

Equality and Inclusion of Social Diversity with respect to Woods and Forests in the UK: An Evidence Review



This is a report produced by the:

Social and Economic Research Group

Centre for Human and Ecological Sciences

Forest Research

www.forestresearch.gov.uk/peopleandtrees

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An appropriate citation for this report is:

Ambrose-Oji, B., 2009, Equality and Inclusion of Social Diversity with respect to Woods and Forests in the UK: An Evidence Review. Research Report, Forest Research. Alice Holt Lodge Farnham, Surrey.

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Introduction

The broad objectives of this research review are to summarise the available evidence of the impact of trees, woods and forests on different sections of British society. This information should support the equality agenda being implemented throughout the Forestry Commission through the new Equality Impact Assessment (EqIA) process.

The specific objectives of this research are to:

- Collate existing knowledge and evidence relating to diversity, inclusion and equality in the context of trees, woodlands and forests;
- Produce a summary review that outlines what we know and what the evidence suggests about the impacts (positive and negative) on the different equality groups;
- Identify the gaps in evidence and knowledge and suggest what further research may need to be commissioned.

Strategic and legislative framework

Diversity and social inclusion are integrated within the work of the Forestry Commission in a number of different ways. At a policy level, all three country forestry strategies include reference to diversity, inclusion and equality. The English Strategy for Trees Woods and Forests or ETWF (DEFRA 2007), indicates that the “Communities and Places” theme, will be achieved through: the support and development of cohesive and engaged communities; green infrastructure and a building a sense of place; and by increasing the contribution that trees, woods and forests make to the quality of life for those living in, working in or visiting England. Two key principles are explicitly included in the delivery of these wider objectives. The first is to understand and deal with diversity, both in the physical characteristics of woodlands, and in the motivations of owners and users. The second is to ensure that the benefits provided by public investment in trees, woods and forests are shared by all sections of the community (DEFRA 2007, page 11). There is explicit guidance on the implementation of policies which will act to “help people to

engage with the ownership, design, management, maintenance and use of their local trees and woodlands as part of their vision for their own neighbourhood (especially those groups and individuals who are difficult to reach or not currently involved)" (DEFRA 2007, page 14). In addition there is an expectation to "promote and support the role of trees and woodlands as a catalyst for community capacity building, bringing together different members of the community through formal and informal activities" (DEFRA 2007, page 14).

The Welsh forest strategy has similar ambitions. The revised Woodlands for Wales strategy still has a focus on disadvantaged and hard to reach groups with proposals to ensure that woodlands respond to the needs and priorities of those communities (Welsh Assembly Government, 2009, page 29). There is also strong support for targeting children, youth and older people through the use of woodlands for forest schools, learning enterprise development and health oriented outcomes (Welsh Assembly Government 2008, pages 30-32).

In the Scottish Forestry Strategy the overarching principles are "sustainability, through sustainable development underpinned by sustainable forest management and social inclusion" (Forestry Commission Scotland 2006, page 14). Scottish forestry is expected to combat social exclusion by promoting opportunities for people to benefit from woodlands and woodland management, helping to tackle the barriers to inclusion, helping children and young people get the best possible start in life, and helping to strengthen communities and regenerate deprived areas (Forestry Commission Scotland 2006, page 14). There are specific objectives to achieve this through the key themes of Community Development and Access and Health, where the removal of cultural and perceptual barriers to woodland access for all sectors of society should deliver health and wellbeing benefits and more resilient communities. Forestry Commission Scotland also has specific strategies for health (Woods for Health) and learning (Woods for Learning).

In addition to the objectives and targets set out in the country forest strategies the Forestry Commission has a duty to comply with a number of important pieces of equality and inclusion legislation. The most important of which are the:

- Sex Discrimination Act 1975 (SDA)
- Race Relations Act (RRA) 1976 and Race Relations Amendment Act 2000
- Disability Discrimination Acts (DDA) 1995 and 2005
- Equality Act 2006

Each of these places a duty on the Forestry Commission to ensure and advance equality in the provision of goods and services, the management of premises, in education and the exercise of public functions.

There are also new access standards in the three countries, which need to be taken into account. These provide guidance on equality of access and add a further layer of compliance:

- Coming from the Scottish Land Reform Act (2005), The Scottish Outdoor Access Code¹, requires access providers such the Forestry Commission to promote access for all, and to widen the range of people and levels of participation in the countryside;
- In England and Wales Sections 60, 61 and 69 of the Countryside and Rights of Way (CROW) Act 2000 introduced statutory and non-statutory guidance and amendments to other legislation (e.g. the Highways Act 1980), so that access to the countryside is improved. For example, better access to rights of way is provided to people with mobility problems² and improvements to local access networks is based on the needs of different groups of users³;
- With regard to rights to access Forestry Commission woodland and forests were not automatically included in the 'right to roam'. However, the Forestry Commission dedicated its freehold estate in England and Wales, as Dedicated Access Land with some minor exceptions, and so access rights now exist over this land. Public access to the forest estate has equivalent status as access land under the provisions of the CROW Act⁴.

Also important to note here is DEFRA's Diversity Action Plan "Outdoors for All"⁵ (DEFRA 2008) which may have influence on related Forestry Commission strategies. Under the Diversity Action Plan there are two key targets for broadening social inclusion that aim to realise a measurable increase in:

- Awareness by under-represented groups of what the natural environment has to offer and where to go to enjoy it;
- The number, diversity and frequency of people in under-represented groups enjoying the natural environment.

¹ The code was developed and issued by the Scottish Ministers in February 2005 under section 27 of the Land Reform (Scotland) Act 2003. See here <http://www.outdooraccess-scotland.com/default.asp>

² See for example British Standard 5709:2001

http://www.countrysideaccess.gov.uk/things_to_know/access_for_the_disabled

³ See for example, Rights of Way Improvement Plans (ROWIPs) 2007.

⁴ See Forestry Commission Operational Guidance Booklet 30 for more information available from; <http://alpacorn.forestry.gov.uk:7777/pls/portal/url/ITEM/F050CD7DB170171DE03012D3098098CA>

⁵ See here: <http://www.countryside.gov.uk/LAR/Recreation/DR/DRAActionPlan.asp>

The Forestry Commission's approach to equality groups

Within each country's forest strategy and the associated countryside legislation, there are strong commitments to the idea of diversity and equality of access to woods and forests. The emphasis on equality and inclusion is tied to an understanding of social diversity. There are six strands of diversity that are supported in the national legislation mentioned above, namely:

- Gender⁶
- Race or ethnicity
- Disability⁷
- Age
- Sexuality⁸
- Faith or belief

The recognition of diversity, and the duty to ensure equality between the "six strands of diversity", applies to the users of Forestry Commission goods/resources, services and public functions, as well as to employees within the organisation⁹.

A seventh dimension of diversity that does not have a statutory foundation but needs equal consideration is social deprivation. "Social exclusion" or "social deprivation", are terms often used interchangeably. However, they do not share a single agreed definition. Social exclusion can refer to any form of inequality or exclusion associated with any of the six "equality groups". The Cabinet Office gave the governmental description of social exclusion in 2000¹⁰ where it is used to refer to the exclusion of people living in areas with difficult economic or socio-economic conditions. As the Cabinet Office asserts, it is a short-hand term for what can happen when people or areas have a combination of linked problems, such as unemployment, discrimination (as a result of any one or a combination of the six strands of diversity), poor skills, low incomes, poor housing, high crime and family breakdown. These problems are linked and mutually reinforcing. Social exclusion is an extreme consequence of what happens when people do not get a fair deal

⁶ That is men, women and people who have gender reassigned or identify as transgender.

⁷ This includes a range of disability types such as those with: communication difficulties; deafness and hard of hearing issues; learning disabilities; mental health issues; physical disabilities; and serious sight loss.

⁸ This includes lesbian, gay and bisexual orientations as well as transgender.

⁹ Specific legislation applies to employees of the Forestry Commission and to its businesses and agencies as captured in the: Employment Equality (Age) Regulations 2006; Employment Equality (Sexual Orientation) Regulations 2003; Employment Equality (Religion or Belief) Regulations 2003.

¹⁰ See for example http://www.cabinetoffice.gov.uk/social_exclusion_task_force/context.aspx

throughout their lives, often because of disadvantage they face at birth, and this disadvantage can be transmitted from one generation to the next. Social deprivation is commonly measured using deprivation indices that take account of multiple indicators of social exclusion, including: average household incomes; employment levels; health status; educational achievements or attainments; geographical access to services (doctors, schools etc); social environment; and housing. The Forestry Commission has taken some of these issues into account in its own programmes already. For example, the focus on 'disadvantaged' areas, linked to urban regeneration, prompted the early establishment of community forests in deprived areas (see for example Land Use Consultants 2005). The Forestry Commission England's Corporate Plan 2008-2011 and the ETWF delivery plan 2008-2012 both use the following as a target for success 'the percentage of the population in priority areas with access to woodlands as an indicator of quality of place'. Priority areas are identified as those that are in the 40% most deprived areas of the country.

Whilst there are general duties defining the need to eliminate discrimination and promote the needs of the different equality groups, the development of new equality legislation extends many specific duties to actively promote, select, consult, and include equality groups in the development of policies and services pertinent to them. The general and specific duties related to race gender and disabilities are outlined in the Forestry Commission's Race Equality Scheme¹¹, Gender Equality Scheme¹² and Disability Equality Scheme¹³. But the Equality Act takes the social inclusion agenda further, and marks a significant policy development. Social inclusion reflects a proactive, human development approach to social wellbeing. The emphasis is to move beyond the removal of barriers, and forward through the active targeting of investment and the promotion of the conditions for inclusion and equitable access at all levels of operation.

This strengthened focus on the promotion of equality means that the Forestry Commission will introduce procedures to assess all new policies and functions using the Equality Impact Assessment (EqIA) process (Diversity Team 2008). The equality impact assessment tool that has been developed by the Commission will be used to assess policies for their impact on employees but most importantly also on service users. The Forestry Commission's approach to EqIA intends to engage people from different equality groups in service areas to ensure their needs and priorities help shape local policy and service delivery¹⁴. The Forestry Commission, as with many other public organisations,

¹¹ Available from <http://www.forestry.gov.uk/forestry/INFD-5TMLRD>

¹² Available from <http://www.forestry.gov.uk/forestry/INFD-72EM2S>

¹³ Available from <http://www.forestresearch.gov.uk/forestry/INFD-6W2DMR>

¹⁴ For more information about the Government's thinking on greater inclusion in decision making through the EqIA process see Department for Communities and Local Government 2008, 'Communities in Control: Equality Impact Assessment' available here:

<http://www.communities.gov.uk/publications/communities/equalityimpactassessment>

has taken the decision that Equality Impact Assessment will be applied to ensure support for each of the six main categories of diversity (Diversity Team 2008).

With this in mind, it becomes particularly important to synthesise the available information about diversity and inclusion in woodlands and forests, so that it is possible to understand better how the Forestry Commission's policies and service provision are likely to impact communities and equality groups at the local level.

Research Methods

The research was conducted through a desk-based review of published material and grey literature (i.e. project reports). The methodology followed as far as possible the general principles of a descriptive systematic review (see for example Centre for Evidence Based Conservation 2008). The priorities that served as the basis for the evidence review were:

- Research since 1990;
- Empirical studies (i.e. primary research including case studies that can be described as evidence);
- Reviews considering empirical research;
- Material covering the countries of the UK (studies from other parts of the world have not been included);
- Documents related to countryside and outdoor access (including openspace and green spaces);
- Data focused on trees, woods and forests;
- Material describing impact;
- Attention on aspects of diversity – using the six/seven strands of diversity and related terms (e.g. BME) as key words.

Definitional and methodological issues

There were some challenges assessing the evidence against the six/seven strands of diversity listed above, because terms used in studies encompassed a mix of the diversity strands or were inconsistent in their application. For example, the term:

- Race and ethnicity is generally captured as "BME" (Black and Minority Ethnic groups) often disguising variations by particular ethnicities¹⁵, and the use of "BME" includes an element of both race/ethnicity and faith/belief equality groups which means that it is not easy to discover the evidence attributable to one factor or another;

¹⁵ see for example Economic and Social Data Service (2006) for a clear articulation of race and ethnicity terminology.

- “Disabled” often concentrates on people with impaired mobility (wheelchair users in particular) rather than other disability groups;
- “Elderly” often assumes impaired mobility but this is rarely made explicit in the study sample;
- Social exclusion in some studies was related to the national indices of deprivation, but in others exclusion was assumed on the basis of geographical location not on those people included in the study;
- Youth, elderly and children are not always defined using years or age classes, and where these have been used they are not consistent across studies;
- ‘Gender’ is used to denote ‘women’ rather than men, women and transgender or gender re-assigned individuals¹⁶.

In addition to this is the fact that individual participants have ‘multiple identities’ and often belonged to more one than one equality group. For example: BME mothers of young children living in areas with a high SDI (see for example Weldon *et al.* 2007a); or teenage, girls from minority ethnic groups (Greenfield *et al.* 2000); or disabled youth from areas of social deprivation (Burns *et al.* 2008). This also made discovering the evidence attributable to one factor or another particularly difficult.

Assessing the evidence and selecting key studies

Amongst the primary research there were a mix of qualitative, case study and quantitative studies. There were also important reviews of literature and evidence. The quality and weight of evidence provided in the studies was assessed using the:

- Government Social Research (GSR) guidelines for Rapid Evidence Assessment (REA)¹⁷. REA is appropriate where research relates to “constructing a map of evidence in a topic area required to determine whether there is any existing evidence and to direct future research needs”;
- GSR guide to Quality in Qualitative Evaluation: A Framework for assessing research evidence¹⁸.

A total of 134 documents were identified, of which 97 documents were selected as being of direct relevance. This came down to a final selection of 34 key empirical studies (see

¹⁶ This is probably understandable since surveys such as the Countryside Agency’s Diversity Review (Uzzell *et al.* 2005a, 2005b), the England Leisure Visits survey (Natural England 2005) and the Forestry Commission’s public opinions and visit surveys (see for example DEFRA 2008, Forestry Commission Scotland 2008, Forestry Commission 2007a, 2007b, 2007c) all show that there are more males (most often white and middle aged) than women who visit woodland and ‘countryside’ frequently.

¹⁷ See here http://www.gsr.gov.uk/professional_guidance/rea_toolkit/sitemap.asp

¹⁸ See here http://www.gsr.gov.uk/professional_guidance/quality.asp

Annex 2) and four significant reviews of empirical research. These are referred to as the 'key studies' or 'core evidence'. Many of the remaining documents were policy and practice guidance documents. Some of these studies form part of a package of documentation covering one particular site. In this review these have been grouped together and been treated as a single study: For example the work of O'Brien (2004; 2005a; 2005b) covers youth inclusion and training at one site Hill Holt Wood, or the work of a team at Cardiff University (Anon 2001b; Bishop *et al.* 2001a; Bishop *et al.* 2001b; Kitchen *et al.* 2006; Kitchen *et al.* no date; Marsden *et al.* no date) which looks at the same case studies in the South Wales Valleys. Whilst some of the key studies concentrate on particular equality groups to provide specific analysis, others used samples which mixed a range of equality groups and then drew more general conclusions. These have been defined as **focused** studies (i.e. dealing with one equality group in detail) and **inclusive** studies (i.e. dealing with a mix of equality groups in broader terms) respectively. Of the key studies a total of 19 are specifically related to woodlands and forests. The empirical studies cover between them more than 70 woodland and forest sites throughout England, Wales and Scotland as well as Northern Ireland.

More than half of the key studies include work with additional stakeholders, most often service providers (e.g. FC staff), to explore their knowledge and understanding of the needs and expectations of equality groups, and their reactions to improving access.

It is worth mentioning here two recent documents of note which have conducted similar reviews. The first by OPENspace (2008) presents a review of evidence for the Welsh Assembly Government focusing on outdoor recreation, participation and the preferences of WAG priority groups. The second by Bell *et al* (2008) reports on the evidence and impact of green space on health and wellbeing for the Greenspace Scotland initiative. Both of these reviews analyse many of the same studies and documents as those included in this piece of work. The Countryside Agency's Diversity Review (Uzzell *et al* 2005a, 2005b; Ward Thompson *et al* 2003) is probably the first influential work on diversity and countryside access, and remains an important source of information. It is referred to a number of times in this document as the 'Diversity Review'.

Diversity, social inclusion and access to woodlands and forests

The particular interest of the Forestry Commission has been, and will continue to be, to understand how to improve equality of access to the public forest estate. The policy and service emphasis on improving equality of access to woodlands and forests and other green spaces, means that most of the research commissioned by the Forestry

Commission (and other agencies with an 'environmental' remit), has concentrated on exploring barriers to access for certain equality groups and how best to overcome these. This type of research documents some of the preferences and attitudes of different equality groups towards woodlands and forests. Preferences and attitudes are often included as a direct measure of the feelings of 'exclusion' held by different groups. As a corollary these studies use these perceptions to develop guidance on how best to encourage different groups of people into woodland settings.

Ensuring and promoting equality in the provision of goods, services and functions requires an understanding of these barriers to access. However, this forms just part of the picture with regard to providing evidence of the actual **impact** of the presence and use of woods and forests by different groups of people, and hence the wider impact of ensuring equality.

Another factor highlighted in the key studies is that for many of the research participants, terms such as 'wood' and 'forest' are used interchangeably with phrases such as 'the countryside'. Even where woodlands were the specific focus of the research, participants tended to answer questions in terms of their broader experience of, and attitudes to, green space in general. The location, tenure or physical characteristics of the woodland or forest included in the studies, even the forest specific research, was not always well described nor related to the topics discussed with research participants¹⁹. Consequently, it is hard to isolate the evidence that relates specifically to the **particular** features of woods and forests, as opposed to those that apply to the 'outdoors', the 'countryside' and green or open spaces more generally.

There is evidence from nationwide and country specific surveys and opinion polls that document the woodland specific preferences of the general population. These demonstrate that the public generally prefer woodlands and forests of about 85% canopy cover, with areas of open space throughout the woodland (Willis *et al.* 2003). Deciduous trees are by and large preferred to dense plantings of conifers (Forestry Commission 2007b; Forestry Commission 2007c; Forestry Commission 2007d)²⁰. But, the evidence suggests, that it is the cost of travel to a site, and individual motivations and attitudes to trees, woodlands and forests that have the most significant impact on the decision to visit and use woodland (Forestry Commission 2007b; Forestry Commission 2007c; Forestry Commission 2007d; Forestry Commission Scotland 2008). Some of these preferences are shown to apply to equality groups also. In their study of under-represented groups²¹

¹⁹ There are some notable exceptions, with exemplary work by Ward Thompson *et al.* (2004a) who very carefully associate woodland type etc. with their research, and provide very clear and detailed spatially referenced information about the woodland under consideration.

²⁰ In some studies there is evidence to support the view that it is 'appropriate' trees which are preferred, i.e. in highland or upland areas conifers may be perceived as 'natural' and preferred as a consequence (see for example Forestry Commission Scotland 2008).

²¹ That is, the socially excluded, elderly, and children.

and access to woodlands and forestry in Scotland, Ward Thompson *et al* (2004a; 2004b; 2004c) show through statistical analysis that the best demographic predictors of woodland visits were: a history of visiting woodland as a child; owning a dog; and having a special connection with woodlands (i.e. attitude). In addition, there is ample evidence to support the view that transport and the costs of getting to woodland is the major barrier to access for individuals within each of equality groups (see for example Anon 2001a; Askins 2001; Barratt and Davies 2001; Bell *et al.* 2006; Bell *et al.* 2007; Blenkinsop 2007; Burns *et al.* 2008; Davis and Adomako 2000; Forestry Commission 2007a; Hillis 2005; Milligan *et al.* 2003; Morris 2003; Pendergast 2001; The Countryside Agency 2005; Ward Thompson *et al.* 2004b; Weldon *et al.* 2007a).

Whilst we can assume that many of the 'headline preferences' mentioned above might also apply to the different groups in society, the evidence relating to under-represented groups in these national level surveys is not well elicited. This is partly because their inclusion in the sample is small, or because there is no analysis which disaggregates by equality groups. Visitor-based surveys of course only capture the opinions of the actual visitors. Whereas women are better represented in visitor-based samples, making between 45-55% of the surveyed participants, the other groups remain under-represented. In general, disabled visitors making up to 8% of the sample and low income groups 5-14% of the sample. Data collection and analysis using techniques which account for individuals being members of more than one equality group, or which disaggregate by different kinds of disability have not been applied.

The final point to be made here is the use of the term "under-represented" or "under-representation". This is not the same as exclusion. Exclusion signifies an inability to participate, a lack of choice brought about by social and other barriers. Equality signifies equal treatment, the ability to choose to participate without the hindrance of barriers. Under-representation may be a matter of choice. For example, a particular individual may simply have no interest in woodlands and forests and therefore elects not to visit. In this sense under-representation may not be a symptom of exclusion or unequal treatment. The challenge is to make sense of the available evidence bearing in mind these kinds of differences.

What do we know already? The evidence.

This section of the review presents the evidence which is available and which goes some way in outlining the details applicable to each of the equality groups.

This section is divided into three parts. The first part illustrates the **characteristics of the key studies** forming the evidence. The second part examines the **barriers** to access and ways of overcoming these shown by the evidence. Finally, the third section looks at any evidence of direct and indirect **impacts** on equality groups.

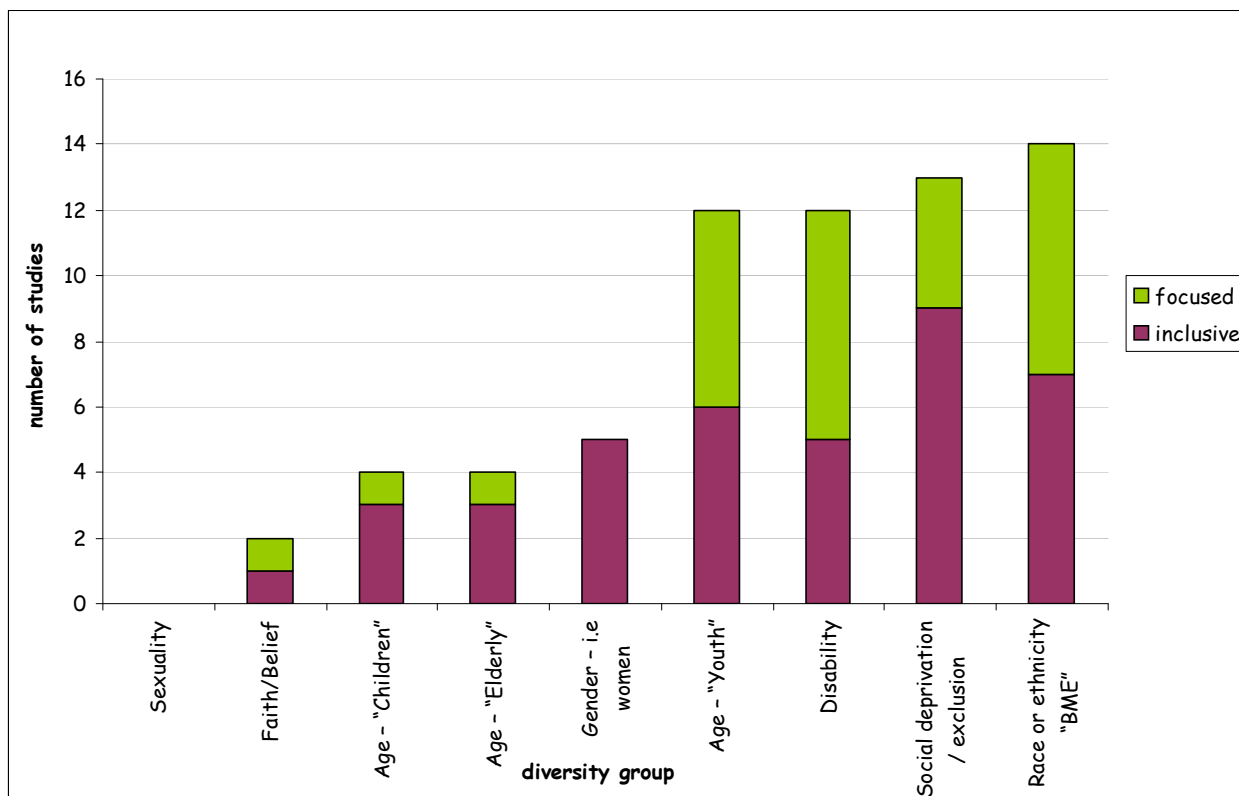
Characteristics of the selected studies

A list of the selected studies and their significant characteristics are included in Annex 1 and Annex 2.

Which strands of diversity are covered and how?

Of the 34 empirical studies targeted by this review, there were 22 **focused** studies (i.e. dealing with one or two equality groups in detail e.g. faith groups who are also Asians) and 10 **inclusive** studies (i.e. dealing with a mix of equality groups in broader terms) that cut across the range of equality groups. How the studies covered the different equality groups is summarised in Figure 1 below.

Figure 1. How the selected studies* cover equality groups



Note: 'Studies' refers to particular cases or research locations, not to the number of documents. Some cases are associated with a number of different research papers and reports. Each of the strands of diversity covered by the inclusive studies are included in category totals.

One equality group was not covered at all: No studies were found which related to sexual orientation and lifestyle and the use of woodlands and forests.

It is interesting to note how the coverage of these studies concentrates on BME, disabled and youth groups. Recent research has responded to the identified need to focus on better understanding these groups²², both through specifically commissioned research and through the increase in the number of projects working with these groups that therefore become available for evaluation and research²³. The relatively high numbers of studies focused on social exclusion or deprivation are accounted for by research located in urban and peri-urban areas and those associated with large scale woodland and forest projects in the English National Forest and the South Wales Valleys. In the most recent research there has been a very conscious effort to focus research attention on locations in areas of greater social deprivation and exclusion.

Which woodlands/forests and outdoor spaces are covered?

The range of different kinds of woods and forests included in the studies is indicated in Figure 2. The information about the tenure of the woodland and forests was not well recorded.

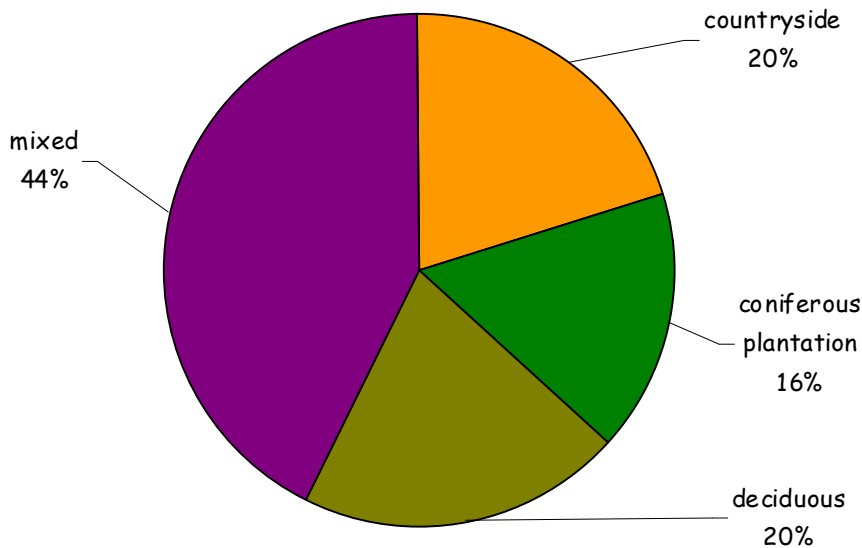
The mix of tenure types includes private woodland (that may or may not have received grant aid), Forestry Commission sites, Local Nature Reserves (LNRs), National Nature Reserves (NNRs), National Parks, Local Authority sites, and sites belonging to third sector organisations such as the National Trust, RSPB and the Wildlife Trusts. Coverage across the three countries was dominated by England and Scotland with just six forest or woodland sites (9%) located in Wales. A total of three sites in Northern Ireland were included.

Since many of the studies have been conducted in areas of multiple deprivation or examined regeneration forests and woodlands open for public access, most were located in peri-urban areas or rural areas (see Figure 3 below). There is a smaller representation of woodlands in urban areas. However, it is important to note that of the 70 woodland sites mentioned 23 did not provide information regarding physical location.

²² The Countryside Agency's Diversity Review (Uzzell *et al* 2005a, 2005b; Ward Thompson *et al* 2003), highlighted these equality groups as being particularly badly represented as users of the countryside, and in terms of those whose views have been collated or researched. Youth, BME and disabled groups were listed as particular priorities.

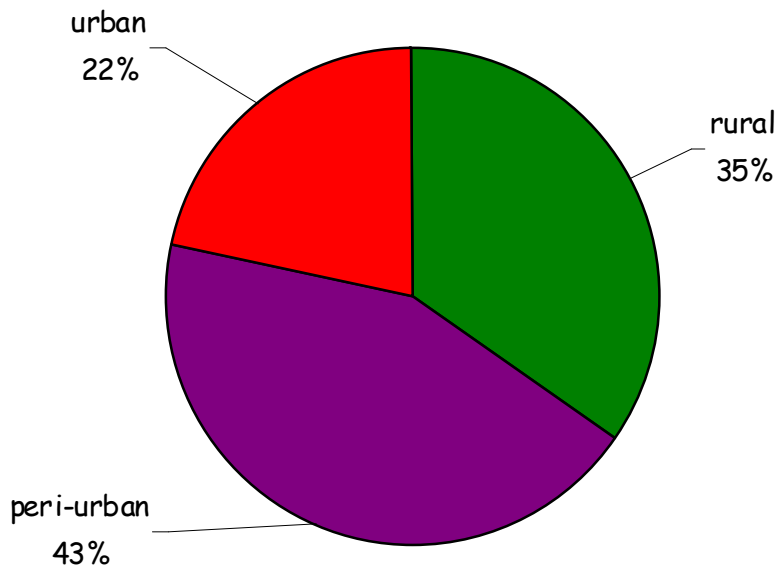
²³ An earlier Diversity Review Research Note (The Countryside Agency 2004), outlines that projects involving equality groups followed a similar order: disability (27%), young people (21%), BME (15%), low income groups (9%), older people (3%).

Figure 2. Study coverage of different types of woodland



The total figure represents the number of woodland sites mentioned across all of the studies. A single study may have included a number of sites each of different type. 22 (out of 70) woodland sites included in the studies were not described so are excluded from the total.

Figure 3. Study coverage of different woodland locations



Note. 23 (out of 70) woodland sites included in the studies were not described in terms of location so are excluded from the total

Barriers to access

The subject of “barriers to access” is well covered in the academic literature and the selected empirical research. The different ways in which these barriers can be characterised and theorised is also well rehearsed, and reflected in the findings of the Diversity Review (see for example Barratt and Davies 2001; Countryside Access and Activities Network 2008; OPENspace 2008; Stoneham 2001; Ward Thompson *et al.* 2003; Weldon *et al.* 2007a). There is general agreement that there are 3 broad categories of constraints or barriers to accessing woodlands, forests and other green spaces. They are normally presented as social, psychological, and physical in origin, as follows:

- **Perceived barriers**

These may or may not be real barriers, but are perceptions and felt barriers that stop people from accessing woods and forests. These would include issues such as fear for personal safety and security; a lack of knowledge about access ‘rights’; lack of time; belief that poor health or fitness prevents access.

- **Social and emotional barriers**

Relating to the way in which people connect with woods and forests at a more personal preference level, many of these barriers are connected with emotional reactions to woods and the outdoors and levels of confidence in outdoor settings. Included here are, feeling unwelcome; fear of getting lost and lack of confidence; concern about anti-social behaviour; being put off by a previous bad experience; disliking the ‘dirt’ and unpredictability of the natural setting and the weather.

- **Physical and structural barriers**

These are site-based and wider societal or economic issues which act as effective barriers. Site-based barriers include poor provision of facilities and poor management of woodland and forest sites; poorly designed site features such as styles, and muddy paths; structural barriers affecting access to sites include lack of or cost of transport; and issues such as entry fees being too high.

It is important to acknowledge how the different types of barriers relate to different forms of exclusion and inequality. Physical and structural barriers are perhaps the most obvious of those which prevent equality of access to disabled users, to mothers of young children, and to the elderly and people managing on lower incomes. It is often clear what actions could be taken to improve equality of access and service provision. Less obvious though are the ways in which emotional and perceptual barriers interact. The studies show that some of the emotional barriers to access may simply signify personal preferences within an equality group as a whole. People from that particular equality group may not be excluded as a whole, but the individual may just choose not to engage in an activity. The point here is that individuals need to be able to make a choice against a background of inclusion and equality. Those responsible for forest and woodland

management and policy need to ensure that the actions needed to remove barriers have been undertaken. Then there will be a judgement about what further actions are possible and can realistically be undertaken to remove some of the less obvious emotional and perceptual barriers to promote equality of access to sites and services.

Work by the Sensory Trust (see for example The Countryside Agency 2005) emphasises the need to think about access along a chain of activity. The “chain of access” starts with the decision to visit a site, continues through to reaching the site, and then leaving to come home again. The chain of access concept introduces the idea that different kinds of barriers have different degrees of influence at different points along the chain. Physical barriers are probably most pressing whilst actually at a sites, whereas emotional and perceptual barriers may exert greater influence at the start of the chain. The apparent lack of information about specific woodland and forest sites and the services offered by the Forestry Commission and others involved in outdoor recreation, has been shown to have a significant impact at all stages of the access chain. This has been identified as a major issue for disabled people and other underrepresented groups (see Diversity Review 2005b, Burns and Graefe, 2007).

The evidence associated with different equality groups and which the sorts of barriers which reportedly affect them are summarised in Table 1.

Perceptual barriers are of particular significance to women, mothers of younger children, disabled people and their carers. These perceptual barriers are related to feelings of vulnerability, safety and the management of risk. The main concerns were around what would happen if there was an accident and the perceived lack of support to deal with problems, as well as the perception that there might be more risk of attack or contact with paedophiles and other criminals in wooded areas. Feelings of vulnerability and lack of confidence were also reported by the elderly, and people from faith groups, different minority ethnic groups and from socially excluded areas. These related to fears of getting lost, not knowing where to go, and not knowing about how and where the countryside might be open to the public, or a general lack of support in case of difficulty (see also Edwards and Weldon 2006; Inland Waterways Amenity Advisory Council 2001; Macnaghten and Urry 2000; Pendergast 2001). In her review of the perceptions of BME groups and use of public open space Morris (2003), shows that lack of confidence and negative perceptions of the environment are a particular concern to many individuals from ethnic minorities, as well as a general lack of confidence, there were particular perceptual barriers to do with feeling unwelcome in woodland or countryside areas, or feeling that they did not belong or have a role there.

It was interesting that some groups of disabled people were disinclined to visit woodland and other countryside areas because they perceived access and services to be “over-regulated” and paternalistic (Burns *et al.* 2008). Not all disabled users want very easy

access all ability trials. Ward Thompson *et al* (2004a, 2004b) showed that amongst women, the young and elderly from socially disadvantaged areas perceptions could be good predictors of woodland use. The most important perceptions were feeling vulnerable; fear of accidents; and the social stigma attached to being alone in the woods. These perceptual barriers can influence the decision to visit woodlands and forests in general, and in some studies are shown to influence the type of woodland or forest visited, and the way in which a site might be visited. For example, darker more densely planted conifer plantations were less attractive to single females.

Social and emotional barriers can be grouped into those to do with interest, those to do with stigma, and those related to fear of other people and social groups. Those reported to have little interest in woodlands and forests were groups defined by faith/belief, race/ethnicity as well as youth and people in areas of social deprivation or suffering from social exclusion. This lack of interest can sometimes be attributed to a personal preference, but it is important to note that lack of interest can also be related to lack of understanding and knowledge of what trees, woodlands and forests could offer. There is also a strong connection between 'lack of interest' and the perceptual barriers linked to the feeling of being unwelcome or being out of place. In addition, there are important cultural issues about engagement with nature which may affect equality groups' perceptions and willingness to visit forests and woodlands. For example, women in some Asian communities may not be expected to spend time outside of the house (BTCV 2007) unless chaperoned or part of a group. In another example Chinese people practising Tai Chi in the outdoors reported feeling inhibited by their perceptions of what people from mainstream British cultural backgrounds would think of them (The Countryside Agency 2003). Social stigma was important to disabled groups of people who reported that they did not want to be treated in an obviously different way to other woodland and forest visitors. Members of certain ethnic groups, and young people also feared other people's perceptions of them if they were seen to be using or enjoying woodlands and forests. These fears were related to being labelled as different, not normal, geeky/weird, or about to take part in anti-social or criminal behaviour.

The fear of other groups in society, or other users of forests and woodlands was perhaps the most significant form of emotional barrier. The elderly, disabled, young and those from minority ethnic groups all feared dogs – this was perhaps the most widely reported emotional barrier. For some disability groups, cyclists and horse riders presented particular problems. Deaf people for example, can not hear cyclists approach and there are usually no visual cues which alert cyclists to be wary of people with hearing impairments. Horses can provide particular problems for people in wheelchairs, and for mothers and young children. Motorbikes and other forms of motorised access are feared by youth and elderly alike, who often associate them either with 'unruly' teenagers or peer group rivals and a threatening presence within the age cohort. A corollary to this is that some teenagers report that they particularly fear using woodland in case they are

labelled as, or blamed for, individuals indulging in anti-social behaviour. Fear of teenagers as a particular group using woodlands and forests as well as open and green space more generally, was a significant barrier to women, people from ethnic groups, the elderly and people in areas of social deprivation. As with the perceptual barriers, many of these social and emotional barriers influenced the decision to visit from the start to the end of the access chain. They also influenced which sites were visited, how the visits were made (e.g. in groups, on particular days), and the activities carried out once there.

The review shows that most quantitative and comprehensive evidence relates to the **physical barriers** to accessing woodland and forest sites. These can be characterised as: accessing sites and activities; the provision and marketing of information relating to sites and activities; the physical design of sites and the geographical and physical limitations of particular woods and forests; and the provision of suitable facilities at sites and events. 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 problem (Burns *et al.* 2008; Uzzell *et al.* 2005a). The study by Bell *et al.* (2006) provides better evidence about access barriers and the needs of the deaf community. Burns *et al.* (2008) provide the most comprehensive review and research of other types of disabled users of forest and woodland. As Burns *et al.* (2008) point out, the dominant image and icon signifying disabled people in UK society is a (white, adult) person in a wheelchair. The barriers to access and potential impacts of forest and woodland use to groups with communication difficulties, learning disabilities, hearing impairment and different degrees of sight impairment are often overlooked as a consequence. Burns *et al.* (2008) also show that disabled children and their families are a particularly under represented or unconsidered group in nearly all aspects of inclusion in countryside recreation. The good practice and guidance documents reviewed as part of this study, concentrated almost exclusively on the physical aspects of countryside, woodland and forest access.

The detailed evidence of physical barriers uncovered by this review, echo the findings of the national surveys mentioned earlier. An important issue to all equality groups is being able to reach woods and forests. For women, disabled people, the elderly, older children and minority ethnic groups, as well as those living on lower incomes if it was not possible to be able to walk to a site or use the bus cheaply, they were not likely to visit. Access by car remained important to disabled people, and being able to get to a site by bicycle was important to youth and children. Entrance fees to woodlands and forests were also likely to act as a barrier to younger and older children and those living on lower incomes. In a number of the case studies dealing with community perception and involvement in the National Forest, there was a good deal of reported resentment about the

appropriation of woodland areas by commercial management companies and the introduction of fees for forest entrance and parking²⁴.

These structural barriers are mentioned as issues that require further attention within urban and development planning. For example, the development of strategies for the provision of public transport and the management and development of green infrastructure such as cycle routes. However, being outside of the traditional responsibility of woodland managers, there was little evidence that these issues reach the strategic forums they need to for proper consideration. Morris (2003) makes a similar point when she identifies an inability to shape strategies for the delivery of rural services being another significant barrier to the use of open space by BME groups.

For disabled people and the elderly with mobility issues the provision of information for the choice and planning of visits emerged as being absolutely essential. The things that individuals needed to know about when planning woodland visits included: the gradients and surface qualities of paths and access routes; the number and locations of rest stops; access routes to and from woodland or forest sites e.g. was there an easy access bus route; and pictures of conditions along the route so that individuals could judge for themselves the level of personal risk they might be taking. In fact for many disabled people the ability to make a positive and informed choice through the use of site specific pictures was more useful, and overcame more barriers, than the access standards and grading applied by schemes such as the BT standards²⁵ (see for example Burns *et al* 2007). Marketing relevant information was important to faith, ethnic and social deprivation equality groups. The right kind of information was able to overcome the emotional and perceptual barriers that prevented understanding about why visits might be interesting, enjoyable or relevant.

A whole variety of dissemination routes and media were mentioned as being important to different groups of people. The internet was noted as being important for pre-planning by disabled groups of people. Non-traditional marketing routes such as social networks, social marketing, and the use of cultural and social events were all identified as being important routes to connecting with people from different ethnic backgrounds, faith groups and with socially excluded groups. But for many, information provision at the point of entry at a site remains essential. This information is needed to create a welcoming atmosphere, overcome fear about getting lost and to address issues of vulnerability and safety. The evidence suggests that signage at the site is also important to enhance visitor experience and to encourage repeat visits. Whilst not having signage

²⁴ The Conkers site is a good example (<http://www.visitconkers.com/index.html>). A number of research participants complained about entrance fees excluding them from being able to visit the National Forest through Conkers (Morris and Urry 2006; Kitchen *et al* 2005, 2006).

²⁵ BT and the Fieldfare Trust (2005).

may not be described as a particular barrier to access – it can be a barrier to full enjoyment of a woodland or forest visit.

Marketing and access information, as well as additional information on site all need to be in the right language, using the right idiom and presented in the most accessible format. Accessible formats that emerged as important included: large print; suitable use of colour and printing contrast; and talking guides and maps for people with visual impairment. Plain English and the use of pictograms, was important to most equality groups, but particularly so to ethnic minority groups, who thought plain English as important as the occasional use of alternative languages such as Urdu, Hindi or Chinese (Mandarin or Cantonese). There are many examples in the guidance documents of new developments here, including signs and services such as the “Sounds Natural” hearing systems and talking signposts found in some outdoor heritage sites (see for example Hillis 2005).

Accessible site design includes the provision of ramps, handrails, tap rails, surface texture designs, and so on which provide different disability groups with the features they need to access and enjoy woodland and forest areas. In addition to this, the evidence shows that there are other features of site design which are important to specific groups, where woodlands free from signs of abuse and litter/rubbish encourage use by women, the elderly and socially excluded groups. Open woodland structures that counter fears of personal safety, children’s safety and risks presented by other users and ‘abusers’ are important to women, the elderly and socially excluded groups. Forest and woodland modelling using different species seems to be important to women, where ‘lighter’, less dense species counter feelings of fear and vulnerability. For those new to woodland or who visit woodland rarely, physical site conditions are less important than distance and ease of accessibility of a site, but freedom from rubbish and signs of abuse remain strong determinants of use.

As Burns *et al* (*ibid*) go on to argue, it is not only the physical aspects of information and site and project design which are important, an additional barrier is the lack of ‘programme accessibility’. This relates to the ways in which programmes and activities beyond the site alone are designed to enable people with a variety of impairments to fully participate and have fulfilling experiences of outdoor recreation. This might also include changing bye-laws, standards or rules that might exclude certain groups, or the provision of conditions in grants which promote equality (see for example Bell 2007b). A good example is the use of assist dogs. These are dogs used by people with hearing impairment, mobility or learning disabilities. It is reported that their role is poorly understood amongst service providers who will welcome guide dogs but not necessarily allow access to other types of assistance dogs (Burns and Graefe 2007). In the example of the RoughRiderz, a disabled mountain biking group, the use of vehicles (quadbikes) to carry them uphill contravenes rules on the use of vehicular access in woodland and forest sites (Burns *et al*. 2008).

Table 1. Barriers to woodland and forest access important to different equality groups

Category of Barrier	Specific details of barrier/s	Equality Group reporting 'barrier'							
		Gender	Disability	Faith / belief	Ethnicity	Elderly	Youth	Child	Social deprivation
Physical and structural	Require easy access by 1. foot, 2. car or bike, 3. bus (cheap and suitable for wheelchairs/buggies/prams)	✓ (1)	✓ (1,2,3)		✓ (1)	✓ (1,3)	✓ (2,3)	✓ (1,2)	✓ (1,2,3)
	Unable to pay entrance fees						✓	✓	✓
	Poor provision of signage and information boards suited to needs of particular group		✓		✓	✓			
	Need for appropriate language (e.g. plain English, Braille, large print, pictograms, Urdu and others)		✓		✓	✓			
	Paucity of information at point of decision (chain of access) 1. accessibility information, 2. appropriate format		✓ (1,2)		✓	✓ (1)			✓
	Poor marketing of site information (i.e. not the information itself but channels of dissemination)		✓	✓	✓				✓
	Physical limitations of the site		✓			✓		✓	
	Features of site condition and design will influence access 1. free from abuse, 2. open structure, 3. species choice, 4. group specific access structures, 5. welcoming entrance and signage	✓ (1,2,3)	✓ (4)			✓ (1,2,5)		✓ (2,3)	✓ (1,5)

Category of Barrier	Specific details of barrier/s	Gender	Dis-ability	Faith/belief	Ethnicity	Elderly	Youth	Children	Social deprivation
Physical cont'	Lack of tolerance or provision of disability aide 1. assistance dogs, 2. interpreters, 3. mechanised scooters		✓ (1,2,3)						
	Need for facilities 1. toilet, 2. convenient and frequent rest stops, 3. play areas		✓ (1, 2)	✓ (1)		✓ (1, 2)		✓ (1, 3)	
Social and emotional	Fear of teenagers or 1. fear of being labelled with an ASBO	✓			✓	✓	✓ (1)		✓
	Fear of other user groups 1. cyclists, 2. dog walkers, 3. horse riders, 4. motorbikes		✓ (1,2,3)		✓ (2)	✓ (2,4)		✓ (2,4)	
	Social stigma associated with use of woodlands, attached to 1. 'all ability' access routes, 2. individual lone entry into woods, 3. peer pressure		✓ (1)		✓ (2)		✓ (2, 3)		✓
	No interest in visiting woodlands, forests and the outdoors or countryside				✓	✓		✓	✓
Perceived	Feelings of vulnerability within woodland sites	✓	✓			✓			
	Carers concerns regarding risks and safety within woodland sites	✓	✓				✓	✓	✓
	Perceptions regarding paternalistic or over-protective attitudes of service providers		✓						
	Lack of welcome, do not feel welcome nor feel have a place in the countryside – lack of confidence		✓			✓			✓

Overcoming barriers

The research evidence suggests that there are specific strategies to overcome the three types of barriers. In the case of each barrier these are:

- **Perceived barriers**
Employing effective outreach strategies and awareness raising activities; outreach and skills development for Forestry Commission and partner staff; and building partnerships with other organisations working with target equalities groups.
- **Social or emotional barriers**
Staff training and awareness raising; working on methods which support empowerment of the target equalities groups; development of information focussed on the concerns of target equalities groups; the organisation of appropriate events; and the use and employment of role models and staff which reflect social diversity and the target population themselves.
- **Physical and structural barriers**
Undertaking accessibility audits and implementing consultation to improve infrastructure design and provision; sustained site enhancement and maintenance work; building partnerships with relevant organisations.

The available guidance documents cover many of these issues. The work by Openspace on access to Scottish woodlands includes handouts and pamphlets covering different aspects of disability access (Bell 2007a; Bell *et al.* 2007; Bowman and Bell 2007; OPENspace 2007a; OPENspace 2007b). The studies by Bell *et al.* (2006) and by Hillis (2005) do similar for people with hearing and visual impairment. There are numerous sources providing information about access for mobility disability groups including the Kent County Council's "Walks for All"²⁶, and good practice examples explaining access to walks on the SouthWest Coast Path²⁷. The RNIB's "See it Right" advice²⁸ provides ideas and guidance on how best to provide printed matter and signage for people with visual impairments. The work on "Routes to Health" includes excellent examples of different ways of marketing, empowering and including socially excluded groups including youth and adult offenders (Anon 2007; Anon 2008; Carter and O'Brien 2008). A Toolkit for including older people²⁹ in the promotion of specific events and activities has been produced by the "Full of Life" campaign. The Forestry Commission's Staff Development

²⁶ See here: <http://www.kent.gov.uk/leisure-and-culture/explore-kent/easy-access/>

²⁷ Available here: <http://www.southwestcoastpath.com/index.cfm>

²⁸ See here:

http://www.rnib.co.uk/xpedio/groups/public/documents/publicWebsite/public_seeitright.hcsp

²⁹ Available from: http://www.dwp.gov.uk/opportunity_age/fulloflife/toolkit_interactive.pdf

Network and the faith factsheets³⁰ produced by the Diversity Team all provide ideas on how to target woodland-based activities to particular religious events and celebrations.

Evidence of Impacts

The positive and negative impact of trees, woodlands and forests on the different equality groups is not well covered in the selected studies. The Diversity Review scoping study (Ward Thompson *et al.* 2003) has already suggested that the collection of baseline data and the establishment of an appropriate evaluation framework is needed to monitor changes to, and impacts of, greater equality of access to the countryside. The Forestry Commission has looked to establish monitoring and evaluation systems with indicators to capture visits to woodland, awareness of woodland and forestry issues and some indication of community involvement in forest or woodland-based decision making processes (see for example Doick 2008; Forestry Commission 2007b; Forestry Commission 2007c; Forestry Commission 2007d; Forestry Commission Scotland 2008). As reported in an earlier section of this report, the visit surveys have shown that many of the equality groups are under-represented. Age, gender, employment status and social grade are used to disaggregate data about how aware people are of forestry issues and of the Forestry Commission, and how often they involve themselves in forest decision making processes. But this information is based on opinions rather than on any detailed investigation of impact.

Detailed measures of the tangible and intangible impacts of trees, woods and forests which cover individual, social, economic and health related benefits are not routinely collected. Such substantive measures of impact require longitudinal studies against baseline data and a measurement against indicators able to attribute change to woods and forests as opposed to other behavioural or socio-economic changes. The Diversity Review established a number of action research projects, which were evaluated for impact in 2006. Further measurement of sustained change and impacts was planned for 2008, so evidence from these should be available soon.

For the most part, impacts are assumed, and are generally thought to be similar to those experienced by the rest of society. Forest economists and economic planners in the UK working at local, regional and national level have conducted some quantification of positive and negative impacts associated with woodlands, forests and green spaces. There are two important themes covered in the impact literature, namely health and wellbeing and the value of land and property.

³⁰ Available from:

http://alpacorn.forestry.gov.uk:7777/portal/page?_pageid=33,1118798&_dad=portal&_schema=PORTAL

Economic evaluations of the negative impacts of ill health through lack of exercise in England place additional direct costs of £2bn to £6.5bn a year on the NHS. This equates with between £40 and £140 per head of population (reported in Regeneris Consulting 2005). There are other studies which have demonstrated the value of the countryside in terms of positive health benefits, for example: Regeneris (2005) estimate that for the North East of England an increase in levels of physical activity of adults by ten percentage points would deliver savings of at least £25m per annum in the economic benefits from improved health, and they go on to demonstrate the value of the Public Rights of Way network to this. Similarly CJC Consulting (2005) reporting to the Forestry Commission show a permanent reduction of one percentage unit in the UK sedentary population (from 23% to 22%) is estimated to deliver a potential social benefit of up to £1.44bn per year (£479m if older people are excluded from the calculation). They go on to discuss how far green space can contribute to this. Scottish Natural Heritage (2001) make similar comparisons for Scottish green spaces.

Whilst we know that there are differential health and wellbeing problems and different patterns of exercise amongst equality groups (see for example McKenzie *et al.* 2008 on Asian women), there were no found studies disaggregating the health benefits of green spaces or woodlands and forests on individuals from the six/seven strands of diversity. The one exception was the recent paper by Mitchell and Popham (2008) reporting a strong correlation between the quality of green spaces and improved health outcomes in areas of social deprivation.

Evidence suggests that high quality green space is linked to confidence in an area and its future (cabespace 2005). We have been shown that woodlands, forests and wooded parks are an important part of this high quality green space, and can contribute to an increase in the value of property and local economic activity that is assumed to benefit a wide range of people in a particular locality (see for example Christie *et al.* 2006a; Christie *et al.* 2006b; Scottish Natural Heritage 2001). The evaluation of the community forest projects in England provided evidence of the contribution and impact of forestry, woods and forests to Public Service Agreement targets (Land Use Consultants 2005). There were gains in education and early learning, economic regeneration and job creation as well as improved health outcomes.

A recently completed study of the social and economic benefits of forestry for people in Scotland was able to use a range of existing survey datasets (such as National Omnibus surveys) supplemented with survey and case study research to produce valuations of forestry's contribution against 30 different indicators (SERG 2009). The report suggests that there is little evidence firm evidence of forestry contributing to economic generation either directly or indirectly. However, the qualitative evidence did suggest that community cohesion and social inclusion could be built through forest visits, volunteering and associated employment. Recent work by O'Brien and Morris (2009) for Active England has

shown that self-reported changes can provide evidence about impacts over the course of a year. In the Active in the Forest project area around Rolleston Forestry Centre in Derbyshire for example, levels of increased fitness were self reported by particular equality target groups.

Impacts on Equality groups

The Diversity Review presents impacts as “perceived benefits”: This section reports on impacts in the same way. As already shown studies dealing directly with **impact or benefits** (either positive or negative) on equality groups were not easy to find, impacts tended to be assumed, to be positive, and restricted to the health and wellbeing agenda. Negative impacts are thought to be captured in the documented barriers to access. The assumptions were familiar, namely that increasing access to woods and would have positive impacts on health (particularly cardiovascular health) and mental wellbeing (reduced levels of ‘daily stress’). The key studies identified these impacts as particularly important for children, the elderly and people living in areas of multiple deprivation where a greater incidence of poor health is often recorded. The other assumed impacts were to do with better quality green space and landscape (including trees and woods), making a positive impact on overall feelings of wellbeing, ‘community cohesiveness’ and ‘community resilience’.

Negative impacts - disbenefits

The most important disbenefits or negative impacts reported were most fully explored in the studies covering disability. The negative impacts mentioned here were:

- That the countryside and woodlands were for some, at times, oppressive, dark and foreboding. Some people reported feeling more depressed being in woodlands. People with visual impairment described how easy it was to get lost in woodlands and how this could force increased dependency on carers instead of providing opportunities for individual exploration;
- People using wheelchairs and mobility scooters described the fear of breakdown. They also described risk avoidance in woodlands and perpetuating dependency on carers by fearing the poor visibility afforded by woodland and the risk of not being able to find other people;
- Some disabled users found social attitudes to them in woodland and forest environments insulting, infantilising or denting their self confidence. These attitudes were manifest through the provision of “all ability – short and comfortable” routes, versus longer and more challenging and interesting paths for a range of competencies and skill levels;
- For some disabled people conflicts with other woodland and forest users could increase their levels of stress.

Other disbenefits and more negative impacts were recorded in areas of social deprivation. Work on the National Forest by Kitchen *et al* (2005, 2006) and Morris and Urry (2006) illustrates that in some areas, the 'gentrification' of woodlands, and improvements to the quality of peri-urban and urban green space can and do bring negative impacts on social cohesion by increasing the cost of housing and working against low income families looking for local homes.

Positive impacts - benefits

A summary of the perceived benefits or assumed impacts affecting each strand of diversity is outlined in Table 2. There are three major categories of benefits identified, namely health and wellbeing, social, and economic. A whole range of health and wellbeing impacts are felt by disabled people visiting green spaces and woodland locations, including: a stronger sense of personal identity; feelings of greater social inclusion away from other settings coloured by discriminatory practice; emotional release (for those with mental health issues in particular); sensory stimulus for deaf, blind, and deaf/blind people; stimulus and sensory diversity beyond normally constrained urban lives; new and challenging activities including a sense of invigoration and a sense of danger; and lastly the ability to exercise. In economic terms Burns *et al* (2006) mention that many disabled people live in areas with high social deprivation indices. By increasing their access to open and green space including woodland, the 'community of location' or the place in which they live creates positive benefits for them. There is some evidence that the community forest programme has brought general environmental benefits which have positive impacts on quality of life indicators for all those living in areas of social deprivation. (Land Use Consultants 2005)

A sense of freedom and ability to play independently of adults, testing and learning about risk, and the promotion of social and personal development skills were mentioned as perceived impacts for children and young adults in woodland or green space settings. There was evidence to suggest that independent play helped young people to form better relationships within their peer groups, which in turn supported their own social problem solving (see for example Brown 2006), as well as helping towards the management of their own levels of stress and mental wellbeing (Bell *et al.* 2003; Milligan and Bingley 2004; Milligan and Bingley 2007; Ward Thompson *et al.* 2006). There were also benefits provided by meeting other children or members for their peer group in dens or woodland spaces. This tended to strengthen their sense of place identity and belonging, and helped build social capital amongst their peers holding similar interests. For those children and young adults involved in woodland crafts, den building and forest education initiatives there were also reported benefits to do with increasing their knowledge and skills base which could lead to better employment prospects or enhanced classroom learning (Milligan and Bingley 2004; Milligan and Bingley 2007; O'Brien 2004; O'Brien 2005a; Ward Thompson *et al.* 2006).

The work evaluating the potential impact of the Forest Schools Initiative or woodland-based learning showed very clearly that long-term contact with Forest School involving regular and frequent sessions allowed primary age children the time and opportunity to learn and develop a range of key skills not evident from classroom work. This included self confidence particularly in the outdoors and more 'risky' settings, the ability to engage in group work, improvements to physical skills (gross and fine motor skills), and knowledge of the natural environment (Murray 2003; Murray and O'Brien 2005; O'Brien and Murray 2007). The more relaxed and freer atmosphere of Forest Schools was also shown to provide a contrast to the classroom environment which suited the learning style of those children preferring practical hands on involvement, i.e. kinaesthetic learners (Murray 2003; Murray and O'Brien 2005; O'Brien and Murray 2007).

There is also some evidence of job creation linked to community forests. However, it is not clear who takes up these jobs and whether they are recruited from the pool of young adults or those who are more socially deprived (Land Use Consultants 2005).

For women, faith groups, ethnic minorities, and the elderly the use of woodland brought positive social benefits by building a greater sense of social identity with a community of interest. Using woodlands as a place to meet others and share in an experience was important. Faith groups and people from ethnic minority backgrounds in particular noted the social benefits of group visits to woodlands and public space including activities which built social capital such as sharing food and picnics, sharing stories and recollections, or sharing religious practice (see for example BTCV 2007). Some individuals from minority ethnic groups, talked about the extra mental and emotional stimulation exposure to woodland and countryside settings provided them with breaking the routines of their normal urban lives. This had impacts in terms of stimulating conversations about countries of origin, remembered sounds and smells, and building a sense of place and identity. For some women from ethnic minority groups this was linked to issues of self esteem and confidence, and again was reported to have positive impacts on wellbeing (BTCV 2007; Cardiff Communities First 2005; Morris 2003; The Countryside Agency 2003).

Finally the study by O'Brien *et al* (O'Brien *et al*. 2008a; O'Brien *et al*. 2008b) looking at the positive benefits of environmental volunteering in woodland and other outdoor sites, noted physical and emotional health and wellbeing impacts on those who were unemployed, as well as an accommodating 'space' to welcome and aid those with mental health problems, developmental delays, emotional and behavioural difficulties.

Impacts on the Forestry Commission

The impacts on Forestry Commission staff are worth noting too. The role of the forester is becoming ever broader and further removed from a “producer and grower of timber”. As Forestry Commission staff tackle the challenge of increasing equality of access and embracing diversity, some important issues are emerging. The evidence suggests that frontline staff and forest managers are still identifying a need for training and awareness of diversity issues. The Forestry Commission already has a training programme on diversity awareness which all staff are required to attend, and there are additional courses covering topics linked to diversity such as learning British Sign Language (BSL), or building community engagement. The demand expressed in the evidence documents is for training and awareness raising that provides guidance on specific equality group engagement techniques and on site specific management and design techniques for addressing particular equality group needs. Action research conducted as part of the Active England project provides a clear example. During a trip organised by Forest Research with Forestry Commission staff designed to introduce a group of Asian women to the national forest, the Ranger said that she found it difficult to have the confidence to go into the Asian community to talk about the wood and the opportunities it afforded (O’Brien *pers comm.*). Whilst forestry staff may understand and wish to act on the need for greater engagement, they do not necessarily have the skills and confidence they need to implement appropriate actions.

Although there is evidence of diversity awareness amongst Forestry Commission and partner staff around issues connected with race/ethnicity and disability, understanding of the needs and preferences of other equality groups is less obvious. The other aspects of diversity with new legislative support will need to be introduced carefully. Whilst many countryside staff reported confusion over the actual detail of legislation, and the interpretation of specific clauses and terms, staff reported a general unease about the terminology and the correct language of diversity. For example, which words and phrases were acceptable ways of discussing diversity and addressing people from different equality groups. The attitudes of public woodland and forest managers was documented by Burns *et al* (2006) who report that there is a “wait and see” ethos until case law establishes required parameters, even though site managers need to be proactive in their application of diversity legislation. There were also concerns regarding the implications of diversity legislation and the allocation of funds, questions remained about how to balance the demands of different groups of individuals and ‘service users’.

Table 2. Positive impacts of woodlands and forests reported by different equality groups

Category of Benefit	Specific details	Equality group reporting 'impact' as a perceived benefit							
		Gender	Disability	Faith / belief	Ethnicity	Elderly	Youth	Child	Social deprivation
Health and Wellbeing	Sense of freedom and individual ability to manage risk – increased sense of personal identity and independence		✓				✓	✓	
	Physical exercise and perceived health improvements	✓	✓	✓	✓	✓			✓
	Sensory stimulation – personal development, improved emotional wellbeing and learning ability		✓		✓		✓	✓	✓
	Challenge of new activities and acquisition of new skills - personal development and independence		✓				✓		✓
	Escape social pressures and release stress		✓				✓		✓
Social	Chance to meet and strengthen social capital with community of interest	✓	✓	✓	✓	✓	✓		
	Building sense of place, belonging and social identity			✓			✓		✓
	Learning and education opportunities			✓ ✓			✓	✓	
Economic	Acquisition of new skills and woodland-based or other employment prospects						✓	✓	✓
	Improvements to communities of location increasing sense of community and value of property		✓						✓

What are the gaps in our knowledge?

There are two different forms of knowledge gap. Firstly a gap in **research** knowledge, that is, groups or particular aspects of use and impact which have not been covered by formal research or evaluative inquiry. Second is a gap in **practice** knowledge. Practice knowledge can be inward facing (i.e. specific to institutional processes and procedures) or outward facing (i.e. specific to forester's interactions with organisations, individuals and communities using Forestry Commission "goods and services"). Inward facing practice knowledge is to do with organisational management and human resources. The Forestry Commission now has a Diversity Team working to update and produce practice knowledge and information in this area.

In general terms, there was more evidence concerning barriers, and very little evidence concerning **impacts** directly attributable to forests and woodlands. Even though it is not always possible to research impacts until barriers have been overcome, it is important to recognise that knowledge of impacts is, and could remain, a significant gap in the evidence base. This raises the issue of the need for monitoring and evaluation systems at a number of project, programme and other levels using socio-demographic information, criteria and indicators specifically able to collate this kind of information. Surveys that the Forestry Commission currently sponsor such as the Public Opinion of Forestry should ensure, as far as is practicable, that information about each strand of diversity is included and that specific analyses by equality group is possible. There is a trend within government and amongst public bodies towards sharing information and datasets. It may be possible to find ways of using other data and information sources to track some of the impacts of specific interest e.g. linking with the GP referral system to understand the impact (and value) of exercise in woodland green gyms on particular equality groups.

Details of the knowledge gaps are included in Table 3 below.

The most obvious gaps in research knowledge are:

- There is no found research looking at the use and impacts of trees, woods and forests on people from groups with different sexual orientations, although there is an increasing recognition by other organisations of the potential of marketing access to outdoor spaces to Lesbian Gay Bisexual and Transsexual (LGBT) groups, e.g. the Ramblers Association "Get Walking, Keep Walking" package specifically for the LGBT community;
- Faith/belief groups, children and women are currently not well represented in research. It is not that research and projects are completely absent but some of the issues to do with overcoming barriers to use are not well explored (e.g. issues of chaperoning for some women), and the effects of "multiple identities" and membership of a number of equality groups (e.g. BME mothers and children of particular faith groups in areas of social deprivation) have not been considered;

- The understanding of the needs of disabled children and their carers is very poor;
- Not all barriers associated with each of the different disability groups have been researched, and there is no research focused on the barriers to access for BME disability groups;
- How to involve diverse groups in decision making about their local spaces, about the creation of new spaces, and about changes or improvements to existing spaces;
- Appropriate monitoring and evaluation methods to capture information about the differential impact on equality groups of trees woods and forests.

The most obvious gaps in outward facing practice knowledge are:

- Practical methods of engagement with non-traditional forests users such as different BME, faith and disability groups. The main concerns mentioned in the research reviewed were to do with, contacting people and groups, the appropriate use of language and terminology around disability and BME issues, language and presentation of marketing and interpretation materials, and the design of appropriate training courses to meet 'outward facing' needs. There are lessons that can be learnt from practice and action research examples such as the effectiveness of outreach methods such as 'led activities' and 'facilitated access' for promoting use by harder to reach groups ;
- Effective ways of engaging with schools/children to promote longer term change;
- The most effective ways of promoting and marketing (including social marketing) woodlands and forests to particular equality groups, and overcoming common perceptual barriers (e.g. not knowing the resource is there, that access is allowed, and what to expect when visiting).

The most obvious gaps to inward facing practice knowledge are:

- How to continue to encourage diversity in recruitment;
- Identifying new models of partnership that will aid Forestry Commission working with particular equality groups, e.g. working with the Royal National Institute for the Blind (RNIB), or with inter faith groups.

Table 3. Barriers to accessing trees, woods and forests for different equality groups

Equality group	Research Gap	Outward facing Practice Information Gap
BME	Differential health impacts of woodlands on BME community Developing a deeper understanding of specific groups within BME communities Novel forms of 'engagement' with, and marketing to, BME groups (e.g. cultural practice, utilitarian models, art and performance)	How to approach and engage different groups – practical measures Use of language and idiom Design of practitioner training courses
Disability groups	The needs of disabled children and their families Congenital versus acquired impairments, what are the implications for established patterns of woodland use versus novel use Mental health and the effectiveness and impacts of forest-based activity on different conditions Barriers to access for disabled people from BME groups	Approaching and working with people from <u>different</u> disability groups Use of language and idiom Improvements to 'marketing' and communication materials at start of "access chain" Novel methods of increasing on-site access for <u>different</u> disability groups Design of practitioner training courses
Children (age)	Establishing intergenerational habit of woodland use	Designing for safety Managing play
Youth (age)	Actual and perceived levels of Anti Social Behaviour (ASB) in woodlands Using woodlands to manage ASB Using woodlands to develop skills Discovering what benefits teenagers would appreciate from woodlands	Managing Anti Social Behaviour (ASB) in woodlands Working with teenagers
Elderly (age)	Integration of woodland-based opportunities through interagency working and support for the elderly health agenda	Improvements to 'marketing' and communication materials at start of 'access chain'
Gender	Methods to overcome barriers to access for women from different diversity communities	Overcoming fear and perceived versus actual levels of crime Managing inappropriate behaviour in woodlands
Faith / belief	Novel forms of 'engagement' with, and marketing to, BME groups	How to approach and engage different groups – practical measures
Sexual orientation or lifestyle	No knowledge	No knowledge
Social deprivation	Gatekeepers to use of greenspace Easy access/reducing costs of woodland use Woodlands as a vehicle for community cohesion Health impacts of woodlands and greenspace on deprived communities	Working to include communities and individuals in deprived areas to improve and create better spaces including trees and woodlands

Annexes

Annex 1. Equality groups covered by empirical studies and included as core evidence

Equality group	Number of focused studies	Number of inclusive studies	Reference publications
Gender – i.e. women	0	5	Weldon, Bailey <i>et al</i> (2007a; 2007b), BTCV (2007), O'Brien (2006), O'Brien and Tabbush, (2005), O'Brien (2005c), Inland Waterways Amenity Advisory Council (2001)
Disability	7	5	Countryside Access and Activities Network (2008), Anon (2007), Bell (2007a; 2007b), Bell and Travlou (2007), Bowman and Bell (2007), BTCV (2007), Burns <i>et al</i> (2007), OPENspace (2007b), Bell <i>et al</i> (2006), Countryside Agency (2005), Hillis (2005), Uzzell, Kelay, <i>et al</i> (2005a; 2005b), (Anon 2001a), Kitchin (1998)
Race or ethnicity "BME"	7	7	Countryside Access and Activities Network (2008), Anon (2007), BTCV (2007), Edwards and Weldon (2006), Cardiff Communities First (2005), Countryside Agency (2005), O'Brien (2005), Uzzell <i>et al.</i> (2005a), Uzzell <i>et al</i> (2005b), O'Brien (2004), Countryside Agency (2003), Morris (2003), (Anon 2001a), Askins (2001), Inland Waterways Amenity Advisory Council (2001)
Age – "Elderly"	1	3	Alves, Aspinall <i>et al</i> (2008), Sugiyama and Ward Thompson (2008), Sugiyama <i>et al</i> (2008), BTCV (2007), Ward Thompson <i>et al</i> (2004b) Ward Thompson <i>et al</i> (2004c), Inland Waterways Amenity Advisory Council (2001)
Age – "Youth"	6	6	DEFRA (2008), Anon (2007), BTCV (2007), Milligan and Bingley (2007), Brown (2006), Ward Thompson <i>et al</i> (2006), Countryside Agency (2005), O'Brien (2005a; 2005b), Uzzell <i>et al.</i> (2005a; 2005b), Milligan and Bingley (2004), O'Brien (2004), Ward Thompson <i>et al</i> (2004b; 2004c), Bell, Ward Thompson <i>et al</i> (2003), (Anon 2001a), Inland Waterways Amenity Advisory Council (2001), Macgill and Bradley-Nicholson (2001)
Age – "Children"	0	3	DEFRA (2008), O'Brien (2006), O'Brien (2005c), O'Brien and Tabbush (2005), O'Brien (2004), Ward Thompson <i>et al</i> (2004b; 2004c), Bell, Ward Thompson <i>et al</i> (2003) O'Brien and Murray (2007) Murray and O'Brien (2003; 2005)
Sexuality	0	0	N/A
Faith/Belief	1	1	Tabbush (2008), Hand (2007), Countryside Agency (2003)

Annex 1. continued

Equality group	Number of focused studies	Number of inclusive studies	Reference publications
Social deprivation / exclusion	4	8	Countryside Access and Activities Network (2008), DEFRA (2008), O'Brien <i>et al</i> (2008a; 2008b), BTCV (2007) Morris and Urry (2006), O'Brien (2004), Ward Thompson <i>et al</i> (2004b; 2004c), (Anon 2001b; Bishop <i>et al.</i> 2001a; Bishop <i>et al.</i> 2001b; Kitchen <i>et al.</i> 2005; Kitchen <i>et al.</i> 2006; Kitchen <i>et al.</i> no date) (Anon 2007; Anon 2008; Cloke <i>et al.</i> 1996; O'Brien 2005c; O'Brien 2006)

Annex 2. Summary features of evidence studies

No.	Study - year of research - and publications	Context/Objectives	Sample group (numbers of people)	Woodland sites
1	Outdoors for All - 2007-08 - (DEFRA 2008)	To collect evidence and elicit stakeholder opinion concerning the draft Diversity Action Plan for to increase countryside access by under-represented groups	205 attendees of open days and 247 written responses to draft plan from stakeholders and under-represented groups including BME, disabled and young people	N/A although associated action research projects in Yorkshire Dales NP, Kent County Council countryside routes, Plymouth Groundwork, and Warwickshire Wildlife Trust
2	Disabled people's perceptions and use of forest resources - 2007-08 - (Burns <i>et al.</i> 2008; Burns and Graefe 2007)	<ul style="list-style-type: none"> • Explore disabled peoples' attitudes, perceptions and experiences of woodlands and how they affect use of woodland • Explore disabled peoples' physical, information and emotional needs and expectations • Explore processes of communication and engagement with disabled people 	41 disabled people on site visits, including people with physical impairment, learning disability, mental health issues, and sensory impairment. Families of disabled children involved with 15 support assistants	7 different forest sites including FC woodland, National Trust, community forests and LA urban woodlands
3	Assessing Access to Scottish forests and countryside. 2006-07 (Bell <i>et al.</i> 2007; OPENspace 2007a)	To undertake rapid evaluation of access provision and identification of improvements	1 disability auditor over 7 forest sites	Mabie Forest, Dalbeattie Forest, Threave Estate, David Marshall Lodge, Aberfoyle; Abriachan Woods; Anagach, Grantown-on-Spey; Lionthorne Woods

No.	Study - year of research - and publications	Context/Objectives	Sample group (numbers of people)	Woodland sites
4	Enhancing access to Scottish forests and countryside. 2007 (Bell 2007a; Bell 2007b; Bowman and Bell 2007; OPENspace 2007b; Travlou 2007)	To work with range of stakeholders (recreation and forest managers as well as public users) to include them in formulation of practical guidance to increase access for disabled groups of people	Recreation managers: 32 attended forum discussions in 3 locations; 58 postal questionnaires.	Penninghame Pond - Dumfries and Galloway, Greenlink Project - Hamilton Park, Loch Garten - Highlands
5	New Pathways to Health and Wellbeing. 2006-07. (Weldon <i>et al.</i> 2007a; Weldon <i>et al.</i> 2007b)	<ul style="list-style-type: none"> To better understand the barriers that might affect people accessing woodlands in Scotland for health and well-being To identify, prioritise and promote potential opportunities to overcome these barriers 	mother and toddlers (7 + 16), young men seeking work (5), old people (50 + 8), youth group (7), mixed rural residents (8 + 6)	Greenlink Motherwell Glasgow; Langlee woodlands Galashiel; FC woodland in Drumchapel; TWIG scheme Dundee; Sunart Oak woodlands Archnumachen
6	Access to the countryside by deaf visitors. 2006. (Bell <i>et al.</i> 2006)	<ul style="list-style-type: none"> To examine the needs, attitudes and preferences of deaf visitors to the Scottish countryside; To examine current provision for deaf visitors in the Scottish countryside; To highlight examples of good practice from Scotland and other To identify practice gaps, and to look at any areas of provision that could be improved. 	22 deaf people at 7 different sites and 11 stakeholder interviews	N/A focus on countryside
7	Race Equality and the Forestry Commission. 2004-2006 (Edwards and Weldon 2006)	<ul style="list-style-type: none"> To identify factors that can act as barriers to BME groups using woodlands Investigate perceptions and opinions of FC staff Provide guidance on improving and implementing the RES 	female Asian elders (6), Somali male teenagers (7), Afro-Caribbean Children (9), Asian women and children (9+ 4), all from inner city	Salcey Woods, Northants Forest District

No.	Study - year of research - and publications	Context/Objectives	Sample group (numbers of people)	Woodland sites
8	Faith woodlands. 2006-07	To investigate and evaluate the process of establishing a faith woodland project	Council of Faiths and Christian, Muslim, Hindu, Sikh, Jewish, Jain, Baha'i, Zoroastrians and Buddhist groups	Maulden Wood, Bedfordshire
9	Reality Check. 2003-06 (Anon 2007; Anon 2008)	<ul style="list-style-type: none"> To assess and evaluate the outputs and impact of the "Walk to Win" and Route to Health projects 	Groups of BME, youth, offenders and disabled people, and an area of social deprivation	Cannock Chase
10	Access for blind and partially sighted people. 2006-07 (Hillis 2005)	To investigate and evaluate access issues for blind and partially sighted people in heritage countryside locations	Blind and partially sighted people (3) and heritage site managers (6)	3 European sites and 3 UK sites: Shores Wood Kent; Chirk Castle Woodland Walk; and Brownsea Island.
11	Barriers to participation. 2006. (Countryside Access and Activities Network 2008)	Explore the following with respect to excluded groups: <ul style="list-style-type: none"> Perceptions of countryside recreation Participation behaviours Barriers to participation in countryside recreation Accessing information 	12 community groups representing excluded sections of the community, 201 in survey, from top 20% of SDI wards	N/A survey emphasis 'countryside and undertaken rural, urban and periurban sites. Belfast, Portadown, Dungiven
12	Get Hooked on Fishing. 2005-06 (Brown 2006; Macgill and Bradley-Nicholson 2001)	To investigate and evaluate the potential of angling towards more socially inclusive use of countryside	Youth in an area of social deprivation	Green spaces by fishing waters Wadsworth, County Durham

No.	Study - year of research - and publications	Context/Objectives	Sample group (numbers of people)	Woodland sites
13	Changed Lives. 2005 (BTCV 2007)	<ul style="list-style-type: none"> • Build on evaluations of projects that developed work with social excluded and disadvantaged groups • Examine impact of EfA on participants • Assess role of environment for social justice • Make info available and look to developing future models of inclusion in the environment sector 	BME, people with mental health issues, travellers, low income groups, all including mix of ages and gender	6 case studies. Woodland link through Blaenau Gwent Green Gym Project. Other projects included gardening course in Glasgow, Calthorpe Project near Kings Cross, London, and St. Mary Magdalen Centre for Asylum Seekers in London.
14	Trees and Woodlands: Nature's Health Service. 2005. (O'Brien 2005)	Review of a selection of Active Woods and Active England projects	BME (40)	Forest of Dean
15	Growing Places and the National Forest 2005 (Morris and Urry 2006)	<ul style="list-style-type: none"> • To investigate perceptions of environmental and socio-economic change in forest areas • To investigate what motivates active participation 	Social exclusion	National Forest Stoke/Trent Valley
16	Free range Teenagers 2004-05 (Ward Thompson <i>et al.</i> 2006)	<ul style="list-style-type: none"> • To investigate and evaluate the role of wild adventure space in the lives of young people 	5 FGDs, age 11-18, total girls 23, boys 23.	Gloucestershire, Northumberland, Cleveland, Essex, Warwickshire

No.	Study - year of research - and publications	Context/Objectives	Sample group (numbers of people)	Woodland sites
17	Diversity Review 2002-05 (Countryside Agency 2005; Uzzell <i>et al.</i> 2005a; Uzzell <i>et al.</i> 2005b)	To investigate: <ul style="list-style-type: none"> • under-representation in accessing local countryside and greenspace for enjoyment; • the relationship between under-representation, cultural background and social exclusion; and, • the potential role of countryside and green space to address social exclusion 	300 people. Emphasis BME, disability and young people. 15 interviews with experts, 32 with non-users and 24 focus groups	N/A participants from inner city London, Birmingham and Bradford
18	BME Communities in Wales, 2004-05 (Cardiff Communities First 2005)	Consultation regarding BME group priorities.	BME and different age groups	N/A Cardiff inner city community first areas
19	Accessibility of woodlands and natural spaces: Addressing crime and safety issues, 2004 (O'Brien and Tabbush 2005)	To explore the perceptions of women and parents with regard to personal safety and crime issues around access to woodlands and forests	Women and children	N/A
20	Urban green spaces and the Peabody trust woodland, 2004 (O'Brien 2005c; O'Brien 2006)	<ul style="list-style-type: none"> • explore the ways people on estates value green space and woodland, • identify levels of use of the Peabody woodland, • engage residents in a walk through of the woodland and collect views. 	Of 565 questionnaires sent 63 returned, women well represented, but BME low (n=7). FGDs with 3 residents groups = 47 people. children, youth, women, social deprivation	Peabody Hill woodland Lambeth, Peabody Hill and Rosendale estates

No.	Study - year of research - and publications	Context/Objectives	Sample group (numbers of people)	Woodland sites
21	Youth Experience of Woodland 2003-04 (Milligan and Bingley 2004; Milligan and Bingley 2007)	<ul style="list-style-type: none"> To identify the long-term influences of outdoor play in woodland on young people's mental health and well-being To identify factors that encourage a positive relationship with woodland To explore the long term impact of different kinds of play on mental health and how everyday therapeutic landscapes that promote the health and well-being of young people might be developed 	16 people (12 female, 4 male) from 16-18 and 19-21 yr old groups, mostly rural childhood (11), most with school education, all white	Eaves Wood, National Trust, close to Silverdale North Lancashire,
22	Older people walking in natural spaces, 2004 (Alves <i>et al.</i> 2008; Sugiyama and Ward Thompson 2008; Sugiyama <i>et al.</i> 2008)	To examine the relationships between various aspects of open spaces in a neighbourhood (including access) and older adults' walking for recreation and walking for transport	286 people over 65 years old completed a self-administered questionnaire	N/A all over UK
23	Hill Holt Wood, 2004 (O'Brien 2004; O'Brien 2005b)	To evaluate the outputs and impact of the Hill Holt community enterprise	Young people in areas with high SDI	Hill Holt Wood
24	Openspace and social inclusion Woodland Use in central Scotland, 2001-03 (Bell <i>et al.</i> 2003; Ward Thompson <i>et al.</i> 2004a; Ward Thompson <i>et al.</i> 2004b; Ward Thompson <i>et al.</i> 2004c)	To investigate: <ul style="list-style-type: none"> How important is forest use to local people (who and how many use forests) Which forests do people use or abuse What counts as use or abuse? What are the design and management implications for managers? 	339 questionnaires, Focus Group Discussions including elderly, school age children, mothers and toddlers in areas with high SDI	Woodlands close to communities in central Scotland: Alloa, Corstorphine-Edinburgh, Lennoxton, Whitburn, Wishaw.

No.	Study - year of research - and publications	Context/Objectives	Sample group (numbers of people)	Woodland sites
25	Capturing Richness, 2003, (The Countryside Agency 2003)	to enable the stories which are held in the collective memory of the Black Environment Network to be recorded... so that they can be published as a collection	BME groups	N/A focus on the countryside and environment
26	BME groups and public open space, 2002-03 (Morris 2003)	Review written evidence concerning BME and open spaces in the UK	BME groups	N/A
27	A Kind of Magical Place, 2002, (O'Brien 2004)	<ul style="list-style-type: none"> To provide greater understanding of the ways in which people value trees and woodlands and the reasons for this (urban and rural perspectives) To assess forestry and environmental organisations views of public interaction with woodland 	Total of 123 people in discussions, including BME mothers with young children, and people from areas of high SDI	4 woodland sites , Ambleside, Liverpool and Knowsley, Southampton, Heathfield..
28	Post-industrial landscapes and social inclusion, 1998-2002, (Clope <i>et al.</i> 1996; Kitchen <i>et al.</i> 2005; Kitchen <i>et al.</i> 2006)	<ul style="list-style-type: none"> to investigate the social, cultural and environmental impacts of forests in areas of post-industrial countryside explore the connections between forestry, forest spaces and social exclusion / inclusion in the context of particular disadvantaged case-study communities 	35 in-depth interviews with FC and other personnel, and 6 discussion groups in each community (total 36) followed by 10 in-depth interviews (total 60)	forests and communities in former coalfield areas. National Forest – Ibstock and Moira. Great North Forest – Craghead and Shiney Row. Central Scotland Forest – Forth and Slammanan.
29	Perceptions of Forestry in the South Wales Valleys 2000-2002, (Anon 2001b; Bishop <i>et al.</i> 2001a; Bishop <i>et al.</i> 2001b; Kitchen <i>et al.</i> no date)	Examine the social and institutional context of forestry in the South Wales Valleys by considering the inter-connections between forestry, forest spaces and local communities	18 FE interviews, 10 in depth interviews and 6 discussion groups in each of 4 study communities assumed to be of high SDI	Coed y Cymoedd FD, Valleys forest, around 4 communities: Resolven Blaengwynfi / Abergwynfi, Maerdy and Fochriw.

No.	Study - year of research - and publications	Context/Objectives	Sample group (numbers of people)	Woodland sites
30	Visible Communities in National Parks, 2000, (Askins 2001)	To research the perceptions, opinions and needs of visible communities in the national parks close to major areas of BME populations	606 questionnaires - Sheffield (296), Middlesbrough (310): Visitor survey 595 in Peak District, 988 residents postal questionnaires N.Y. Moors and Peak District NPs. 6 FGDs Middlesbrough (3) Sheffield (3). 20 in depth SSIs Middlesbrough (10) Sheffield (10). FGDs with recreation and NPA staff	Peak and North York NPs
31	Open Return, 2000-02, (Anon 2001a)	Collect information on how to better meet needs of different groups in terms of access to NP	7 case studies of particular projects with supplementary interviews (1036) focused on BME, disabled (poor mobility), youth	Lake District NP
32	Access to waterways, 2000-02, (Inland Waterways Amenity Advisory Council 2001)	To explore ways in which our inland waterways (mainly canals and navigable rivers) can foster social inclusion	400 questionnaires to HH near water, 180 people in meetings of which 70 = BME. BME in sample inclusive of low income, elderly, women and youth as focus of analysis)	N/A waterways in Birmingham, Leicester, London, Manchester

No.	Study - year of research - and publications	Context/Objectives	Sample group (numbers of people)	Woodland sites
33	The impact of Forest schools in England and Wales, 2003-2005, (Murray 2003; Murray and O'Brien 2005; O'Brien and Murray 2007; O'Brien and Weldon 2007)	To evaluate the impacts of Forest School against six educational 'propositions' (outcome indicators) and explore	In Wales 2 groups of children in deprived areas as pilot methodology and then tracked changes in 24 children in three case study areas in England over an 8-month period – 360 observations in all	2 sites in Wales, Duffryn near Newport Gwent and Celyn Woodlands, Flintshire, England 7 school and woodland sites in Shropshire (2), Worcestershire (2) and Oxfordshire (3)
34	Environmental volunteering 2007-2008 (O'Brien <i>et al.</i> 2008a; O'Brien <i>et al.</i> 2008b)	Identify the motivations, barriers and benefits to those who volunteer in the environment.	Interviews and questionnaires with 88 volunteers and 26 representatives of voluntary organisations. Diversity not a specific focus but included unemployed people	10 sites of which 6 inc. woodlands: Galloway forest, Pages Bank reserve Durham, Moffat hills, Glasgow, Eskdale, and Morpeth woodland garden

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