Forest Service

THE DEPARTMENT OF
AGRICULTURE & FOOD
AN ROINN TALMHAÍOCHTA AGUS BIA

Forest Recreation in Ireland
A Guide for Forest Owners and Managers

The Forest Service of the Department of Agriculture and Food is Ireland's
national forest authority. It is responsible for forest policy and the
promotion of the forest sector, the administration of forestry grant
schemes, forest protection, the control of felling and the promotion
and support of forest research. The Forest Service promotes Sustainable
Forest Management as a central principle of Irish forest policy, whereby
forests are managed to provide economic, social and environmental
benefits on a sustainable basis for both current and future generations.

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As one of my first actions since assuming responsibility for the forestry portfolio in the Department of Agriculture and Food, I am delighted to announce the publication of *Forest Recreation in Ireland – A Guide for Forest Owners and Managers*.

Under sustainable forest management, Ireland's woodlands and forests represent a multi-facetted resource that provides timber and employment, enhances the landscape and the environment, promotes biodiversity, and sequesters atmospheric carbon. Their use for recreation is yet another important public benefit arising from Ireland's forestry programme.

I regard recreation as a key non-timber benefit. Developing a forest as an amenity creates a resource for the local community and for people visiting from elsewhere. Using the forest for simple quiet enjoyment or for a particular sport or adventure activity promotes fitness, health and a sense of well-being. Forest recreation also creates the basis for a wide range of related enterprises and opportunities for income generation.

My Department promotes forest recreation by supporting relevant organisations and initiatives, and by providing funding through the NeighbourWood Scheme. This scheme is aimed at encouraging the development of local woodland amenities through a partnership approach involving local communities and landowners.

Forest Recreation in Ireland – A Guide for Forest Owners and Managers further underlines the commitment of my Department to promoting this aspect of Ireland's forestry programme. It is aimed at encouraging forest owners and managers to consider providing for recreation in consultation with users, and offers practical advice and information on best practice within the Irish forestry context.

The promotion of forest recreation by this Department strongly complements the work of Comhairle na Tuaithe, initiated under the auspices of the Department of Community, Rural and Gaeltacht Affairs to advance countryside recreation in Ireland. Comhairle na Tuaithe is drawing together farmers, recreational users and relevant state bodies to jointly realise the significant potential contribution this sector can make to rural development in Ireland.

A wide range of individuals and organisations involved in forest and outdoor recreation contributed greatly to the development of this publication, and I wish to acknowledge their invaluable input. It is hoped that *Forest Recreation in Ireland – A Guide for Forest Owners and Managers* will further promote this aspect of Irish forestry, and in doing so, encourage the creation of more opportunities for people to experience and enjoy our woodlands and forests.

Mary Wallace, TD
Minister of State

Forest recreation – everything from family walks...

IRELAND'S FORESTS – A UNIQUE AMENITY

The appeal of woodlands and forests

Forests – from small woodlands in our towns and cities, to larger forests located in the countryside – are among Ireland's most popular and widely used amenities. They provide an ideal setting for us all to escape the daily grind, to experience the natural world, and to spend time with family and friends. They are also hugely versatile, being suitable for a wide range of activities involving people of all ages and abilities, from afternoon strolls and family picnics to orienteering and paint-balling. It is no wonder that forests are so popular. In fact, a recent study[1] estimates that there were over 11 million visitors to our forests in 2004.

Forest recreation, along with countryside recreation in general, is receiving more and more attention in Ireland, as we begin to realise the considerable potential benefits involved.

Forest recreation, rural income, development and employment

Forest recreation can contribute significantly to rural income, development and employment. There are many opportunities for income generation for the owner, both directly from car-parking fees, the sale of permits, etc., and indirectly, where the forest forms part of a business based on holiday cottages, an open farm, a horse-riding centre, a camping or caravan park, an outdoor adventure centre, a visitor centre, a country craft outlet, etc. Wider benefits also accrue to the surrounding community, as visitors from Ireland and abroad come into the area and use other attractions, local B&Bs, shops, pubs and restaurants.

The rural development aspect of forest recreation is particularly relevant, given the changing nature of agriculture in Ireland. A recent study[2] estimates the value of leisure and recreation in Irish forests at €38 million per year, with a potential to double this figure, if adequate mixed species forests and facilities are provided.

Health and well-being

Also of growing relevance is the role of forest recreation in promoting people's health. Attractive and accessible woodlands encourage people outdoors to take regular physical exercise, which is a key component in strategies aimed at tackling heart disease and obesity. The natural sights and sounds of the

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1,2 Bacon, P. 2004. *A Review and Appraisal of Ireland's Forestry Development Strategy.*

woodland also calm us and promote a sense of well-being. This link between trees, forests and health is well-documented, and perhaps in the future, doctors will be prescribing walks in the wood as a preventative measure against various ills!

Woodlands for towns and cities

Ireland's towns and cities continue to expand rapidly, and it is estimated that over 70% of Ireland's population now live in urban areas. This aspect of modern Ireland highlights a real need for attractive woodland amenities within easy reach of our urban communities.

Fostering a woodland culture

On a more general level, forest recreation increases people's appreciation of and respect for the forest, the countryside and for Ireland's natural heritage. This fosters a woodland culture and underpins efforts to protect the countryside and to support the rural economy.

Forest recreation – a decision for owners

The Forest Service, the national forest authority, regards recreation as a key component of sustainable forest management, and as a major non-timber benefit of Ireland's forests. *In this regard, the Forest Service encourages forest owners and managers to consider providing for recreation within their forest, where possible, in consultation with the local community and with other users.*

This is a decision that rests solely with the owner, and one that must take account of difficulties surrounding public access and cost. Nevertheless, a wide range of opportunities exists, from simple walks to cater for local people, to related enterprises aimed at generating an actual income.

FOREST ACTIVITIES

Informal activities

Woodlands and forests are highly versatile, providing an ideal venue for many different activities involving people of all ages and abilities. Many of these activities are informal in nature, involving individuals, families and friends deciding to spend time outdoors, e.g. afternoon strolls, dog walking, family outings and picnics, children's play, jogging.

Formal activities

Other activities involve enthusiasts or particular interest groups, clubs and sporting bodies, and in some cases may require permits or licences. They

...to bird watching (Photo S. Bosbeer)...

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include hill walking, orienteering and scouting, wildlife watching, horse-riding, mountain biking, rock climbing, artistic pursuits such as painting and photography, recreational hunting and angling, camping and paint-balling, and high impact activities such as motor-biking, quad-riding and 4x4 driving, which require particular control. Some of these activities take place within the forest itself, while others incorporate the forest as part of a trail or circuit within the wider landscape.

FOREST TYPES

From a recreational perspective, forests can be loosely divided into two categories.

Forests managed primarily for timber

The first category includes forests managed primarily for timber, ranging from small-scale, lowland farm forests to larger forest tracts in upland areas. The scope for recreational development in these forests, based on features such as forest roads and ridelines, is considerable. Development can range from the provision of small-scale facilities to cater for local use, to larger scale developments involving car parking, picnic areas and linkages to wider networks within the surrounding countryside, such as long distance waymarked ways. Larger forests can also cater for activities requiring large areas, such as orienteering, recreational hunting and mountain biking.

Forests managed primarily for recreation

The second category includes woodlands and forests managed primarily for recreation, often with extensive facilities such as playgrounds, visitor centres and toilets. This category includes neighbourwoods in and around town and cities, forest parks, and areas of woodland connected to other amenities and enterprises, such as public parks, outdoor adventure centres, holiday villages, caravan parks and campsites. This category can also include National Parks, where woodlands are managed primarily for conservation, but also for public access, interpretation and enjoyment.

...to paint-balling.

ABOUT THIS GUIDE

Intended users of this guide

Forest Recreation in Ireland – A Guide for Forest Owners and Managers offers practical advice on developing woodlands and forests for recreation. It addresses the main topics likely to arise within the Irish context, and also points to other sources of information. It is aimed at forest owners and managers keen to develop recreational opportunities, and also at the other key players involved, such as local communities, outdoor activity and sporting interests, environmental groups, local authorities and other statutory bodies, etc.

Content overview

This guide is divided into three main sections:

- Section 1 sets out how to assess a forest's potential for recreation, and explores issues surrounding consultation, promoting accessibility, and planning.

- Section 2 advises on the most common recreational facilities, including walking routes, car parking and signage, and offers guidance on woodland diversity and open spaces.

- Section 3 explores a range of related issues, such as forest interpretation, the use of forest codes, avoiding conflict and promoting safety in the forest, public access and liability, and undesirable activities.

In addition, further sources of information and useful contacts are listed in Appendices A and B.

Note that forest recreational development may be subject to existing Forest Service environmental guidelines and felling controls.

1.1 PROVIDING FOR FOREST RECREATION

Deciding to provide for recreation

In the vast majority of situations, the decision to allow access and to provide for recreation in the forest rests solely with the forest owner, and is provided on a goodwill basis[1]. This decision depends very much on the owner's personal level of interest, and the weighing-up of a range of potential benefits and drawbacks.

Potential benefits

Potential benefits include the following.

- Many owners have considerable pride in their woodland and get a real sense of satisfaction from letting people enjoy its attractions, and from the resulting goodwill amongst users and the local community.

- Developing a forest for recreation also creates opportunities for income generation for the owner, both directly from car-parking fees, the sale of permits, etc., and indirectly, whereby the forest forms an integral part of a business based on holiday cottages, an open farm, a horse-riding centre, a camping or caravan park, an outdoor adventure centre, a visitor centre, a country craft outlet, etc.

- Wider economic benefits also accrue to the surrounding community, as visitors from Ireland and abroad come into the area and use local attractions, accommodation, shops, pubs and restaurants.

Potential drawbacks

Potential drawbacks include the following.

- Issues regarding privacy, visitor safety, public liability, vandalism and litter.

- Increased costs in terms of installing and maintaining facilities and increased insurance cover for public liability and fire.

- Concerns about inadvertently creating some form of right of access, and about giving users a say in how the forest is managed.

- Possible disruption of other forest objectives and operations.

The level of commitment

The level of commitment is also up to the owner. Some owners may be willing to accommodate low-level use by local people. Others may be prepared to commit more heavily, particularly if the development of the woodland as an amenity is linked to an onsite enterprise, as outlined above.

Ensuring success

At whatever scale, recreational development must be appropriate and sustainable in terms of the owner's level of commitment and resources, the attributes of the forest, and the needs and preferences of the users. Identifying the best way forward will therefore involve an assessment of the forest's potential for recreation, and consultation with forest users. Development should also incorporate the 'access for all' approach, and be based on careful planning. All of these issues are discussed in subsequent sections.

1.2 ASSESSING THE FOREST'S RECREATIONAL POTENTIAL

Having decided on his/her level of commitment, the forest owner should, in consultation with users, assess the potential of the forest for recreation. This will point to the best way forward, be it how best to cater for existing uses, or how to gear up for higher visitor numbers and different uses in the future.

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1 In some cases, there may be a legal obligation to cater for a right in law allowing visitors to enter land (e.g. rights-of-way, fishing rights). Elsewhere, for pragmatic purposes, an owner may have to provide for recreation as the best way to control uninvited use and associated problems that already exist in the forest.

Consideration of the following questions will help with this process.

1.2.1 What is the forest currently being used for?

Observe how people are using the forest

Simply observing what is already going on in the forest will give a strong indication as to how best recreational development should proceed. What type of activities are people already using the forest for? Who are the users and what is the level of use? Which are the most popular open spaces and routes? Are there any conflicts that need to be addressed?

Much of this information can be picked up simply by observing how people are using the forest, looking out for signs of use on-the-ground, or by chatting with visitors. Although costly, detailed surveys may be justified in larger developments, where specific information on user profile, travel distances, average spending, etc. may be needed.

1.2.2 How compatible is recreation with other forest objectives, functions and values?

Consider the wider forest context

Carefully consider other objectives, functions and values of the forest, such as timber production, sensitive habitats, important archaeology, to assess if recreational development is indeed appropriate. These factors and their related restrictions and operations (e.g. harvesting and extraction) may limit the potential for recreational use to certain areas or to certain periods, or may even rule it out altogether.

1.2.3 What is the basis of the forest's appeal?

Identify attractive features and attributes

Irish woodlands and forests very often have layer upon layer of natural, historical and cultural heritage encompassing a wide range of features and attributes: topography, rock outcrops, natural viewpoints and ridgelines, streams, rivers, lakes and waterfalls, flora and fauna, ancient trees, archaeological remains from various ages, historical, cultural and folklore associations, literary connections, previous site uses and interesting place names. Other features and attributes are determined by forest management, such as species, age and structural diversity, woodland edges and open spaces (clearings, glades, ridelines), and the colour and texture of the overhead canopy. Many of these are subtle in nature, while others stand out as major 'honey pot' attractions in their own right.

Sense of place

Such features and attributes have a major bearing on the basic appeal of the forest to visitors, combining to create a unique atmosphere or sense of place. From the outset, identify those features and attributes that underpin the forest's appeal, and set about ensuring that they are protected and, where possible, enhanced.

Proactive management

Conversely, some forests have an atmosphere that many visitors find unwelcoming and uncomfortable. However, this can often be traced back to issues easily addressed by management, such as cutting back overgrown paths, replacing rundown facilities, thinning and high pruning to open up the canopy, creating views out onto the surrounding landscape, tackling undesirable activities, and promoting a sense of active management.

1.2.4 Who are the potential users?

Identify potential activities and users

Identify potential users at the outset, as this will have a major bearing on recreational planning and management. Forest recreation covers a wide range of activities and user groups, all with their own needs and preferences. Forest users can range from locals out for an evening stroll, to family day-trippers or tourists who travel some distance to get to the forest, to people pursuing a particular activity, either as individuals or as members of a club. Also consider the nature of the visit. For example, the typical family unit represents a mixture of adults wanting to relax, and children wanting adventure and play.

1.2.5 Are there any potential dangers within the forest?

Identify potential dangers

Be aware of potential dangers – these may restrict the potential for recreation, or may even rule it out altogether from some or all of the forest. Potential dangers can arise from natural features such as uneven ground, overhanging branches and steep riverbanks, or from artificial features such as open wells, unstable gravel pits and substandard recreational facilities. Danger can also arise from conflict between different recreational uses, such as walking and mountain biking, and between recreation and other forest objectives and operations, such as harvesting and extraction.

See Sections 3.4 and 3.5 for further information.

1.2.6 How important is location?

The impact of location on the type and intensity of use

Location has a major bearing on the recreational potential of the forest, and on the type and intensity of use – and misuse – likely.

For example, the biggest demand in woodlands in or near towns and cities is likely to be for family visits, dog walking and picnicking, with the intensity of use likely to be very high, particularly during weekends and school holidays. Unfortunately, the potential for misuse (such as vandalism and drinking parties) and conflict with normal forest management is also likely to be considerable. Similarly, the recreational potential of forests within or nearby well-known tourist routes, areas and attractions will be greater than that of forests in more isolated settings.

Local infrastructure – proximity to major routes, the quality of local roads, the availability of shops for snacks, access to public transport, etc. – also influences the forest's potential for recreation.

A small lake located within the forest may be ideal for birdwatching...

...prompting the idea of developing a hide in co-operation with local bird enthusiasts.

Potential for linkages with wider networks

As described in Section 2.2, the forest's location may create the potential for linkage with wider recreational networks in the surrounding landscape, such as long-distance walking routes, upland walks, Slí na Sláinte routes, and scenic and heritage drives. Such linkage adds greatly to the forest's recreational value, plugging it into a wider recreational resource and a new set of users.

1.2.7 Is forest size important?

Forest size and potential for recreation

As with location, size has a major bearing. A small woodland may have a high recreational value, if, for example, it is located near a town with no other woodland amenities available in the surrounding area. Generally, however, the larger the forest, the greater its potential for recreation.

Carrying capacity

Forests can accommodate large numbers of visitors without losing their basic appeal. However, there is a limit to this carrying capacity, when overcrowding and unsustainable use overwhelm the forest, leading to its breakdown as a recreational resource and major conflict with other forest objectives and values. Generally, the larger the forest, the greater its carrying capacity. Opportunities to cater for incompatible activities, such as family walks and mountain biking, are also greater, as specific areas can be zoned for different uses (see Section 3.3).

Resilience to people pressure

Similarly, some forest types are better able to withstand pressure than others, and can support high levels of usage and more demanding activities. For example, plantation forests are generally more robust and resilient to people pressure than semi-natural woodlands.

1.2.8 Is the forest suited to a particular type of activity?

Identify potential uses based on features and attributes

Depending on their particular features and attributes, some forests are better suited to specific uses than others. For example, a sizeable upland forest with views across the surrounding countryside will have a natural appeal for ramblers and hill-walkers. A woodland with areas of open marsh may be suitable for bird watching. A forest with a varied topography, with plenty of dips, hollows and inclines, may be ideal for a mountain-bike trail.

1.2.9 Are there any recreational facilities already in place?

Recreational facilities are a major factor in attracting people to the forest and enabling them to enjoy their visit. The type and level of facilities will vary greatly from forest to forest, from a simple walking circuit for local people, to a full-scale development comprising a visitor centre, café and restrooms, and a network of different walking routes. Other forests will have specialised facilities for specific activities, e.g. angling piers, birdwatch hides, bridle paths.

Take stock of what's needed

When assessing the forest's recreational potential, take stock of any recreational facilities already in place. Are existing facilities adequate or are more needed? What is the condition and state of repair of existing facilities? Do particular activities being catered for require specialised facilities? Can forest roads, landing bays and ridelines play a recreational role? A good way to assess whether or not more facilities are needed is to think through the entire visit – from arrival to departure – from the perspective of the various user groups. This process is particularly important for visitors with particular needs, e.g. parents with baby buggies, people using wheelchairs and other mobility aids.

See Section 2 for guidance on recreational facilities.

1.3 A CONSULTATIVE APPROACH

Consultation with users during planning and management is a key ingredient in the success of any forest recreational initiative, for the following reasons.

Identifying needs

- At the very basic level, consultation identifies people's needs and preferences, which allows the development of the forest best suited to its eventual users.

Promoting compromise

- Consultation allows the forest owner and forest users to discuss recreational proposals and issues, based on a shared understanding of the challenges and restrictions facing the owner, and the needs and preferences of the users. This process promotes mutual respect, compromise and support, pre-empts potential conflict, and helps to identify the best way forward based on what is realistic.

Securing commitment

- Consultation gives users a stake in ensuring that the forest succeeds as an amenity. It creates an onus on people to take greater care of the forest and its facilities, to adhere to the forest code, and to respect any restrictions in place. It also promotes a sense of protection for the forest, encouraging people to keep an eye out and to raise the alarm if problems arise.

Potential volunteers

- A consultative approach will also create a potential pool of volunteers to assist in various tasks. These range from litter clean-up or tree planting by enthusiastic locals, to the installation, upkeep and repair of specific facilities by relevant user groups.

Tapping into specialist knowledge

- If catering for a particular activity, consulting with the relevant users (including clubs and organisations) will tap into specialist knowledge regarding how best to proceed, and the type and specification of facilities required. Examples include the layout and design of a mountain bike trail, and the construction and positioning of a birdwatch hide. This process may also identify potential sources of funding for such facilities.

Fostering consultation

Consultation can be fostered in various ways. In the case of small, low-key developments, friendly informal contact with people already using the woodland may be all that's needed to get feedback and suggestions and to keep the lines of communication open. Where a specific activity is being catered for, relevant clubs and organisations can be consulted, ideally at as local a level as possible.

Hold onsite meetings with key players, to explore and discuss options. Devil's Glen, Co. Wicklow.

Mountain Meitheal is a group of volunteers who undertake conservation and restoration projects on mountain and forest paths and trails in partnership with Coillte, National Parks & Wildlife Service, and other landowners.

As scale, complexity and the number of people involved increase, more formal forums and participatory methods come into play. These include public meetings, the use of consultative plans and maps, 'Planning for Real' methods, and the setting up of committees to represent the various interest groups.

It is often not possible to consult in detail with all user groups, such as visitors travelling from other parts of the country or from abroad. However, their views can be gathered using onsite surveys, questionnaires and suggestion boxes.

Genuine engagement

At whatever level, consultation should be an ongoing and genuine two-way process aimed at arriving at the best recreational solution for the forest. It should not be used by owners to rubberstamp a pre-determined plan, or by users to make unrealistic demands.

Wider consultation

In addition to the users themselves, consultation with other parties may also be appropriate, to ensure a more strategic approach. Depending on the situation, these might include the following.

- Adjacent landowners, to explore the potential for complementary recreational development and linkages, or to pre-empt potential difficulties such as unwelcome recreational overflow into adjoining properties, or nuisance and disruption to nearby households.

- The general community, to encourage local acceptance for the development and to allay any concerns regarding, for example, the licensing of certain activities.

- The Local Authority, to ensure compatibility with the local infrastructure.

- National bodies, for example, the National Waymarked Ways Advisory Committee or the Irish Heart Foundation, to discuss possible incorporation into waymarked and Slí na Sláinte routes in the locality.

- Organisations offering potential funding and support, such as the Forest Service, LEADER, etc.

1.4 ACCESS FOR ALL

'People with disabilities'...

The term 'people with disabilities' encompasses people who live with some level of physical, sensory, learning, mental health or emotional impairment that restricts their capacity to participate in economic, social or cultural life. Actual disabilities range greatly: mobility issues requiring the use of wheelchairs, specialised bicycles and other aids, sight and hearing difficulties, learning difficulties, etc. Disabilities can also be temporary as well as permanent, as people become disabled to various degrees at different stages of their life, due to illness and age.

...a description, not a definition

'People with disabilities' is a description, not a definition. As with everyone else in society, people with disabilities enjoy woodlands, forests and the outdoors in general, and have particular needs and preferences which must be considered.

An estimated 10% of the population live with some level of disability. Add family members, friends and others involved in the visit, and it

becomes clear that pursuing access for all will be relevant to a sizable chunk of Irish society.

Legislation

Most legislation in this area focuses on making the built environment more accessible to people with disabilities, and has limited application in the woodland context. However, Section 4 of the Equal Status Act (2000) (see *www.irishstatutebook.ie*) is relevant, as it creates a responsibility on the provider of a service (such as a forest owner developing his/her forest for recreation) to do all that is reasonable to accommodate the needs of people with disability.

Access for all

Very often woodland owners and managers shy away from the idea of pursuing access for all, thinking that it requires 100% wheelchair access to all areas. However, access for all isn't about setting unrealistic targets. *Instead, it is about using available resources wisely in a way that enables people with as wide a range of abilities as possible to enjoy the forest.* Key ingredients in this approach are strategic thinking, consultation, and the use of best practice.

The following principles apply.

Access to the entire forest experience

Access for all isn't only about physical access; it involves access to the entire forest experience. Consider access for all during the layout and design of all recreational facilities, including trails, car parks, gates, seats, picnic tables and information signs. Bear in mind that inappropriate facilities very often create the greatest barrier faced by people with disabilities. At the very least, aim for the least restrictive approach. Access for all should also be incorporated into other related measures such as leaflets, booklets, websites, guided tours and other events held in the forest.

Applying the access for all approach, such as the design of a wheelchair accessible birdhide, creates a facility, and a forest, which can be used and enjoyed by all members of the community.

A strategic approach

Be strategic. If resources are limited, focus initially on achieving the highest level of access possible to the most attractive area or feature in the forest, and build up from there. Similarly, tackle issues that will yield the greatest results. For example, repairing a poorly drained section of trail at the forest entrance may open up a large stretch of highly accessible trail beyond.

Never make assumptions

Never make assumptions about people's abilities. On signs, leaflets, etc., give accurate factual information about what's ahead in terms of slope, surface, etc., and let people with mobility difficulties – and indeed everyone else – make their own choice about whether or not to proceed.

An inclusive approach

Do not have separate facilities, paths, events, etc. for people with disabilities. Instead, aim for an inclusive approach that allows people with and without disabilities to enjoy the woodland together.

Consultation

As with other user groups, include people with disabilities during planning, design and management, to identify specific needs and preferences, and to get the best advice possible. Consultation can take place with people with disabilities living within the local community, with local disability groups, or with national representative bodies.

Guides on best practices

Use available guides and manuals setting out best practice. The National Disability Authority (*www.nda.ie*) offers information and guidelines (e.g. *Building for Everyone*) for improving accessibility within the built and outdoor environment, which will be relevant to various aspects of forest recreation (e.g. visitor centres, restrooms). Fieldfare Trust (*www.fieldfare.org.uk*), an organisation that works closely with people with disabilities and countryside managers, provides a wealth of information and advice in its publication *Countryside for All – Standards and Guidelines*. Included in this are standards in relation to path surface, slope, distance between rest areas, height and width clearance, etc. for different outdoor recreational settings, from urban parks to wilderness areas.

1.5 PLANNING FOR RECREATION

The need for a plan

A plan setting out what needs to be done should be prepared. This plan should reflect the owner's level of commitment, the recreational potential of the forest, and the needs and preferences of the users. The plan should also dovetail with other aspects of forest planning, to ensure that recreation is fully considered within overall forest management.

Level of detail required

The detail needed depends on scale and complexity. Low level use by locals might only require a simple 'to do' list regarding the upkeep of the entrance and footpaths. Where recreation is a priority and where a range of facilities are provided and uses encouraged, the plan needs to be more thorough, comprising detailed maps, specifications and costings. Revenue-generating enterprises require a further level of planning in the form of a business plan based on projected user numbers and revenue streams.

Basic elements

Although plans will vary greatly in detail, all should incorporate the following basic elements.

Phasing the work

Consider breaking down the work into different phases, with each phase to be completed within a set period – be it several months, a year or several years – before moving onto the next. When deciding on these phases, make sure that the timeframe is realistic, both practically and financially. This approach will ensure that work is divided into achievable tasks and progresses steadily in a sustainable and coherent manner. For example, the recreational development of a particular forest could involve the following phases:

Phase 1 (Year 1): Develop 850 m of new footpath to link up existing forest roads and to create a circular walking route.

Phase 2 (Year 2): Improve the forest entrance with timber rail fencing and landscape planting.

Phase 3 (Year 3): Install a total of three seats, one picnic table and eight waymarkers at key points along the walking route.

The plan should also have a medium- and long-term outlook for the future of the forest as a recreational resource.

Incorporate the need for maintenance and repair when planning for recreation in the forest. Fairymount Farm, Co. Tipperary.

Provision for maintenance

Provision should be made in the plan for ongoing maintenance and running costs. These can vary greatly, from the cost of a periodic tidying-up of a forest entrance, to an ongoing clean-up, maintenance and repair programme often required in a heavily used forest park or urban woodland.

Monitor and review

Monitor progress and review the plan on a regular basis, to take account of unforeseen factors. This process will indicate how well the development is working in terms of realising the forest's recreational potential. Consultation with users, along with simple surveys and visitor counts, will provide essential feedback.

Where to go for advice and information

As a first step in developing a forest for recreation, it is recommended that the owner contacts various organisations who will be able to provide information, advice and possible support, such as the Forest Service, the Local Authority (e.g. Heritage Officer, Community and Enterprise Section), Rural Development Agencies (LEADER), Enable Ireland, the National Waymarked Ways Advisory Committee, and other sporting and outdoor activity organisations (see Appendix B for details).

SECTION 2 Recreational Facilities

2.1 GENERAL CONSIDERATIONS

The importance of facilities

Recreational facilities allow visitors to experience, use and enjoy the forest. The type and amount of facilities needed depend on the type and level of use envisaged, and of course, available resources. However, adding even a small number of well-placed facilities will have a major impact, reassuring people that they are indeed welcome.

Ensure that all facilities are in keeping with the woodland setting. For example, this unstained oak sign is well suited to its surroundings. Ballygannon Wood, Co. Wicklow.

Range of facilities

General facilities include walking routes, seats, picnic tables, waymarkers, information boards, bridges, stiles, children's play facilities, nature trails, fitness trails, viewing points and car parking. Depending on the uses being catered for, other facilities may also be appropriate, such as horse-riding paths, mountain bike tracks, bird watching hides and angling piers. More extensive facilities, such as visitor centres, toilets, cafés, gift shops, camping facilities and holiday chalets, may also be appropriate in the most heavily used recreational forests or as part of a leisure-based enterprise.

Main types of facilities

This chapter provides general advice on the most commonly used facilities, including walking routes, signage, picnic facilities and car parking. Related issues such as woodland diversity and open spaces are also addressed. Advice on outdoor cooking and litterbins is included in Sections 3.7 and 3.8. Information on more specialised facilities required for particular activities and users is contained in the suggested reading list (see Appendix A) and from relevant organisations (see Appendix B).

The following general considerations will help identify the most appropriate type and level of facilities for the forest, and how these can be realised with minimum expense. Various guides as also available, such as *Design for Outdoor Recreation* (see Appendix A).

Access for all

Apply the access for all approach when planning and designing all facilities (see Section 1.4), to ensure that as many people as possible are able to enjoy the forest. Measures relating to different facilities are outlined in the relevant sections.

Quality

Focus on providing a few well-positioned, high quality facilities maintained to a high standard. This will be far better than installing lots of substandard facilities, which then require unsustainable levels of maintenance, repair and replacement.

Distribution of facilities

Generally, the number and scale of facilities should diminish with the distance from the point of entry, such as the car park. For example, in a larger, heavily used forest, information signs, surfaced footpaths, picnic units and play areas should be focused in the more accessible areas, to cater for the general visitor. Moving further out, a progressively lower intensity of facilities, including narrower, more naturally-surfaced walking routes with occasional waymarkers, will suit those seeking further challenges and looking to get away from the crowd and to enjoy the wilderness.

A well-constructed footpath will require less repair and maintenance, and represents a most sustainable solution in the long run. Djouce Forest, Co. Wicklow.

Specialised facilities

Certain activities require specialised facilities, e.g. bridle paths, bird watching hides, mountain bike tracks. As part of the general consultative approach described in Section 1.3, liaise with relevant clubs in the locality, or with the relevant national body (see Appendix B), for input regarding these facilities and any standards and specifications that may apply.

Reflect the natural woodland setting

Facilities should be in step with the natural woodland setting. Keep design as simple and as unobtrusive as possible, use natural material such as timber and local stone, and adopt a consistent style and quality throughout the forest. Apart from high-visibility colours on warning signs, directional signs and waymarker, any paint or staining used should reflect the natural colours of the forest. Don't overdo the number of facilities provided. For example, lots of signs visible from a particular spot creates a sense of clutter and takes away from the forest's natural appeal.

Durability

Durability will reduce maintenance, repair and replacement costs. Facilities should be robust and resilient to damage (including vandalism), weathering and decay. Measures include: the use of large diameter timber; treatment with a suitable wood preservative; secure anchorage using buried metal cross pins and/or concrete; recessed lettering and symbols; and the use of weather-resistant paint.

A logical sequence

Plan facilities so as to provide a logical sequence for the visitor. For example, a new walking route, complemented with appropriate facilities, should flow naturally from the point-of-entry onwards, taking in forest features along the way to create an attractive sequence of diverse experiences.

Minimise site impact

Minimise site impact throughout the planning and installation of facilities. Avoid sensitive, vulnerable sites and adopt low impact options, where possible. As previously described, Forest Service environmental guidelines apply. A Felling License may also be required for any associated tree felling.

In areas where vandalism may be an issue, consider indestructible options for seating, such as suitable rocks and boulders.

Silvicultural implications

Consider the silvicultural implications of creating new routes and spaces within an existing forest, particularly in relation to the risk of windthrow. Ideally such features should be added at the planting or replanting stage of the forest cycle.

Incorporate facilities into overall forest management

Ensure that all recreational facilities are fully incorporated into the overall management of the forest, and are duly considered during forestry operations such as thinning and harvesting.

2.2 WALKING ROUTES

Spectrum of walkers

Walking is undoubtedly the most popular recreational use of our forests. The actual route people take is the primary way in which they experience the forest and derive enjoyment from their visit.

Walking encompasses everything from short afternoon strolls by parents and their young children, to all-day and all-weather hikes by keen hill-walkers, who include the forest as part of a wider route.

Access for all

Apply the access for all approach to the planning, design and management of walking routes, to open the forest to visitors with various abilities. Slope, surfacing and potential barriers, such as gates, require particular attention. See Section 1.4 for information on relevant standards.

Needs and preferences

Consider the needs and preferences of the likely users. Young parents with baby buggies will have a very different set of requirements regarding surfacing, width, slope, distance, etc., compared to a dedicated and fully equipped hill-walker.

In larger forests, provide different types of routes to give people choice based on their own abilities and preferences. Shorter, well-surfaced loops following a level or gentle slope and avoiding steps, stiles and gates, can be developed around the point of arrival (e.g. car park), offering a readily accessible option. As distance increases, these can gradually give way to longer, steeper and more naturally surfaced routes that represent a greater challenge.

Creating a network

In most cases, walking routes will include existing forest roads and tracks, and new sections of footpaths added to create access to areas or features not

already serviced by these. New footpaths can also be used to link up existing roads and tracks, in order to eliminate cul-de-sacs and to create a greater combination of routes. These new sections will introduce diversity, allowing people to step off the forest road, which can become monotonous, onto a narrower route offering a closer experience of the forest.

The following are some of the main considerations involved in planning and managing walking routes within forests. Further information is provided in *Guidelines for the Developing and Marking of Waymarked Ways* (see Appendix A).

Getting it right from the start

Proper routing, construction and drainage will result in a walking surface that is sustainable for the level of use envisaged. Getting it right from the start will minimise maintenance requirements, and will avoid costly problems such as surface widening and erosion.

Incorporate features and avoid dangers

When setting out a new walking route, ensure that it takes in attractive features of the forest (as described in Section 1.2.3). Conversely, avoid features that may be sensitive to people pressure (e.g. sensitive habitats and archaeological remains), or that pose a potential danger (e.g. abandoned quarries, steep riverbanks).

Circular routes

Aim to create a looped or figure-of-8 route, so that people can walk a circuit and not have to retrace their steps. In larger forests, aim for a network of alternative circular routes, identified by coloured waymarkers (see Section 2.3). This offers visitors a variety of walks to choose from, as well as allowing the closing-off of certain routes during forestry operations, localised flooding, etc., while still enabling access on others.

Linking in with other routes

Explore the possibility of linking up walking routes within the forest with other walking routes in the locality. These include both informal routes and designated routes, such as Slí na Sláinte walks and long distance waymarked ways. Such linkage greatly enhances the forest's recreational value, plugging it into a wider recreational resource and a new set of users.

Unofficial paths and natural desire lines

There may be unofficial footpaths already present in the woodland, developed through informal use over time. Incorporate these into the official network, as

A simple footpath within a young ash woodland, developed to cater for relatively light use as part of a farm holiday enterprise. Fairymount Farm, Co. Tipperary.

A simple boardwalk provides access across localised areas of wet terrain. Note the use of wire gauze for grip underfoot. Killarney, Co. Kerry. (Photo S. Bosbeer)

Stiles provide access over fences, but create difficulties for less mobile users. Killary, Co. Mayo.

they are often well-established and preferred routes that people are already using. Similarly, in and around towns and cities, new woodland sites are often crossed by natural desire lines, which reflect how people are currently using the site. These should be incorporated into the walking route network within the future woodland, as their use will undoubtedly persist.

Incorporating historical routes

Using historical maps and records, identify old abandoned routes that could be cleared and brought back into use. Incorporating such routes will add greatly to the sense of heritage associated with the forest, enhancing its appeal. Note that archaeological advice may be required to protect the original surface features, if still evident. See the Forest Service *Forestry and Archaeology Guidelines* for details of the relevant advisory bodies.

Rights-of-way

Incorporate traditional rights-of-way into the walking route network within the forest. However, bear in mind the nature of their use. For example, it may be inappropriate to include a heavily used right-of-way providing access to a neighbouring farm.

Width, surfacing and border treatment

Width, surfacing and border treatment will all depend on the envisaged use.

Where intensive use is expected and ease of access is important (e.g. forest parks, neighbourwoods), a smooth, compacted crushed stone surface, finished off with a finer top dressing, will be required. The path should be wide enough to enable people to walk at least two abreast. In some situations, tarmac may be used. Border treatment may involve wide grassy margins mown on a regular basis, to reinforce a sense of active management and reassurance.

At the other end of the scale, remote walking routes provided for hill-walkers can comprise a simple narrow footpath. If required, surfacing should be discreet, using locally sourced material. Border treatment should comprise the periodic cutting back of encroaching vegetation. The overall aim is to reinforce a sense of solitude, wilderness and exploration.

As previously described, in large forests, different types of routes can be provided to accommodate people with different abilities and preferences.
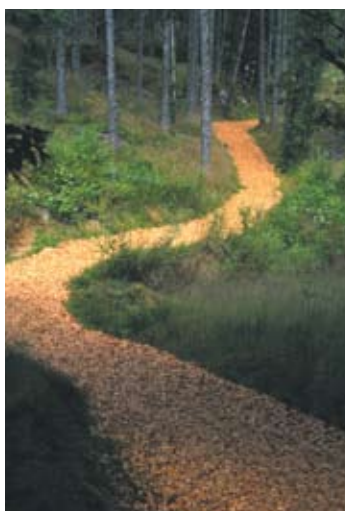
When fresh, wood chips and bark mulch provide an attractive surface. However, both soak up moisture and break down rapidly, and are generally unsuitable as a long-term solution. Strontian, Scotland.

Complex and expensive bridging may be required to cross larger waterways in heavily used forests. Ballyseedy Wood, Co. Kerry.

In urban areas, greenspaces are often crossed by natural desire lines, which reflect how people are currently using the site. These should be incorporated as pathways into any future woodland design. Cabinteely, Co. Dublin.

Drainage

Proper drainage is key to maintaining a high quality, stable walking surface. Direct all water off and away from the path, by compacting and consolidating the surface dressing, and by using carefully positioned collector drains, culverts and water bars.

Position new footpaths in a way that exposes the surface to the drying effects of the sun and wind. Avoid routing paths through soft wet ground and areas prone to flooding, as maintenance will be a continuous problem. If such areas are unavoidable, a geotextile underlay or sections of raised timber boardwalk may be appropriate, the latter overlaid with wire mesh to prevent slippage underfoot. However, these options are not always the best and most sustainable solution for difficult sites. For example, wet soil can ooze up through gaps, tears and seams in the geotextile underlay. Boardwalks are expensive, and those made from railway sleepers can be extremely hazardous underfoot if covered by snow.

Waterbars, culverts and other drainage measures are a vital element of footpath construction. Djouce Forest, Co. Wicklow.

Avoid steps

When adding new sections of footpath, avoid using steps as far as possible, as they are expensive and can create a barrier for people with mobility difficulties. Instead, plan routes so as to avoid excessive slopes, or if unavoidable, to descend in a gentle zig-zag fashion. Avoid having too many switchbacks, as impatient walkers may begin taking short cuts directly down the slope.

Design of new forest roads

If a new forest road or track is being installed, consider ways to enhance its value for walking. For example, it may be possible to add curves and bends, to create a sense of expectation about what's around the next corner.

Local material

If surfacing is required, use crushed stone and gravel sourced from within the forest or the surrounding locality. Such material will blend in better, both visually and ecologically.

Bark mulch and wood chips

Bark mulch and wood chips are generally not suitable for surfacing, as they become sodden and deteriorate very rapidly. However, both may be an option to demarcate temporary walking routes during particular events held in the forest, such as a week-long programme of guided walks.

Gates, stiles and crossings

Gates and stiles are needed wherever a walking route crosses a wall or fence. Numerous designs are available, from spring loaded and kissing gates to squeeze and ladder stiles. Consider access for all – inappropriate gates and

stiles are often a major barrier to visitors with mobility difficulties. In this regard, generally limit stiles to more remote, inaccessible areas.

Similarly, footbridges may be required to allow walkers to cross over streams and rivers, and are attractive features in their own right. These range from simple crossings with handrails, to more elaborate, pre-assembled structures. Simple stepping-stones can be used to cross streams in remoter areas, as long as they remain safe to use during periods of higher water level.

2.3 SIGNAGE

The role of signage

Signage is a powerful tool in forest recreation. It can be used to reassure people that they are indeed welcome in the forest, to provide direction and orientation, and to highlight heritage. Signage can also be used to promote the forest code and to alert people to potential dangers.

Amount of signage required

The amount of signage required will vary greatly. A small woodland popular among locals for short evening walks might only need a simple welcoming sign and a handful of waymarkers, as users will already be familiar with the woodland and its features. Conversely, forests catering for more intensive and varied recreational use (e.g. forest parks, neighbourwoods) require a greater level of signage, in terms of both density and type.

Note that, where thinning, harvesting, extraction and other forestry operations are underway, safety warning and prohibition signs must be used and obeyed (see Section 3.4).

Access for all

As with all facilities, adopt the access for all approach with signage, so as not to exclude anyone from the information presented. For example, position information and heritage boards so that they can be viewed comfortably by visitors in wheelchairs. Similarly, large font or even Braille will help people with sight difficulties.

The following are the main issues involved in developing signage. Also see general considerations set out in Section 2.1.

Keep information brief and clear

Information presented on all signs should be brief and clear. Adopt conventional symbols already in the public domain, as they will be easily recognised. All text should be kept short and concise.

Waymarkers are used to mark out walking routes in the forest. Use different colours or symbols to highlight different routes. Ballygannon Wood, Co. Wicklow.

Information boards can also include a notice board (right panel), to highlight current issues such as ongoing work, upcoming events, seasonal wildlife, etc. Glendalough, Co. Wicklow.

Waymarkers and directional signs

Waymarkers and simple directional signs mark out walking routes and give direction to features, facilities, etc. They are normally positioned at junctions, but should also be dotted along long stretches, to reassure people that they are still on their selected route.

- During installation, ensure that the waymarker or sign is correctly orientated, to prevent any confusion regarding which way to go.

- Securely anchor to prevent the piece from being twisted *in situ*, which would misdirect people.

- If there are two or more walking routes within the forest, identify each using different coloured or themed waymarkers.

- Include a rough estimate of the remaining distance on at least some of the waymarkers or signs, to inform walkers.

Information boards

Information boards give an introductory overview of the forest and the layout of walking routes, facilities and features. They are best positioned at the point at which people walk into the forest, often after parking their car.

- Use an outline map of the forest as the centrepiece of the board. Represent information pictorially on this map as far as possible, with a 'YOU ARE HERE' arrow to orientate people. Use the same map in all leaflets and booklets, to promote familiarity.

- Clearly illustrate walking routes on the map. Give the approximate distance and a brief but accurate description of each (e.g. 'finely surfaced, mainly flat, with occasional steep sections') to allow people to choose based on their preferences and ability. Identify different routes by using different colours, symbols or themes, both on the map and on the corresponding waymarkers. If using waymarkers, ensure that the first one marking out the trail is clearly visible from the information board.

- The board should include the forest code, to remind people of their responsibilities while in the forest (see Section 3.2). Also consider giving a contact point with management (e.g. address, phone number), to enable people to report any problems (e.g. vandalism, dumping) and to provide general feedback.

Clear and simple maps are easy to understand and provide a wealth of information about the woodland and its features and facilities. Fairymount Farm, Co. Tipperary.

A welcoming sign at the forest entrance will create a good first impression amongst visitors. Ballygannon Wood, Co. Wicklow.

- Update the board periodically to incorporate any new facilities and attractions. Consider temporary notices to highlight upcoming events, restrictions due to forest operations, or particular wildlife to look out for during the current season. A removable Perspex screen held on with screws will facilitate easy updating. Every time the screen is removed, wipe it to remove any algal growth. Laminate all maps, information sheets, posters, etc., to protect the paper against damp.

Heritage boards Attractive information boards highlighting various aspects and features of the forest's natural, historical and cultural heritage add greatly to a person's visit, creating a deeper understanding of and appreciation for the forest. A number of these can be set along walking routes, to create a heritage or nature trail (see Section 3.1). Text should be short, concise and accurate, and aimed at the general reader.

Languages Consider presenting information in Irish, to promote the national language. Also consider foreign languages such as French, German and Spanish – even a couple of words will be greatly appreciated by visitors from abroad.

Road signs Directional signage on approaching public roads and junctions may be justified in situations where the forest is being developed as a major recreational resource. Consult with the Local Authority, as specifications and planning permission may apply. A welcoming sign with the forest's name should also be considered, positioned at the forest entrance.

2.4 PICNICKING

Picnicking in the forest is very popular, particularly among young families. Very often, an attractive and well-maintained picnic area will itself act as a honey pot feature, drawing people to the forest. Usually families adopt a particular spot for their picnic and use it as the base for their entire visit, with children making forays into the surrounding area and parents staying put to supervise, relax and chat.

Low cost options Picnics can be catered for without the need for dedicated picnic tables. Often a mown grassy area will create an ideal setting for people to roll out a picnic rug. Alternatively, natural furniture, such as oversized logs and flat-topped boulders, can be strategically positioned, as can simple seats that allow people to eat off their laps. These options are ideal for forests where use is low, and also for scenic viewpoints and other sensitive areas, where people are welcome to stop and eat, but perhaps not in large numbers.

Picnic tables Greater use may justify picnic tables, of which many designs exist. An important consideration is the ease with which users with different levels of mobility can sit down and stand up from the table. One or more tables should also be directly accessible to visitors with wheelchairs.

Developing a picnic area If developing a cluster of picnic tables to form a designated picnic area, consider the following.

- Picnic tables can be placed beneath the canopy or within open spaces, usually close to a sheltering forest edge and interspersed with groups of trees. Keep lines of vision open on all sides, to reassure users of their surroundings and to enable parents to keep an eye on their children as they play nearby.

- Consider spacing. Picnic tables should be far enough apart for privacy, and yet not so far apart that people feel isolated.

- Position tables so as to get good sunshine.

- Locate the picnic area within easy reach of the car park, both to facilitate visitors carrying heavy picnics, and for ease of maintenance.

- In large, heavily used forests, several picnic areas can be provided to offer a choice of sites and settings.

- Bins may be appropriate, particularly in larger picnic areas. In general, however, it is better to encourage people to take their litter home – see Section 3.8.

2.5 PARKING

The need for parking

The need for parking will vary greatly from forest to forest. A small cluster of spaces may be enough in a woodland used by locals for evening strolls and dog walking. On the other hand, full-scale parking facilities, staffed during peak periods, may be needed in forest parks, neighbourwoods and other high-use forests that attract people from afar. Major difficulties, including hazardous on-road parking and traffic congestion, arise wherever use is high and parking facilities are absent or inadequate.

Using management features

Features required for normal forest management, such as entrances, forest roads and landing and turning bays, can often double up as parking areas. Considering dual-use during planning can further enhance this potential. For example, extra room can be added to a proposed forest entrance, to create space for a small number of cars to park. However, be aware of the potential for future conflict with management, such as blocked entrances.

Dedicated parking facilities comprising an entrance from the public road and a feeder road leading to the car park itself, may be necessary. The main considerations for such facilities are as follows.

Encourage good traffic flow

Keep traffic flow as simple, direct and as intuitive as possible. Car parks laid out as a one-way loop often work best. Clear directional signs are also important, using conventional, easily recognisable traffic symbols. Allow a generous parking space for each car, to enable drivers to manoeuvre in and

Warning signs positioned within the car park will remind car users not to leave valuables in the car. Glendalough, Co. Wicklow.

Secure, lockable barriers are often necessary on all vehicle entrances into the forest.

out with ease. A number of extra-wide spaces should also be designated for visitors using wheelchairs and other aids.

Safety

Consider safety throughout. Promote clear sightlines at all junctions. Speed signs and ramps will slow drivers down, while yield and stop signs at junctions will show who has priority. Note that Local Authority permission may be required for the creation or upgrading of a forest entrance off a public road. Open sightlines at the entrance will be needed, necessitating tree removal and vegetation control.

Reflect the natural woodland setting

A forest car park should reflect the natural setting of the forest itself. Avoid features that characterise its urban counterpart, e.g. straight lines, hard edges, concrete bollards, double yellow lines. Use natural sweeps and curves, and locate parking spaces in small clusters, with some among trees and others out in the open. Use sensitive designs for signage, and locally sourced gravel for surfacing. Demarcate the edge of the car park using low wooden posts or low grassy mounds.

Security

Car security is a big concern for people. Various measures will help to promote a sense of watchfulness and coming and going, that will help deter thieves. For example, ensure open sightlines throughout the car park, and avoid creating isolated, out-of-sight parking spaces. If planned, position the picnic area or playground within sight of the car park, to allow people to keep an eye on their car. Erect warning signs advising people not to leave valuables in the car.

Forest entrance

The point-of-entry from the public road creates the very first impression of the forest. It should therefore be attractive, tidy and welcoming, and should reflect the natural setting of the forest itself. Generous bell-shaped entrances, lined with wooden fencing, boulders or a grassy mound, work well. A simple welcoming sign with the name of the forest is also appropriate.

Barriers

A secure barrier is usually required to close the car park, usually at night. Such barriers should be capable of withstanding considerable abuse, for example, from 'joy-riders' seeking access onto forest roads at night. A narrow entrance and/or maximum headroom barrier may also be needed, to restrict the type of vehicle entering. See Section 3.6 for advice on locking forest car parks. Barriers will also be needed on any forest road leading from the car park, to prevent unauthorised vehicle access further into the forest.

Catering for other vehicles and forms of transport

Depending on the nature of the forest and its use, parking spaces may be needed for vehicles other than cars, e.g. school coaches, horseboxes, campervans. Also, some visitors may arrive on foot, bicycle or public transport, particularly in the case of neighbourwoods in and around urban areas. Encourage people to use these forms of transport. For example, highlight nearby bus stops on any promotional material relating to the forest, and provide secure bike racks for cyclists.

2.6 CHILDREN'S PLAY

General considerations

Play facilities greatly enhance a forest's appeal among young families, and often represent a honey pot attraction in their own right. However, given the exacting safety standards and the cost involved, playground equipment is usually only justified in high-use forests, such as forest parks and neighbourwoods. If used, design and construction should reflect the natural woodland setting. If possible, adopt an imaginative theme inspired by the forest itself. Also, with access for all in mind, favour equipment that is accessible to children of different abilities.

Súgradh, an organisation promoting the child's right to play, provides detailed

guidance on developing playgrounds within the Irish context (*www.playireland.ie* see Appendix B).

Encourage natural play

The woodland itself presents an ideal environment for children, with natural slopes, low branches, small streams, stepping stones, logs and boulders all promoting natural play and exploration. Therefore, instead of installing formal playground equipment, consider promoting opportunities for natural play within the woodland itself.

Locating play areas

Whichever option is used, play areas should be accompanied by seats, to allow parents to keep an eye on their children in comfort. Also, consider removing potentially dangerous berry-producing trees and shrubs in the vicinity (e.g. holly, yew, rowan), as they may pose a risk to young people through choking or poisoning.

Woodlands and forests are full of natural play opportunities for young people. Glendalough. Co. Wicklow.

2.7 WOODLAND DIVERSITY

The importance of woodland diversity

Physical features and attributes such as species mix, age and stand structure, understorey and ground layers, open spaces and ancient trees, etc., are all part of the forest's natural diversity. Very often they blend together to create a particular atmosphere. For example, a stand of mature

The chance of seeing wildlife is a major attraction of the forest. Charleville Wood, Co. Offaly.

Douglas fir will often have a majestic, cathedral-like atmosphere, while a multi-storey broadleaf woodland will feel distinctly sylvan.

Generally, the more diverse a forest is, the greater its appeal and potential for recreation. Using both short- and long-term measures, management can directly influence diversity, and hence, the forest's basic appeal.

Increase diversity for walkers

Walkers in particular prefer diversity on a small scale, i.e. diversity that is readily apparent at walking pace. In uniform conifer areas, diversity for walkers can be introduced by planting broadleaf strips along sections of the route.

Promote wildlife

Diverse woodlands and forests can be a treasure-trove for birdwatchers and other wildlife enthusiasts. Also, casual visitors often cite the chance of seeing wildlife as a major attraction. Measures in the Forest Service *Forest Biodiversity Guidelines* will promote the variety and abundance of wildlife, with a corresponding increase in the forest's appeal. These include increased species, structure and age diversity, the retention of ancient trees and deadwood, native tree planting and the installation of bird boxes.

Measures set out in the Forest Service Forest Biodiversity Guidelines *will enhance woodland diversity, thereby increasing the opportunities for visitors to experience wildlife.*

Retain a sense of natural disorder

Random gaps in the canopy, uneven undergrowth, fallen deadwood and other features and attributes that might seem untidy in a conventional sense are in fact key to the forest's underlying appeal. While safety considerations dominate (see Section 3.4), do not over-sanitise the forest, and instead aim to retain this sense of natural disorder and informality.
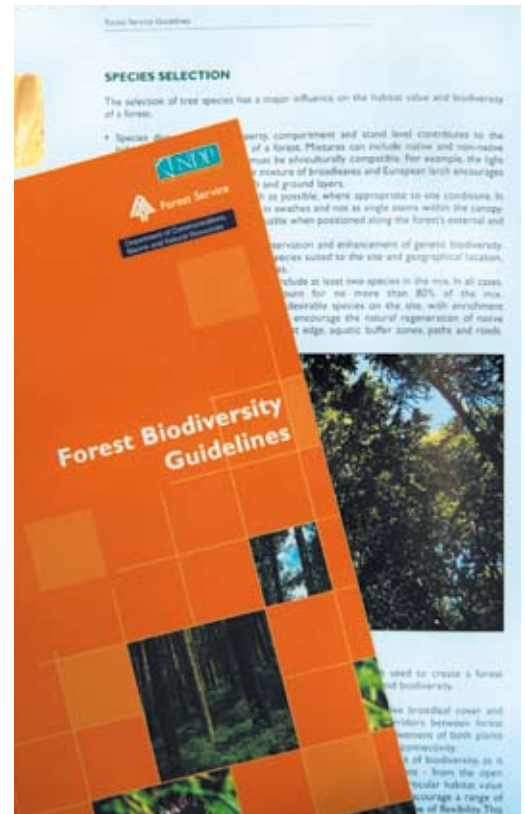
Restructuring the forest

Harvesting and replanting create a great opportunity to restructure the forest and to introduce diversity in terms of species, age structure, open spaces, natural edges, etc.

2.8 OPEN SPACES

The role of open spaces

Open spaces are a vital component of forest recreation. They increase diversity by creating contrast (e.g. light, colour, temperature) with areas under canopy, and provide space for activities to take place. They vary greatly in size, from small woodland glades upwards.

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Areas in front of viewing points need to be managed to prevent the view from becoming blocked. Strontian, Scotland.

Different types of open spaces

Operational open spaces may be suitable for recreation, depending on safety and sensitivity. These include ridelines, firebreaks, forest roads and loading bays, and open spaces required under the Forest Service environmental guidelines, e.g. aquatic buffer zones, archaeological exclusion zones, areas of biodiversity enhancement. Other open spaces can be introduced specifically for recreation. These include open spaces around attractive features and viewpoints, and open spaces to house specific facilities and activities. Open spaces located beside car parks are often very popular, particularly if they also include picnic tables.

Planning open spaces

Careful planning will greatly enhance the recreational value of an open space. For example, orientate the open space so that it catches as much direct sunlight as possible. Maximise width to prevent future overshadowing as the surrounding canopy grows taller. Similarly, the open space in front of a viewpoint should be large enough so that the canopy downhill will not block the view at some point in the future. The shape or footprint of the open space should be organic in nature, avoiding straight edges and sharp angles.

Edge treatment

Open spaces can be further enhanced by encouraging a gradual transition from grass to native shrubs and small trees, up to the woodland canopy itself. This creates an attractive, natural edge between the open space and the woodland canopy, and is also very good for wildlife. However, this treatment may not be suitable in all situations, e.g. along footpaths in urban woodlands, where opportunities for concealment need to be eliminated.

3.1 DISCOVERING THE FOREST

Encouraging visitors to discover the forest's heritage

Irish woodlands and forests often have a wealth of natural, historical and cultural heritage associated with them. Allowing people to discover some of this will add greatly to their visit, as well as encouraging a wider appreciation of Ireland's heritage.

In the vast majority of cases, dedicated visitor centres offering exhibitions, talks and guided tours are simply not an option. However, lots of other measures can be used to highlight the heritage associated with local woodlands and forests, many of them simple and relatively inexpensive.

Focus on young people

Generally focus on young people – they are eager to learn and their enthusiasm will draw in other family members. With access for all in mind (see Section 1.4), also consider people with special needs, tailoring leaflets, maps, signs, guided walks, etc. accordingly in order to open up the forest in every sense.

Local expertise

Tap into reliable and accurate sources of information in the locality. For example, local foresters, historians and wildlife experts may be prepared to supply suitable text for information boards and leaflets, or to lead occasional guided walks.

Highlight the forest's heritage

Wherever possible, highlight the heritage associated with the forest. For example, different walking routes can be named after various birds, historical features or trees found in the forest. Similarly, where the original Irish townland name has an association with trees or woodland, consider adopting it as the name of the forest.

Heritage and nature trails

Existing routes can be transformed into heritage and nature trails simply by creating a series of stops to highlight notable features. New sections can also be added to take in other features. Relevant information can then be provided using either *in-situ* interpretation boards (see Section 2.3) or simple numbered markers linked to the relevant section of an accompanying leaflet or booklet (see below). These stops can also include outside features, such as views of mountain peaks and other landmarks in the wider landscape.

Guided walks led by local experts are a great way to encourage people to discover the forest. (Photo S. Bosbeer)

Information on various features and aspects of the woodland can be provided onsite, using panels. Rosturra Wood, Co. Galway.

Simple markers can be used to highlight features or themes along a nature or heritage trail, with further information given in an accompanying leaflet or booklet. Balrath Wood, Co. Meath.

Leaflets and booklets

Leaflets and booklets – ideally map-based – can be used to highlight various aspects of the forest's heritage. Although designed primarily for use during the visit, they can also double up as promotional material for the forest. Leaflets and booklets can range from inexpensive A4 photocopied sheets to glossy, foldout publications. In major recreational forests, such material can be put on a website, allowing people to print off copies before their visit. In all cases, text should be accurate and concise, and of interest to the general reader.

Promote forest code

Where possible, include the forest code (see Section 3.2) on all interpretation boards, leaflets, booklets, etc. This will remind people of their own responsibilities as visitors, within the positive context of them finding out about the forest.

Outdoor classroom

Invite local schools to use the forest as an outdoor classroom. Potential activities can span all classes and subjects, from nature study and science to arts and woodwork (e.g. bird and bat boxes). The Tree Council of Ireland's National Tree Day, aimed at primary schools, shows the wide array of learning opportunities possible.

Creative arts

Invite local writing and poetry groups, painting groups and photography clubs to consider using the woodland or forest as the subject of a creative project for their members. As well as being very rewarding for the people involved, with agreement, a selection of the results could be used in future interpretation and promotional measures.

Explain the forest cycle

Explain any forest management operations planned or underway, using temporary notices. Outline why such operations are needed within the context of the forest cycle, and measures to protect the environment. As well as informing people and allaying concerns, this measure will promote a general understanding of woodland management. (Note that this measure is *in addition* to any mandatory warning signs required – see Section 3.4.)

Community events

Consider organising an event or activity within the forest for local people. Examples include guided family walks, tree planting, face-painting and demonstrations of traditional woodcraft. A certain degree of organisation and publicity is required, but local environmental groups and other interested

Into the Dark, a sculpture by Eileen MacDonagh, part of the Sculpture in Woodland collection, Devil's Glen, Co. Wicklow.

A simple information board describing operations will help allay people's concerns and promote awareness of woodland management practices. Saviours Wood, Co. Wicklow.

Tree-planting and face-painting in Terryland Forest Park, Galway City, are just some of the community events that can take place in the woodland. (Photo S. Bosbeer)

parties might be prepared to help out. Consider timing these events to coincide with National Tree Week (March) and National Heritage Week (September), to benefit from the heightened public awareness of heritage issues generated by these nation-wide programmes.

3.2 PROMOTING A FOREST CODE

A positive tone

A forest code is a simple list of what and what not to do that people are expected to follow during their visit. Its purpose is to make visitors and users more responsible for their actions in terms of protecting the woodland habitat, co-operating with management (e.g. adhering to any temporary prohibition signs), and being considerate of other visitors and users.

The code should have a positive and informative tone that encourages people to act appropriately – a list of rules and restrictions has a limited impact and very often turns people off. The code should also be short and concise, and included on all information boards, leaflets, booklets, etc.

General and specific codes

A number of codes aimed at general users have been developed by various organisations, including the Irish Farmers Association, National Parks & Wildlife Service, the Tree Council of Ireland and Comhairle na Tuaithe. Various bodies promoting and representing particular outdoor activities have also developed specific codes of conduct for those activities, e.g. Mountaineering Council of Ireland, the National Waymarked Ways, Coillte. See Appendix B for contact details.

As described below, forest owners willing to allow particular activities such as horse riding and mountain biking should insist that a code of conduct is drawn up for that activity.

Leave No Trace

Leave No Trace (*www.LNT.org*), an international model for promoting outdoor ethics, is an excellent example of a code for recreational users. Efforts are underway to establish Leave No Trace in Ireland, and recent codes reflect its underlying principles. For example, Comhairle na Tuaithe's country code is set out as follows:

- Plan ahead and prepare
- Be respectful of others
- Respect farm animals and wildlife
- Keep to durable ground
- Leave what you find
- Dispose of waste properly
- Minimise the effects of fire

3.3 AVOIDING CONFLICT

The potential for conflict

Woodlands and forests are ideal for many different activities. Unfortunately, conflict can easily arise between different activities, and also between recreation and other forest objectives, such as wood production and conservation. Often it is a question of degree. For example, walking and horse riding may be compatible within a particular forest, assuming that the level of use is low and that paths are wide enough to accommodate both activities safely. Conversely, activities such as motorbike scrambling can cause major disruption, and must be strictly controlled or excluded altogether.

If it does arise, conflict can become a costly problem, disrupting management, undermining safety and detracting from the enjoyment of all users. However, preventative steps can be taken.

Decide on which activities to accommodate

The owner should be clear about which activities s/he is prepared to accommodate. This decision will be based on compatibility, user preferences and constraints such as forest size and available resources. Also, if a particular activity persists despite being discouraged, consider accommodating it instead of struggling continuously to exclude it.

Involve user groups

The best way to minimise conflict is to adopt a consultative approach with users during planning and management (see Section 1.3). This creates an atmosphere of understanding, compromise and support, in which conflicts can either be pre-empted or solved through dialogue.

Forest code

Many conflicts arise from users acting irresponsibly and carelessly. The promotion of a forest code will remind people of their responsibilities regarding the forest, its management and other users (see Section 3.2).

People can be reminded of the forest code during their visit to the wood. Ballyseedy Wood, Co. Kerry.

Minimising conflict arising from specific activities

Particular activities, such as horse riding, mountain biking and quad riding, are enjoyed by many and represent a valid recreational use of the forest. However, if uncontrolled, these can be hazardous, damaging and highly disruptive. Owners willing to accommodate such activities should insist on the following.

- The activity should be carried out under the auspices of a formal club or organisation, subject to a renewable agreement with the owner.

- The club or organisation should develop an acceptable code of conduct governing the activity.

- Where possible, the use of the forest for the activity should be restricted to members of the club or organisation, and made subject to adherence to the code.

- The club or organisation should have adequate insurance cover for both its members and the forest owner.

Zoning for different activities

Consider allocating different areas of the forest for different uses. For example, within a particular forest, attractive and accessible areas can be zoned for intensive use, with short walks and picnic tables provided for families. Meanwhile, other, more remote areas can be earmarked for timber production, less intensive activities such as hill walking, or less compatible activities such as horse riding. Zoning can be applied in various ways. For example, maps, information boards and leaflets can be used to show which activities are welcome, where, and why. Facilities can be restricted to those areas zoned for recreation, and tailored to the activity in question. The use of warning and prohibition signs, barriers and gates will also discourage people from straying into inappropriate areas.

Time restrictions

Licence and permit control can be used to restrict certain activities to particular times of the day or year. Forestry operations will also require periodic restrictions, requiring the use of warning and prohibition signs – see Section 3.4 for further information.

Duplicate facilities

Although costly, incompatible activities can be kept apart by providing duplicate facilities. For example, a separate network of walking routes and bridle paths can be developed within a forest popular for both walking and horse riding. In such cases, minimise the number of crossroads to reduce opportunities for walkers to stray onto the bridle network, and *vice versa*, with clear indication as to who has right-of-way. Clear signage, together with tailored surfacing and facilities, will also help to define each network.

3.4 PROMOTING SAFETY

Disclaimer Sections 3.4 and 3.5 are not a legal interpretation of the Occupiers' Liability Act (1995). Anyone seeking a legal interpretation should obtain legal advice.

Potential hazards

Woodlands and forests contain many potential hazards, both natural (e.g. uneven surfaces, dangerous trees, overhanging branches, steep riverbanks) and introduced (e.g. unstable ruins, deep drains, unsafe recreational facilities). As described in Section 3.3, danger can also arise from conflict between different recreational activities, and between recreation and forestry operations.

A variety of steps can be taken to promote safety in the forest, as described below. For further information, the UK Visitor Safety in the Countryside Group (see *www.vscg.co.uk*) publishes a guide entitled *Managing Visitor Safety in the Countryside,* aimed at providing owners and managers of urban and rural open spaces with advice on best practice, principles and information on visitor safety.

Remember that 'safety' does not have to mean 'sterile' – it is possible to develop a woodland that is safe for recreation while also retaining the sense of naturalness that underpins its appeal.

Identify potential hazards

At the very outset, identify potential hazards and measures needed to safeguard visitors. Once implemented, carry out regular checks to ensure that these measures remain effective and to identify any new hazards. Keep a full record (including dated photographs) of all inspections, maintenance and repair work. This will inform future planning and management decisions, and will demonstrate due care by the owner, should a legal action emerge.

Increase awareness

Increase the awareness of potential hazards in the forest, using signage, information boards, leaflets and booklets. Remind visitors that the forest is a natural, outdoor environment that calls for common-sense measures such as the use of sturdy footwear and warm, waterproof clothing. Various organisations have developed safety guidelines for specific activities, e.g. *Walk Safely in the Irish Hills and Countryside*, a leaflet published by the Mountaineering Council of Ireland, the National Waymarked Ways Advisory Committee and the Countryside Access and Activities Network (NI).

Use warning signs to alert people to possible dangers, such as steep drop-offs in rivers and lakes. Glendalough, Co. Wicklow.

Avoiding conflict

Conflict between different recreational uses and between recreation and other forest objectives can create hazards. Therefore, efforts to promote safety should include measures to minimise conflict, such as consultation, forest codes and zoning (see Section 3.3.). Zoning is a key tool, whereby people are encouraged to remain within a designated area and away from other areas where potential hazards may exist.

Safety measures

Many potential hazards can be avoided, for example, by designing new walking routes to simply by-pass a particular danger. However, in some situations, exposure to potential hazards is unavoidable, necessitating specific safety measures and warning signs. For example, a walking route ascending a steep valley wall may have dangerous drop-offs at various points along the way. This would require sturdy safety fencing and clear warning signs to alert users.

Prohibition signs

Forestry operations such as harvesting and extraction represent a major hazard, and access by visitors to the worksite must be strictly prohibited. Temporary prohibition signs, positioned for maximum visibility, must be used on all approach routes to the worksite. (If possible, locate these at junctions, to allow people to pick up an alternative route without having to retrace their steps.) Temporary notices should also be included on any information boards, informing visitors of the operations and the potential hazard they pose. The Health and Safety Authority's (HSA) *Code of Practice for Managing Safety and Health in Forestry Operations* outlines best practice on prohibiting access, use of signs, etc.

In the interest of safety, visitors must be warned of the danger of forestry operations such as thinning and harvesting, and kept away from the worksite. Union Wood, Co. Sligo.

Safety on the forest worksite

In forests used for recreation, there is a particularly high onus to ensure safety on any operational worksites, as users may enter these areas despite prohibition signs. A key document in this area is the HSA's *Code of Practice for Managing Safety and Health in Forestry Operations*. This code provides practical guidance on observing the provisions of the Safety, Health and Welfare at Work Act (1989) and the Safety, Health and Welfare at Work (General Application) Regulations (1993) for forestry operations, setting out the role and responsibilities of the landowner, the forestry work manager, the contractor and the subcontractor.

Site restoration

As described in the Forest Service *Forest Harvesting and the Environment Guidelines*, site restoration is required following forestry operations. This includes the removal of any residual dangers (e.g. hazardous chemicals, loose fencing wire, temporary structures) before the area is reopened for recreational use.

Safe facilities

Ensure that all facilities, including stiles, gates and seats, are properly installed, inspected regularly and maintained in a safe condition. Exacting safety standards apply to playground equipment (see *www.playireland.ie*). Other facilities, such as safety fencing, car parking and footbridges, may be subject to national building requirements or general construction codes.

Various organisations also provide standards for facilities required for specific activities. For example, *Guidelines for the Developing and Marking of Waymarked Ways*, published by the Heritage Council and the National Waymarked Ways Advisory Committee, contains a wealth of information on the development of waymarked ways.

Safety in the car park

Speed ramps, stop and yield signs and directional arrows can all be used to control traffic flow in forest car parks and service roads. Local Authority permission is required to create or upgrade entrances onto public roads. Safety measures may be necessary, such as tree felling to open up sight lines.

Dangerous trees

Organise periodic inspections to identify dangerous trees or branches overhanging walking routes, car parks, picnic areas, public roads, etc., and ensure that remedial work is carried out promptly, where required. Further information is contained in the Forest Service *Guidelines on the Recognition of Dangerous Trees*.

Branches overhanging popular walking routes can pose an unacceptable risk, and should be removed.

3.5 THE OCCUPIERS' LIABILITY ACT AND INSURANCE ISSUES

Summary of the Occupiers' Liability Act (1995)

The Occupiers' Liability Act (1995) provides clarity regarding the responsibility of both the occupier and the recreational user. In general, the occupier must take reasonable precautions to guard against danger, and must not act with reckless disregard for recreational users. Similarly, there is an obligation on recreational users to take all necessary steps to ensure their own safety, and to act responsibly, given their knowledge of the forest. This includes full cooperation with signage and other control measures put in place for their safety.

The *IFA/FBD Guide to the Occupiers' Liability Act* (1995) explores the contents of this Act, and will be of interest to forest owners. Slightly amended extracts of this guide are reproduced below, with kind permission.

Disclaimer *The IFA/FBD Guide to the Occupiers' Liability Act (1995) is not a legal interpretation of the Act. Anyone seeking a legal interpretation should obtain legal advice. A full copy of the Act is available from the Government Publications Sales Office, or at* www.irishstatutebook.ie.

EXTRACTS FROM THE IFA/FBD GUIDE TO THE OCCUPIERS' LIABILITY ACT, 1995

Classes of entrants and the duties of occupiers

There are three categories of entrant under the Act, namely Visitors, Recreational Users and Trespassers, with differing duties expected of occupiers towards visitors on the one hand and recreational users and trespassers on the other hand. The three new categories of entrant, and the duties owed by an occupier to each, are explained below.

Entrant		Duty of the occupier
Visitor	Includes: • a person present on premises at the invitation, or with the permission, of the occupier; • a person present by virtue of an express or implied term in a contract; and • an entrant as of right, e.g. Gardaí, etc.	A duty to take such care as is reasonable in all the circumstances to ensure that a visitor to the premises does not suffer injury or damage by reason of any danger existing on the premises.
Recreational User	A person present on premises, without charge (other than a reasonable charge for parking facilities), for the purposes of engaging in a recreational activity.	Not to intentionally injure the person or damage the property of the person, nor act with "reckless disregard" for the person or the property of the person.
Trespasser	All entrants other than visitors or recreational users.	As for Recreational User

What is "reckless disregard"?

In deciding whether an occupier has acted with reckless disregard, the Courts are required to take *all* the circumstances into account, including the following.

• Did the occupier know of the danger?

• Did the occupier know of the presence of the recreational user?

• Did the occupier know that the recreational user was near the danger?

• Should the occupier have protected the recreational user against the danger?

• Was it straightforward, practical and at a reasonable cost for the occupier to protect the recreational user against the danger?

• What was the type of premises and was it desirable to retain open access to the premises given the danger?

• Did the recreational user take care of him- or herself and act responsibly given how well he/she knew the premises?

- What warnings were provided?

- Was the recreational user accompanied? If so, what control or supervision did that other person exercise?

Use of warning signs

One of the tests for reckless disregard is the nature of any warning given or posted by the occupier of dangers existing on the premises. Properly worded warning signs, displayed prominently, may provide protection for occupiers against the risk of a successful legal action by a recreational user.

Other issues

The Act deals with a number of other important issues, including the following.

- *Stiles, gates, etc.* Structures, including stiles and gates, primarily for use by recreational users rather than by the occupier should be kept in a safe condition.

- *Independent contractors* An occupier who has taken reasonable care when engaging an independent contractor will not be liable for injury or damage caused to an entrant by the contractor's negligence unless the occupier knows the work has not been properly done. However, an occupier cannot delegate liability to an independent contractor in cases of work that is inherently dangerous. Examples of this type of work might include the felling of road boundary trees or demolition of a high boundary wall.

Insurance

Despite changes to the law introduced in the Occupiers' Liability Act (1995), landowners still run the risk of claims by members of the public. Accordingly, *it remains essential that landowners take out adequate public liability insurance*, in order to protect against legal claims (subject to the specific exclusions and monetary limits set out in the policy).

Clear 'no entry' signs can be used to keep people away from dangerous areas. Belvedere Estate, Co. Westmeath.

High risk activities

As described in Section 3.3, the forest owner may be willing to accommodate specific high-risk activities, as long as these are carried out under the auspices of a formal club or organisation. The forest owner should also verify that the club or organisation has adequate insurance cover to protect both its members and the owner him- or herself.

3.6 UNDESIRABLE ACTIVITIES

The impact of undesirable activities

Various undesirable and often illegal activities can unfortunately occur within the forest. These include loitering, drinking parties and illegal dumping (or fly-tipping), malicious fires and other forms of vandalism, 'joyriding' along forest roads, and substance abuse. Such activities create a threatening atmosphere for both visitors and the surrounding community, and greatly undermine the forest's recreational value. They also represent a costly problem for the owner.

Although often associated with larger urban centres, undesirable activities can occur anywhere in the country. At the very outset, consider whether or not these activities are likely to be an issue, and adopt preventative measures (see below), as required. In extreme cases, recreational development may simply be unrealistic.

Encourage legitimate users

Encourage legitimate users into the forest, to create a desirable presence and an early warning system, should problems arise. This is reinforced by a consultative approach to forest recreation (see Section 1.3), as everyone involved will have an active interest in the forest. In some situations, e.g. urban neighbourwoods, a network of volunteer wardens can be developed, involving regular visitors and local enthusiasts.

A sense of active management

An atmosphere of active management discourages undesirable elements and attracts legitimate users. Remove evidence of abuse, such as dumped rubbish, bottle-strewn bonfire sites, burnt-out cars and vandalised facilities, as soon as possible. With the consultative approach to forest recreation, volunteer clean-up days can be organised.

Closing the forest during hours of darkness

Many undesirable activities take place during darkness. As described in Section 2.5, secure barriers are recommended at all vehicle entrances. Consider locking car park entrances at night, particularly near urban centres. Local residents may be prepared to lock up each evening on behalf of management.

A number of issues apply.

- Clearly indicate the lockup time, using signs and notices on information boards, leaflets, booklets, etc.

- Allow a later lockup time during the summer, to take account of the longer evenings.

- Be as generous as possible with the lockup time, to allow legitimate users a full day in the forest.

- Occasionally people will be locked in, having arrived back at their cars later than expected. A contact number for the key-holder could be displayed, although this system is open to abuse.

- Allowing later lock-up times by prior arrangement, to facilitate organised groups.

Informing the authorities

Inform the Garda Síochána of major problems that arise – they may be able to provide a presence, for example, by including the area in routine patrols. Similarly, inform the Local Authority of any illegal dumping. Under litter legislation, the owner of the dumped material will have a case to answer, if his/her identify can be established. The Local Authority may also erect signs along adjoining roads, detailing penalties for dumping.

Personal security

The personal security of visitors may be an issue, and should be factored into design and management. For example, limiting the number of walking routes will ensure casual contact between visitors and will prevent people from becoming isolated and potentially vulnerable. Reduce opportunities for concealment along walking routes and open spaces, by pruning, thinning and undergrowth control, and by keeping a wide grassy margin.

Vandalism and facilities

Consider the level of vandalism that seats, signs, picnic tables and other facilities may have to withstand. Avoid elaborate facilities – these often attract vandalism, damage easily, and are costly to repair and replace. Instead, opt for facilities that are simple, low-keyed and robust. Secure anchoring in concrete

Signage will discourage dumping to some extent, reminding potential offenders of the anti-social nature of their activities, and creating an atmosphere of management. Ballygannon Wood, Co. Wicklow.

If closing the forest carpark at night, clearly indicate the lock-up time for users. Devil's Glen, Co. Wicklow.

Pioneer species, such as birch, alder, rowan and willow, are ideal for woodland planting in urban areas. They are resilient to damage and grow rapidly to form an emerging woodland canopy within several years. Terryland Forest Park, Galway City.

may be needed. Consider indestructible alternatives, such as smooth rocks or large logs for seating.

Protecting new trees Newly planted trees can be easily vandalised, particularly in the neighbourwood context. In such cases, favour pioneer species such as willow, birch and alder, planted as forest transplants at high densities. This will result in a fast-growing young canopy capable of withstanding a certain level of damage. Also, avoid conflict between trees and site uses. For example, adopt established natural desire lines crossing the site as walking routes within the new woodland. For more advice, see Appendix B of the Forest Service NeighbourWood Scheme brochure.

Malicious fires See Section 3.7 for guidance on malicious fires.

Car security See Section 2.5 for guidance on car security in forest car parks.

Littering General littering by visitors is addressed in Section 3.8.

3.7 FIRE

Forest recreation and fire The lighting of fires in or near forests is controlled under the Forestry Act (1946), the Wildlife Act (1976) and the Wildlife (Amendment) Act (2000) (see *www.irishstatutebook.ie*). Notwithstanding such legalisation, fire – either accidental or malicious – can pose a real threat to the forest and to adjoining property. Recreational use can increase fire risk (and the corresponding cost of insurance), due to the greater number of people in the forest. However, increased numbers can also mean that any fires that do occur will be spotted quickly before spreading.

The following considerations apply.

Standard measures Standard measures to protect against fire, such as firebreak, reservoirs and fire plans, are set out in the Forest Service *Code of Best Forest Practice – Ireland* and *Forest Protection Guidelines*.

Outdoor cooking

It is generally advisable not to provide for outdoor cooking within the forest. However, facilities may be appropriate in certain limited situations, for example, in campsite developments or in heavily used picnic areas where cooking persists. In such cases, carefully planned facilities in designated areas will enable people to enjoy the experience of outdoor cooking, while also minimising associated fire risk. Measures to facilitate outdoor cooking should be in keeping with the above legislation relating to fire.

Many designs are available, from low campfire-type structures to waist-high barbeque grills. A simple block pedestal, flat-topped rock or cut tree stump can be provided as a surface for disposable barbeque trays. Consider covering part of nearby picnic tabletops with thick wire mesh, to protect against scorch damage from hot pots and trays. All cooking facilities should be situated within large open spaces, where the risk of fire spreading to the forest canopy is minimal.

A simple cut stump provides a handy platform for disposable charcoal BBQ trays. Glendalough, Co. Wicklow.

Raising awareness

Visitors should be alerted to the risk of fire and instructed not to be careless with fire. This message can be promoted positively as part of the forest code (see Section 3.2). Temporary notices can also be used to reinforce the message during high-risk periods. However, in forests where vandalism is an issue, such notices may actually trigger malicious fire lighting.

3.8 LITTERING

Legal obligations

Landowners, including forest owners, have certain obligations under law (principally the Litter Pollution Act (1997)) to keep areas that are open to the public litter-free, regardless of how the litter got there. The owner is also obliged to keep free of litter any outdoor area on his/her property that is visible from a public place. For more information, contact the Local Authority or ENFO – The Environmental Information Service (*www.ENFO.ie*).

Encourage visitors to take litter home

The best approach to controlling general littering by visitors is to encourage people to take their litter home for recycling or disposal. This message can be promoted positively as part of the forest code (see Section 3.2). Encourage people to be proactive, by picking up and carrying out one or two extra bits of litter dropped by others.

Litter bins

The question of whether or not to provide bins should be considered carefully. Do visitor numbers and activities justify their use? Is management fully committed to emptying bins on a regular basis?

Where used, bins should be lidded, easy to empty, and in keeping with the woodland setting. Glendalough, Co. Wicklow.

If bins are to be used, consider the following.

- Bins should be placed wherever litter is most likely to be generated, for example, on the way back to the car park, in picnic areas, and beside information boards.

- To prevent unsightly overflowing, increase the frequency of emptying during the summer months, weekends and other periods of heightened use.

- Numerous bin designs are available. In general, bins should be lidded, easy to empty and fireproof. Their capacity should also reflect the degree of use and the frequency of emptying. Consider providing segregated bins for recyclables.

Cleaning-up after forestry operations

The Forest Service *Code of Best Forest Practice – Ireland, Forest Harvesting and the Environment Guidelines* and *Forestry and Water Quality Guidelines* stipulate the removal and appropriate disposal of waste generated during forestry operations, e.g. discarded nursery bags, old machine parts, surplus chemicals, empty containers, lunch litter.

3.9 DOGS AND THE FOREST

Owner responsibilities

Forests are ideal for walking the dog, encouraging dog owners to visit on a regular, often daily, basis. However, using the forest code, dog owners should be made aware of their particular responsibilities. For example, dogs should be kept under effective control at all times (a requirement under the under the Control of Dogs Act (1986)), to safeguard other users and to avoid disturbing wildlife.

Walking the dog is a popular daily use of the forest. Belleek Forest, Co. Mayo.

Fouling

Dog fouling is particularly unpleasant and can pose a health risk, particularly in picnic or children's play areas. Consider providing a short stretch of footpath or an open space specifically for dog owners to bring their dogs through as soon as they arrive at the forest. This will enable dogs to 'do their business' within a designated area. Dog owners should also be requested to remove dog foul, using 'pooper-scoopers' or plastic bags.

Contact ENFO – The Environmental Information Service (*www.ENFO.ie*) for more information on the above issues.

Roadside signs can be used to highlight woodland amenities up ahead. Ballygannon Wood, Co. Wicklow.

Various types of leaflets and booklets can be used to promote the forest and to provide information to people during their visit. These can range from simple photocopied sheets to expensive colour productions.

3.10 PROMOTING THE FOREST

Level of promotion

Deciding whether or not to promote the forest, and to what extent, depends on the type and scale of development. Word of mouth will suffice where local use is the aim – indeed, owners may be reluctant to attract greater numbers from further afield. Conversely, forest parks, neighbourwood projects and other major developments will merit a high level of publicity.

When publicising the forest, do not raise expectations too high regarding what's on offer – dissatisfied visitors are unlikely to return, and will dissuade others from visiting. Also, consider if publicity is needed at all – an attractive woodland with established facilities may already be drawing people in.

Different ways to promote the forest

Various measures can be used, e.g.

*   leaflets and booklets made available through local shops, B&Bs, tourist centres, etc. (see Section 3.1);

*   regular articles in the local press;

*   website development;

*   public road signs (which require Local Authority agreement); and

*   inclusion in tourist maps and literature.

An imaginative, high profile event can also be staged to generate local, regional and national media attention. Sporting clubs will often promote their own events held in the forest with the owner's agreement, and this will provide further publicity for the forest itself.

The following is a list of publications of relevance to the area of forest and outdoor recreation. Many of the organisation websites listed in Appendix B also contain a wealth of additional information.

A Review and Appraisal of Ireland's Forestry Development Strategy. 2004. Peter Bacon & Associates. Government Publications Sales Office, Molesworth Street, Dublin 2.

Building for Everyone: Inclusion, Access and Use. 2002. National Disability Authority, 25 Clyde Road, Dublin 4 (www.nda.ie).

Code of Practice for Managing Safety and Health in Forestry Operations. 2003. Health and Safety Authority, 10 Hogan Place, Dublin 2 (www.hsa.ie).

Community Woodland Design Guidelines. 1991. Forestry Commission (www.forestry.gov.uk).

Countryside for All: Standards and Guidelines. Fieldfare Trust (www.fieldfare.org.uk).

Creating and Managing Woodlands around Towns. 1995. Forestry Commission Handbook 11. HMSO, London.

Design for Outdoor Recreation. 1997. Simon Bell. E & FN Spon, London.

Footpaths: A Practical Handbook. 1994. British Trust for Conservation Volunteers (www.btcv.co.uk).

Forest Recreation Guidelines. 1992. Forestry Commission (www.forestry.gov.uk).

Guidelines for the Developing and Marking of Waymarked Ways. 2002. The Heritage Council and the National Waymarked Ways Advisory Committee (www.walkireland.ie).

Guidelines on the Recognition of Dangerous Trees. 1998. Forest Service, Department of Agriculture and Food, Johnstown Castle Estate, Co. Wexford.

Managing Visitor Safety in the Countryside: Principles and Practice. 2003. Visitor Safety in the Countryside Group (www.vscg.co.uk).

NeighbourWood Scheme. Brochure on the NeighbourWood Scheme grant package, available from the Forest Service, Department of Agriculture and Food, Johnstown Castle Estate, Co. Wexford.

Recreation Policy: Healthy Forests, Health Nation. 2005. Coillte, Newtownmountkennedy, Co. Wicklow (www.coillte.ie).

Trail Solutions: IMBA's Guide to Building Sweet Singletrack. International Mountain Bicycling Association (www.imba.com).

Trees and Woods in Towns and Cities: How to Develop Local Strategies for Urban Forestry. 1999. National Urban Forestry Unit, The Science Park, Stafford Road, Wolverhampton, WV10 9RT, UK.

Tree Trails of Ireland. Information booklet published by Inversoft and the Tree Council of Ireland, The Park, Cabinteely, Dublin 18.

Urban Forestry in Practice: Case Studies. 1998. National Urban Forestry Unit, The Science Park, Stafford Road, Wolverhampton, WV10 9RT, UK.

Walk Safely in the Irish Hills and Countryside. Information leaflet published by the Mountaineering Council of Ireland, the National Waymarked Ways Advisory Committee and the Countryside Access and Activities Network (NI).

The following is an alphabetical list of various organisations in Ireland and elsewhere of relevance to the area of forest and outdoor recreation. Please note, this is not an exhaustive list, and many of the websites given have useful links to other relevant organisations.

BirdWatch Ireland
Rockingham House, Newcastle, Co. Wicklow
Tel. 01-281 9878; www.birdwatchireland.ie

Central Fisheries Board
Unit 4, Swords Business Campus, Balheary Road, Swords, County Dublin
Tel. 01-8842 600; www.cfb.ie

Coillte
Newtownmountkennedy, Co. Wicklow
Tel. 01-201 1111; www.coillte.ie

Comhairle na Tuaithe, Department of Community, Rural and Gaeltacht Affairs
43-49 Mespil Road, Dublin 4
Tel. 01-647 3219

Conservation Volunteers Ireland
Steward's House, Rathfarnham Castle, Dublin 14
Tel. 01-495 2878; www.cvi.ie

COST Action E33 'Forest Recreation and Nature Tourism'
www.openspace.eca.ac.uk/costE33

Countryside Access and Activities Network for Northern Ireland
The Stableyard, Barnett's Demesne, Belfast BT9 5PB
www.countrysiderecreation.com

Countryside Recreation Network
www.countrysiderecreation.org.uk

Crann
PO Box 860, Celbridge, Co. Kildare
Tel. 01-627 5075; www.crann.ie

Cycling Ireland
Kelly Roche, 619 North Circular Road, Dublin 1
Tel. 01-855 1522; www.cyclingireland.ie

Enable Ireland
32 Rosemount Park Drive, Rosemount Business Park, Ballycoolin Rd., Dublin 11
Tel. 01-872 7155; www.enableireland.ie

ENFO – Environmental Information Service
17 St. Andrew St., Dublin 2
Tel. 1890 200 191; www.ENFO.ie

Equestrian Federation of Ireland
Kildare Paddocks, Kill, Co. Kildare
Tel. 045-886678; www.horsesport.ie

Fáilte Ireland
Baggot Street Bridge, Dublin 2
Tel. 1890 525 525; www.failteireland.ie

Fieldfare Trust
67a The Wicker, Sheffield S3 8HT, UK
Tel: 0044 114 270 1668; www.fieldfare.org.uk

Forest Service, Department of Agriculture and Food
Johnstown Castle Estate, Co. Wexford
Tel. 1890 200 223; www.agriculture.gov.ie

Forestry Commission
www.forestry.gov.uk

Health and Safety Authority
10 Hogan Place, Dublin 2
Tel. 1890 289 389; www.hsa.ie

Heritage Council
Rothe House, Kilkenny
Tel. 056-777 0777; www.heritagecouncil.ie

International Mountain Bicycling Association
www.imba.com

Irish Deer Society
www.theirishdeersociety.com

Irish Heart Foundation
4 Clyde Road, Ballsbridge, Dublin 4
Tel. 01-668 5001; www.irishheart.ie

Irish Landscape Institute
8 Merrion Square, Dublin 2
Tel. 01-662 7409; www.irishlandscapeinstitute.com

Irish Orienteering Association
www.orienteering.ie

Irish Sports Council
Block A, Westend Office Park, Blanchardstown, Dublin 15
Tel. 01-860 8800; www.irishsportscouncil.ie

Irish Timber Growers Association
17 Castle Street, Dalkey, Co. Dublin
Tel. 01-235 0520; www.itga.ie

Irish Wheelchair Association
Áras Chúchulainn, Blackheath Drive, Clontarf, Dublin 3
Tel. 01-818 6400; www.iwa.ie

Keep Ireland Open
www.keepirelandopen.org

Leave No Trace – Centre for Outdoor Ethics
www.LNT.org

Mountain Biking Ireland
mbi@irishcycling.com; www.mbi.ie

Mountaineering Council of Ireland
Sport HQ, 13 Joyce Way, Parkwest Business Park, Dublin 12
Tel. 01-625 1115; www.mountaineering.ie

Mountain Meitheal – Upland Conservation Workers
www.pathsavers.org

National Association of Regional Game Councils
www.nargc.ie

National Disability Authority
25 Clyde Road, Dublin 4
Tel. 01-608 0400; www.nda.ie

National Parks & Wildlife Service, Department of the Environment, Heritage and Local Government
7 Ely Place, Dublin 2
Tel. 1890 202 021; www.npws.ie

National Waymarked Ways
c/o Irish Sports Council, Block A, Westend Office Park, Blanchardstown, Dublin 15
Tel. 01-860 8823; www.walkireland.ie

Scouting Ireland
Larch Hill, Dublin 16
Tel. 01-495 6300; www.scouts.ie

Sculpture in Woodland
c/o Coillte, Newtownmountkennedy, Co. Wicklow
Te. 01-201 1111; www.sculptureinwoodland.ie

Society of Irish Foresters
Enterprise Centre, Ballintogher, Co. Sligo
Tel. 071-916 4434; www.societyofirishforesters.ie

Sports Council for Northern Ireland
House of Sport, Upper Malone Road, Belfast BT9 5LA
www.sportni.net

Súgradh – Celebrating The Child's Right To Play
www.playireland.ie

Sustrans Northern Ireland
Marquis Building, 89-91 Adelaide Street, Belfast BT2 8FE
www.sustrans.org.uk

Tree Council of Ireland
The Park, Cabinteely, Dublin 18
Tel. 01-284 9211; www.treecouncil.ie

Woodlands of Ireland
The Park, Cabinteely, Dublin 18
Tel. 01-284 9329; www.woodlandsofireland.com

Visitor Safety in the Countryside Group
www.vscg.co.uk