

FOREST LANDSCAPE DESIGN
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SUMMARY

The British Government is committed to a policy of multipurpose forestry and the Forestry Commission has a statutory duty to seek a balance between timber production and environmental considerations. Rapid expansion of forests has led to sudden changes in the landscape which are often seen as unwelcome and which can cause anti-forestry sentiments. There are certain constraints on forest expansion which can ensure a minimum standard of forest landscape design. Further landscape changes may follow from altered agricultural use.

The Forestry Commission has a clear policy on forest landscape design, and has developed well-established techniques applicable to all types of woodland. These are based on detailed appraisal of the existing landscape, in terms of sensitivity, character, heritage value, existing elements of diversity and any special features. Forest landscape is designed to be in harmony with the existing and surrounding landscape, recognising the importance of shape, scale, diversity and unity of the elements which make up the forest and woodland landscape. There is a need for research into public attitudes and preferences in relation to forest landscape. It is essential that foresters have positive attitudes to environmental issues, enter into discussion with the public, and receive training in environmental work. Sufficient funding is required for this work, and effective publicity for the benefits which well-designed multipurpose forests offer the community.

Key words: policy; landscape; environment.

INTRODUCTION

The landscape of forests has many connotations, the interpretations of which have various meanings for a wide range of people. The fundamental starting point in any consideration of the current uses of multipurpose forests is fitness for purpose within the context of proper land use.

Public concern for the future of forests has manifested itself in wide ranging legislation over recent years. Some of this seeks to protect forests and focus upon the values of landscape associated with them, to conserve and enhance them through various designations, while in the process modifying previously standard forestry practices. In addition the current debate on the future of the countryside, in particular agricultural land, has led to a series of initiatives in the United Kingdom which are likely to result in significant changes to the landscape of rural areas.

Forests are primarily under the control of foresters. Planning and landscape design are two separate but closely related aspects of their role. Land planning and design are two techniques by which to solve many of the problems faced in developing multipurpose forestry. Landscape planning is a process for optimising the economic, social and ecological benefits to be derived from land use. A balance must be struck between these factors, taking account of society's perception of them as part of the process.

Against this background it is not surprising that poorly designed afforestation can upset the balance, to the extent that it is seen as unpalatable and unacceptable by many, who then become opposed to continued forest expansion. Measures intended to regulate afforestation are significant, yet at best they only go half way to the proper integration of forests into the landscape. The other essential ingredient is design.

History of Forest Landscape

It is now 25 years since Dame Sylvia Crowe, the distinguished landscape architect, first gave advice to foresters about the visual effects of forests on the landscape. Appreciation of the value of woodlands within the community is far older, however. The feelings of people of earlier ages are unknown, but they probably regarded forests largely as a source of food, timber, fuel, shelter and protection. It was in the 17th and 18th centuries that aesthetic consideration was first given to woodland. The Earl Bathurst at Cirencester, for example, set about "joining willing woods" for visual reasons. In the 18th century many of the wooded parks around the great houses of the nobility were created and demonstrate the considerable landscape skills of their designers. More recently Paul Cezanne showed an appreciation of land form and forest in his many studies of Mont Ste Victoire in Provence, while in Britain in the early part of this century the painters Paul and John Nash made a significant contribution to the way in which we look at landscape in terms of its structure and scenery, through paintings which included various types of woodlands.

THE LEGISLATIVE AND POLICY FRAMEWORK

Forestry in the United Kingdom has been promoted since 1919 under a number of Acts of Parliament. The most recent important legislation is the Wildlife and Countryside (Amendment) Act of 1985, under which the Forestry Commission has a duty to seek a balance between timber production and environmental considerations (Britton and Leslie 1991).

The Forestry Commission's policies on environmental practice are set out in several policy statements and working guidelines (Forestry Commission 1985a, b; 1986; 1989; 1990). These set conservation and landscape standards which the Commission observes in its own forests and which apply equally to private forestry. Grant aid to private forestry is conditional upon applicants meeting these standards which include the special requirements of broadleaved woods, nature conservation, water quality, and archaeological protection in addition to the landscape design of any proposal. Similar control is exercised through the conditions which are attached to felling permissions, which oblige woodland owners to fell, and restock afterwards, in an acceptable manner.

Forestry and agriculture are regarded as permitted development under the system of planning controls operated by Local Authorities in the United Kingdom (Rollinson 1991). Control of forestry development is exercised by the Forestry Commission as a department of central Government through the grant aid mechanism described above and not devolved to Local Authorities. Virtually all planting is done under Forestry Commission grant schemes, and the process of approval involves consultation with appropriate Local Authorities; forestry development does not come under the planning functions of the latter, but it does impinge on environmental protection, roads and transport, local employment and similar Local Government functions. Local Authorities take forestry into account in their Structure Plans (the principal statement of their planning policies and intentions). Certain land designations, such as National Parks, National Scenic Areas and Areas of Outstanding Natural Beauty, Sites of Special Scientific Interest and National Nature Reserves have a restrictive effect on land use within the landscape.

Government policies designed to reduce agricultural production may also have an effect on the landscape in the long term. In areas designated as Environmentally Sensitive, grants are paid to farmers to maintain otherwise uneconomic "traditional" farming practices; under the 'Set Aside' scheme, land taken out of production may become woodland. A Farm Woodland Scheme was launched in 1988 with the aim of encouraging farmers to plant new woods on arable or improved grassland, so taking the land out of agricultural production. This scheme is also, intended to bring benefits of habitat and landscape improvement. It follows that a clear understanding of how different landscapes can accommodate woodlands - small or large - is necessary, given the great regional variations in Britain.

Forestry strategies

It is widely recognised that there are areas where combinations of great scenic diversity and ecological values render them highly sensitive to forest expansion, particularly on a large scale: we also know there are landscapes which could accommodate well-designed large scale forests. A number of Local Authorities and National Park Authorities in England and Wales have produced maps showing where forest expansion might or might not be appropriate, to assist them when consulted by the Forestry Commission on proposals for development. More recently in Scotland the Government has asked Local Authorities to prepare Indicative Forestry Strategies, which include landscape considerations, to help to identify the areas where forest expansion should be encouraged (Rollinson 1991).

FOREST DESIGN AND THE ENVIRONMENT

The Forestry Commission's policy on landscape design is based on the principles outlined by Dame Sylvia Crowe (Crowe 1978), and set out afresh in "Forest Landscape Design Guidelines" (Forestry Commission 1989). The latter gives the basis of assessment that is required for all planting in new or existing forests. All aspects of the subject are covered by a recent book "The Design of Forest Landscapes" (Lucas 1990)

The results of this policy are now apparent. Forests where particularly good examples of fine forest design in the process of implementation can be seen include Ennerdale, in Cumbria; Beddgelert and Coed y Brenin in North Wales; Ardgartan in Argyll and Strathyre in Stirlingshire. The objective is to create forests which appear natural at a scale which is in keeping with the surrounding landscape, emphasising natural features such as watercourses, gullies and crags by means of different species or age classes, and by avoiding unnatural straight lines and regular geometric shapes, including those associated with internal roads and other routes.

New woodland should, where possible, encourage use by the public for recreation. It is often best to delay recreational developments until the wood is established, but they should be allowed for at the outset. All public roads and paths must remain unobstructed when fencing, cultivating and planting, and during harvesting. Walkers should have access through the woodland to open country above, with stiles or self-closing gates where necessary, and walking routes within the forest should be attractive.

Form and Function in the Landscape

The principles of forest design are now well established within the Forestry Commission to the extent that carefully defined techniques for management of a complete range of woodland types in relation to land form are currently practised.

Perhaps the most significant aspect of our appreciation of the woodland scene lies in its shape and those of the component elements of the forest which often determine its character. The shape of the outer edge is specially important for the satisfactory appearance of the forest, in particular in linking it to adjoining land. The forest should also reflect the scale of its surroundings and follow the form of the ground in **the shape** of its various margins. Good design also provides diversity in the number and degree of different features in the landscape, within an overall unity of design.

The process of design begins with the existing landscape. The sensitivity of a landscape depends on its resilience in relation to change; this can be a subjective judgement. The landscape character is a distinct pattern of elements which occur consistently in a particular type of landscape. Landscapes are also valued for their historic and traditional associations, and heritage is an important factor. Elements of diversity should be identified and protected - land form, water, rocks, wildlife features, and special areas such as archaeological sites, recreational areas and viewpoints - and the planting kept well away from them. This also applies to special features such as well known landmarks, which stand out from the general background; the forest should be carefully designed to maintain and emphasise the character of these features.

Whether planting new woodlands or managing existing ones, the particular contribution they can make to the landscape, the community and to wildlife conservation are important considerations. The relative weight to be given to the objectives of timber production, recreation, wildlife conservation, shelter and landscape enhancement will vary, and forest management will be influenced accordingly. A near-natural woodland managed as a nature reserve requires very different treatment from an urban recreational forest, but in all cases the need for an improved landscape is a central consideration for forest managers and for the wider public who use and enjoy forests.

Forest Landscape Design and the Future

To what extent does the progress made in forest planning, design and associated research meet the demands of a complex and environmentally aware society for the 21st century? A balance has to be struck, based on the principles so far outlined, and the vision and message carried forward and spread quickly and extensively.

There is a clear need for research, if only to establish and consolidate a hypothesis of design. There are many, unaware that the British landscape is man made, who regard the "natural" landscape as being unable to incorporate man made forests; this is not surprising after many centuries of forest clearance. Change in cherished landscapes, especially if sudden or unexpected, is particularly disliked. Research has started to set **firm** foundations for an

understanding of public preferences and attitudes towards forest landscapes, which will enable forests to be designed to match those preferences. This work will need to be continued and monitored over time.

There are at least five important requirements, if public support for forest expansion is to be won.

- More rapid change in attitudes of forest managers with regard to environmental concerns as an integral part of all forest operations, emphasising new skills of creativity, and taking pride in multipurpose forests.

- More open discussion with public on forestry issues, to dispel fears and promote understanding. Foresters must be willing to listen, and take heed of what the public think.

- More training of foresters in environmental work, to acquire the understanding and skills necessary to achieve the desired balance.

- More effort put into environmental work; funds may have to be redeployed, and resources obtained from sponsorship, volunteer workers and from conservation and countryside organisations.

- More and better publicity for well designed forests, particularly those with good recreational facilities.

Although much remains to be done, the forest industry is addressing these issues. The introduction of Indicative Forestry Strategies encourages logical selection of sites for forest expansion and in-depth landscape planning where appropriate. The requirement for environmental assessment of particularly sensitive proposals is an added safeguard. The development and application of landscape design techniques by the Forestry Commission have provided a valuable means by which the appearance of all woodland may be blended and integrated within the landscape. What is needed now is wider education and communication to ensure that the Government's commitment to multipurpose forest management is put into practice by foresters as quickly and widely as possible.

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