in geographical provisioning of woodlands discussed above may be a factor in this.

Disability: Proportionally fewer disabled people had visited woodlands (58%)

Ethnicity: Proportionally fewer people from the Black and Minority Ethnic (BME) groups had visited. This figure is the lowest of all groups with only 45% of BME people visiting woodland in England and 34% in Scotland. This compares to 75% of white people in England.

These findings raise important equity issues that will be considered more in Section 8 - Making woodlands socially/psychologically accessible.

Men and women are equally represented as woodland users. Morris et al.'s analysis found that 73% of men and 72% of women had visited woodlands in England (Morris et al. 2011). The Quality of Experience studies found a slightly higher usage by men (59%) compared with women (41%) (BMG 2011).

3.4.2 What do people use woodlands for?

Key Points:

Exercise is consistently cited as the most common activity on a woodland visit. (Exercise includes walking, running and cycling).

Around a third of all respondents also mention engaging in relaxation, watching nature, playing with children, having a picnic or barbecue.

The majority of visits to woodlands are social occasions.

We noted in Table X in section 1.2 that people can engage with woodlands in a variety of different ways. The majority of surveys about the activities people undertake in woodlands are related to recreational activities such as walking and cycling rather than to volunteering or other types of more active engagement. However, qualitative studies of particular activities or targeted interventions such as volunteering, mental health projects and education projects have captured these activities (O'Brien, Morris, and Stewart 2012) (O'Brien and Murray 2007, Wilson 2009). In this report we are using activity as a proxy for what motivates people to visit and use woodlands. Motivations to visit are linked to the benefits people have gained from previous visits and anticipate gaining from the current visit

Exercise is consistently cited as the most common activity on a woodland visit. (Exercise includes walking, running and cycling). The MENE survey shows that of

all visits to the natural environment, walking is the most popular activity, mentioned by 77 % of respondents during the 2010/11 survey period. In particular, dog walking is a major contributor to this figure with 51% of all visits involving a dog. Interestingly, this is a predominantly white activity as only 12% of BME woodland users walk a dog compared with 53% of white users (Natural England 2011). Other activities such as horse riding or off road cycling were mentioned by only 1% of respondents to the MENE survey (Natural England 2011).

Looking specifically at woodland use, the POFS reports that 66% of those in the UK and 65% of those in England who had visited woodlands give 'exercise' as the main reason for visiting TWF (Forestry Commission 2011b). In the POFS survey exercise includes walking, running and cycling, thus any detail on off road cycling is obscured. Horse riding is still a minority activity mentioned by only 4% of UK respondents who had visited woodlands.

The FC Quality of Experience surveys offer a more detailed picture of activities in woodlands to complement these national level surveys. From the total data set of 2566 interviews, it was found that 63% of visitors had been walking, and 35% of visitors reported some form of cycling. Only 2% report running, and 0.5% horse riding.

Around a third of all respondents also mention engaging in relaxation, watching nature, playing with children, having a picnic or barbecue. Site-specific reports confirm these findings (Morris and Doick 2009, Morris and Doick 2010). The Quality of Experience surveys of individual sites (Bedgebury; Thetford; Wyre - 2008) found that the leisure activities most frequently undertaken at the three sites were similar and included: walking with or without a dog, visiting the cafés, cycling, having a picnic or barbeque and using particular facilities such as children's play areas or a Go Ape course (Forestry Commission 2011c).

Of all the response options in the POFS 'following an interpreted trail' is the least common (14%) though whether that reflects people's desire for unstructured activities or lack of trails is impossible to tell.

In the surveys such as POFS people are able to select more than one option from a prescribed set. This has limits in developing a valid picture of preferred woodland activities. A recent paper tries to model demand for informal outdoor recreation using statistical methods. The results of this 'confirm it identifies a broader range of demand drivers than previously observed' (Jones et al. 2010), highlighting the importance of multiple research techniques and that people like to undertake a variety of activities in woodlands.

The majority of visits to woodlands are social occasions. Averaged across all England sites, the Quality of Experience studies found that the average size of group visiting was four people. Only 6% of people came to the woodlands alone, and 30% came as a pair (BMG 2011). These figures are substantially different from those reported by MENE when looking at all visits to the natural environment. MENE (2011) found that 47% of visits were taken by an adult on their own and the overall average party size was 2.4. The social nature of woodland recreation has been established as one of the key features contributing positively to well-being, which we discuss below.

The Quality of Experience data found that the average length of visit to woodlands was 2 hours and 26 minutes, which is higher than the average duration of a visit to the natural environment according to the MENE survey (1 hour, 58 minutes). These differences are attributable in part to the fact that the Quality of Experience surveys focus mainly on destination woodlands rather than local or urban woodlands, whereas MENE includes all excursions, with parks in towns and cities counting as the most visited type of destination, comprising 22 per cent of all visits to the natural environment during 2010/11.

3.4.3 Which types of woodlands do people use?

Key Points:

There is evidence for a bi-modal use of woodlands with use patterns for local woodlands differing from 'destination' woodlands.

Awareness of ownership of woodlands is generally low.

Local woodlands and 'destination' woodlands

Urban, peri-urban and rural woodlands differ somewhat in their usage patterns. Respondents who had visited woodlands and forests in the last few years were more likely to visit 'woodlands in the countryside' (84% for both UK and England) than 'woodlands in and around towns' (62% for UK and for England). In addition, nearly half of respondents (47% in UK and 46% in England) reported visiting woodlands and forests in both locations (Forestry Commission 2011b). There appears to have been some change in urban woodland use in the last few years as the proportion of respondents reporting visiting woodlands in and around towns is significantly higher than it was in 2005 (64% in 2009 in comparison with 52% in 2005)' (Public Opinion of Forestry 2009).

When looking at peri-urban woodlands, which sit between the categories of urban and rural, a new simplified distinction has emerged between local community woodlands and destination woodlands (O'Brien, Morris, and Stewart 2012).

- **Local community woodlands**: are used by local people who travel from a short distance, who visit reasonably frequently (often every day or every week) and do not stay long at the sites that have no toilets or café.
- **Destination Woodlands:** are used by a mix of longer distance visitors and locals who travel further to get to these sites, people often visit less frequently (a few times a month or a few times a year) but stay longer at the sites which have cafes and toilets.

This distinction fits with other evidence of a bi-modal use of TWF with regular, local visits made on foot and longer outings by car (Curry and Ravenscroft 2001). The *Quality of Experience* surveys of individual sites found that the majority of visitors to the three sites were travelling for less than an hour to reach the sites.

These terms are relatively new and not included in the national surveys, hence data regarding their provision is not readily available. As a proxy the Natural England survey of accessible greenspace in the South East found that while 77% of households in the South East had access to a site of 100ha+ within 5km of their home, only 20% had access to a site of at least 2ha within 300m of their home. Although these figures are for greenspace, it was also found that woodlands comprised 57% of the accessible greenspace in the South East. This suggests that it is local community woodlands that are less well provided than destination woodlands (McKernan and Grose 2007).

Public or private woodlands

The National Inventory of Woodland and Trees (Forestry Commission 2003) includes an assessment of recreational use of each surveyed plots; 57% of FC forest showed evidence of public recreation, compared with only 32% of non-FC (Gilbert 2007).

A number of recent studies have begun to raise questions of woodland ownership in focus group discussions (Tabbush 2005) (Morris and Doick 2010) (Carter 2009). ‘Respondents generally used public space owned by local councils or the Forestry Commission or they used private space that was owned by Non-Governmental Organisations who often allowed public access such as the National Trust and the Royal Society for the Protection of Birds’ (O’Brien 2005b).

The Public Opinion Survey of 2009 showed that of respondents who visited woodland in past few years (N=1291) a third of them were not aware of who owned the woodland. Only 15% visited woodlands that could have included private woodlands (see table 4).

Table 4: visitor percentage by ownership
(Public Opinion of Forestry 2009)

Woodland by ownership category	Percentage of respondents who visited woodland in past few years (N=1291)
PFE	26%
Woodland Trust	14%
National Trust	34%
Other	15%
Don't know	34%

Awareness of ownership of woodlands is generally low. 'Generally, there was little awareness of who owned the woodlands people described using and this led then to them lacking confidence to visit and confusion over what spaces they were allowed to access' (Lawrence 2009, Tabbush 2005). There was more ambiguity over ownership of smaller sites (O'Brien 2005b).

In one study urban and rural groups showed different levels of awareness of ownership of woodlands they used. 'The urban groups expressed some feelings of uncertainty about where people were allowed to go in the countryside, which areas were public space and which areas were private' (O'Brien 2005b). With regards to the PFE, 'there was some confusion about the difference between crown land and FC woodland' (Lawrence 2009). Carter analysed the knowledge of ownership data by ethnicity. 'BME groups are much more likely to report visiting public woodlands other than the PFE especially those owned or managed by local authorities' (Carter 2009). This finding may be associated with a greater use of urban sites by BME participants.

4. Access for well-being

In this section we summarise briefly the well-being benefits gained from TWF. The evidence for these benefits is reviewed in greater depth in Appendix 2. We also explore woodland users' perceptions of the benefits they gain which links to their motivations for accessing TWF and their values. This has direct implications for strategies to improve access.

Well-being is closely linked to quality of life. Defra's 2007 statement of well-being is broad and inclusive. 'Well-being is a positive physical, social and mental state; it is not just the absence of pain, discomfort and incapacity. It requires that basic needs are met,

that individuals have a sense of purpose, that they feel able to achieve important personal goals and participate in society' (Levett 2007).

We use the term well-being benefits to cover the full range of benefits people experience when accessing woodlands: Fun and enjoyment, health benefits, education and learning, symbolic meaning, social connectedness, nature connectedness, sensory stimulation, escape/freedom, employment, personal development and sense of ownership. These cumulative benefits can equally be classed as 'cultural goods' following the practice of the UKNEA (Quine 2011).

Data sources:
There is a large body of literature on the well-being benefits of greenspaces and TWF, and there have been a number of comprehensive reviews of different aspects of this in recent years (see table 5). These reviews informed much of our analysis of well-being benefits which is summarised in table 4 and developed in more detail in Appendix 2.

Table 5: Literature Reviews of benefits of Greenspace and TWF.

Author, date	Title	Specific focus
Bell, 2006	Green and Public Space Research: Mapping and Priorities	Looking for research gaps
Bell, 2008 (sometimes cited as sniffer)	Greenspace and quality of life. Scotland	Quality of life, Scotland
Bird, 2007	Natural Thinking	Mental health and well-being
CabeSpace, 2010	Community green: using local spaces to tackle inequality and improve health	Health, deprivation and ethnicity
Croucher, Myers and Brethorn, 2007;	Greenspace and the links between greenspace and health	Health, Scotland
Edwards, 2006	Social and Cultural Values associated with European Forests in Relation to Key Indicators of Sustainability	Social and cultural value, Europe
Edwards, 2009	Economic and social benefits of forests for people in Scotland	Economic and social, Scotland
Forest Research, 2010	The benefits of Green Infrastructure	Urban
Karjalainen, Sarjala et al. 2010	Promoting human health through forests: overview and major challenges.	Health
Knecht 2004	Urban Nature and Well-Being: Some Empirical Support and Design Implications.	Urban
Lawrence 2009	Social benefits from the Forestry Commission	Public forest estate,

	Public Forest Estate in England: review of current evidence	England
O'Brien, Williams and Stewart, 2010	Urban health and health inequalities and the role of urban forestry in Britain: A review	Urban health.
O'Brien and Stewart 2011	Exploring relationships between peri-urban woodlands and people's health and well-being	Health, Peri-urban woodlands
Urban Green Spaces Task Force, 2006	Green spaces, better places	Urban areas.

Of these 14 reviews 6 focus on health in particular, 5 focus on urban or peri-urban areas, and 3 are targeted at impacts in Scotland but draw on general data.

4.1 Expanded typology of well-being benefits

Five out of the 14 studies on well-being and quality of life have been undertaken by the Social and Economic Research Group at Forest Research (SERG) over the past decade. SERG have recently identified an expanded typology of the well-being benefits that people gain from TWF drawing on this decade of research evidence. Figure 4 shows that different configurations and interactions between the physical TWF resource; governance structures and processes; types of engagement and activities; and the characteristics of individuals and social groups can lead to the realisation of a wide range of well-being benefits.

The impact of governance structures was covered more fully in the Community Governance report, also commissioned by DEFRA for the IFP, looking at the impact of community involvement in forest management. The quality of the TWF resource is explored in section 8 where we look at the effect of improving physical features in woodlands to increase access. Individual and group characteristics and activities are discussed in section 9 where we report on interventions aimed increasing access for particular groups and individuals. In table 5 we outline the potential well-being benefits achievable when all of the other factors are working to enhance the realisation of these benefits.

Figure 4: Well-being Conceptual framework
(presented by O'Brien and Morris at the OpenSpace Conference, Edinburgh, 2011).

We outline the expanded well-being typology identified by SERG in the first column of Table 6. The Table also outlines whether the well-being benefits fit within the cultural goods typology identified by the UK NEA. The key aspects of what are included in each well-being component are illustrated along with references to the evidence and examples of mechanisms and interventions that have contributed to these well-being outcomes. The typology illustrates the many ways in which people gain benefits from accessing woodlands.

Table 6: Summary of evidence for well-being themes (O'Brien and Morris, 2012 – on going development of typology)

Well-being benefit theme (expanded typology)	Connection to cultural goods category	Key points	Empirical studies	Mechanisms and interventions
Fun and enjoyment	Leisure, recreation and tourism goods	Woodlands provide a space for a variety of activities Woodlands have a capacity to absorb activity without seeming crowded Woodlands provide opportunities for adventurous activities such as climbing trees, building dens, mountain biking, Go Ape etc. Woodlands are free.	O'Brien 2005 Burgess and O'Brien 2001	National forest (growing places) Woodlands in and around towns Active England
Physical action and movement	Health goods	Being in woodlands enhances the enjoyment of exercise – this is partly through the experience of being in nature, partly through the added value of exercise as a social experience. Woodland can provide a range of opportunities to be active – from walking, cycling trails to Go Ape trails and mountain bike routes	Pretty et al. 2005 Chang 2008 Lauman 2003 Takano, Fu et al. 2002,	Chopwell wood Active England Walking the way to health Branching out project FCS Play project FCS Green gym Therapi project Thames chase West Midlands health project
Mental restoration	Health goods	Woodlands are places for restoration – relaxing, being calm Woodlands are places for contemplation	Cimrich and Ronis 2003 Townsend 2006 Ottosson 2008 Kuo 2001 Nordh et al.2009 Amorita et al. 2007 Berman et al. 2008 MIND 2007	Feel blue touch green Australia Faith woods
Education and learning	Educational goods	Woodland play areas are beneficial for children's physical development. Woodlands provide opportunities to use natural materials to construct, make and create objects or structures Woodlands provide opportunities for a	Lovell and Roe 2009 Roe and Aspinall 2011 Leslie 2011 Taylor 2001 O'Brien and Murray 2006 Gathright, Yamada et al. 2006	Forest school, Glede wood –NEETS Hill Holt wood Fjortoft – natural playground Norway Nordh 2009 burn out and recovery in woods Sweden Taylor ADD and children USA

Well-being benefit theme (expanded typology)	Connection to cultural goods category	Key points	Empirical studies	Mechanisms and interventions
		variety of education and learning activities from Forest School to apprenticeships Restorative effects also support the educational benefits of woodlands There is a link between childhood play in woodland and the extent of usage in later life.	Davies and Waite, 2005; Borradaile, 2006; O'Brien and Murray, 2007 Miligan and Bingley 2007	Forest Kindergarten Scotland
Symbolic/cultural	Heritage goods	Trees are valued by the public as markers of time and place Woodlands are richly symbolic environments Trees are symbols of national and local identity	Tabbush 2010 Jorgensen 2007 Jones 2011	Cannock Chase – route to health (cultural value) Neroche landscape partnership scheme
Landscape	Heritage goods	TWF are often an important component of the landscape both within the countryside and within peri-urban and urban built environments.	Forest Research 2010 Stewart and O'Brien, 2010	Neroche
Social connectedness	No clear category link to NEA cultural goods typology – can bring health benefits.	Woodlands are good settings for social occasions Participating in organised activity can facilitate meeting new people, and feeling part of a group.	Morris and O'Brien 2011 Morris, Doick and Cross, 2009	Volunteering research Active England
Nature connectedness	Religious and spiritual goods	The woodland environment can afford a sense of connection to natural cycles and processes Activities such as conservation volunteering can lead to maintenance or restoration of woodland habitats Gathering non-timber forest products has a range of benefits	O'Brien 2012 Martin Emery 2006	Access 2 nature Volunteering research
Sensory stimulation	Health goods	Woodlands provide a rich sensory three-dimensional experience including views, sounds, smells, touch Sensory experiences are often an important component of a woodland visit	Yamada 2006 Ottosson 2008 O'Brien et al. 2012	Route to health Cannock chase

Well-being benefit theme (expanded typology)	Connection to cultural goods category	Key points	Empirical studies	Mechanisms and interventions
		or view The sensory experience can be therapeutic		
Escape/freedom	No clear category link to NEA typology	Woodlands provide a contrast and escape from more general everyday experiences Woodland can provide an escape from the built environment in densely populated urban areas.	O'Brien 2005 O'Brien et al. 2012	Capital woodlands – London Active England
Sense of ownership	No clear category link to NEA typology	Getting involved in the management of a woodland can be a positive experience of a sense of ownership A sense of ownership is part of the motivation for private woodland owners.	Urquhart and Courtney 2010	Cydcoed Capital woodlands
Meaning, identity and personal development	No clear category	Engaging with TWF and undertaking activities in TWF can provide people with a sense of meaning and identity e.g. Offenders getting involved in conservation activities, people's feelings of belonging to nearby woods such as the New Forest, Forest of Dean.	Carter 2009 O'Brien, 2005 and 2006	Offenders scheme Wye Wood Hill Holt wood

4.2 What's special about TWFs?

Some of the well-being benefits outlined in Table 5 could also be gained from time spent in other forms of greenspace such as parks and open rural areas. The evidence shows, however, that TWF offer certain unique features that enhance the benefits people gain from time spent in woodlands. In a study commissioned by Defra to better understand people's engagement with the natural world, woodlands came across as 'the most 'flexible' landscape because they are often accessible to all kinds of groups, while simultaneously representing real 'nature''. The qualitative research found that 'woodlands were the most popular landscape amongst the segments [groupings of people], valued for natural beauty, delivering solitude' (The Futures Company 2010).

Another study that highlights the particular benefits of different landscapes is the MENE study. This survey asks respondents to state their level of agreement with a number of statements relating to the 'outcomes' (benefits) of visits to the natural environment, and allows comparisons to be drawn between the benefits of different place types (see Table 4 in Appendix 5). The results show that visits to woodlands scored most highly in terms of enjoyment, appreciating surroundings, and feeling calm and relaxed. Woodlands and forests scored higher than all natural environments in all outcome categories, with the exception of 'learning something new about the natural world' in the 2nd year of the survey. The following features are mentioned in the wider literature:

- The size of trees is significant for providing complexity to a landscape, and a contrast to the urban environment.

- Trees provide screening such that woodlands have the capacity to absorb activity without seeming busy. In their variety, woodlands provide opportunities for a wider range of activities than other ecosystems (Church, Burgess, and Ravenscroft 2011).

- Contact with the natural environment is enhanced in woodlands as people have the opportunity to use natural materials - den building, gathering non-timber forest products. Woodlands also provide a rich sensory 3 dimensional experience with sound being an important component of this (Yamada 2006; O'Brien et al. 2012).

- Trees are important markers of time. Pritchard (2008) notes that trees are special in that 'the growth of an individual specimen can be witnessed at first hand, and people can easily relate to its lifespan as of a similar order to a human life-span, and may even mourn its death. At the same time, older ones may span

many human generations, representing living history' (Pritchard 2008). Similarly, trees can also have symbolic meaning associated with places. This may be an individual sense of connection to a particular place through repeated visits, or in a wider sense with certain species representing national values e.g. English Oak, Caledonian Pine forest etc (Tabbush 2010).

In summary, while a number of studies have indicated that there may be particular qualities of woodlands and forests that mark them out as special, research to-date has not set out to make direct comparisons between woodlands and other kinds of greenspace. We have identified this a research need in sub-section 10.2.3.

4.3 How people value woodlands

Key points:

Life stage is an important determinant of how people value woodlands.

The 'whole' experience of a woodland visit is important for forest users.

A variety of woodland types can offer a satisfying experience of 'nature'. There is no 'ideal type' woodland providing the most well-being benefits.

As well as deriving personal benefit from woodlands, people value the wider social benefit that woodlands can provide for society as a whole

Taking the words of woodland users as a starting point gives an authentic view of what the public value about being in woodlands. Edwards and Weldon (2006) reported that 'focus group participants valued the 'ecological' and 'economic' benefits as well as the social ones, but the 'social' benefits dominated the discussions' (Edwards and Weldon 2006). Similarly O'Brien, in reviewing work on four woodland sites, found that 'the most common responses concerning benefits of woodland experiences were to do with the concept of restoration which is linked to mental and psychological well-being. Participants talked about reducing stress, peacefulness, calm, restfulness - all of the groups mentioned some of these aspects' (O'Brien, Morris, and Stewart 2012). These findings are confirmed by the POFS 2011, where respondents' data showed that the most important benefits are 1) relax and de-stress, 2) have fun and enjoy oneself, 3) exercise and keep fit (see table 6) (Forestry Commission 2011b). These findings are once again supported by the interview data from the Quality of Experience studies where respondents were asked what they liked most about the site they were visiting and 32% said 'peace/tranquillity/relaxation' and 41% said 'beautiful scenery/views' (BMG 2011).

Table 7: Personal benefits of woodlands and forests

	UK 2009	England 2009	UK 2011	England 2011
They are places where I can relax and destress	94%	94%	95%	94%
They are places where I can have fun and enjoy myself	91%	90%	94%	93%
They are places where I can exercise and keep fit	84%	84%	90%	89%
They are places where I can learn about the environment	80%	81%	80%	79%
They are places where I feel at home	69%	69%	75%	75%
They are places where I can learn about local culture or history			64%	64%
They are good places for me to socialise	50%	51%	59%	58%
They get me involved in local issues	33%	34%	34%	35%

POFS 2009 and 2011.

Base: All respondents who had visited woods: UK-2009 (1,549), 2011 (1,393); England-2009 (1,291), 2011 (1,170)

Life stage is an important determinant of how people value woodlands. The Quality of Experience survey at Beechenhurst found that:

- Visitors with older children (59% of those with children aged 6-10 and 63% of those with children aged 11-15) were more likely to mention peace / tranquillity / relaxation, as well as exercise and keeping fit (28% of those with children aged 6-10 and 32% of those with children aged 11-15);
- Respondents who had brought children of any age with them to the site (32%) were more likely to mention activities for children;
- Those with young children (22% of those with children aged 0-5) were more likely to mention it being a safe environment;
- Those without children were more likely to mention that it was clean / well looked after (12%) or that they had been before and wanted to come again (9%);
- Visitors aged 55+ were more likely to mention the opportunity to spend time with family / friends (30%), that the site was close to home (25%) or to mention wildlife / bird watching (18%);

Table 7 shows that people value the relaxation and enjoyment aspects of woodland use most highly. Surveys such as the POFS provide useful data, but in separating out the components of woodland benefit they mask the fact that **for woodland users it is the**

the 'whole' experience that is valued highly. By not breaking the experience into formal categories, the qualitative work offers deeper insight into people's experience. 'People do not always experience these categories separately. They may visit a forest and experience all of them at once, which clearly makes them harder to assess or value' (Edwards and Weldon 2006). In-depth interviews of Swedish forest users reported a similar finding; 'the main result is that forest visitors value forests as a complete unit, embracing all three categories of values' (Gundersen 2009).

Preferences for certain types of woodland

A key piece of research into people's preferences found that diversity best characterised the public's preferences. O'Brien et al. (2012) found that some people express a clear preference for managed sites while others preferred more natural environments, with life stage affecting this preference. In the same vein, some people enjoy the social aspect of being in woodlands, yet others seek the experience of solitude. The one common strand amongst many of the interviewees was a **preference for 'complexity and variety in the landscape'** (O'Brien, Morris, and Stewart 2012).

In a report exploring the relationship between silvicultural attributes to the recreational value of forests in Europe, Edwards et al. (2010) found that 'size of trees' is universally considered one of the most important attributes, along with attributes that reflect level of intervention such as 'size of clear-cuts', 'residue from thinning and harvesting', and 'visual penetration'. The results also highlight a public preference for a degree of management intervention and an impression of 'managed naturalness'. Perhaps interestingly, their research also points to the relative unimportance of tree species diversity in relation to recreational value.

Another study that attempted to evaluate users' preferences for different forest features was conducted recently in a peri-urban planted forest in New Zealand. The survey results based on 578 users showed that 43% of walkers would prefer 'a more diverse forest focusing mainly on more tree ages, a shift from high to medium density stands and a lesser proportion of radiata pine in the landscape' (Dhakal et al. 2011). 'Walkers demonstrated a stronger preference for a more diverse forest compared to mountain bikers, with 30% of mountain bikers showing no preference for changes in the current forest features'. The extent to which users derive increased satisfaction from a more diverse forest was affected by socioeconomic characteristics, such as household income and having children.

UK studies have also found some consistency in public preferences for certain types of woodland. 'Mixed woodlands (conifer and broadleaved) are the most popular with both sexes and all age groups (58.2% of users prefer them)' (Coles and Bussey 2000). These authors suggest that open woodland offers qualities that are unique to the woodland environment, different to other urban green spaces. 'Dappled shade, noise, smell,

grandeur and a sense of timelessness are qualities that are closely monitored by users' (Coles and Bussey 2000).

'Woodlands are seen in urban areas as representations of nature' (O'Brien 2005d). Following from this, management practices that preserve a 'natural' appearance are valued highly. Conversely any feature that suggests urban activity or unnecessary human intrusion at the expense of 'natural' dilutes the woodland experience and leaves a negative impression (Coles and Bussey 2000).

A variety of woodland types can offer a satisfying experience of 'nature'. Research has shown that the experience of 'nature' can be found in a variety of woodland types, even local, urban woodlands. 'One interesting thing that came out of the comparison between Northwoods and Chicago was that many of the same kinds of experiences occur in both regions. Significant experiences of beauty, contact with nature, escape, refuge, and solitude do not only occur in the Northwoods. Many people seek and find such nature-based experiences in parks and forest preserves closer to home, sometimes in relatively small pockets of nature surrounded by major urban development' (Schroeder 2007).

It seems that just as different types of woodland have different functions, so different types of wood are valued differently and **there is no 'ideal type' woodland providing the most well-being benefit**. O'Brien et al. (2012) make the point that 'one woodland may not always meet the needs of the same individual as preferences change and are dependent on many different factors such as life stage, time of year, who they are visiting with (if anyone) and what they want to get out of their trip' (O'Brien, Morris, and Stewart 2012). Preferences change with life stage as was documented in the segmentation analysis of people's engagement with nature. This study found that the majority of Mature explorers (55+ and still active) appreciated woodlands and waterways for being less commercialised and 'managed' and for allowing for a slower pace. 'Woodlands and waterways are also often familiar to this segment from their younger days and offer a welcome sense of nostalgia' (The Futures Company 2010).

A conception of a 'minimum' requirement of woodland may be useful, and for this Coles and Bussey suggest that to match the public preferences urban woodlands should be a ' 5±10 min walk from the home, be of a suitable size to create a woodland environment (minimum of 2 ha) and have an open structure' (Coles and Bussey 2000). This supports the Woodland Trust Access standard.

4.4 Personal values and social values

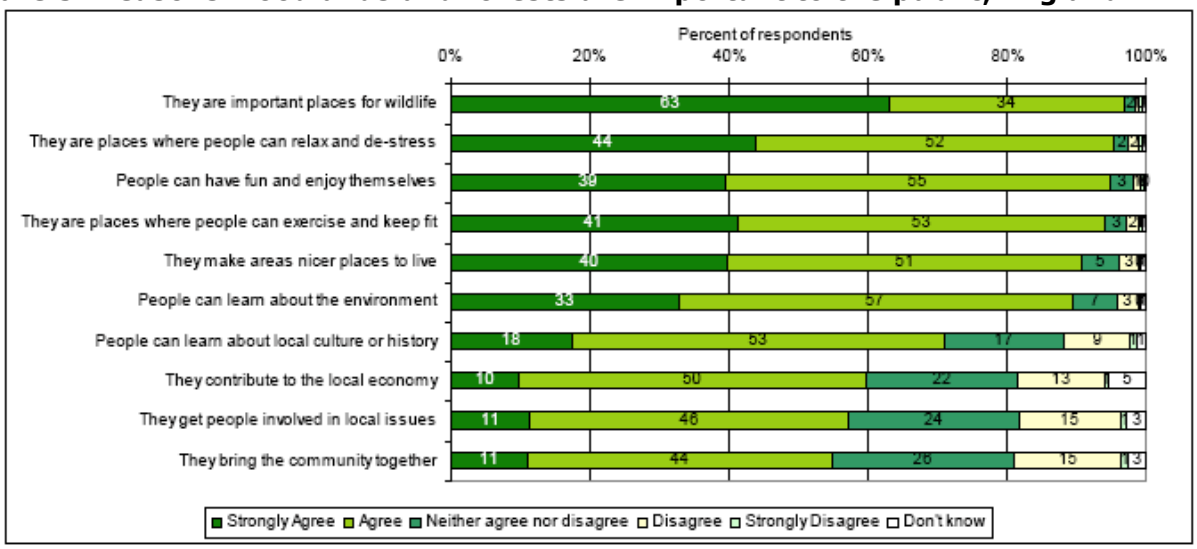
As well as deriving personal benefit from woodlands, people value the wider social benefit that woodlands can provide to the whole of society. The social

value of woodlands has not been widely documented but one key study included questions on this in their interviews (Morris and Doick 2009). By interviewing both woodland users and the catchment population some interesting results were found:

- Visitors were more likely than the catchment population to agree with statements about the community benefits of the sites.
- A comparatively high proportion of the Birches Valley's catchment population felt that the site benefits the local community.

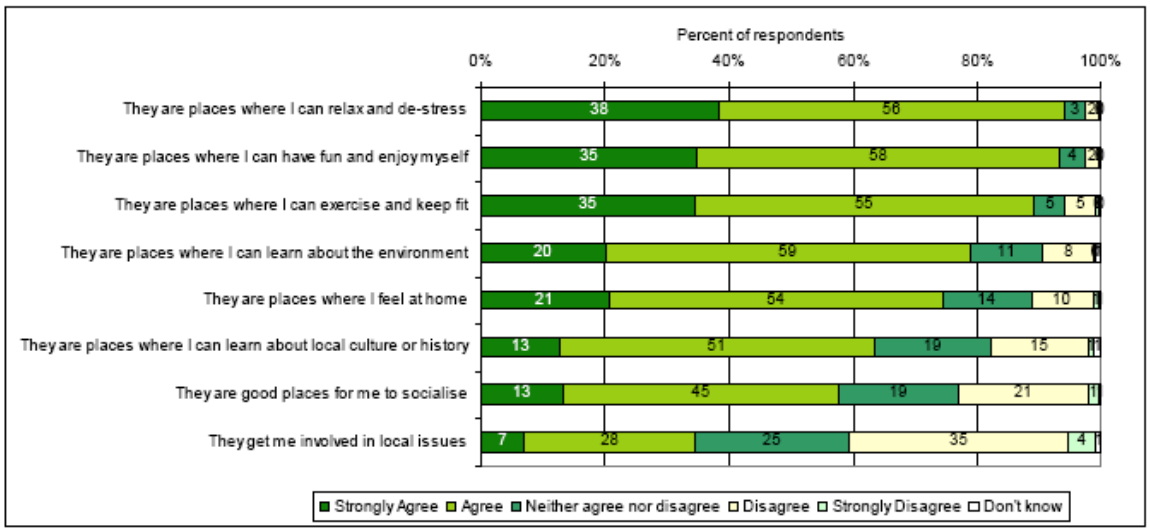
The POFS (2011) asked respondents about how woodlands are important to themselves as individuals, and to the public as a whole. The UK figures are shown in figures 5 and 6. Overall there was a stronger agreement with the statements about the public importance of woodlands, rather than the individual importance, suggesting that people value woodlands for their contribution to society as a whole.

Figure 5: Reasons woodlands and forests are important to the public, England



Weighted base: 2011 survey - All respondents in England (1,733)

Figure 6: Reasons woodlands and forests are important to the respondent, England



Weighted base: 2011 survey - All respondents who had visited woodlands: England (1,170)

Qualitative research also highlights that when people talk about the well-being benefits they gain from TWF they may also talk about how woodlands can provide benefits to others e.g. good play areas for children, paths that allow for disabled access (O'Brien, Morris, and Stewart 2012) (O'Brien, Morris, and Stewart 2012). 'One of the main discoveries of this research was that when talking to people about woodlands the discussion was always linked to wider issues to do with people's relationships with nature, the fast pace of change in contemporary life which often generated feelings of anxiety, and concerns about the loss of green space and wildlife (O'Brien 2005b).

These expressions of social value are not unique to woodlands. In the UKNEA Fish et al. report that 'the commonest metaphor used in people's talk about why urban parks and greenspace mattered was that outdoor settings were 'a gateway to a better world', valued for the multiple contributions they made to community well-being' (Fish et al. 2011). The same authors argue that where ecosystem services are concerned, decision making based on economic valuations and individual preferences alone will be limited and that a 'consideration of shared values is one important component of moving towards more pluralistic approaches to valuation'.

5. Barriers to increasing woodland use

As the previous section has shown, the potential benefits gained from regular access to woodlands are very wide ranging, but not everyone is able to tap into this potential. This section of the report considers the evidence concerning barriers to access, or any factors that limit public participation in recreational use of woodlands. Though there are many ways of engaging with woodlands; (e.g. volunteering, working, managing) as noted previously, most of the data in this field concerns barriers to access for *recreational* use.

It is acknowledged in the literature **that one cannot assume that greater access to TWF is a universal goal**, but it is important to determine if there are factors inhibiting the access of people who would like to participate more, or who would benefit greatly from doing so. Several surveys collected data from non-users as well as forest users that provides comparative data (Forestry Commission 2011b, Lovell 2009, Natural England 2011, TNS Research International 2011). One study concluded that there is a lack of information in this area, and more particularly a lack of knowledge of the activity preferences of groups not choosing to use woodlands (Lovell 2009).

Data sources: Strategies for improving access draws largely on the body of literature focussed on barriers. There have been several key reviews of this in recent years (Morris et al. 2011, Ambrose-Oji 2009, OPENspace 2008, Weldon 2007). Much of this literature, and particularly scholarly studies, focus on the needs of particular under-represented

groups of the population and strategies for increasing their use of TWF. The aims of this report however are to look broadly at increasing access in general, amongst all sectors of the population, including regular users.

5.1 Why people do not use woodlands more

Key points:

'Not enough time' is the most common reason for not visiting TWF.

Non-users cite 'not interested' as most common reason.

Individuals can experience multiple barriers to access.

The factors that prevent the general public from accessing woodlands more are somewhat different to the 'barriers' faced by specific groups of people as typically explored in the literature.

In the general surveys of woodland users '**Not enough time' is the most common reason for not visiting TWF.** Amongst survey respondents who did visit sometimes, the most common answers given for not using woodlands more often were 'I'm too busy/not enough time' (36% for the UK and for England) and 'bad weather' (31% for the UK, 28% in England) (Forestry Commission 2011b). In a detailed study of 5 woodland sites, 'lack of time' again emerges as the most significant barrier to more frequent use for both visitors and non-visitors (O'Brien and Morris 2009). However, a meta synthesis of qualitative research on barriers (Morris, et al. 2011) reveals that the issue of limited time is not often raised spontaneously by research respondents in interviews and focus groups. It is not clear why there are differences between the qualitative and quantitative evidence in this respect. It may be that the 'not enough time' response category used in surveys becomes a catch-all for respondents who find it the easiest box to tick, perhaps because it reflects positively on them as 'busy people'.

Other significant barriers were 'not interested' (19% UK), 'Other personal mobility reasons' (15% UK), 'Don't have a car' (12% UK) and 'Woods are too far away' (11% UK) (Forestry Commission 2011b). The results for England alone were almost identical. However respondents could give more than one reason and a large proportion of respondents identify with almost all the barriers suggested. This is a limit of the value of survey data, with qualitative focus groups offering a more nuanced picture of the interaction of barriers.

Non-users cite 'not interested' as most common reason. 19% of UK POFS respondents who had not visited woodland in the last few years said they were 'not interested in visiting'. This was the second most frequent answer after 'not enough time'. The MENE survey reports that the largest group of people who don't visit the natural environment said that they 'had no particular reason for not visiting' (21%). After this they most often cite poor health (19 per cent) and old age (16 per cent) as reasons (Natural England 2011). Further research is needed to explore whether this declared lack of interest is masking other barriers or a cultural norm among certain groups. One review suggests that 'For some under-represented groups, there may be no cultural habit of countryside visiting; for others, such as young people, there may be no social context in which such visits are seen as attractive' (OPENspace 2008).

The studies and research on barriers to access focus primarily on the barriers faced by particular groups who are currently under-represented amongst woodland users. This framing produces a somewhat different conceptualisation of barriers with a general agreement on a two-stemmed typology of barriers, as set out by Morris et al. (2011):

1. **Physical/structural barriers -** covering the physical, environmental and public services-related issues that limit woodland accessibility. Barriers within this category can be 'general /overarching' (e.g. weather), 'on-site' (e.g. signage, facilities), or 'off-site' (e.g. lack of public transport, lack of information)
2. **Socio-cultural, economic and personal barriers** – a broad category of barriers that covers wider societal and cultural, as well as personal values and perceptual aspects. This category also covers those economic factors that constrain visits.

This typology provides a useful way of structuring thinking on barriers even for the general user. A key point emerging from the literature is that **people experience many barriers at once**. Open-ended discussions with forest users and non-users have shown that within these broad categories there are many potential factors at work and people typically face several barriers at once. Morris et al. (2011) found that non-visitors were *'more likely than visitors to experience multiple barriers'*.

5.2 Social distribution of barriers

Studies have shown that the distribution of barriers across social groups varies significantly. The concerns of different groups at different life stages clearly differ, as do the cultural norms of sub groups within the population.

Morris et al. (2011), in a review of POFS data over a number of years shows which associations are statistically significant (Box 1). The results from this quantitative analysis outline barriers for those who do not visit woodlands and for those who are visitors

Box 1: Significant barriers and social variables (taken from Morris et al. 2011)

For non-visitors, the following associations of barriers and social variables emerge as significant (ranked in order of statistical significance):

Mobility –women, older people (55+ yrs), C2DE, disabled people and White people ($p<0.01$).
Woods too far away – BME ($p<0.05$).
No car – women, 65+ yrs, C2DE, disabled ($p<0.01$), white people ($p<0.05$).
Not interested – men, decreasing barrier with increased age class (16-24>24-35 etc.), non-disabled, White ($p<0.01$).
Too busy – 35-44 age class most busy (decreasing probability either side of this age class), ABC1, non-disabled, BME ($p<0.01$)

For visitors, the following clusters emerge as significant:

No barriers - White, middle-aged (45-64 yrs) with no disability ($p<0.01$). Men ($p<0.05$).
Weather + lack of facilities - C2DE ($p<0.01$). Female, white ($p<0.05$).
Too far away - ABC1 and BME ($p<0.01$). Female, 55+yrs ($p<0.05$).
No car + too far away + mobility reasons - Age class (increasing probability either side of 35-45 yrs age class) and disabled ($p<0.01$), female, C2DE ($p<0.05$).
Too busy - Men, younger age classes (16-54 yrs), ABC1 and no disability ($p<0.01$).
Not interested - Males with no disability ($p<0.01$).
Mobility reasons – 65+yrs, C2DE and disabled ($p<0.01$).
Woods not safe + lack of facilities - 55+yrs, disabled ($p<0.05$).
Other reasons - 55+yrs ($p<0.05$).

Taking the standard typology of equality groupings: Age, gender, disability, ethnicity, social deprivation and faith, Ambrose-Oji produced a comprehensive review of the main concerns of each group (Table 8) (Ambrose-Oji 2009).

Table 8: Social group and main barriers.
(adapted from Ambrose-Oji 2009)

Social group	Barrier concern	Reference
Young people	Girls: Safety anxieties	Milligan and Bingley 2007
	Boys: Concern of being seen as troublemakers	O'Brien 2006, Weldon et al. 2007, O'Brien and Morris 2009
Middle aged people (35-60)	Fears – getting lost, antisocial behaviour	O'Brien 2005a and b Tabbush 2005, Carter et al.

	Lack of information	2009, O'Brien and Morris 2009
Older people (60+)	Fear of going alone	O'Brien and Morris 2009
Women	Personal safety Transport issues	Weldon et al. 2007 O'Brien 2005a and b
Low socio-economic status	Financial costs of visiting 'restricted horizons'	O'Brien and Morris 2009
Disability	Physical access issues Lack of information	Burns et al. 2008
Ethnicity	Lack of cultural affinity with woodlands Financial costs of visiting	Edwards and Weldon 2006

Part B: Interventions for improving access

6. Mechanisms and interventions

In this section we explore the mechanisms and interventions that can be used to improve access to TWF in GB. We focus particularly on the following:

- Provision of woodlands - either through new planting or opening up privately owned woodlands for public access (section 7).
- Physical improvements to woods - addressing physical barriers to access such as lack of appropriate signage, or clear paths. Section 8 looks at interventions for improving access to existing woodlands through making physical changes of this nature.
- Addressing the needs of individuals and groups - When discussing people's reasons for not accessing woodlands the research has shown that even a well-managed woodland will not be accessible to some groups and individuals because of social or psychological barriers. Ways to tackle this are looked at in section 9.

In this report 'intervention' is taken to mean a planned action to create change. Projects and programmes are one type of intervention, others include policy strategies, grants partnership working, and education initiatives. We use the term 'mechanism' as a broader term to refer to different ways of using interventions for creating change.

Data sources:
Our review has sought to document interventions that can be used to encourage public access. Within these interventions, targeted programmes and projects can be used to have a positive bearing on woodland accessibility. There is no single national database that holds information about interventions in woodlands. The FC does not have a GB overview of its own interventions as much of its data is held at a regional level. SERG undertook some work for the FC to try and document what data was available on well-being focused projects[1] and programmes that FC was running or facilitating in partnership with other organisations (O'Brien 2010). This report documented 130 projects being undertaken by FC and a range of other organisations. The evidence on the

1 Project – temporally defined, i.e. it has a start and end date; a defined budget, often wholly or partly externally funded; often a pilot for a new initiative; no specific boundaries (landscape scale or site specific); will have a range of outcomes.

Programme – a statement of intent or a collection of projects (such as Cydcoed); activities that are running all the time; may have a wide spatial context or no spatial context; longer timescale than projects; once a project is finished it may be developed into a programme.

range of projects and programmes was found to be varied in its form and where it was held. There was no systematic and national database being kept by FC for information apart from its Project Initiation Document database in England for large scale projects over £100K, and a similar process in Scotland for projects over £50K. These were often partnership projects, part funded by Lottery bids. We make use of this research documenting projects, but have limited our analysis to projects and programmes that have been formally evaluated. This tends to distort the discussion towards larger scale projects and it must be reiterated that **there is a wide spectrum of activity aimed at improving access, not all of which is formally evaluated.** While it is easy to highlight the larger projects there are many more small-scale initiatives that are not evaluated or formally documented. Because we focus primarily on evaluations of interventions to understand the effectiveness of different approaches, much of the work (particularly in addressing the needs of individuals and groups) relates to FC either leading interventions or working in partnership to deliver them. These interventions are often, but not exclusively, on the public forest estate. Third sector bodies, local authorities and some private owners also get involved in interventions, however the evaluative data available for these is limited.

When looking at the objectives of the projects and programmes that were identified, O'Brien (2010) found that projects and programmes that promote broad well-being (189/331) or health objectives were prominent (66/331), followed by education (39/331). Volunteering (18/331) and culture (19/331) objectives were the least represented. Project/programmes undertaken by FC or with FC as a partner need to fit into the strategic delivery of the three country forestry strategies and delivery plans (O'Brien 2010).

In the subsections that follow we list the relevant projects cited and full details of these can be found in Appendix 3. In the Appendix the projects are split into larger scale and smaller scale projects that have been undertaken in recent years and that have had some form of evaluation. Many of these have been led by the Forestry Commission in each country.

6.1 Different categories of mechanisms for driving change

The policy literature outlines several ways in which Governmental objectives can be achieved through affecting public behaviour (Collins et al. 2003):

1. Regulatory – such as Land Reform Act (2003) Scotland
2. Financial incentives – such as woodland grants with conditions attached
3. Provision of information – such as health information promoting walking
4. Marketing and influencing strategies – promoting a culture of 'doing your bit' for the public, such as the 'Big Society'.

The 4th approach is relatively new in affecting woodland access but the Coalition Government's Big Society policy is relevant to encouraging community groups and private individuals to take a greater role in providing public goods.

In considering woodland access, policy objectives are to be achieved not only through influencing people (private owners) but also through policy strategy delivery via public bodies such as FC. For this we have used the category of 'innovative approaches' as these embrace a variety of ways of working.

The evidence points to a number of mechanisms that can be used by different organisations or individual landowners to enable, encourage and promote people's access to woodlands. How these are used will depend on the objectives of the responsible organisations, landowners or managers. A number of interventions may be used at any one time. For example, a partnership might come together to apply for a specific grant that might lead to improvements in infrastructure to improve access, along with the development of promotional material to encourage use. The evidence shows that these interventions can play a significant role in improving public access to woodlands in England.

7. Increasing accessible woodland provision

Increasing the area of woodland that is accessible to the public can be achieved through new planting on public or private land, or by dedicating existing private woodland as accessible. Bringing derelict woodlands back into management is another approach, which we consider in 6.3 improving the physical access to woodlands. Table 9 outlines the main mechanisms and interventions for increasing accessible woodland provision.

Table 9: mechanisms for increasing woodland provision

Category	Mechanisms	Examples of Interventions
Regulatory	Legal requirements	CROW
	Policy direction – strategies, targets	Forestry strategies in England, Scotland and Wales
Financial incentives	Grants	Woodland Creation Grants Woodland Improvement Grants Cydcoed.
Information provision	Standards and Guidelines – that provide direction and information	UK Forestry Standard Forests and people guidelines
Innovative approaches	Forest group	Sweden, Germany and Belgium examples

7.1 Mechanisms for creating new woodland

7.1.1 Regulatory mechanisms

All four of the Country forestry strategies in the UK set out the promotion of woodland access as a key objective.

The Public Forest Estate has a clear mandate to increase accessible woodland in priority areas. In England, under the Government's 2007 Strategy for England's Trees, Woods and Forests, FC England's Corporate Plan specified that FC should aim to 'continue to improve the amount and quality of accessible woodland close to where people live within defined priority areas'. 'Priority Areas' are defined as urban areas falling within the 40% most deprived in England. During the Comprehensive Spending Review 07 (CSR07) period, FCE also adopted the following corporate target under Aim 4 (Communities & Places): Target 1: Increase the percentage of the population in priority areas with access to woodland according to access standards from 62% to 64% (relating to an additional 750,000 people having access)– as an indicator of woodlands' contribution to Quality of Place. This target was achieved; the percentage of the population in priority areas with access to woodland increased to 66.3% - relating to an additional 833,000 priority people having access (http://www.forestry.gov.uk/england-corporateplans). The focus on urban areas with relatively high levels of deprivation is an illustration of FCE's interest in the social distribution of woodland access and associated public benefits.

In Scotland, following a Quinquennial Review of Forest Enterprise Scotland in 2001, it was recommended that the FC bring forward proposals to Ministers to set up a rolling land acquisitions fund, financed by the sale of parts of the estate which have relatively low public benefits. In 2004 ministers agreed to the proposal that FCS proceed with a re-positioning approach, selling areas with low potential to deliver public benefits to invest in programmes (including land/woodland acquisition) which would make a significant contribution to delivery of the Scottish Forestry Strategy. Criteria for property acquisitions were set out, including: 'Be located near to centres of population and capable of contributing to the delivery of the Woods In and Around Towns (WIAT) initiative.' The WIAT programme is explicitly focused on urban areas and areas of high deprivation (Forestry Commission Scotland 2011a).

Even with political backing, there are barriers to woodland expansion where there is increasing competition for land as the food security needs of the countries become prominent. Planting on brownfield land is generally more expensive than planting on agricultural land and presents other difficulties (Woodland Trust 2004). Though this has been done successfully in the Newlands and South Yorkshire Coalfields projects (Forestry Commission 2009) (Department for Communities and Local Government 2007). The

National Forest has also created 1,336ha of woodland on brownfield sites between 1991 and 2010. Of this, only 21.8% is from derelict land reclamation, the majority 67.4% making use of mineral and landfill restoration (www.nationalforest.org/document/sd/4_Land_recycling.pdf).

7.1.2 Financial mechanisms

Financial incentives to increase publicly accessible woodlands are already in place but take up by private landowners is modest. These include the Forestry Commission's Woodland Grant Schemes and other focussed grant schemes such as Cydcoed, aimed at community groups in Wales.

The England Woodland Grant Schemes consists of six main grants of which two have implications for public access. The Woodland Improvement Grant is for capital projects that include public access facilities, therefore the land must be dedicated for public access. The Woodland Creation grant supports the establishment of new woodlands that generate public benefits (Forestry Commission England 2011b).

The **Woodland Creation Grant** (WCG) supports the establishment of new woodlands that meet national and regional priorities. To achieve this the grant is available on a competitive and regional basis, using scoring systems that select applications against public benefit priorities.

The WCG has a National Additional Contribution for Permissive access to woodland at £500/ha. To be eligible for this the new woodland must:

be located where there is a demand for public access;

be designed to facilitate permissive access on foot;

be accessible for free, quiet enjoyment by the public during daylight hours for 11 months of each year;

offer permissive access for 30 years from first payment of the AC.

Woodland Improvement Grant (WIG) funds capital investment in woodlands, over an agreed period to create, enhance and sustain an increase in the quantity and quality of public benefits delivered.
Through the Public Access fund of the WIG scheme, '80% funding is available for access provision/improvement in priority areas of the country. These are described as 'Quality of Place' priority areas that take into account areas of high population, deprivation indices and current lack of public access provision. Woodland outside the Quality of Place priority areas are eligible for 50% funding where there is less than 1 hectare of free

public access for every 500 residents within 8km.'

It is difficult to get accurate figures for the take up of these grants as the FC data is held regionally. The Woodland Trust report that the rate of woodland creation has fallen overall in the UK in the last five years, with a total of 5,900ha planted in 2008-2009 compared with 11,900ha in 2004-2005 (Woodland Trust 2004).

7.1.3 Dedicating private land

Whether tied to a grant condition, or independently landowners and long leaseholders can voluntarily dedicate land for public access that would not normally be covered by CROW act (2000). This gives the public the right of access on foot. 'Making a dedication creates a right of access in perpetuity, (or until a long lease expires) even if the ownership of the land changes. Dedication does not prevent the land from changing use or prevent its development. Dedicators can also benefit from reduced liability under occupiers' liability legislation'.
http://archive.defra.gov.uk/rural/countryside/crow/dedicate.htm

Currently there is no exemption from inheritance tax for land dedicated under CROW. In some cases conditional exemption may be available for land of outstanding scenic, historic or scientific interest where owners give undertakings to maintain the land, preserve its character and provide reasonable public access (Email Communication with Natural England's senior advisor on heritage / access tax exemption incentives 2012).

7.2 Working with private woodland owners

Key points:

There are several practical concerns that deter private landowners from opening their land for public access.

It is important to understand the values, attitudes and perceptions of woodland owners as this affects their willingness to provide public goods, voluntarily or through incentive schemes.

This reveals that:

1. Public recreation is a low priority for most landowners.
2. Not all landowners are financially driven, thereby weakening the potential of financial incentives as motivating mechanisms
3. Public access and grant conditions are felt to impinge on a landowners' sense of ownership rights.

Private landowners are an important group when looking at the forest resource of GB as a whole. Individual owners of woodlands make up 43.6% of the total woodland area in GB, though this figure excludes woods of less than 2ha. In some parts of central and southern England this figure is much higher with private owners accounting for over 80% of woodland cover (Forest Research 2003).

7.2.1 Practical concerns surrounding public access

There are a number of issues which have impeded the wider take up of the incentives to encourage private landowners from opening their land to public access. Some of these are concerns about inconvenience to the landowner (vandalism, legal responsibilities), others are tied in with the values of landowners, which, as discussed below in 7.2.2, differs across different types of owner. These factors are related in that where the values of the landowner are sympathetic to giving public access the other inconveniences are not viewed as such a problem and vice versa. The evidence shows that management decision making is a process of weighing up priorities combined with evaluating perceptions of risk. A French study attempted to estimate forest owner's willingness-to-accept (WTA) values 'as a measure of the financial compensation that they expect in exchange of reduced forest amenity values due to a public recreation use management plan' (Gadaud and Rambonilaza 2010). Their main conclusion was that 'the perception of risk probability remains a key variable that influences forest landowners' decisions'.

1. The long timescale for permitting access: Voluntarily dedicating private land for public access under CROW must be done for perpetuity (or for a leaseholder as long as the long lease expires). This is a disincentive for some landowners. Under the grant schemes, public access can be given for shorter timeframes: 10 years for WIG grants up to and including £10,000, 20 years for grants up to and including £20,000 and 30 years for WIG grants over £20,000 and all landowners receiving the Public access Additional Contribution under the Woodland Creation Grant. Owners have expressed concerns that once public access is given then it is very hard to revert this at the end of the grant period (Church and Ravenscroft 2008, Urquhart, Courtney, and Slee 2010). This is linked to owners values of control over their land.

2. Concerns over liability and lawsuits: Studies have reported that legal responsibility is a deterrent for landowners to the take up of public access schemes (Sime, G. M. Speller, and Dibben. 1993) (Snyder et al. 2008), (Urquhart, Courtney, and Slee 2010). The Occupiers' Liability Acts of 1957 and 1984 sets out the duty of care landowners have towards people invited or permitted to use the land. It was a condition of the CROW Act that access rights ought not to place any undue burden on the landowner be it financial or otherwise. As such, on land dedicated as public access under

CROW, there is a reduced level of liability for those people exercising their CROW rights. This should alleviate landowners concerns to some extent but the higher level of liability remains for permitted users where other forms of access, such as children on a pre-arranged school visit, are permitted (Countryside Agency 2004).

3. Vandalism and theft: This was reported as a concern by Sime, Speller, and Dibben (1993). There is little UK research on this, but international studies offer some greater insight. A Swiss study found that the actual reduction in timber value due to recreation-induced damage can account for up to 16% of the total proceeds. However, 'the monetary benefits of forest recreation in these areas by far exceeds the damage to trees' (Rusterholz et al. 2009).

4. Loss of privacy (Church 2005) (Sime, G. M. Speller, and Dibben. 1993) (Urquhart, Courtney, and Slee 2010) This ties in to the motivations of owner's and whether they use the woodland for their own recreation.

5. 'Bureaucracy and administration are a very consistent feature of landowners' perceptions of grant schemes (Church 2005, Dandy 2009, Elliss and Frost 2002, Wavehil Consulting 2009). Overall these studies show that landowners perceive grant schemes to be bureaucratic, complicated and an administrative 'burden'. In addition, lack of knowledge of grants was cited in two studies as a barrier to their application for grants (Ward and Manley 2002, Wavehill Consulting 2009).

7.2.2 Understanding landowner motivations

Recent research in England has shown that private owners are not a homogenous group, but they show a wide variety in motivations for owning the land, and willingness to adopt new practices (Urquhart and Courtney 2011) (Urquhart, Courtney, and Slee 2010, Urquhart, Courtney, and Slee 2011). Traditional classifications of landowners were based on size of holding or whether they managed the land for timber production. When considering encouraging landowners to adopt new practices these categorisations are of limited use. Instead the research has shown that **it is important to understand the values, attitudes and perceptions of woodland owners as this affects their willingness to provide public goods, voluntarily or through incentive schemes** (Church and Ravenscroft 2008, Curry and Ravenscroft 2001, Urquhart and Courtney 2011, Urquhart, Courtney, and Slee 2010). This is also found to be important in other countries in Europe and the USA (Rodríguez-Vicente and Marey-Pérez 2009) (Marey-Pérez and Rodríguez-Vicente 2009) (Wiersum, Elands, and Hoogstra 2005) (Bengston, Asah, and Butler 2011).

An important piece of primary research into private forest owners motivations in England is the work of Urquhart and Courtney (2011). A postal survey across 3 regions of

England classified 426 private woodland owners into six cluster groupings (Urquhart, Courtney, and Slee 2011). Table 10 shows the six cluster groupings and the strategic variables that were high scoring for each group.

Table 10: Cluster grouping of private woodland owners
(Urquhart and Courtney 2011)

Cluster grouping	% of sample	Strategic variables – high scoring
Individualist	24.1%	Personal enjoyment, constrained
Multifunctional Owner	19.8%	Financially orientated, private consumption, public amenity, personal enjoyment, environmental
Private Consumer	19.5%	private consumption, personal enjoyment grant dependent.
Conservationist	14.5%	Conservation Environment Grant dependent
Amenity Owner.	12.5%	Amenity conservation
Investor	9.5%	Financially orientated

The authors conclude that of all owner types, the Multifunctional Owners are the most likely to deliver a range of public benefits, while Individualists are the least amenable to subsidies to encourage public good delivery. From this we can develop a more nuanced understanding of the priorities of different landowners.

1. Public recreation is a low priority for most landowners.
In their review of landowner's attitudes to woodland creation, they report that there is a clear pattern amongst the studies that provide evidence on owners' reasons for having and planting woodland. 'Landscape and conservation (wildlife and shelterbelt) are ranked highest, with shooting also often high; production and profit come low in the list of priorities, and provision of public recreation even lower' (Lawrence, Dandy, and Urquhart 2010). Nijnik (2007), reports on the priorities of landowners taking up WIGs finding that between 1995-2002 (n-18,755) public recreation is a high priority objective for only 15.1% of applications (Nijnik 2007).

Similarly, in a study of six sites in South-East England, Church and Ravenscroft found that only 19% of respondents used their woodlands for recreation and a similarly low

percentage (23%) use their woodland for commercial timber. Instead, they claimed that their woods were a wildlife habitat, a landscape feature (68%) and a reserve for nature (48%) (Church and Ravenscroft 2008).

In Scotland 'many private estates are owned by absentee owners who regard them as being more for pleasure than business, the key motivations for ownership being game sport, leisure and personal reasons rather than profit' (MacMillan 2010, Warren and McKee 2011). Public access can be seen as conflicting with other activities, such as hunting (Snyder et al. 2008) and wildlife (Sime, G. M. Speller, and Dibben. 1993).

2. Not all landowners are financially driven, thereby weakening the potential of financial incentives as motivating mechanisms. The evidence suggests that cost may be only one of several considerations in landowners decisions about woodland management and creation. Other goals such as conservation, privacy and sense of ownership also affect their approach (Church and Ravenscroft 2008) (Warren and McKee 2011) (Burton and Wilson. 2000). A study of woodland owners in the Chilterns found that for 75% it brings no income, nor even covers its costs for 52% (Render 2004). This confirms Urquhart's findings where financial orientation was only significant for investment owners (9.5%) and multifunctional owners (19.8%).

Church and Ravenscroft (2008) conclude that the propensity of owners to take up any incentive is therefore a function of their predisposition towards the goals of the recreational access incentive scheme **and the extent to which these goals are congruent with their self-identity as (largely) custodians of their woodland** (Church and Ravenscroft 2008).

3. Public access and grant conditions are felt to impinge on a landowners' sense of ownership rights.

Control is an important value for many private landowners. Many studies report a sense of custodianship or responsibility for the land and landscape (Sime, G. M. Speller, and Dibben. 1993) (Stewart et al. 2001). Render (2004) found that private landowners, contractors and private non-forestry businesses/owners felt that owners should be able to do as they wish with their land, and were concerned they would lose control with increased access. Similarly, it is a common perception amongst landowners that accepting grant money from government will entail a loss of control over their property – particularly when linked to grants for public access' (Cater 1994, Sime, G. M. Speller, and Dibben. 1993, Urquhart 2006, Urquhart, Courtney, and Slee 2010).

Private landowners can show considerable public-mindedness, but prefer to be in control of their properties to manage according to their own priorities. In a study of Scottish

landowners it is reported that 'many owners have strong emotional attachments to their land and are motivated by altruistic concerns about nature conservation, local employment and future generations (MacMillan 2010). They perceive themselves as having social responsibilities as 'keepers' or 'guardians' of the land (Stewart et al. 2001) (Warren and McKee 2011). This role as a guardian interacts with values around control as some owners want to keep control of their land so as to 'protect' it from public access in order to better maintain it's conservation value. For example, in one study the owner's concern to protect wildlife areas led to a need to control access. Certain groups, such as bird watchers, local people, conservation groups and school groups were welcomed as their priorities were similar and the groups' use was limited (Sime, G. M. Speller, and Dibben. 1993).

7.3 Lessons from abroad

The conflict between private ownership and public needs has been described by an American author as 'a seemingly intractable resource management problem' (Mortimer 2008). The international literature does however offer some alternative mechanisms for working with private forest owners.

Prevalent in Northern Europe, and now emerging in the USA, **forest owner groups** bring together small forest owners into larger, more efficient management units. [see WP3]. These government-backed programmes unite landowners where the small-holdings are contiguous plots in the same area. This is not as common in the UK as in Europe. Furthermore, these programmes may still present a conflict for landowners with their desire for control.

Kittredge (2005) analysed forest cooperative associations worldwide, assessing their potential application in the USA. He found that there were an estimated 3.6 million private forest owners participating in some form of cooperative association in 19 different countries – mostly Europe, also Australia, New Zealand, Japan and South Korea. These cooperative associations included not just management cooperation but also information cooperation, equipment cooperation and financial cooperation.

Kittredge found remarkable similarity across countries in the factors that triggered the start of forest cooperative associations. In virtually all cases, a problem served as a catalyst for owners to cooperate and the government played a role in the development of cooperative organisations. 'In many cases, these organisations are seen as tools to implement national forest policy on private lands'. This has implications for their potential in the UK, which would need government backing and the willingness of landowners to trust that the cooperatives would be to their advantage. The review also found that even in countries where cooperation was longstanding and widespread, cooperative organisations do not appeal to all landowners. Resistance from landowners was linked to:

- Disinterest in their woods in general.
- Disinterest in the financial aspects of their woods.
- Distrust of an organisation or of the profession of forestry.
- A belief that they can manage their land better on their own.
- Lack of mature timber and hence no market incentive to participate.

While Kittredge did not consider public access, these findings suggest that landowners may be put off joining cooperatives if encouraging public access was a condition of membership, especially if they themselves were not interested in developing the access potential of their land.

A US study concluded that landowners in general prefer **tax based policies** over direct subsidy support (G.C and Mehmood 2010). Preferential property tax treatment of forested land is part of legislative policy in all 50 states. Land that is managed for timber can be enrolled in the scheme but in some states enrollement remains consistently low. (Fortney, Arano, and Jacobson 2011) Tax incentives based on productive timber output would be of less applicability in the UK as we know that the greater proportion of owners do not get an income from their forest land.

'Family forest owners viewed **one-on-one access to a forester** or other natural resource professional to 'walk the land' with them and discuss their management alternatives as the most important type of assistance that can be provided (Kilgore et al. 2007).

8. Physical improvements to woodlands

In this section we consider what can be done onsite, within the woodlands, to encourage greater public access. In the literature, 'physical barriers' to accessing woodlands is a broad category that also includes general /overarching features such as poor weather, and offsite features such as lack of public transport and information (Morris et al. 2011).

The evidence about physical access is very much dominated by the studies dealing with disability. These are themselves biased towards issues important to wheelchair users, to those with visual impairments, and those with some form of mental health condition (Ambrose-Oji 2009, Burns 2008) (Uzzell 2005). In this report our focus is not only on particular groups facing 'physical access barriers', but also on the general population using TWF for recreational purposes. Table 9 summarises key mechanisms for improving the quality of the woodland resource for users.

Most of the projects we look at have focussed on site enhancement and maintenance tasks as these are the 'easiest' to overcome as changes are straightforward to plan and carry out given sufficient resources. They are also the tools that lie within the traditional remit of a forest manager, however recent research has argued that without a locally

developed understanding of the needs of target groups, practical changes may fail to enhance access as much as anticipated (Morris et al. 2011). This will be covered more fully in section 9.

Table 11: Mechanisms and interventions for physical improvements to woodlands.

Category	Mechanisms	Examples of Interventions
Regulatory	Legal requirements	Equality Act 2010
	Policy direction – strategies, targets	Forestry strategies in England, Scotland and Wales
Financial Incentives	Grants	English Woodland Grant Scheme - Woodland Improvement Grants Scotland Rural Development Programme Challenge grants Better Woodlands for Wales
	Targeted and funded projects and programmes (includes Lottery Funded activity).	Access 2 Nature, Active England, Big Tree Plant, Woodlands in and around Towns, Heads of the Valleys and Western Valleys, Cydcoed.
Information provision	Standards and Guidelines – that provide direction and information	UK Forestry Standard Forests and people guidelines
Innovative approaches	Partnerships	Landscape Partnership Schemes (e.g. Neroche and Grow with Wyre)
	Forest resource, infrastructure and facilities development	Greening NHS Estates in Scotland, NHS Forest, mountain bike trails, woodland parks, forest centres

On the PFE improving access is an expected part of good management. Much delivery of well-being outcomes goes on through day-to-day work at woodland sites, and on public land this is an integral part of the management approach in line with FC policy and the forestry strategies of each country. 'Often much of what occurs in the districts and regions/conservancies is referred to as 'activities', 'initiatives' or 'events' and would not be classed by the respondents specifically as projects or programmes. Events and

self-led activities are often considered core business: 'it's just what we do' (O'Brien 2010).

Although for ease of analysis we have separated the components of interventions to improve access, the **majority are multifaceted in approach.** Working to address the specific requirements of individuals and groups will often sit alongside efforts to improve the quantity and/or quality of physical access on a given site. For example, since its inception in 1994, the Mersey Community Forest, has been delivering various interventions including land reclamation, creating access to green space, tree planting, engaging local communities and bringing woodland into active management (Forest Research 2010) (Mersey Forest 2007).

8.1 Bringing neglected woodlands back into active management

'*without this [physical improvements] people wouldn't go into the woods because it was a bit of a daunting area; now it is much more inviting because it looks nice; also it gives out a message that there are people that care about the woods'* (Icarus 2011).

Well-maintained woods are perceived as safer than poorly maintained woods where rubbish dumping and graffiti detract from the value of the woodland experience (O'Brien and Tabbush 2005) (O'Brien 2006) (Agyemang 2007, Maas 2009). This is particularly the case in urban woodlands and the Capital Woodlands Project in London has been addressing this issue. In London the majority of woods are owned and managed by local authorities, 'who often do not know their exact extent or quality' of the woodlands in their care (Forestry Commission England 2011a). This is exacerbated by further segmentation of responsibility where in some cases different departments within the authority 'own' different woods across the borough. This is the case in Croydon where some woodlands are managed by the Parks department, others by Estates and Valuers department, and others managed under 'agreements' with Wildlife Trusts (Forestry Commission England 2011a). The Capital Woodlands Project recommends that the first step to better management should be to **locate and map all woods.** This is followed by a survey of the woodlands, a gathering of funds and finally the development of a management plan. This process is equally applicable to private woodland owners.

To make this process simple for woodland owners the FC provides a template management plan on its website (http://www.forestry.gov.uk/ewgs-wpg). It is worth noting that of the 14 pages in this plan there is only one small box section which addresses public access: 4.7.2 Public access and impacts on local people.

WIAT (Forestry Commission Scotland 2011a) has been particularly successful in bringing urban woodlands back into active management in Scotland. Eleven thousand hectares have been brought into management since the project began in 2005. New activity is targeted to encourage access and maximize the well-being benefits of woodland regeneration, with a focus on areas of the four city regions where social deprivation is high and woodland provision (both in terms of the amount of woodland and quality of woodland management) is low (Forestry Commission Scotland 2011b). As a result of the WIAT programme on average 40% of Local Authority owned woodland in Scotland is now under management. Funding for the programme came from the Scotland Rural Development Programme grants and the Forestry Challenge Funds administered by FCS. Phase I of WIAT between 2005-2008 cost £30million, phase II between 2008-2011 was a further £27million.

The Community Forests in England have similarly achieved large-scale regeneration of neglected woodland with 27,000ha now under active management across all sites (Land Use Consultants and Ltd 2005, Stewart 2010).

Funding is often cited as an issue to lack of management, particularly for local authorities that are keen not to add to their annual tax burden (Forestry Commission England 2011a). For private landowners there are grants available for projects aiming at improving management of neglected woodlands. Under the English Woodland Grant Scheme there are Woodland Improvement Grants. In Scotland the Scotland Rural Development Programme administers the WIAT woodland improvement challenge fund that aims to bring urban woodland into sustainable management and improve recreation facilities. This fund was introduced in 2004 and in the first four bidding rounds £7.2million was committed to 102 projects involving over 4,000ha of urban woodland (Stewart and O'Brien 2010). In Wales the grant scheme Better Woodlands for Wales has made use of a WIG Calculator - a spreadsheet designed to provide cost values for grant-aidable operations, based on criteria selected by the user. The WIG grant will pay at three levels; 25%, 50% and 75%, depending on the type of work and the location.

8.2 Infrastructure improvements

Creating and maintaining paths and cycle ways is a simple and effective way of improving woodland for better accessibility. Most funded projects include some work of this nature and there is evidence that these features are valued highly by users. The Quality of Experience studies found that when users were asked what their favourite thing about the site was, 41% mentioned walks, paths and trails. This was the top scoring answer alongside beautiful scenery. One of the partners from Groundwork Northumberland's Ashington Community Woodlands noted in the evaluation that:

> *"Through the creation of new networks and the improvements of existing ones (path surface improvements, cutting back vegetation, opening up sightlines), the woodland is now a*

*valuable ecological and recreational resource – there has been and continues to be a noticeable increase in site usage" (*Sustrans) (Icarus 2011).

Careful planning of infrastructure improvements can maximize the benefits to woodland users and ensure that **infrastructure improvements become a lasting legacy of a project.** In the Neroche project constructing a 13.5mile circular path was a key component of the project and has become popular with walkers, dog walkers, families and horse riders (Carter et al. 2011). An easy access one-kilometre trail provided opportunities for those with mobility impairments and families with children in buggies. In thinking of the needs of less mobile groups Ambrose-Oji (2009) recommends that woodland managers do an **accessibility audit** before commencing infrastructure projects (Ambrose-Oji 2009). In reporting to Scottish Natural Heritage, Saddler (2008) suggests that they 'recognise, support and disseminate information on an **accessibility classification** for paths to enable a wide range of individuals to better match their needs with available, managed access routes' This is not only for disabled people 'but also because everyone can benefit from achieving a better match between their aspirations/abilities and the sites they choose to visit' (Saddler 2008).

Planning of infrastructure improvements also provides an opportunity for community involvement. In a scheme funded by Suffolk Coastal District Council a community consultation about recreation in the forests led to the development of Rendlesham car park, play & cycling facilities.

Car parking facilities are useful in peri-urban and rural woodlands in particular. Car parking charges and **entrance fees** present a substantial barrier to certain groups especially those on lower incomes. In studies evaluating the community perception and involvement in the National Forest, there was a good deal of reported resentment about appropriation of woodland areas by commercial management companies and the introduction of fees for forest entrance and parking, particularly at the Conkers site [http://www.visitconkers.com] (Ambrose-Oji 2009, Kitchen 2006, Morris 2006).

There is little UK research on the public's willingness to pay for forest access but the issue has been more comprehensively studied in the USA where 60% of the United States Forest Service (USFS) forests have introduced fees (Huhtala 2007, Espey, 2005). The main questions are whether any level of fee is acceptable to the public, and if so what is the appropriate level of fee to be equitable (see Chung 2011 for an overview). A study in Finland found that even low fee levels decrease recreation visits among lower-income users, but that high fees can have a negative effect on the welfare level of higher-income users in particular (Huhtala 2007).

The only study in England we found was conducted in 1996 with a stratified sample of 325 households in Wantage, Oxfordshire (Bateman 1996). These householders were

interviewed and asked to consider a hypothetical proposal for the setting up of a recreational woodland within five miles of the town. They were asked to specify how much they were WTP per household per annum in extra taxes and how much they would be WTP per adult per visit as a car parking fee. Nearly a quarter of respondents (24.3%) were opposed in principle to the idea of an annual payment of any sum and 14.8% were not willing to pay a per-visit fee of any sum. Including these non-payers the mean WTP per annum was £9.94 per household and the mean WTP per visit was £0.82 at 1996 prices. The authors state that the results obtained must be treated with caution and that the data reveals that households are not familiar with estimating hypothetical payments for increased provision of public goods.

Transport to sites and the cost of getting to woodlands is a significant barrier for certain groups (Bell 2007, Burns 2008, The Countryside Agency 2005, Weldon 2007). Ambrose-Oji (2009) observes that the development of strategies for the provision of public transport lie outside of the traditional responsibility of woodland managers and therefore 'there was little evidence that these issues reach the strategic forums they need to for proper consideration' (Ambrose-Oji 2009).

8.2.1 Onsite facilities

Onsite facilities include both functional infrastructure items such as toilets and cafes as well as recreational facilities such as play areas, camping facilities, sports facilities and cultural attractions. Table 12 shows the count of facilities on FCE sites (Lawrence 2009).

Table 12: Facilities on FCE sites

Facilities	Count of Facilities on FCE sites
Parking – free	189
Parking – paid	41
Information	118
Easy access	100
Toilets	73
Refreshments	55
Visitor centres	31
Shops	22

The evaluation of Active England site 'Bedgebury' found that 'in 2006 there was a significant increase in the number of people re-visiting Bedgebury on a multiple times per week or per month basis' (Morris 2009). The authors concluded that this increase in re-visiting 'is highly likely to be due to the new facilities and activities that provide visitors with a wider range of things to do on site'.

Cultural attractions can create a surge of interest in a site. Pritchard (2008) reports

that on the Forest of Dean Sculpture trail, 40,000 visited in one week for the Lightshift event in 2001. Annually it is estimated that around 100,000 people visit at least part of the Forest of Dean Sculpture Trail. Pritchard's evaluation of the contribution of art to the woodland experience argues that art has wide ranging benefits, beyond a simple swelling of visitor numbers. 'Art can add in unique ways to people's relationship with, awareness of, understanding and valuing of trees, forests and woodland' (Pritchard 2008).

8.2.2 Information

Lack of clear **signage** regarding public access on private woodlands contributes to public uncertainty. 'The urban groups expressed some feelings of uncertainty about where people were allowed to go in the countryside, which areas were public space and which areas were private, and this raises issues about social inclusion and the use of the countryside particularly for groups who are not frequent or familiar users' (O'Brien 2005b).

The evidence suggests that signage at the site is also important to enhance visitor experience and to encourage repeat visits. This is particularly important at the point of entry at a site. Welcoming information can help create a welcoming atmosphere, overcome fear about getting lost and to address issues of vulnerability and safety (Ambrose-Oji 2009). In 2004 the FC initiated the Walkers Welcome scheme whereby woodland owners who allow the public into their woodland under the FC Woodland Grant Scheme are provided, free of charge, with 'Walkers Welcome' signs and discs to display on their land.

Information on woodlands that is accessible prior to planning an outing is valuable to groups with particular needs and useful to all users. The Woodland Trust have used a grant from the Access 2 Nature grant to launch a website 'Visit Woods' (http://visitwoods.org.uk/en/visit-woods/Pages/get-involved.aspx). Described by the Woodland Trust as 'the first comprehensive, interactive website showcasing virtually all publicly accessible woodland in the UK'. The Visit Woods website includes clear information on the facilities of each wood, along with searchable maps and information and pictures provided by people who have used the woodland themselves. The Quality of Experience surveys found that of first time users 55% had heard about the woodland by word of mouth. Only 16% had learnt about the woodland through the internet or a website and 5% from a leaflet (BMG 2011).

8.3 Balancing the needs of different groups

Woodlands are able to absorb a variety of different activities though on occasion the needs of one group may clash with the needs of another. For example paths, when used frequently by horses can become churned up making it less desirable as a place for walkers (Weldon 2007). Occasionally programmes which focus on the needs of a

particular target group face opposition from regular users. In the Active England evaluation 'many project staff expressed concern that the needs of different target groups were often not complementary, making it difficult not to exclude one group by focusing narrowly on the needs of another' (Morris and O'Brien 2011).

More common, is conflict between the conservation priorities of woodland managers and the recreation demands of the public. PROGRESS (PROmotion and Guidance for Recreation on Ecologically Sensitive Sites) is a European funded monitoring programme set up in the Forest of Dean and Fontainebleau, France to address the need for sustainable recreation as conflict had arisen between high usage numbers and conservation concerns (http://3b.nweurope.eu/page/projet.php?p=31&id=513).

The distinction between local community woods and destination sites becomes significant when considering the appropriate level of facilities for a site. Destination sites, in attracting people over a large area, tend to need more provisions than sites that are used daily by local people walking their dog. As yet there are very few instances of private woodlands becoming key destination woodlands.

When considering how to improve particular sites, local consultation is desirable. The Landscape Institute have pioneered a practical toolkit for measuring the quality of public spaces called spaceshaper. Spaceshaper uses a site visit, questionnaire and a facilitated workshop to bring together a variety of stakeholders including managers and non-users to evaluate the site. Since the tool was launched in February 2007, over 300 facilitators have been trained and 200 Spaceshaper workshops have taken place around the country, though only a handful of these have been on woodland sites (http://www.landscapeinstitute.org/Spaceshaper/index.html).

In summarising the evidence on the interventions to improve physical access we have run the risk of being too prescriptive in our recommendations. O'Brien (2011) reminds us that 'policy-makers should look to support a variety of woodland experiences and site types, ranging from well-managed areas with lots of facilities and high numbers of visitors to quieter, more 'natural' sites where people can escape and be alone if they so choose' (O'Brien, Morris, and Stewart 2012).

9. Addressing the needs of individuals and groups

As discussed in the literature on barriers outlined in section 5 of this report (Ambrose-Oji 2009, Morris et al. 2011), the accessibility of woodlands goes far beyond issues concerning the physical characteristics of sites. As such, even well-maintained woodlands with good quality access facilities and infrastructure may be underutilised by the general public, and may be disproportionately underutilised by certain social groups.

Morris et al. (2011) argue that conventional approaches to improving access that only focus on increasing the spatial proximity of woodlands to communities, and on improving the physical accessibility of sites will have limited impact, particularly with these under-represented, or so-called 'hard-to-reach' groups. They emphasise the need to understand and address the needs and requirements of specific target groups and to tailor mechanisms and interventions to address them. As such, they call for forestry policy makers and managers to think beyond their 'conventional remit' (p.391) to address the barriers that fall within their 'socio-cultural and personal' categories.

While Morris et al. (2011) acknowledge that there is often overlap between social and personal experiences of and attitudes towards woodlands and forests, for the purposes of their barriers categorisation they argue that it is helpful to maintain a distinction between personal and social dimensions, arguing that some barriers either relate to the experiences of specific individuals, or are manifest at the level of social and cultural groups. As such, they established two sub-categories, namely 'Social, cultural & economic' and 'Personal characteristics, experience and abilities'.

Here we refer to evidence of mechanisms and interventions that have addressed both personal and social barriers faced by individuals and groups. The analysis of evaluative evidence shows that it is hard to maintain and apply Morris et al.'s distinction between personal and social barriers in relation to actual interventions. This is because the vast majority of targeted interventions work with established groups or new groupings of individuals that have a particular barrier or set of barriers in common. Typically, this is done through working in partnership with organisations representing certain interest groups, or by actively convening individuals who share particular characteristics and access requirements.

9.1 Addressing personal and social barriers

Table 13 provides a summary of the evidence of interventions that address personal and social barriers.

It s often the case that projects and programmes work with a number of target groups and cover a number of well-being themes. As such, it is sometimes problematic to distil out and assess the efficacy of the particular aspect of an intervention that is focused on personal and social barriers. For example, one of the Active England projects run at Bedgebury Pinetum involved major improvements to access facilities and infrastructure that were combined with a programme of outreach and organised activities targeted at particular groups.

Many projects that target specific groups of people, use the woodland as a context for addressing the needs of the target group, rather than simply encouraging general access. For example several successful schemes have worked with offenders, offering training in woodland skills, which has a direct impact on their personal well-being and employment opportunities (Carter 2007, The Small Woods Association 2009). This is an innovative use of the woodland resource and demonstrates how programmes that understand the needs of target groups will be more successful.

Table 13: Mechanisms and interventions to address personal and social barriers

Category	Mechanisms	Examples of Interventions
Regulatory	Legal requirements	Equality Act 2010
	Policy direction – strategies, targets	Forestry strategies in England, Scotland and Wales
Financial incentives	Grants	England: Woodland Health Improvement Grants Scotland: Forestry for People (F4P) Challenge Fund
	Targeted and funded projects and programmes	Active England, Wye Wood, Route to Health, Green Gym, West Midlands Health project, Therapi project, Green Exercise Programme, Access to Nature projects
Information provision	Standards and Guidelines – that provide direction and information	UK Forestry Standard Forests and people guidelines
	Public information leaflets	Chopwell Wood Health Project
Innovative approaches	Education and learning programmes	Forest School, Wye Wood, Capital Woodlands, volunteering schemes
	Therapeutic programmes	Chopwell Wood Health Project, Branching Out, Feel Blue Touch Green, rehabilitation project in Sweden, Hill Holt Wood Forest School
	Outreach and 'facilitated access'	Active England, Feel Blue Touch Green

	Building confidence and skills	Branching Out, Feel Blue Touch Green, project in Sweden, Active England project at Haldon Forest, Hill Holt Wood, Offender and Nature Schemes
	Role models	Hill Holt Wood, Volunteering schemes
	Gatekeeper groups	Faith Woodland, Active England project (Rosliston Forestry Centre)
	Awareness raising and staff training	Branching Out, Hill Holt Wood, Chopwell Wood Health Project, Offenders and Nature,
	Empowering target groups	Walking for Health, Offenders and Nature schemes,
	Building partnerships	Neroche Landscape Partnership Scheme, WIAT programme, West Midlands Health Projects, Route to Health Project,

Information provision: Morris et al. (2011) establish lack of information as an important barrier to access. Furthermore, their review illustrates that different individuals and groups require different kinds and formats of information. For example, disabled respondents have emphasised the need for detailed information about access and facilities, preferably supported with photographs (Burns 2008). A review of evidence on participation in outdoor recreation by under represented groups noted that translation into a range of languages may be appropriate (Edwards and Weldon 2006) 'but can be seen as patronising by second generation ethnic minority groups (Askins 2004, OpenSpace Research Centre 2008).

Communicating what is on offer and what is available is also an important part of information provision to overcome lack of awareness of opportunities. The Chopwell Wood Health Project provided leaflets for doctors' surgeries and meetings were held with practice staff to outline what exercise opportunities were on offer for patients in the woodland. Information and guidance is also a mechanism that has been used in the WIAT programme (Forestry Commission Scotland 2011a). In the Therapi project (Kessel 2005) interviewees were shown a 'just walk' leaflet. Kessel reports that factors such as

lack of pictures of BME people, or pictures of people in what looked to be expensive clothing (e.g. Barbour jackets) made it difficult for interviewees to identify with and hence the leaflet failed to communicate to these groups. Therefore, providing relevant targeted information is important. The Walking to Health scheme provides a wide range of information for those that want to set up a health walk scheme and apply for funding; this can help overcome issues of lack of awareness of the benefits of the scheme, but also lack of understanding of how it works (http://www.wfh.naturalengland.org.uk/). The Green Exercise Programme (Hynds 2011) sought to provide information about local green spaces to overcome issues related to lack of knowledge and awareness of what spaces people could access.

Targeted led activities and events: Organised activities and events at woodland sites are and can be used to address the specific requirements of individuals and groups. For example Hill Holt Wood in Lincolnshire (O'Brien 2005c) (O'Brien 2005) and Offender and Nature Schemes (Carter 2007) have set up and run volunteer tasks for young people and adults who have either been excluded from school or were in prison or on probation. Hill Holt Wood staff have worked closely with schools and local authority learning services, while offender schemes work with prison services. The barriers that offenders and excluded pupils face relate to issues of low socio-economic status, deprivation, lack of transport and lack of confidence in accessing woodlands.

Five projects at woodland sites were funded through the Active England programme (Morris and O'Brien 2011, O'Brien 2009b). Each project worked with a range of under-represented groups to encourage them to visit the sites as part of a focus on healthy lifestyles. For example, projects ran specific activities for women and girls, certain age groups, and Black and Minority Ethnic groups to help overcome barriers such as lack of confidence, unfamiliarity with the site in question, or the lack of social norms of visiting woodlands and other green spaces. The Wye Wood project (Howie 2007) also organised led walks, volunteer activities such as coppicing, and buggy walks for mothers that were targeted at young people connected to the probation service and those with mental health problems to address barriers of lack of opportunity, confidence and lack of cultural norms of visiting woods. WIAT organised activities such as walks and volunteering have enabled deprived communities to become more familiar with their local woods and aimed to develop people's sense of ownership of local woods (OPENspace 2010). The Route to Health project worked with excluded young people and mental health patients to create art works with health messages that were placed along a one-mile woodland trail in Birches Valley (Forestry Commission England undated). The Green Gym programme run by BTCV involves conservation activities in a wide range of green spaces including woodlands (Yerrell 2008) and has reached a diversity of people including those with mental health problems who often lack the confidence and motivation to access woodlands and other spaces without support and encouragement. The West Midlands Health project organised walks that helped participants to overcome

barriers to do with fear of unknown spaces, fear of anti-social behaviour and of getting lost (O'Brien 2006). The Therapi project at Thames Chase Community Forest found that targeted events and activities could help to overcome the symbolic barrier some people faced in not being able to imagine themselves using the woodland spaces (Kessel 2005). The Green Exercise Programme Evaluation (Yerrell 2008) looked at eight green exercise projects in England that focused on different target groups. The projects included some that focused on organised weekly activities and others that ran for a set number of weeks. The projects aimed to address barriers of feeling unsafe alone in green spaces, concerns about anti-social behaviour, concerns about what spaces could be accessed and accessing private property (for example, via public rights of way). The Newlands project in North West England included organised programmes of events and activities. For example activities in Moston Vale were targeted at local schools and the local community to overcome concerns about safety, anti-social behaviour and lack of awareness of the site (Newlands and Forestry Commission England undated).

Education and learning programmes: Many education programmes run for months/years and, therefore, facilitate long-term engagement with woodlands. They focus primarily, although not exclusively, on children and young people and are delivered by environment staff working closely with schools and colleges. For example, Forest School, which has become increasingly popular in Britain, involves children being taken out into woods every week to carry out their learning outdoors. Forest School has reached children who have had no or very little experience of visiting woodlands before and can help those pupils who struggle to learn in the classroom environment or those who particularly benefit from hands on learning approaches (O'Brien and Murray 2007). Apprenticeship schemes (e.g. run as par of the Neroche Landscape Partnership Scheme) and training opportunities (e.g. Wye Wood and Capital Woodlands) have supported those who have been out of work for long periods and face barriers in returning to the workforce. Some volunteering projects are linked to local colleges in which participants can gain accredited training (O'Brien et al. 2008).

Therapeutic programmes: Therapeutic programmes are primarily targeted at people with mental health problems, emotional and behavioural problems or those prescribed exercise through the GP referral scheme. They involve health as well as environment professionals and programmes generally run for a ten to thirteen week period and have an explicit focus on aiding recovery and rehabilitation. For example, organised and led walks, cycles rides and tai chi sessions have been set up in projects such as the Chopwell Wood Health Project, which aimed to encourage woodland access to improve health and well-being (O'Brien 2006). The project ran for nearly two years from 2004 to 2005 and was a partnership between the Forestry Commission and Gateshead and Derwentside Primary Care Trusts. Adults referred by their doctor could join the organised activities. Conservation volunteer activities were organised for those suffering with mental health problems in the 'Branching Out' project in Scotland (Wilson 2009), 'Feel,

blue touch green' project in Australia (Townsend 2006) and a rehabilitation project in Sweden for those on long term sick leave (Nordh, Grahn, and Wahrborg 2009). These activities can help to overcome barriers of confidence, anxiety, not wanting to visit alone, isolation, money concerns, deprivation and low motivation. Faber, Taylor and Kuo (2009) in an experimental study of children with and without Attention Deficit Hyperactivity Disorder (ADHD) found that children who walked in a park (rather walking in a down town or residential area) concentrated better after walking. The authors argue for the use of green space as a treatment for ADHD (Taylor and Kuo 2009). While we are not aware of evaluations of specific projects or programmes that focus on ADHD and children, findings from other projects (Hill Holt Wood, Forest School) suggest that woodlands and green spaces can be used to aid in overcoming barriers of attention and concentration that some young people face (O'Brien 2005c) (O'Brien and Murray 2007).

Outreach and 'facilitated access': The evaluation of Active England (O'Brien 2009b) (Morris and O'Brien 2011) shows that some individuals and groups require a particularly intensive form of intervention – referred to as 'facilitated access' - to encourage their use of woodland sites. The projects targeted BME groups and particularly women from BME groups, as well as individuals from deprived backgrounds who had never visited local woodlands, either because they were unaware of which local woodlands they could access, they lacked the confidence to visit, they could not afford to visit, or it was simply not something that people from their community did. Similar problems were identified with BME groups in Northamptonshire identified by Edwards and Weldon (2006). For these groups, facilitated access was required, involving community outreach to establish contact, and organised transport to the site to undertake a led activity such as a walk or cycle ride. The Feel Blue, Touch Green project in Australia worked with mental health patients who undertook conservation activities. Groups were transported to the sites to overcome barriers of lack of transport, support and lack of motivation (Townsend 2006).

Building confidence and skills: Some individuals and groups lack the confidence to visit woodland sites. The therapeutic programmes such as Branching Out in Scotland (Wilson 2009), Feel Blue Touch Green in Australia (Townsend 2006), and a project in Sweden (Nordh, Grahn, and Wahrborg 2009) have created activities targeted at adults with mental health problems. All of the projects have worked with mental health services and taken people out into woodlands and green spaces to undertake volunteer type tasks to build confidence and aid recovery. As part of the Active England project at Haldon Forest, a weekly organised mountain bike ride for women enabled participants to build confidence on their bikes and to develop the skills necessary to access more technical sections of the mountain bike trails. Participants stated that being part of a women-only group was important (O'Brien 2009b), Hill Holt Wood activities, Offender and Nature Schemes also helped to build confidence for excluded young people and adults and potentially use the skills they learnt to find employment. Apprenticeship schemes such as those run through the Neroche Landscape Partnership Scheme (Carter

2011) also help to develop the skills of young people in order to seek employment. Volunteering programmes can help to build the skills not only for young volunteers interested in seeking employment or learning new skills to add to their CV but can enable all age groups to learn new skills (such as coppicing, plant identification etc) and develop confidence in accessing woodlands they had not been to before (O'Brien et al. 2012).

Role models: Having staffing and volunteer profiles that reflect the population diversity could assist in encouraging greater involvement (OpenSpace Research Centre 2008). The director and operations manager at Hill Holt Wood as well as other site staff act as role models for the young men who participate in learning activities in the wood. The staff model appropriate behaviour such as respect and trust for people and the environment overcoming barriers related to anti-social behaviour and low motivation (O'Brien 2005a). The Neroche Landscape Partnership Scheme development manager and project manager acted as role models to the local stakeholder group participants enthusing them as well as assisting them in working with a variety of organisations (Carter 2011), helping to overcome barriers of awareness of opportunities. Research on volunteering activities (O'Brien et al. 2008) highlighted that volunteer leaders can be role models for volunteers, overcoming barriers for those who feel like they do not belong or lack a cultural norm of visiting and being actively engaged in woodland activity.

Gatekeeper groups: An evaluation of a Faith Woodland (Tabbush 2008) revealed that a range of social, cultural and economic circumstances can restrict the ability of certain individuals and groups to engage with and access their local woodlands. Stakeholders interviewed as part of the evaluation highlighted the effectiveness of identifying and working through 'gatekeeper groups' (p.53) as an efficient route for targeting outreach and establishing dialogue with particular individuals and groups within the community. This was also the case in Edwards and Weldon's (2006) study of BME communities. In the Active England project at Rosliston Forestry Centre, an Asian women's focus group identified the need for site ranger staff to engage with Asian men's groups as gatekeepers to their wider families. Encouraging Asian men to use the forest might mean that they start to bring their families out for day trips (O'Brien 2009b).

Empowering target groups: To support local communities to take action to develop and deliver their own activities. It is important to include both 'communities of interest' (for example young people who are interested in biking) as well as 'geographical communities' (the local neighbourhood). The Walking for Health programme organised by Natural England involves walks being led in a range of habitats, including woodlands, to encourage people to become more physically active (http://www.wfh.naturalengland.org.uk/). As part of the programme, training has been provided to empower participants who want to volunteer to lead walks and encourage

others to benefit from the activity in the way they have. This addresses barriers related to lack of confidence to lead others. The programme also provides information and support for people who want to set up a 'Friends of' group to organise and deliver health walks. Offenders and Nature schemes and Hill Holt Wood focus on empowering young people and offenders to improve their life chances by participating in the schemes and gaining skills (Carter 2007, O'Brien 2005c).

Estimates of the monetary value of projects such as these are rare. One example of a study that did attempt an economic analysis of social benefits was done with the WIAT Greenlink project that involves an ongoing programme of woodland management, conservation and community events along a cycle route connecting Strathclyde Country Park to Motherwell. In 2009, a Social Return on Investments (SROI) analysis was carried out on the conservation and volunteering activities taking place in the woodlands surrounding the cycle path. The SROI calculation for the conservation volunteer programme gave an estimated social return of £7 for every £1 invested. The study analysed changes experienced by 7 stakeholder groups: The conservation volunteers (including the local residents), Central Scotland Forest Trust Board and management, North Lanarkshire Council (5 departments), Forestry Commission Scotland, Motherwell Community Police and the National Health Service. The main beneficiaries were found to be the conservation volunteers themselves and local residents, though the other stakeholder groups also reported on a wide range of beneficial outcomes.

10. Key lessons from mechanisms and interventions

In this section we draw on the key findings of the evaluations reviewed in sections 7, 8 and 9 to highlight evidence of important success factors in securing and improving public access through increases in accessible woodland provision, improving physical access to woodlands, and addressing the needs of individuals and groups. We also draw out important results that help to identify the limitations of the various mechanisms and interventions evaluated. It is hoped that the discussion of key success factors and limitations will provide a useful feed into the IFP's deliberations and resulting recommendations in relation to public access to TWF in England.

It is perhaps helpful to start, however, with a qualifying statement that identifying success factors and limitations from the evidence presents a number of challenges.

This is particularly the case with interventions to improve physical access and to address the barriers faced by individuals and groups. This is partly because, as discussed earlier, these interventions are often multifaceted and may combine an array of approaches under the umbrella of a particular project to enable or facilitate access and the

realisation of well-being benefits. As a consequence, **it can be challenging for evaluators to isolate specific 'ingredients' of success or failure from other causal variables**, such as the on-going management of a given site, or indeed community- or societal-level processes of change. For example, in a review of arts projects on FC sites, Pritchard (2008) reported that 'There is a small degree of frustration on the part of involved staff concerning the relative underdevelopment of evidence-based substantiation of the impact which they themselves perceive to be happening' (Pritchard 2008). He goes on to acknowledge that 'quantifying these effects is challenging, since the arts-related drivers that may operate in a given location are often hard to distinguish from other drivers.' Similarly, the authors of an evaluation of woodland projects funded under the Active England programme were only able to conclude that increases in visitor numbers were highly likely a result of improvements to access infrastructure and facilities at a number of the sites (O'Brien 2009b).

Another limitation of the evaluative evidence is that due to the short term nature of the funding that often characterises interventions and the corresponding timing of evaluations, **it can be impossible to assess whether the changes observed during the project cycle will be sustained in the long term**. For example, the Active England evaluation found that site improvements would provide a lasting legacy for some projects. However, for projects that used funding to employ staff on a temporary basis, it was unclear how the loss of staff at the end of the project would impact on the long-term delivery of the project's objectives (Morris and O'Brien 2011).

10.1 Specific success factors and limitations

10.1.1 Increasing accessible woodland provision

In relation to the issue of low uptake of grants to improve public access, Sime et al. (1993) suggest that grant conditions need to reassure owners over issues such as property rights, control over entry and/or use of the woodland. Furthermore, they recommend that owners should be provided with legal and financial support against theft and vandalism. They conclude that owners were more likely to accept public access under a temporary agreement. This would then present less of a conflict with their desire to maintain control.

Simplifying the bureaucratic processes of grant application, and providing better information to landowners regarding this process, may overcome the perception that these will add to the administrative burden of landowners.

In particular the work of Urquhart suggests that projects that target landowners who are already multifunctional in their woodland management, should face less resistance than general schemes (Urquhart and Courtney 2011, Urquhart, Courtney, and Slee 2011).

10.1.2 Physical improvements to woodlands

Improving the quality and increasing the quantity of physical access provision of the PFE is a key part of the day-to-day management activities of the FC staff, in line with FC policy and country strategies. This has led to significant investments in physical access infrastructure and facilities at many PFE sites (Lawrence 2009) and significant increases in visit and visitor numbers at some sites (O'Brien 2009b).

However, some evidence points to the need to balance the popularity of high quality infrastructure and facilities on sites that display a high level of management for access and recreation, with the high value that is also placed on less intensively managed, more 'natural' woodlands (O'Brien, Morris, and Stewart 2012). These authors remind us that policy-makers should look to support a variety of woodland experiences and site types, ranging from well-managed areas with lots of facilities and high numbers of visitors to quieter, more 'natural' sites where people can escape and be alone if they so choose.

There is strong evidence that signs of anti-social behaviour in woodland sites, such as vandalism and littering can act as a significant barrier to visiting woodlands and can have a strong negative impact on people's quality of experience.

10.1.3 Addressing the needs of individuals and groups

The research on barriers to access and the social distribution of barriers (Morris et al. 2011) highlights that certain social groups require high levels of support and intervention to introduce them to woodland environments and to make them aware of the potential benefits of accessing them. This level of engagement can be essential to overcome psychological or cultural barriers (e.g. for women and BME groups) and barriers to do with 'restricted horizons' and low socio-economic status (O'Brien 2009b). 'Facilitated access' has proven to be a key mechanism for encouraging such individuals and groups to visit woodlands. The recent evaluation of Access 2 Nature funded projects concludes that 'engaging people with little or no previous experience of the natural environment can be exceptionally resource intensive work; it runs at a slow pace, and a lot of time is needed to secure the interest and trust of those unfamiliar with the natural environment' (Icarus 2011).

Projects and programmes that involve regular, rather than one-off, led activities in woodlands, and which are delivered over longer time periods (months or sometimes years) can be extremely effective in providing necessary encouragement and support, particularly for those with specific problems such as anxiety and feelings of social isolation (Nordh, Grahn, and Wahrborg 2009, Townsend 2006, Wilson 2009). In the project planning stages thought needs to be given to how participants will 'progress' beyond the end of the project. This is particularly important for training projects with vulnerable groups, to make sure that their skills can be utilised in some direct way (The

Small Woods Association 2008, The Small Woods Association 2009). It is also of relevance to general access, to ensure that the access benefits of the project endure.

Mechanisms and interventions that combine physical access infrastructure improvements with the provision of organised and led activities and appropriate information are likely to be most successful. The provision of information that is accessible by specific target audiences is essential if a more equal social distribution of woodland access is to be achieved. The careful planning, design and targeting of information provision needs to be adequately resourced, and the skills required to do this effectively should not be overlooked.

The most successful interventions tailored to the needs of specific groups are those that are engaging and fun. It is often the social dimension of organised activities in woodlands that come to be most valued by participants – often it is the enjoyment of the company of others and a sense of belonging to a group that sustains interest and attendance.

10.2 General, over-arching factors

To draw insights relating to success factors in securing and improving public access it is useful to step back a little from the detail of individual interventions to discuss some of the more general, cross-cutting approaches that emerge from the evidence as particularly important in relation to the promotion of public access. Here the discussion focuses on general issues to do with evaluation, organisational attitudes, values and ways of working.

10.2.1 Evaluation

In Chapter 24 of the UKNEA, Fish et al. (2011) argue that decision making regarding ecosystem services needs a pluralistic approach to valuation and evaluation, incorporating both economic valuations and qualitative approaches to valuation. 'Hybrid tools that bring together quantitative and qualitative, monetary and non-monetary, and individual and shared values for future change remain a logical aspiration for decision-makers wishing to take an holistic approach to the management of ecosystem services' (p1192 Fish et al. 2011). Several different tools are being explored including 'deliberative monetary valuation' and 'deliberative multi-criteria analysis', which could prove useful in weighing up decisions for access improvements. It should be noted that many of the important benefits from access improvements do not lend themselves to economic quantification and cost-benefit type analysis.

Spatial data can be useful in providing an overall picture of provision in an area

(McKernan and Grose 2007) but the data is time-consuming to collect and analyse. The findings are also general in their application rather than responsive to the nuances of local context. We recommend that local consultation and partnership work is essential to inform decisions about interventions to increase and improve access provision.

10.2.2 Working in partnership

There is strong evidence to suggest that partnership and other forms of collaborative working have become an important and positive dimension of interventions to encourage public access to woodlands in GB. This requires forestry and environment sector bodies such as FC to build partnerships with a diverse range of organisations including those in the health sector, education bodies, prison and probation service, social care services, NGOs, social enterprises and local community groups. These partnerships can help to overcome the barriers of understanding, to reach specific groups and tailor services to them. They can also be essential in identifying and gaining access to groups and provide expertise and advice that is not available within forestry sector organisations. This is particularly the case with PFE woodlands in England where, increasingly, FCE works successfully with a diverse range of public, private and 3rd sector organisations and individuals to deliver public benefits. The evidence highlights that interventions that are delivered through partnership have the advantage of drawing on the expertise of a variety of organisations and individuals (see, for example (Carter 2011)). In a review of the FC's relationship with civil society organisations Ambrose-Oji (2010) highlights the benefits of these partnerships:

- Access to **additional sources of funding**
- **Improved delivery** through added staff and resource capacity
- **Access to skills and knowledge** additional and complementary to that available in the Forestry Commission
- **Increased levels of engagement** with people and issues beyond the reach of the Forestry Commission and other public sector bodies
- **New ideas**
- **Continuity of delivery** when projects change funding structure or objectives evolve
- Civil society organisations have the **ability to lobby and act independently** which can increase partnership legitimacy amongst users
- Civil society organisations often have **greater flexibility and more proactive** timescales that can speed delivery of projects and actions.

A partnership approach can also be usefully applied to the physical access dimension of woodland site management. For example, community groups such as 'friends of xxx wood' often play a vital role in much of the work in maintaining woodlands as well managed, welcoming, and accessible places. Working with community groups also has an advantage for FC in that community groups can access different funding streams.

Sometimes it is the specific interests and enthusiasm of particular staff on the ground that gets projects underway. These 'champions' can also act as a mechanism for improving access by getting a particular project up and running. An evaluation of the Walking for Wellness pilot project in Northumberland found that 'walk coordinators can potentially have a key role in bridging between health/community services and health walks and in linking new recruits with informal befrienders' (South, Giuntoli, and Kinsella 2011).

10.2.3 Responsive design and delivery

There is strong evidence to support the argument that interventions and mechanisms that are based on good knowledge and understanding of relevant stakeholders are most likely to succeed. They are also more likely to represent good value for money, as projects that are tailored to the needs of specific groups can focus their resources more clearly.

In relation to woodland grants to promote public access, Church & Ravenscroft (2008) found that the extent to which incentive goals were consistent with owner objectives was an important factor in uptake. The work of Urquhart, Courtney et al. (2010) to profile private forest owners' motivations is an important source of relevant information and insight.

Understanding the barriers and corresponding access needs of different social groups is also essential to the effective design and successful delivery of interventions, both in relation to physical access provision and targeted activities and events. Understanding needs is key to the successful tailoring of projects, programmes, information and this can be achieved through community outreach and by working in partnership with organisations representing relevant interest groups. It is essential that community outreach and partnership working is recognised and adequately resourced as an important mechanism for overcoming barriers to understanding, reaching specific groups and tailoring services to them.

There is little evidence in the project reports of explicit processes of reflexive learning, whereby project staff use the evaluation process to reflect on their own experiences of project delivery as a feed into on-going project design and delivery. The need for reflexive learning is brought out in the recent evaluation of projects funded by the Access 2 Nature scheme, where it is recommended that 'projects need to be 'fleet of foot' to react to opportunities as they arise; the organisational culture needs to embed flexibility and responsiveness' (Icarus 2011).

10.2.4 Evidence gaps and recommendations for further research

This report has brought to light several areas where there is insufficient published evidence to inform policy decision-making.

Areas we would like to highlight include:

- Very little research has been targeted specifically at non-users of woodlands to assess whether they would like to be able to access woodlands more and to inform the design of appropriate interventions that would enable and encourage access.
- There is currently a lack of longitudinal evaluations of interventions that assess long term outcomes of promoting public access and enhance public benefit from woodlands.
- There is currently a lack of comparison between sites where interventions take place and those where they do not, and between the benefits and barriers associated with woodlands as compared to other types of greenspace.
- Detailed segmentation work could help to identify specific audiences whether these are private landowners or particular social groups. This would provide information that could be extremely useful in designing and targeting interventions.
- Levels of public access have been adequately researched. However, there is currently a lack of evidence relating to public demand for more accessible woodland, and for improved access (infrastructure, equipment) to existing woodlands.

Public Forest Estate:

- Distribution data on the facilities provided at different sites could to help target future investment.
- Cost details per hectare of different intervention types on the public forest estate would also be useful for targeting future investment.
- The distinction between local and destination woodlands has potential to clarify the different requirements and provision of these types of woodland but there is currently no use of these terms in the survey data gathered. Research testing the explanatory potential of the distinction would be welcomed and could be complimented with spatial analysis.

Private landowners:

- There is a distinct lack of data on the spatial distribution of private woodlands and recreational access.
- We found no data on the potential financial benefit to landowners of opening up private woodlands for access or the likely cost of doing this.

- National level data on the take up of grant schemes and impact of these. (This is particularly a gap in England where data is held regionally and does not seem to have been analysed at a national level).
- More research into private landowners' potential responsiveness to different incentive schemes or other interventions. Potentially this research could benefit from current behavioural insights work being undertaken by the Cabinet Office and a range of government departments.

11. Conclusions

This report set out to address the questions:

- 'What is the extent of use of, and what the motivations and well-being benefits associated with trees, woods and forests, and how does this compare with other types of greenspace'?
- 'What measures have been successfully applied to encourage public access, to overcome barriers and enhance public benefit'?

There is a lot of evidence concerning the use of woodlands and the types of activities people undertake when accessing woods. We use activity as a proxy for the motivations people have for accessing woodlands and suggest that these are strongly linked to the well-being benefits people have experienced from previous visits or anticipate gaining from future visits. There is evidence on the well-being benefits (and values) of TWFs and a wider range of evidence focused on the well-being benefits of greenspaces. We note that it can be difficult to make specific distinctions between TWF and greenspace, as trees can be important components of parks, squares and green infrastructure. However, we have outlined some of the key factors that are particularly special to TWF.

Evidence shows that there exists a wide range of barriers that different groups can face in accessing woodlands. These are not only related to getting to a site, whether access is allowed on a site, and getting around on site; but barriers also relate to a wider range of socio-cultural, economic and personal barriers concerning factors such as social norms of visiting woods, familiarity, confidence, and awareness. Dealing with these latter issues is new for much of the forestry sector and requires different skills and approaches.

In reviewing the evidence we provide a new expanded typology of the well-being benefits people can gain from TWF. We outline that well-being benefits accrue from different configurations and interactions between the physical woodland resource (type of woodland, size, infrastructure, facilities) the types of engagement and activity being undertaken (walking, cycling, volunteering etc.), the characteristics of individuals and groups (age, gender, ethnicity, user group, community group etc.) and governance processes and structures (ownership, site management, site objectives, interventions and mechanisms used and available).

A range of mechanisms and interventions are being and can be used to encourage and enable public access across England. Evaluative evidence for these interventions is limited primarily to the public forest estate or the Forestry Commission working in partnership with third sector bodies, community groups and local authorities. Evaluations have taken place due to funding requirements e.g. (Lottery) and/or the objective of learning from operational delivery of what works and what does not work. Some of the evaluations of interventions focus on the impacts to the target groups benefiting from the intervention as well as the processes of how the intervention was set up and run. Combining both impact and process evaluation enables learning to be fed into interventions so that improvements and changes can be made while they are still running. Without robust evaluations of interventions we cannot learn and share learning on how to engage with particular groups and how to encourage and facilitate public access and enhance public benefit.

The evaluations that do take place do not often run beyond the life of the specific intervention, project or programme. Therefore it is not clear whether any improvements made in public access and the realisation of well-being benefits continue beyond the life of the intervention. This is a major issue concerning the sustainability of changes that are brought about such as increases in regular visits or in physical activity.

The key overarching factors that can lead to successful interventions are: 1) partnership working and, 2) understanding stakeholders in order to enable responsive design and delivery. Current evidence based on interventions that are being delivered shows that partnership working is wide spread and often a critical factor in the delivery of effective interventions. The diversity of partners can be beneficial (bringing new ideas, experiences, expertise) and potentially sometimes problematic (partners may have differing objectives, differences in capacity etc.). Understanding stakeholder needs, objectives and how these might be addressed are also essential in delivering successfully targeted interventions.

We categorised interventions into those related to: 1) woodland provision, 2) physical improvements to woodlands and 3) addressing the needs of individuals and groups. In terms of woodland provision an important gap in evidence relates to improving understanding of the values, attitudes, perceptions and objectives of private woodland owners. Physical improvements to woodlands such as improving facilities and infrastructure can make a significant difference to enabling public access and enhancing well-being benefits. In addressing the needs of individuals and groups interventions maybe targeted at: 1) overcoming barriers to accessing woodlands, and 2) overcoming barriers to gaining well-being from a particular woodland activity. Approaches such as education and learning, therapeutic programmes, targeted and led activities, outreach

and facilitated access have been shown to be successful approaches that can enable public access and the realisation of well-being benefits.

To finish we argue that while the evidence of well-being benefits gained from access are broad and reasonably well researched, there is less evidence about how these benefits differ across different woodland ownership and management types (other than the public forest estate). There is also less evidence regarding interventions that aim to increase public access and the realisation of well-being benefits. What evaluative evidence there is is strongly focused on the public forest estate or on other woodlands where the Forestry Commission is a partner in the intervention. We know that local authorities and third sectors organisations are delivering interventions and evaluations are needed of these to contribute to the current knowledge base. Evidence for interventions, focused on public access, run by private woodland owners is particularly sparse and efforts are currently aimed at increasing understanding of their attitudes and objectives.

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Appendix 1. Methodology

1. Making use of existing knowledge network.

A 'call for evidence' using the text indicated in box 1, which was sent to relevant contacts by email. Thirty-six people responded and provided 173 documents or links to documents. Sixty-one of these were of relevance for this report. These contacts, and the evidence provided, are listed in Appendix 5.

2. Literature Search

We conducted a literature search of academic and grey literature, using both academic on-line databases (Scopus, Web of Science) and internet search engines (Google, Google Scholar). The broad scope of this report has meant that we are drawing upon several related bodies of literature including work on access, benefits, barriers, and policy interventions. Our main selection criteria were

1. Relevance to the key issues and UK context
2. Recent reports and studies were preferred. Anything prior to 1990 was not selected.
3. Papers dealing with the financial and environmental benefits of TWF were not selected, as this was deemed beyond our remit.

Our search terms included combinations of:

Wood*/forest/
use/visit/recreation/access/public access
ownership/nifp/private

benefit/value/barriers/well-being/ wellbeing
physical activity / mental well-being / mental health / restoration / quality of life / connection to nature / sense of place / social connections / education / learning / social / cultural / symbolic / historical / heritage / wilderness / atmosphere / cost / time / transport / weather / safety / risk / change / improvement

Our search terms produced 10,555 hits overall. From looking at the most relevant of these we selected 202 on the basis of title, and from this 104 were rejected following reading of abstract, and the full text of 98 were sourced. A further selection round left us with 70 references.

In addition we sourced project material using the following criteria

1) Interventions that are fully evaluated

2) Published studies that look at particular programmes and their effects but are not strictly evaluations
3) FC summaries that explicitly outline what was done, who was involved, costs, achievements

3. Database compilation

We compiled an Excel database to systematically record all the identified evidence, both from key contacts and literature searches. All records were also put into endnote.

In addition project material was sourced through the FC records and internet, enabling us to compile the tables of evaluated programmes and projects used in the analysis.

4. Analysis:

We examined the evidence to identify key trends in relation to the objectives of this study.

Appendix 2. Well-being benefits

Fun and enjoyment

Woodlands provide a space for a variety of activities – A summary table in the Cultural Services chapter of the UKNEA shows that, compared with other habitats, woodlands offer one of the widest ranges of recreational activities (Church, Burgess, and Ravenscroft 2011).

Woodlands have a capacity to absorb activity without seeming crowded The varied possibilities for activity in woodlands can generally co-exist without detracting from the positive features of the woodland experience (O'Brien 2005c).

Woodlands are free. – The MENE survey shows that in 75% of visits no expenditure occurred (Natural England 2011). There is evidence of a widely held belief that woodlands should be free (Curry and Ravenscroft 2001) (Burgess 2002).

Examples of projects that have increased the well-being benefit from fun and enjoyment of woodlands: National forest (growing places) Woodlands in and around towns

Physical action and movement

There is a wealth of literature documenting the health benefits of outdoors exercise, though the specific mechanisms whereby trees and woodlands contribute to improved health is still under-researched. A recent review of 93 research papers concluded that 'it is clear that trees in parklands, woodlands, streets and around homes and workplaces are important for human health ' (O'Brien, Williams, and and Stewart 2010).

Physical activity is one means through which woodlands can deliver health benefits. Using woodlands is associated with increasing activity levels. This can have both short-term benefits in terms of fitness and longer-term health benefits with issues such as obesity or cardiovascular health. However, proximity to greenspace or woodlands is not directly associated with increased physical activity. Many studies have looked for associations between variables of greenspace such as proximity and quality and physical activity indicators. In a review of the evidence relating to urban forests and physical indicators O'Brien (2010) identified 21 such studies between 2004 and 2009. Thirteen found a positive association of at least one variable, but 8 found no statistically significant association.

Some experimental studies exploring possible mechanisms have measured short-term health indicators such as heart rate or blood pressure while subjects view images of natural scenes and urban scenes (Chang et al. 2008, Laumann, Gärling, and Stormark 2003, Pretty et al. 2005). These indicate that physical activity has a positive effect but they are experimental rather than recording actual experience outdoors. Epidemiological studies use population data to explore associations between greenspace accessibility and long term health indicators such as life expectancy (Takano, Fu et al. 2002, Hu 2008) and body mass index (Mujahid 2008, Bell 2008, Tilt 2007). O'Brien identified a further 28 studies based on self reported health data to broaden the picture of long term health related benefits from proximity or use of greenspace. (Mitchell and Popham 2007) *Overall one can say that there is some evidence that proximity, size and amount of green space influence physical health outcomes.*

Social contact also contributes to the positive health effects of woodland use. Green space use that facilitates social contact is shown to be of greater health benefit. A recent project took people suffering from depression and involved them in nature-based activities in a woodland site. Positive results were found, in part attributed to the social contact, and that the activities were socially valued (Townsend 2006). This underlines the findings of another study that concluded 'use' of outdoor space is a process, not an event involving many interwoven factors (Pinder et al. 2009).

Mental restoration

The most common responses concerning benefits of woodland experiences were to do with the concept of restoration. Participants talked about reducing stress, peacefulness, calm, restful-ness (O'Brien, Morris, and Stewart 2012).

Restorative and cognitive effects are another means through which woodlands deliver health benefits. Spending time in woodlands has been shown to reduce tension and improve mood (Berman, Jonides, and Kaplan 2008, MIND 2007, Morita et al. 2007). In the MIND survey 71 per cent of respondents reported decreased levels of depression following the green walk (MIND 2007). O'Brien (2010) found ten recent studies showing a positive effect of natural spaces on attention-related or mood indicators.

Studies that focused particularly on trees include Nordh et al. (2009a) which showed that trees play a role in enabling a sense of 'being away' in a city and that activities in the forest a way back from exhaustion and long-term sick leave. Research has shown that walking in a forest can lessen negative emotions and increase positive emotions more than walking along a street (Oishi et al., 2003; Osaki et al., 2005 cited in (Yamada 2006)).

Together restorative and social benefits of woodlands can have a range of positive effects on mental health and coping strategies. A positive effect of time in nature has been found for cancer patients (Cimprich and Ronis 2003); depression (Townsend 2006); crisis management (Ottosson and Grahn 2008) and even poverty (Kuo 2001).

Examples of projects that have increased the health benefit:
Chopwell wood
Active England
Walking the way to health
Branching out project FCS
Play project FCS
Feel blue touch green Australia
Green gym
Therapi project Thames chase
West Midlands health project

Education and learning

Research of recent years has highlighted the positive contribution that outdoor education can bring to children and young people (Borradaile 2006, Davis 2005, O'Brien and Murray 2007). In a detailed eight month observation period 'Improvements in the children's confidence, motivation and concentration, language and communication and physical skills were recorded by teachers and Forest School leaders. Changes took time to occur, highlighting the need for repeated and regular contact with the natural environment, especially for children who do not have access to nature as part of their everyday lives' (O'Brien 2009a).

Public support for woodland based educational experiences is evident from the POFS survey where around four fifths of respondents (83% in the UK and 82% in England) agreed that 'Woods are good places for my children to learn about the outdoors'. In addition to organized educational activities there is a strong public feeling that 'playing in the woods is good for children's health' (75% in the UK and 74% in England) (Forestry Commission 2011b).

Woodland play areas are beneficial for children's physical development. A Norwegian study of kindergarten children playing in a forested area found that the experimental group (46) showed considerable improvements in motor fitness compared to the reference group (29) and significant difference ($p<0.01$) between the groups was found in balance and co-ordination skills (Fjørtoft 2001). These differences were attributed to the 'stimulating and varied play environment.' Another study compared the physiological and psychological effects of climbing a live tree in a forest with those found

after climbing a concrete tower of the same height in the same forest (Gathright, Yamada, and Morita 2006). Physiological test results indicated that climbers' bodies were more relaxed after tree climbing than after tower climbing. Psychological results indicated greater vitality, and reduced tension, confusion, and fatigue while tree climbing, when compared to tower climbing. These results suggest that it is not only the physical complexity of natural play spaces which benefit children but the whole experience of being in nature.

Woodlands provide opportunities to use natural materials. In addition to the physical challenges of natural play areas, using natural materials is a positive experience for young people. Activities such as den building and gathering non-timber forest products broaden the sensory experience. 'Woodlands provide smells, sounds and touch' (O'Brien and Murray 2007).

Restorative effects also support the educational benefits of woodlands. The calming and therapeutic effect of being in woodlands is particularly important for young people with emotional and behavioural difficulties or special needs (O'Brien 2005c). Taylor et al. 2001 found that children function better than usual after activities in green settings, and that the 'greener' a child's play area, the less severe his or her attention deficit symptoms (Taylor, Kuo, and Sullivan 2001). Even children without prior attention problems were found to benefit cognitively from engagement with a natural play space (Leslie 2011) (Lovell and Roe 2009) (Roe and Aspinall 2011).

There is a link between childhood play in woodland and the extent of usage in later life. A study with young people from the North West of England explored the influences that shape young people's relationship with woodland environments. Although a connection was found between childhood access to woodlands and the likelihood of usage later in life, the authors add a cautionary note that it is not a straightforward relationship, and 'other factors can play a significant role in shaping the person-landscape transaction' (Milligan and Bingley 2007).

Examples of projects that have increased the educational benefit: Forest school, Glede wood –NEETS Hill Holt wood Forest Kindergarten Scotland

Symbolic /cultural significance

Woodlands are richly symbolic environments. 'Our research shows that woodlands are… filled with significance and meaning' (O'Brien, Morris, and Stewart 2012). 'The

political and symbolic meaning of woods has long roots, and thus influence current attitudes to the ownership of and access to woods' (Tabbush 2010).

Trees are symbols of national and local identity. There are many linkages between forests and identity, both individual and collective (Jones 2011). Particular species such as the English Oak, Caledonian Pine forest are valued as symbols of national identity. In the same way TWF contribute to a sense of place at a local level.

Examples of projects that have increased the symbolic and cultural benefit: Cannock Chase – route to health (cultural value) Neroche

Landscape

Trees are valued by the public as markers of time and place. In focus groups 'many referred to trees as symbols of qualities such as longevity, borne out of an ability to adapt, regenerate and survive' (O'Brien, Morris, and Stewart 2012). A study in Sheffield found that 'the elderly respondents particularly valued the woods for their links with the past, and opportunities for immersion in the natural world' (Jorgensen and Anthopoulou 2007).

Woodlands give aesthetic pleasure. 'One person in the Birches afternoon group summed it up: "nature is naturally inspiring". The diversity of trees was appreciated, and seeing trees that participants were not used to seeing often, as well as finding wild flowers found in the wood' (O'Brien, Morris, and Stewart 2012).

Examples of projects that have increased the landscape benefit: Neroche

Social connectedness

Woodlands are good settings for social occasions. Evidence from previous research that SERG and others have undertaken highlights that social engagement in woodlands is often an important component of a visit (Morris and O'Brien 2011). In their assessment of the Active England woodland sites it was noted that visits to all three sites are highly social and few people visited alone (Morris et al. 2011).

Participating in organized activity can facilitate meeting new people, and feeling part of a group. In a questionnaire participants were asked to what extent they felt that visiting with others or participating in an organised activity was important. Combining the agree

and strongly agree responses highlights that visiting with other people was most important (94%), followed by taking part in an organised activity (78%), and meeting new people (71.5%) (O'Brien, Morris, and Stewart 2012). Getting involved in an organised activity is particularly good for those who may not want or have the confidence to visit alone.

Examples of projects that have increased the benefit from social connectedness: Volunteering research Active England

Nature connectedness

The woodland environment afforded a sense of connection to natural cycles and processes. 'Many respondents talked about how woodlands signify a connection between themselves and nature. It appears, furthermore, that visits to woodlands have the effect of reinforcing an awareness of this connection by bringing people into direct experiential contact with, and actually being part of the natural environment and its processes' (O'Brien, Morris, and Stewart 2012). Observations of changes in the physical appearance of trees afford a sense of connection to the changing seasons. This sense of connection, of being part of natural cycles of change emerges from the research as a strong beneficial influence over people's well-being.

Gathering non-timber forest products has a range of benefits. A study in Scotland established that small-scale gathering of non-timber forest products (NTFPs) - wild edibles, medicinals, craft materials, etc. – 'has a range of benefits which have a specific hearing on the health and well-being of gatherers… by providing a source of joy and passion, feelings of self fulfilment and worth, and of human and personal identity. This well-being derived from the development of intimate bonds with the natural environment, family and friends' (Martin, Emery, and Dyke 2006).

Examples of projects that have increased the benefit from connection to nature: Access 2 nature Volunteering research

Sensory experiences

Woodlands provide a rich sensory three-dimensional experience. Part of the experience of nature is the sensory experience woodlands provide 'because when you're in a wood it is all around you'. 'The forest represents a major structure of the natural environment and affects all our senses: sight, sound, smell, taste, and touch.' (Yamada 2006). In a questionnaire, participants were asked to agree/disagree with: 'the following

improve my health and well-being when I visit this wood' – views (100%) smells (98%), textures (94%) and sounds (90%) were most important. If we just take the strongly agree response then views (84%) would be the most important followed by sounds (45%), smells (41%) and texture (20%) (O'Brien, Morris, and Stewart 2012).

Interesting work on this comes from Japan where the sensory experience of nature is greatly appreciated. Yamada et al. have explored the forest 'soundscape'; the sound of wind-blown leaves, the murmur of a stream, and birdsong. 'These sounds help compose the refreshing environment of a forest, but little research has focused on them.' In one study the authors clarified the differences between the acoustic properties of coniferous and broadleaf tree leaves (Katsumata et al., 2003 in Yamada 2003) and examined the psychological and physiological effects of hearing those sounds. Similar work was done for the acoustic properties of stream murmurs, and most recently they developed a method of planning forest walking routes to maximize the soundscape experience (Yamada 2006).

The sensory experience is therapeutic. 'We suggest that the rehabilitative effect of nature is tied to its function as an enriched environment.' In work with people rehabilitating after a crisis, Ottosson (2008) found that 'during stays in natural settings, an interaction takes place between sensory stimulation, emotions and logical thought—an interaction that leads to a new orientation and new ways of seeing one's self and one's resources' (Ottosson and Grahn 2008).

Escape/freedom

Woodlands provide a contrast and escape from more general everyday experiences. 'Getting out into the woodland environment gave participants a contrast to their everyday lives and provided for some feelings of freedom and escape. This could be escaping from something such as worries/frustrations or escaping into a sensory experience i.e. the view' (O'Brien, Morris, and Stewart 2012).

Emotional and psychological pleasures such as freedom, escape, quietness, being away from pressure, relaxation, contemplation, privacy, contentment and calm (O'Brien 2005).

Sense of ownership

Getting involved in the management of a woodland can be a positive experience of a sense of ownership. This theme is highly developed in WP3.

A sense of ownership is part of the motivation for private woodland owners.

There is evidence that 'ownership' is very important to some private woodland owners, and part of what they enjoy about their woodland is privacy and being able to do what they choose (Urquhart and Courtney 2011, Urquhart, Courtney, and Slee 2010).

Projects that have increased the benefit from the experience of ownership: Cydcoed Capital woodlands

Meaning, identity and personal development

Woodlands are places for contemplation. 'Contact with woodland could provide people with opportunities and space for: reflection on their place in the world, putting worries into perspective, thinking about the natural environment, considering other people's behaviour' (O'Brien, Morris, and Stewart 2012).

Example of a project that has increased the well-being benefit of identity and meaning: Faith woods

Appendix 3. Programme and project details

Table 14: Large scale programmes affecting access

intervention	Date	Description and objectives	Location	Ownership	Funding	Access improvements			Evaluation
						Planting	Physical improvements	Group and individual access needs	
Access 2 Nature grant scheme	Ongoing	to encourage people from all backgrounds to understand, access and enjoy our natural environment. 115 awards made - 9 projects with a woodland focus	All GB	PFE, Local Authority, NGO	£28.75 million grant scheme Big Lottery Fund's	One project Treewise -	Less than a third of all projects made physical access improvements Visit Woods website funded	Faith Woodlands project, Treewise, environmental education.	Icarus 2011
Active England	2003-2009	To encourage under-represented groups in physical activity to become more physically active. 241 projects funded – 5 projects with a woodland focus	Kent, National Forest, Devon, Wiltshire, Nottingh amshire, England	PFE and community	£94.8 million Sport England and Big Lottery	NO	New facilities and infrastructure	Facilitated Access 6 target groups: People on low incomes. People with disabilities. Women and girls. People 45 + years of age Young people < 16 years BME Group	Morris, and O'Brien, L. 2011.
Capital woodlands project	2006-2009	Capital Woodlands is a pan-London project with programmes aimed at providing community, education, training and volunteer opportunities across the city.	London, England	Local authorities and other	£1.04 million from heritage lottery fund	No	2,000 people at Fun days, 6,000 volunteer days at 100 sites, 134ha woodland improved, 5,000 school children participating.	Training for 12 unemployed people	FC (2011) Woodland Management in London
Community Forests	1990 -	To demonstrate the potential contribution of environmental improvement to economic and social regeneration 12 original projects, 8 remaining.	England	PFE and other	Core funding from Government. Now self-financing. Total investment secured £175million	10,000ha planted, Opened up 16,000ha of woods and greenspace for recreation	Brought more than 27,00ha existing woodland under management. Restored or created more than 4,000km footpaths and cycle routes.	Many projects involving local communities, e.g. Community Contracting Initiative, Mersey forest	Evaluation 2005: www.communityforest.org.uk/resources/evaluation_report.pdf

intervention	Date	Description and objectives	Location	Ownership	Funding	Access improvements			Evaluation
						Planting	Physical improvements	Group and individual access needs	
Cydcoed	2001-2008 (2 phases)	To use community forestry to deliver social inclusion and create social capital. 163 projects;	Wales	Local authority (81) and PFE (19)	£16 million from EU objective 1	37 new community woodlands, 316ha planted	101km of new or improved paths 7.8km new cycle tracks 652 new or improved access points	13 988 people involved 29 162 people attending events	SERG. 2008.
Forest school programme	1992-ongoing	To encourage first hand learning opportunities; increase environmental understanding; promoting wood as a sustainable resource; developing emotional & physical well-being among children.	Over 100 Forest Schools in England, 20 in Scotland and 20 in Wales	PFE and other	FC, support in kind from FSC	No	No	The total number of participants (children) involved in FEI activities across GB in 2009 was estimated to be 14,776.	O'Brien and Lovell 2011 O'Brien 2009 O'Brien, E and Murray, R. 2006. Murray, R. 2003.
Lincolnshire Limewoods Project	2005 - 2011	• To enhance the conservation value of the woods • To encourage community ownership. • To develop an access network and visitor facilities within the project area.	Lincolnshire, England	PFE and private.	£1 million (£700k from Heritage Lottery fund)	No	• Over 20 km of managed routes have been improved to provide access. • A new trail providing access for people of all abilities. Education and public enjoyment: • Chambers Farm Wood Centre has been refurbished and a new toilet block built.	There have been 25 school visits and 15 training events, 48 public events have been held including a 'working woodlands' day,	Not evaluated: data from FC case study
The Millennium Forest for Scotland	1994-2001	80 individual projects over 400 sites, to bring about significant physical restoration of native woodland	Scotland	Mixed	£30 million of which National Lottery £11.3million	3,577ha new planting, 6,174ha regeneration 12,506ha into active management	200km of footpaths created/restored		Data from Stewart and O'Brien 2010

intervention	Date	Description and objectives	Location	Ownership	Funding	Access improvements			Evaluation
						Planting	Physical improvements	Group and individual access needs	
National Forest	Since 1995	Large-scale landscape change delivering regeneration across 2oo sq miles in Central England.	Derbyshire, England	Private	Run by National Forest Company total comprehensive net expenditure 2010 -2011 £2,816,392	6 million trees across 51,800ha	2005 Annual Fair attracted more than 6,000 visitors and over 100 exhibitor	Many programmes with social outreach	Morris and Urry 2006 Ball et al. 2004
Neroche	2006-2009	To invest in natural, built & cultural heritage of area; to make landscape more accessible to everyone; to improve people's ability to sustain the qualities of the landscape.	Blackdown Hills, England	Mixed, PFE and private	£2.95 million (of which £2 million heritage lottery fund and £25k FC)	279 hectares of forest habitat created	40 kms of trails offering long distance off-road access for walkers and horse riders, all ability trails	Volunteering opportunities and programmes of events	Carter, C. O'Brien, L and Morris, J. 2011.
Newlands	2003-2009 phase 1	Large-scale regeneration project aiming to transform brownfield land into community woodlands.	North West, England	Private ex-brownfield land brought into PFE	£59 million	347 hectares regenerated	Cycle paths, sports equipment and footpaths created	Innovative social benchmarking work	Newlands Green Streets: pilot project. Evaluation report 2009
Treegeneration	2003-2008	• to promote the environmental benefits, the versatility and the cost effectiveness of trees and woodlands • to make it easier to use trees and woodlands in urban areas.	North East Wales	Public and private	Total cost of planting schemes £164,205 (£115, 342 from treegeneration grants)	27 planting schemes supported – 30ha planted	No	Local involvement: 2,200 people involved in planting, but not specific outreach for groups.	FCW 2009: Treegeneration
South Yorkshire Coalfield Restoration Project.	2001-2005	To encourage and provide urban greening, social enterprise, recreation and educational resources, timber production	South Yorkshire, England	Land restoration Trust own the land, managed by FC	£56 million	Restoration of 400ha of brownfield land	Paths and access points created	Green gym, community rangers to encourage local access	Communities and Local Government 2007

intervention	Date	Description and objectives	Location	Ownership	Funding	Access improvements			Evaluation
						Planting	Physical improvements	Group and individual access needs	
Woodlands In and Around Towns (WIAT)	2005-2011 phase 3: 2011-2014	To improve quality of place and help community participation: 1. create new woodland 2. bring neglected woodland into active management 3. work with people to help them use their local woodland.	Scotland	PFE and private	£50 million since 2005	1,400ha of new urban woodland created.	11,000 ha of neglected woodland brought into active management Over 300 miles of new or upgraded footpaths created	3,000 school children involved. 7,000 people participated in events.	Thompson, Roe and Aspinal, 2009

Table 15: Smaller scale projects with an impact on access –NB. This table is not intended to be a comprehensive summary of all projects but gives background detail on projects cited in the report.

intervention	Date	Description and objectives	Target group	Location	Ownership	Funding	Achievements	Evaluation
Amazon woman – project under the Wye wood partnership	2011	2 projects run by Small Woods in Telford and Hereford. To rehabilitate and reintegrate women offenders and those at risk of offending into their local communities by addressing the causes of offending behaviour in a safe non threatening woodland environment. The women spent 12 weeks in the woods learning woodland and coppice skills	Women probationers, - women at risk of offending through mental health and those on substance misuse related programmes.	Shropshire, and Hereford, England	Private and Duchy of Cornwall.	Funded through the LSIS and Skills Funding Agency Equality and Diversity Partnership Project	Numbers in the projects were small (15). The evaluation used the SF 36 index. Improved commitment among participants was observed.	(Pollard 2011)
Branching out	2007-	A referral programme for mental health patients, dedicated to green space and conservation. The service consists of three hours of activities per week in a woodland setting over a 12-week period. Clients take part in a variety of activities, including health walks and tai chi, conservation activities, bush craft, and environmental art.	Adults with mental health problems in the Greater Glasgow area.	Glasgow, Scotland	Council and PFE	FCS and match funding from Glasgow City Council Glasgow and Clyde Valley Green Network Partnership NHS Greater Glasgow and Clyde Glasgow Centre for Population Health	Twelve Branching Out groups have run with 77 people completing the course overall. Significant increase in physical activity levels. Self-reported improvements in confidence and self-esteem from participating clients	Wilson 2009
Chopwell Wood Health Project. –	2004	To improve the health and well-being of local communities surrounding the wood and build the evidence base in relation to woodlands and health	Local communities	Gateshead North East England	PFE	Forestry Commission Gateshead PCT Derwentside PCT Friends of Chopwell Wood Raleigh Cycles	Derwentside: Over 200 young people and staff from four schools in Derwentside took part. • After the visits there was a significant increase in the number of pupils who saw the wood as a 'healthy place' and increased usage by school families. Gateshead: 33 GP referrals took part in the activities, with 91% of referrals completing the 13 week programme, and most	O'Brien, E and Snowdon, H. 2007. FCE case study

intervention	Date	Description and objectives	Target group	Location	Ownership	Funding	Achievements	Evaluation
							continuing to participate post-programme.	
Cannock Chase: route to health	2005 - 2008	To enable people to access health information through sculptures themed around health issues and to experience the benefits of the outdoors. Artworks created by local artists and community groups,	'Hard to reach' community members (e.g. the inactive, and those with mental and physical health or disability issues),	West Midlands, England	PFE	£50,000 partners and Arts council	2,000 people have been directly engaged by participating in workshops A tenfold increase in visits (50,000 visits) to the trail each year.	FCE case study
Cannock chase : chase trails project	2007 -	To provide sustainable and exciting cycle trails To encourage existing cycling activity away sensitive habitats into robust areas able to cope with increased activity.	People aged 30+, women and girls, young people, people on low incomes, Black and Minority Ethnic groups and people with a range of disabilities	West Midlands, England	PFE	£206,720	The pilot technical trail that has been created has seen 30,000 visits in its first full year. • The facilities are being used by a wide variety of sporting groups including British Cycling. • Cyclists are being successfully drawn away from sensitive habitats.	FCE case study
Dartmoor prisoner resettlement initiative	2004-2006	To deliver a rehabilitation programme with HMP Dartmoor allowing selected offenders to work with Forestry Commission personnel at woodland sites. To offer offenders the opportunity of experiencing the restorative physical and mental effects of being outdoors in the natural environment.	Offenders	Dartmoor, England	PFE	£202k of which £78k from FC	The facilitator of this project won the 'Excellence in Service Delivery' category at this year's Civil Service Diversity & Equality Awards To date 25 offenders taking part, of which 15 have secured full-time employment in the private sector following release. Seven kilometres of streamside in the Dartmoor forests have been opened up by participants on the scheme.	Carter 2007
Faith woods	2006 -	A community involvement project with outreach through faith groups	Faith groups and general community outreach	Maulden Wood, Berkshire, England	PFE	FCE and the Department of Communities and Local Government (DCLG).	Site found, Woodland established, Community groups involved.	Tabbush, P. 2008.

intervention	Date	Description and objectives	Target group	Location	Ownership	Funding	Achievements	Evaluation
Glede wood	2008 -	Objectives: • To encourage a positive attitude to peers and adult role models • To increase self esteem • To develop motivation • To work in a manner that enhances physical health	A training programme for NEETs (youths Not in Education, Employment or Training).	Telford, England	Private. Offered to the project via http: woodlands.co. uk	European Social Fund - through a delivery contract with Telford and Wrekin Council	Small participant numbers. Two participants on the project have embarked on progression routes through college, apprenticeship and volunteering opportunities.	The Small Woods Association 2008
Hill holt wood	1995 -	To maintain the ancient woodland for use by the public. To teach and develop young people to help them realise their potential	Young people.	Lincolnshire, England	Private community	Runs as a social enterprise – delivery contracts with public bodies	Is a successful social enterprise. Daily on site around 100 people -27 staff and around 75 trainees.	O'Brien 2005 Stewart 2011
THERAPI (Tackling Health through Environmental Regeneration and Public Involvement)	2002 -	To promote the use of Thames Chase Community Forest (TCCF) for improved health and well-being.	General community outreach	London, England	Community Forest	£250k raised in matched funding. Countryside Agency, Local Councils and Primary Health Care Trusts.	11 projects delivered Fit'n'Green and Walking Health projects have been particularly successful in improving participants' mental and physical for health.	FCE case study
Tick Wood	2008	Partnership project with West Mercia Probation Trust	Offenders, but widened to include all probationers.	West Midlands, England	Private	Includes financial support from Sainsbury's Family Trust	13 registered for OCN qualifications from 65 participants (63 men and 2 women Observational records show improved motivation, confidence and physical health.	The Small Woods Association
Venture out	2009-2012	A three year health based programme - to increase the use of green spaces for physical activity across Telford and Wrekin	Sedentary adults, those with special needs and from communities with high indices of deprivation.	Telford, England	Local Authority	Telford and Wrekin Primary Care Trust.	Local community engagement events: Six training sessions of 12 weeks each, 2 days per week 56 Volunteering sessions. Total 514 sessions reaching 4484 participants	The Small Woods Association 2011
Walking for Health initiative	2000 -	To support the creation of 200 'walking for health' schemes across England over a five year period. (Also extended to Scotland – Paths to health)	Deprived communities, Ethnic minorities, isolated rural communities	All over	Varied	£12 million. Countryside Agency and the British Heart Foundation. UK National Lottery's New Opportunities Fund	WHI has helped to train more than 11,000 walk leaders and now supports: 650+ led health walk schemes; 3,200+ walks per week; 75,000+ regular walkers every week.	WHI 2004

intervention	Date	Description and objectives	Target group	Location	Ownership	Funding	Achievements	Evaluation
West Midland Health project	2003-4	A woodland-based health pilot project over one year. 7 projects	General	West Midlands, England	PFE and other	A Health Woodland Improvement Grant	4 out of 7 pilot projects evaluated	O'Brien, E. Greenland, M and Snowdon H. 2006. Interface NRM. 2004.
Winchester Prison Rehabilitation	2005-2008	To provide offenders with work experience and the skills to enhance their employment prospects. To offer offenders the opportunity of experiencing the restorative effects of being outdoors in the natural environment to enhance their physical and mental well-being. To help offenders re-integrate into the community upon release and reduce re-offending	Offenders - these are primarily men	Hampshire England	PFE	£200k (of which £100k FC)	Eight offenders worked on the scheme in the first year, for a total of 280 days. Participants constructed 400 metres of all ability access trails, brought one hectare of overgrown hazel coppice back into management and improved over three kilometres of road and ride edges.	FC case study
Working with Prisoners' initiative	2003 -	To offer training to prisoners.	Offenders	Oxfordshire, Bedfordshire, Lancashire	Natural England	Through Natural England	No data found	Carter 2007

Appendix 4. Glossary

ADHD - Attention Deficit Hyperactivity Disorder
ANGSt –Accessible Natural Greenspace Standard
BME – Black and Minority Ethnic groups
BTCV – British Trust for Conservation Volunteers
CROW – Countryside and Rights of Way Act
CSR07 - Comprehensive Spending Review 07
EU – European Union
FEI – Forest Education Initiative
GB –Great Britain
GP – General Practitioner
FC - Forestry Commission
FCE – Forestry Commission England
FCS – Forestry Commission Scotland
FCW – Forestry Commission Wales
IFP – Independent Forestry Panel
JMT – John Muir Trust
MENE – Monitoring of Engagement with the Natural Environment
NEA – National Ecosystem Assessment
NEET – Not in Education, Employment or Training
NGO – Non-Governmental Organisation
NTS – National Trust for Scotland
PCT – Primary Care Trust
POFS – Public Opinion of Forestry Survey
PFE – Public Forest Estate
PROGRESS - PROmotion and Guidance for Recreation on Ecologically Sensitive Sites
REA – Rapid Evidence Assessment
RSPB – Royal Society for the Protection of Birds
SERG – Social and Economic Research Group
TWF – Trees, Woods and Forests
UK – United Kingdom
USA – United States of America
WCG – Woodland Creation Grant
WHI – Walking for Health Initiative
WIG – Woodland Improvement Grant
WIAT – Woodlands in and around Towns
WT – Woodland Trust
WTA – Willingness to Accept

Appendix 5. Response to call for evidence

Box 2. Text of email circulated to invite contributions to Evidence Review

Forest Research has been asked by the Independent Panel on Forestry to review the evidence relating to community engagement in woodlands, to inform the Independent Forestry Panel in reaching their conclusions and to complement the tremendous response to the Panel's call for views and other research activities. You can find out more about the work of the Panel on their web pages at http://www.defra.gov.uk/forestrypanel/

The IFP have asked us to look at these two topics, alongside a comparison of how other countries approach forestry policy:

- Access: opportunities, barriers, perceptions and experiences of woodland / forest access from the perspective of woodland users, owners, managers, neighbours
- Governance: the motives, processes, experiences and / or outcomes of community engagement in any level of decision-making about woodland use and management (including models for ownership).

We would like to ensure that this review is as comprehensive as possible. We aim to take account of reports, theses and other material that may not be available through the standard on-line bibliographic search tools. In relation to the above two topics we are also particularly interested in any evaluations of projects/programme/interventions that aim to improve access or governance processes.

Eligible evidence will include a description of aim, method, data sources, findings and conclusions.

Table 16: Documents and weblinks received from the call for evidence:

Total 156 references, 73 of which were of relevance to WP3- Community engagement, 82 of which were of relevance to WP4 – Access.

Name	Organisation	Reports/Papers Cited	Documents Provided	Weblinks
Ian Barrett	Defra	Understanding what people want from the natural environment using customer segmentation	The Futures Company (2010) RP0280 Understanding what people want from the natural environment using customer segmentation	
Ian Bateman	UEA	Papers authored by Bateman	Batemen & Lovett (2000) Estimating and valuing the carbon sequestered in softwood and hardwood trees, timber products and forest soils in Wales.	
		Economic analyses of recreation	Bateman, I.J. and Lovett, A.A., (2000) Valuing and mapping woodland access potential, Quarterly Journal of Forestry, 94(3), 215-222.	
		Economic analyses of recreation	Bateman (in press) Economic Assessment of the Recreational Value of Ecosystems in Great Britain	
		Economic analyses of recreation	Brainard, Bateman & Lovett (2009) The social value of carbon sequestered in Great Britain's woodlands	
			Brainard, Bateman and Lovett (2001) Modelling demand for recreation in English Woodlands	
Giles Brockman	FC Scotland	Tunstall & Rendlesham Off-road cycling Group		http://www.trogmtb.com/
Giles Brockman	FC Scotland	Rendlesham carpark; play & cycling		http://www.forestry.gov.uk/rendlesham
Giles Brockman	FC Scotland	Tunstall forest BMX area.		http://www.moredirt.co.uk/trail_info.php?id=387
Giles Brockman	FC Scotland	Red Rose theatre company		
Kieron J. Doick	Land Regeneration and Urban Greenspace Research Group		Doick and Morris (2011) Activities and Events in England's Woodland	
Mike Downey	Natural England	Mersey Forest through Sefton Coast Woodlands Forest plan.	The Mersey Forest (2003) the Sefton Coast Woodlands, A 20 Year Woodland Working Plan, 2003 - 2023	
Kate Fielding	FC	Submission from the Forestry Commission's Equality and Diversity Team	Personal communication	

Name	Organisation	Reports/Papers Cited	Documents Provided	Weblinks
Louise Fleetwood	Community Involvement Coordinator Nottinghamshire		FCE (2011) Sherwood and Lincs Forest District Case studies 2010-2011	
Rob Gazzard	South East England Forest District		Ambrose-Oji (2010) Forestry Commission: working with civil society organisations	
Stephen Herbert	Natural England		Natural England (2011) MENE Report NECR084	http://www.naturalengland.org.uk/ourwork/enjoying/research/monitor/default.aspx
David Jenkins	Coed Cymru	Woodland recreation info	Personal Communication	
Keith Jones	FC North West & West Midlands		TEP/ Vision 21/The Countryside Agency (2004) Newlands Community Involvement Report	
Anita Konrad	Groundwork	London Trees and Woodlands Grant Scheme (now part of the RE:LEAF initiative)		http://www.ltwgs.org/
Nigel Lowthorpe	Hill Holt Wood	Issues of access and governance	Personal Communication	
Jason Maclean	FC West Midlands	West Midlands case studies, Walk to win,		http://www.walktowin.org/
		Monitoring Report (Cannock Chase Council) Route to health Survey	Cannock chase Council (2005) Monitoring Report Route to health Survey	
		Wye wood evaluation		www.forestry.gov.uk/fr/INFD-73QDK2
		Monitoring and evaluating quality of life for Forestry Commission England		www.forestry.gov.uk/fr/INFD-7TGBUC
		Active England evaluation		www.forestry.gov.uk/fr/INFD-6W8KLM
Duncan McKay	Natural England	MENE	Natural England (2011) MENE Report NECR084	
Ron Melville	FC England	Successes of the London Tree and Woodland Community grant scheme - Books sent	The Capital Woodlands Project (2011) Managing London's woodlands	
Bill Murphy	Head Recreation Coilllte	Dublin Mountains Partnership		http://www.dublinmountains.ie/home/
Paul Nolan	Mersey Forest	Home page		www.merseyforest.org.uk/pages/us_projects.asp

Name	Organisation	Reports/Papers Cited	Documents Provided	Weblinks
		Study into impact of mersey forest		www.merseyforest.org.uk/pages/displayDocuments.asp?iDocumentID=191
		North West Cheshire Forest Strategy		www.merseyforest.org.uk/pages/displayProjects.asp?iProjectID=22
			England's Community Forests -(2005) Review	
Tim Oliver	FC - Delamere	TEP Derelict, Underutilised and Neglected Land (DUNL) land survey	TEP (2006) Derelict, Underutilised and Neglected Land (DUNL) survey	
		The Public Benefit Recording System (PBRS)		www.pbrs.org.uk
		Cheltenham / Gloucester University ongoing monitoring and evaluation report of CMF	Countryside and Community Research Unit, Gloucester (2000) LRUFR CMFS Sustainable woodlands thriving communities	
		National Audit Office (NAO) report completed on CMF project	NAO (2005) Community Forests: A review of the Capital Modernisation Fund project	
			Blue Sail (2009) St Helens Forest Park	
		Newlands, the Spaceshaper social benchmarking work done by Pathways Consultantancy for each site	Pathways Consultancy (2008) Measuring the social impact of Town Lane – a new community woodland	
			Pathways Consutlatncy (2008) Netherley Spaceshaper Report	
Angela Pollard	Small Woods	Glede Wood Project	Small Woods (2008) The Glede Wood Project	
		Wye Wood Project	Small Woods (2008) The Glede Wood Project	
		Apley Woods - Big Lottery end of grant report	Small Woods (undated) Apley Woods - Big Lottery end of grant report	
		Venture Out. Increasing the use of Telford's Green spaces	Small Woods (2011) Venture Out. Increasing the use of Telford's Green spaces	
		Amazon Woman Hereford	Small Woods (2011) Amazon Woman Herford	
		Amazon Woman Telford	Small Woods (2011) Amazon Woman Telford	
		Social Forestry Overview	Personal Communication	

Name	Organisation	Reports/Papers Cited	Documents Provided	Weblinks
		Tick Wood Evaluation	Small Woods (2009) The Tick Wood Project	
		Tick Wood case study	Small Woods (2009) The Tick Wood Project	
Jo Sayers	The Mersey Forest Team	The Link Between the Quality of Parks and Behaviour	Cabespace (2005) Decent parks, Decent behaviour	
		Forest school initiatives around liverpool		www.projectdirtliverpool.com/group/forestschools
		Page listing docs relevant to green infrastructure		www.greeninfrastructurenw.co.uk/liverpool/search.php
Mike Seville	Country Landowners Association	Experience of managing private woodland	Personal Communication	
Chris Short	CCRI	Maximising the Economic Benefits of the New Rights of Access in Wales	Powell J and Christie M (2002) Maximising the economic benefit of the new right of access	
Chris Short	CCRI	Participants, activities, and experiences: understanding the connections		http://www.ccri.ac.uk/Projects/HeritageandLandscape/Completed/H13_Participants,%20activities,%20and%20experiences%20-%20understanding%20the%20connections.htm
Chris Short	CCRI		Jones O., (2011) Forest landscapes: Identity and Materiality	
			Curtis PHD. Debating the public benefits of community woodlands on degraded land: claims, aspirations and experiences at reclamation sites in the Northwest of England.	
			Jones O., and Cloke P., (2002) Tree Cultures: The Place of Trees, and Trees in their Place	
Bill Slee	James Hutton Institute	Comments on Opportunities to access woodland	Personal Communication	
		With Paul Courtney of the University of Gloucestershire, I co-supervised a PhD thesis on public goods in private woodland in England	Urquhart, J. 2006. A qualitative analysis of the knowledge base of private woodland owners with respect to woodland management and public good benefit issues. University of Gloucestershire.	
		Willis et al. and Willis and Benson	Willis and Benson (1989) Recreational values of forests.	
			Forestry 62:93-110.	
			Willis et al (2003) Social & Environmental Benefits of Forests in Great Britain.	

Name	Organisation	Reports/Papers Cited	Documents Provided	Weblinks
Richard Snow	Plunkett Foundation		Plunkett foundation (undated) Hill holt wood	
Wendy Thompson	Natural England		Natural England (2011) Monitoring of Engagement with the Natural Environment	
			Icarus (2011) Access to Nature grant scheme	
		Experiencing landscapes		http://naturalengland.etraderstores.com/NaturalEnglandShop/NECR024
			Carney (2011) Are the Norfolk Walking for Health Schemes having an impact on the health and wellbeing of their participants?	
			South, Giuntoli, Kinsella (2011) An evaluation of the Walking for Wellness project and the befriender role	
			Douglass & Carless (2011) Walking the Way to health in Bristol	
		Defra Diversity Review that aimed to identify barriers to people enjoying the outdoors.	Openspacce (2003) Diversity Review: Options for Implementation.	
Judy Walker	Smallwoods	Coed Lleol. End of Project Report	Coed Lleol (2010) Coed Lleol End of Project Report 2008-10	
		Wye Wood evaluation 2010	Tudge (2010) Wye Wood Evaluation Report	
		Wye Wood report 2005	Howie, Aldridge and Parrot (2005) Wye Wood: the wider wood. A project description and evaluation	
Catharine Ward-Thompson	Landscape Architect	Openspace Research		http://www.openspace.eca.ac.uk/
Jenny Wong	Wild Resources Ltd			www.dyfiwoodlands.org.uk
Sarah Vaughan	The Silvanus Trust			www.silvanustrust.org.uk/index.php?page=good-from-woods
			Stewart (2011) Woodland related Social Enterprise Enabling factors and barriers to successs	
			Morris et al (2011) Access for all? Barriers to accessing woodlands in the UK?	
				www.bcwoodland.org.uk/
				www.nerochescheme.org/

Name	Organisation	Reports/Papers Cited	Documents Provided	Weblinks
				www.silvanustrust.org.uk/index.php?page=woodland-renaissance-investments
			FC (2008) Offenders and Nature, policy into practice	

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