

THE GWENT SMALL WOODS PROJECT 1979-84



Compiled and edited by
J W Ll Zehetmayr



Summary

Over the 5 year period the project has promoted the management of small woods in Gwent – mainly located on owner occupied farms. While sale of timber, planting and restocking have been important features, the area so treated has been almost matched by that protected against stock by fencing with a view to the prevention of further woodland deterioration and the encouragement of natural regeneration.

While the employment of a Project Officer is seen as most valuable in launching such an initiative it is considered that the scheme's continuance can be ensured in Gwent given suitable arrangements between statutory bodies and the County Council, together with certain alterations in grant arrangements.

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**Report compiled and edited by
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Chairman of the Steering Group**

Sponsored by
The Countryside Commission The Forestry Commission

Acknowledgements

The cover illustration and Plates 1 – 6 are by the author. Plate 7 is by Mr. R. Haxworth.

Abbreviations used in text

ADAS	Agricultural Development and Advisory Service
CC	Countryside Commission
DART	Dartington Amenity Research Trust
FC	Forestry Commission
FGS	Forestry Grant Scheme (from late 1981)
GCC	Gwent County Council
MAFF	Ministry of Agriculture, Fisheries and Food
MSC	Manpower Services Commission
NCC	Nature Conservancy Council
NFU	National Farmers Union
RASE	Royal Agricultural Society of England
SSSI	Site of Special Scientific Interest
TG	Timber Growers of Great Britain
TPO	Tree Preservation Order
WOAD	Welsh Office Agriculture Department

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Preface

This five year experiment in woodland management arose out of earlier investigations into the state of small woodlands in Gwent by the County Council, and by the Dartington Amenity Research Trust on behalf of the Countryside Commission. The experiment was carried out under the direction of a steering group drawn from a wide range of countryside interests; the Forestry Commission provided the Chairman and the Project Officer, the main financial contribution came from the Countryside Commission, while Gwent County Council provided labour through its Manpower Services Commission teams and forestry staff.

The value of a Project Officer in stimulating interest and action amongst small woodland owners was clearly demonstrated by the experiment which also showed the possibilities and limitations of better timber marketing, grants and conservation advice for guaranteeing the future of Wales' woodland heritage.

The experiment clearly showed the value of promoting woodland management and this is now being taken forward in the whole of the Principality by the Welsh Wildwoods Campaign which will seek to encourage better management amongst all woodland owners and involves a range of bodies including the Nature Conservancy Council, the Countryside Commission and the Forestry Commission.

The Report makes a number of recommendations which will be taken into consideration by the Forestry Commission and the Countryside Commission in the course of the deliberations on broadleaved woodland policy which are currently in train. Meanwhile, the Report is being published in full so that it can enjoy a wider readership. Copies may be obtained from the Publications Section, Forestry Commission, Alice Holt Lodge, Wrecclesham, Farnham, Surrey GU10 4LH, price £3.50 + 50p postage and packing.

Countryside Commission

Forestry Commission

The Gwent Small Woods Project 1979-84

Introduction and Objectives

This report summarises work carried out over the five year period of this Project for the consideration principally of the Countryside and Forestry Commissions as the main sponsoring bodies. It is hoped that it will be of value to Gwent County Council who gave strong support throughout, and of interest to the many comparable projects and to foresters throughout lowland Britain.

The basis of the report was a summary made at the end of the first three years by the Project Officer, Head Forester Keith Hawkins, and the District Forest Officer (now Forest District Manager) for Gwent, David Parsons. It has been extended and re-written by the Steering Group Chairman, John Zehetmayr – formerly Conservator for South Wales, Forestry Commission – who has taken into consideration the comments of the Steering Group (see page 9 and Appendix III).

On the basis of a survey of woodland carried out by the County Council, Gwent was selected in 1978 for a pilot study by Dartington Amenity Research Trust on behalf of the Countryside Commission. This was the forerunner of a series on small woodlands but, in the meanwhile, the Gwent project was launched as a follow up. The objectives as worked out by the Steering Group in 1978 were as follows:

to investigate the extent to which effective woodland management on farms can be achieved for landscape, nature conservation and wood production benefits, consistent with good agricultural practice.

The Report covers a number of lines of enquiry and of working methods explored, some of them abortive; records the work carried out over five seasons; and attempts to relate the achievements to the overall state of woodlands in Gwent. Recommendations on how effective management might be forwarded are based on analysis of both case histories and the overall position.

Gwent: Topography and Land Use

Gwent is a county of great contrasts. To the west are the densely populated steep sided industrial valleys. Here from small beginnings on the northern edge of the coalfield the iron industry developed using charcoal made in the local woods for smelting the ore. Later coal took the place of charcoal and further cutting of the native woodland took place to meet the demand for pitwood. Today these industries are in decline but their use of timber in the past, followed by the continuous grazing, has resulted in the loss of most of the woodland at the northern end of the valleys. Much of the high ground separating the valleys is common and sheep farming predominates. Further south in the Ebbw valley more woodland has survived but much of the 'native' woodland here is now unmanaged and grazed.

In the east of the county along the Wye valley, woodlands have survived and are mostly under management. The Project has mainly concentrated on the Usk area and parts of northern Gwent where there is a more intimate landscape of relatively low but sometimes steep sided hills with many small woods. Here livestock rearing is the mainstay of agriculture, particularly in the north of the county with more emphasis on milk production in the south. There are pockets of arable farming, for example around Trelleck and Raglan, but most crops are grown for livestock. The average size of the farms, at 60 ha, is smaller than in many parts of England but there are a number of larger estates towards the north of the county.

Dutch elm disease has reduced the tree cover, particularly on the 'levels' adjacent to the Bristol Channel. Elm was not a dominant tree over the rest of the county to the same extent as in some areas of England, consequently the loss has not been so obvious. Nevertheless with some 17 000 ha (12.3 per cent of the land surface compared with 11.6 per cent for Wales as a whole) Gwent remains a well wooded county; of this total about 3500 ha are in woods of less than 10 ha which is considered to constitute a small wood.

GWENT

Fig. 1.



Woodland Surveys and the Pilot Study

Gwent County Council has for some years been actively assessing the landscape and conservation importance of small woods. In 1974, the County Council surveyed all woods over 0.4 ha (1 acre) which were neither Forestry Commission nor dedicated Private Woodlands (Gwent CC, 1976). In 1977 the County, in consultation with the Nature Conservancy Council, surveyed all privately owned and non SSSI woodland over 1 ha (2½ acres) outside the Brecon Beacons National Park. Some 5000 ha were covered and those woods of particular interest for nature conservation interest and landscape value were identified. The County Council's policy was developed from the results of this survey and from its continuing interest in encouraging forestry in Gwent and may be summarised as follows (Gwent County Council, 1978):

- i To maintain the overall woodland area.
- ii To encourage positive management of broadleaved woodland.
- iii To use TPOs where no suitable management schemes can be agreed (this function has now passed to District Councils).

With this information available, an area to the east of Usk (see map) was chosen for the pilot study for a series of woodland surveys covering England and Wales. The Dartington Amenity Research Trust carried out this study on behalf of the Countryside Commission during 1978. DART found that the woodlands on the farms studied were deteriorating for a number of reasons. The main ones were a lack of knowledge concerning woodland management; serious difficulties with harvesting and marketing broadleaved woodland produce, particularly in small lots; and a shortage of readily available technical advice. Against this, however, the study suggested that the process of deterioration could probably be halted and even reversed. The woodlands constituted a resource where the value should increase rather than diminish over the years and discussions with the farming community indicated that farmers might be persuaded to undertake management of their woodlands, particularly if some economic benefit from management could be shown.

The consultants concluded that if suitable machinery for giving advice to farmers could be provided and that if the difficulties farmers experienced over harvesting and marketing woodland produce could be overcome, it should be possible to improve the management of small woods on farms in Gwent. The DART report suggested that the 'Project Officer' approach was likely to achieve the most satisfactory results (DART, 1978).

The final report by DART on the wider survey of nine areas, including the pilot area in Gwent, was not published until the Gwent Project was well under way. In general, its conclusions reinforce those of the pilot study in that the value of small woodlands – defined as landscape, wildlife, historical, timber and game – would best be maintained and enhanced by bringing such woodlands under management in the widest sense, with marketing of produce recognised as the key element (DART, 1983).

A further report for the Nature Conservancy Council has determined the 'ancient' woodlands of Gwent, defined as having existed continuously since the Middle Ages. Of a total of 18 210 ha in woods over 2 ha in area, 8817 ha were considered to be ancient but of this total only 37 per cent (3249 ha) was semi-natural, the remainder having at some time been planted, often with conifer (NCC, 1982). It is estimated that over 900 ha have been lost – mainly converted to agriculture – over the last 50 years; among the highest figures for some 20 southern counties. Nevertheless, Gwent remains relatively richly endowed with ancient semi-natural woods, ranking with Cornwall and Gwynedd but behind Somerset and Oxfordshire in surviving area (NCC, 1984).

The last relevant report is that on the recent census of woodlands and trees carried out by the Forestry Commission, 1979-82, which covered by counties both woodlands (defined as over 0.25 ha) and non woodland trees. The county summary for Gwent (Forestry Commission, 1985) has been used as a basis for reviewing the present position and the effect of the Project together with possible changes in policy or grants by the Countryside and Forestry Commissions.

Organisation of the Project

Meetings of interested parties were held in July and November 1978 to consider the DART report, with the knowledge that the Countryside and Forestry Commissions were prepared to back a project in the county. It was agreed that a Steering Committee should be composed of representatives of the following bodies: Gwent County Council, Nature Conservancy Council, Countryside Commission, Forestry Commission, Welsh Office Agriculture Department, Country Landowners Association, Farmers Union of Wales, National Farmers Union, Timber Growers England and Wales, and that the Chairman should be provided by the Forestry Commission.

At this stage it was agreed that the Forestry Commission should provide a forester as Project Officer to work in close liaison with officers of the other bodies, in particular those of the Countryside Division of the County Planning Department, the Agricultural Development and Advisory Service of WOAD, and regional staff of the Nature Conservancy Council.

The terms of reference for the Project Officer were developed in early meetings. Subsequent meetings, held about six monthly, reviewed progress as a whole, and considered current developments, notably on existing and possible grant arrangements, woodland management practices and the balancing of the various interests, particularly agriculture, forestry, nature conservation and landscape.

The following terms of reference were agreed for the Project Officer in 1979:

To promote the Project objectives (see page 5) by:

- i seeking contact with and establishing good working relationships with woodland owners;
- ii advising on woodland management, consulting as appropriate the Countryside Commission, the Nature Conservancy Council, Welsh Office Agriculture Department and Gwent County Council;
- iii promoting the appropriate existing grant schemes for the planting and management of trees and small woods; and employing a full range of suitable management techniques, e.g. coppicing;
- iv planning and implementing measures to aid the marketing and harvesting of woodland timber; including the fostering of new outlets for timber.

In addition the Project Officer will:

- v disseminate the experience gained, to encourage the better management of small woods in other areas;
- vi be responsible for a report to a Steering Committee listing the progress of the projects, the reactions of the farming community, and proposing methods for increasing the Project's effectiveness.

From 1 April 1980 with the support of the Steering Committee an agreement was made between CC and FC by which the former would provide £6000 a year from their experimental budget to support the objectives of the Project and FC would continue to second a forester (Mr K Hawkins) and provide a vehicle for the woodland management team. Gwent County Council agreed to provide this MSC sponsored team.

The effect of this agreement is that for two years – later extended to four years – from 1980-84 the Project Officer was in a position to make grants where the circumstances did not fit those envisaged in the grant schemes of the various bodies: ADAS, NCC, FC or CC (the latter administered by Gwent County Council).

Publicity

During October 1978 a circular letter explaining the scope of the Project was sent to 250 farmers in the parishes of Llangwm, Llantrisant Fawr, Llangibby Fawr, Llanbadoc Fawr, Usk, Gwehelog Fawr and Undy. A three per cent response was achieved which was not particularly encouraging but was about the same as that achieved from advertising by agricultural agencies. Some indirect publicity had been achieved earlier in 1978 when nurserymen and contractors were circulated to find out the availability of plants and the capacity of contractors to carry out work generated by the Project. Plant supply and contractors capacity was found to be adequate.

In early 1979, with the support of the National Farmers Union, an article was printed in the *Monmouthshire Farmer* explaining the background, objectives and grants available. In April 1981 the National Farmers Union published a short article on behalf of the Steering Committee describing the progress to date and the improved fencing grants available. A follow up article appeared in the *Monmouthshire Farmer* late in 1983. In general, it is felt that the existence of the scheme is fairly well known to landowners in Gwent, particularly as many are members of the NFU.

On a wider front a good deal of publicity has been generated by progress reports at conferences which were considered important in view of the considerable number of comparable projects set up in southern Britain over the last five years. Briefly these may be summarised:

- a. Interim summary to 1981 presented to the RASE Conference on Small Woods, subsequently published in the *Arboricultural Journal* (Zehetmayr, 1981).
- b. This summary, to date, but with the addition of interviews with farmers involved, was included in the 'Timber' supplement to *Farmers Weekly* of January 1982.
- c. A seminar 'Small Woods in Lowland Britain' was organised by the Gwent Project staff in June 1983 for those involved in comparable work and for the officers of statutory bodies whose responsibilities lie in this field. The attendance of fifty was almost equally divided between these categories and showed considerable agreement on objectives though there was room for wide variation in means. The results were written up (Forestry Commission, 1983) and are summarised on pages 36-37.
- d. In the field of training the Project has for three years, 1982-84, formed the background to an annual course on Woodland Management for ADAS staff from all over England and Wales. This has been well received and forms, in our opinion, perhaps the single most important channel of communication with farmers because ADAS advice on woodlands is given within the context of the particular farm enterprise as a whole. It is sad to learn that these courses are likely to be discontinued owing to pressure on ADAS staff and finance, at a time when farmers may welcome diversification and when limits to expansion of food production are being set.

As the Project ended, a short leaflet was produced by the Steering Group, *Farm woods and trees in Gwent*, outlining the value of woodlands, the need for action and examples of woodland management. Operations eligible for grant are indicated, as is the availability of free advice from the Forestry Commission and from the County Planning Officer.

The timber market

Initially, the Project Officer investigated the likely markets, particularly for broadleaves and small conifer thinnings. Since the beginning of the Project in 1979 the timber market has slumped badly and then picked up again. However, large conifer logs were easy to market throughout and fetched satisfactory prices. Smaller diameter thinnings, however, attracted very little interest during 1981 and 1982. When the market became buoyant again towards the end of the Project period, there was much more interest, particularly in hardwoods, both low grade and high quality. This led to a marked rise in requests for felling licences in the latter part of 1983 and the beginning of 1984. Throughout a high proportion of such requests were for clearance for agriculture but in all cases some concessions have been agreed to keep or regenerate part of the woodland for amenity and timber reasons. The landowner is not

usually aware of the outlets for various products so it fell to the Project Officer to investigate the most suitable market for the produce available and then to invite three tenders for the landowner's consideration. During the two years when prices were depressed it was the practice to advise farmers to defer selling their timber.

The marketing of the timber by the Project Officer had advantages for both parties involved.

- a. Many farmers have experienced or heard of difficulties with timber contractors and they have more trust in an independent professional advisor with no financial involvement.
- b. An estimate of volume was made thus providing a basis for negotiation and price fixing.
- c. A contractual document was available for use by and for the protection of both parties.
- d. The Project Officer builds up a relationship with the timber interests over a period which is not possible for the individual farmer who may only make one sale in a decade. This is particularly important in ensuring orderly working and clearing up after cutting.

One of the major problems has been the size of parcels on offer; the more volume available to a buyer on one site, the more interest shown. In some cases the best advice available was to delay thinning until the market improved, for while timber is still growing it remains an asset. Once felled, it must be sold or it would be a complete loss. Sales of thinnings have usually been achieved only in conjunction with felling or where extraction is simple. With firewood and fencing the main outlets, prices are lower; some thinning has been carried out by owners working over a period and using the timber themselves or locally.

Prices for trees sold standing have fallen within the ranges:

Species	Market	Value
Conifers	Sawlogs and pulpwood	£10–13/m ³
Broadleaves	Mining timber and pulpwood	£ 6–10/m ³
Broadleaves	Turnery poles	£ 3–5/m ³
Broadleaves	Pulpwood with timber	£ 3–4/m ³
Broadleaves	Pulpwood	£ 2–3/m ³

- Notes:
- i Value of standing timber varies with topography and extraction distances.
 - ii No broadleaved sawlogs have been sold through the Project.

Prices have risen recently and it is important that any Advisory Officer has a sound grasp of marketing all types of timber, or has access to such information, to be able to appreciate fluctuations in the market and give reliable advice to farmers. **It is proposed** that while FC Private Woodland Officers cannot be expected to sell parcels on behalf of owners, they should be able to indicate markets and estimate volumes and price ranges in conjunction with harvesting and marketing colleagues. They should also be able to refer owners to possible purchasers and suitable contractors and to suggest when the value of the timber would make employment of a consultant worthwhile to measure and market a parcel.

Employment of Manpower Services Commission teams

The DART report shows that shortage of labour on some farms restricted work in the woods and it was decided that some assistance would be required on many schemes. The Manpower Services Commission was approached and agreement was reached to employ one supervisor and five men under the Special Temporary Employment Scheme, 1979-80. Operational efficiency depended greatly on the quality of the supervisor and we were fortunate in this respect. Due to the high turnover of people on the scheme the full complement of five was

never reached and new entrants always required training. Generally, the quality of work was good but output by normal forestry standards was understandably low.

At this time the County were also running a woodland team who assisted on projects. To reduce overheads both these teams came under the management of the County Council Planning Department from 1 May 1980 and reached a total complement of 14 employees including two supervisors. Both teams carried out work which arose as a result of the Project or from the County Council's normal tree planting programme. There were three main types of work:

- a. Stockproof fencing.
- b. Planting.
- c. Preparation of ground – clearance of scrub for planting, and production of poles and firewood for the owner's use.

During the early phase of the scheme when no grant aid was available for fencing alone, the offer of free labour for fence erection and planting made the scheme financially acceptable to the farming community. Indeed, during this period free labour was the keystone of the scheme. However, the special Countryside Commission Grant, which was available from April 1980, changed the emphasis of the scheme and farmers were often prepared to erect fences with their own labour given aid in cash or by provision of materials. The new Forestry Grant Scheme, available from Autumn 1981, has also stimulated interest in planting and the need to make extra provision for establishing new plantations or restocking felled areas has diminished.

The 'Action' initiative

It was decided by the Steering Committee after the initial response had waned that the Project Officer should not only 'react' to requests for advice but should also approach farmers and landowners with woodlands within what was termed the Action Area (see Map page 7). The woodlands were chosen from those designated in the second Gwent County Council survey as important on grounds of landscape and nature conservation and which were at risk from grazing.

This proved more difficult than responding to farmers who had already shown an interest. The main element in woodland conservation is obviously fencing against stock and this new approach coincided with provision by the Countryside Commission of experimental funds which were, in fact, mainly used for this purpose over the next four years. However, a farmer's main priority is to get the best economic return from his enterprise and if he considers that this aim is best met by allowing stock into his woods freely, it is very difficult to persuade him to fence for woodland protection or even for controlled grazing.

The farmer who approaches the Project Officer usually has some idea of how proposed planting, felling or fencing will fit in with his plans for overall development. Conversely, a farmer approached by the Project Officer may see no direct benefit and may still not be interested even when full payment is offered for the work desired by 'outside bodies'. Apart from complete enclosure of very small woods, the aim was in several cases fencing of part of a wood to rest and regenerate it, with a view to fencing the remainder or a further part while opening the first enclosure, in say 15 years time.*

Despite much footwork, visits, telephone calls and discussion the 'Action Area' initiative faded away as available resources were taken up by owners who wished to participate. It is worth noting that this finding is supported by the fact that no action resulted under the Project in the original DART pilot area in Gwent despite in one case very prolonged discussion. Similarly, in the area of Gwent included in the Brecon Beacons National Park only one of 14 planting schemes resulted from an initiative by Park Staff.

**Note:* It is gratifying to record that as the Project ended, one of the fences erected enclosed half an existing 3 ha wood, leaving the other half open for stock shelter. Hopefully, the roles of the halves will be reversed in due course and the whole be retained as a landscape feature.

Discussion of the Cases

As a result of the various initiatives set out above most contacts were made by landowners direct to the Project Officer, although some important contacts with farmers were made via ADAS officers in the course of their routine visits to farms. Yet others arose from direct approaches to officers of the FC, NCC or Gwent CC; usually these were in ignorance of the Project and were referred on as appropriate.

The Project was specifically aimed at woods on farms and it is of interest that of some 50 land ownerships where action has resulted some 35 were in fact farms. Six more were estates, often those whose larger woodlands are or were dedicated, while the remaining cases were on a variety of commercial and private ownerships including a convent and an industrial concern. While several estates carried out work in three or four woods, most farmers worked on their only wood or on a new plantation; some half dozen, however, carried through two or more projects.

The farmers who contacted the Project Officer were almost all owner-occupiers and fall into two main categories:

- a. those who had land which they could not use economically for agriculture, typically steep bracken banks or field corners. They wished to utilize their land more fully and thought in terms of material for fencing and other farm use and in some cases of a long term timber crop;
- b. those who wished to clear woodland and convert to agriculture. Some farmers are achieving this result by attrition, wintering stock in their woods thus preventing regeneration and taking firewood and other timber. With the quantity allowed to be cut without licence there is no doubt a small wood can be whittled away in a decade or so.

An early meeting on site was arranged to discuss with the owner his aims. This usually resulted in a brief written report on the possibilities of the wood or the site. Also at this stage it was indicated whether FC or CC grants applied and whether other assistance could be provided, e.g. use of MSC labour or supply of fencing materials.

Where proposals were for planting of bare land the projects were relatively simple and discussion mainly concerned the shape of the area to be fenced and the species to be used. Most farmers start with the assumption that conifers will be most useful for general farm use and needed persuading that appropriate broadleaves could make a real contribution especially for firewood and for a long term crop to give individual trees of high value.

Fortunately given the climate and terrain of Gwent the extensive use of Japanese larch is very appropriate and was often combined with broadleaves on better soils. A real question here is how far should a Project Officer go to persuade owners not to use species which may lead to marked landscape change, e.g. Lawson cypress or, indeed, Red oak.

Proposals for conversion of woods to agriculture were a more difficult matter but while farmers generally held to their main priority of increased grazing area, they were often prepared to engage in horse trading. Such bargaining takes place before the formal issue of a felling licence and has proved the real worth of the Project as set out in reference to specific cases below.

Obviously there were disappointments even when the initial approach had been from the owner. In some cases after many telephone calls, several visits and an outline proposal, no work in fact transpired, although there may be a stated intention to act in the future. Some owners reacted strongly to the limitation of their action normally associated with licences to fell. In one or two cases such inaction is in fact a gain, albeit rather insecure, for conservation.

Much more satisfactory were the cases where the farmer accepted the overall desire to retain woodlands and limited his conversion to those areas most suitable for agriculture and fenced the remaining woods and/or planted other areas *in lieu*. For example, half a 6 ha wood has been saved from original conversion proposals in this manner on a small farm where the proportion of woodland was high and grazing land at a premium. It is clearly most important for the Project Officer to develop a good relationship with the owner and the latter is more likely to respond when he finds the officer is willing to understand his problems, be flexible and where necessary persuade the authorities – FC, Gwent CC or on occasions the NCC – to accept a package before the felling licence conditions are finalised.

To establish this close relationship, letters, telephone calls and, above all, visits are important and the Project Officer often carried through the paperwork relating to licence or grant applications. It has proved difficult to decide when to finally cut losses on a slow moving proposal. Obviously it is time consuming to chase up cases but dealing with small farmers, almost all on family farms, means that busy periods such as hay making or silage cutting divert thoughts from the woods and thus proposed sales slip, timber extraction is delayed by wet periods and all too easily a season or more is lost before replanting. It has, indeed, been a fact that over the last two years of the Project 'firm plans' for action have exceeded the annual achievement.

Largely for reasons of changing markets, changing economic circumstances and, indeed, changing grants and other aid, the Project was geared to practical results rather than to formal silvicultural planning for small woods. It was not thought likely that any but short term – 2 to 3 year – plans for action would be of any relevance if that immediate action was not achieved. Hence the record of achievement is in physical terms, but this gives no credit for certain other aspects of advice and persuasion, in particular for conservation gains.

A number of owners were advised not to try to market their timber in the difficult conditions post-1980; another was advised not to thin but to consider bringing forward felling in a few years time; while yet another was persuaded to continue thinning for farm use rather than felling prematurely. In at least one case it is satisfactory to record that a small area of larch licenced for felling, which missed the market in 1980, was re-licenced and sold well by the Project Officer in 1983.

Very rarely advice was ignored but in one case the removal of undergrowth from a wood left open to grazing was persisted in, although subject to a Tree Preservation Order. This was the exception but, of course, such cases would not normally be brought to the Project Officer for advice or assistance in the first place.

In other instances agreement was reached in difficult cases involving TPO or SSSI even though all the statutory bodies would have preferred no woodland clearance. In at least one such case involving woods within a SSSI, inability to sell – not in this case undertaken by the Project Officer – has postponed the felling, led to the need to renew the licence and brought the case within the purview of the 1981 Wildlife and Countryside Act. In such a case the conditions of the licence reflect the views of Forestry Commission as forest authority, the local authority for landscape, and the NCC for conservation, the last named issuing a letter of consent. After five years in this particular case it remains to be seen whether the conditions can be satisfactorily enforced, given that the owner originally desired to fell a larger area.

Other examples of work which are not recorded concern small areas, either for planting or other treatment, which fall outside the small wood definition and were on farms where such woods were being considered. Clearly it would be against the spirit of the Project to have two sources of advice or assistance and in such cases schemes were prepared for the County Council to implement or *vice versa*, while in several cases both tree groups and woods were planted at the same time, only the grant sources were different.

Interaction with Landscape, Nature Conservation and Recreation

It is worth a brief note on the interaction of the Project as a whole with other countryside interests grouped under the three headings of this section.

Landscape

Besides the statutory National Park and Area of Outstanding Natural Beauty, there are recognised Special Landscape Areas in Gwent within which important woods have been protected by Tree Preservation Orders. During the five years, seven cases arose where felling licences were applied for on areas covered by TPOs so that the decision falls to the County. The licences were granted after discussion with the Project Officer and in one case with NCC as lying within an SSSI. In one case the licence expired without the agreed felling being carried out and in a second only thinning was involved. In the remaining five cases the felling of 7 ha was agreed, 5 ha to be restocked. In every case the conditions included protection of the whole or remainder and the proportion of broadleaves was increased overall. The total cut agreed by the County Council amounted to 2000 m³, almost half of it in thinning. Such positive management of Tree Preservation Orders is highly desirable and it is particularly notable in that five of the seven cases lie on the corridors of major roads, the A48 or A449, and were designated because of their contribution to the view from these roads. This willingness to negotiate and manage positively should stand the County Council in good stead when a case arises where they wish to refuse consent to felling of trees under an order.

Nature conservation

Three areas for which felling licences were sought fell within Sites of Special Scientific Interest and one, referred to above, was already under a TPO. One case has a long and tangled history, certain felling has been licenced twice but has not yet taken place. The two other cases have been gains for conservation in that conifers have been agreed for cutting within the SSSI and their replacement will be by broadleaved planting or regeneration, while the areas as a whole – some 8 ha – were fenced under the Project.

Outside the statutory conservation sites Gwent County Council's survey of 1977 (unpublished) identified woods over one hectare which were species rich or diverse in habitat: those having both attributes being recognised as of most significance for nature conservation. Of some 50 existing woods in which operations were carried out under the Project, eight fell into one or both of these categories; the county total for such woods was c.240. Of the eight, four were felled in whole or in part and a total of some 4 ha was converted to agriculture, the remaining 11 ha are being either thinned or restocked and in every case fenced. In the other four cases the woods were thinned or fenced or both. In only one case did the restocking include larch on about 1½ ha. The total area fenced is 26 ha of which about one third is to be regenerated.

The most relevant comment here is perhaps that given 240 such woods in Gwent, the silvicultural upgrading of eight of them in five years, albeit at a loss of 4 ha out of 30 to agriculture, poses little threat to conservation as a whole and, indeed, one could consider the rate of protection regrettably low; this topic will be considered later in the context of the small woods as a whole.

Recreation and amenity

While small woods play a very large part in the general landscape – out of all proportion to the area they occupy – their capacity to contribute to public recreation apart from general viewing of the landscape is very limited. An examination of Ordnance Survey maps suggests that there is no right of public access to the vast majority of the woods treated during the Project. Only six out of almost 50 are traversed by footpaths, though some 20 more have footpaths or bridleways adjoining or nearby. These form an important feature in the scene as viewed by a walker or rider who is of course limited to an external view. Unless there is to be a general upgrading, way-marking or re-organisation of the footpath network in an area, it would appear most invidious to place on owners who embark on woodland management an access condition attached to grants. Indeed, it could be said that the owner who undertakes a woodland scheme involving fencing, planting and possibly tree shelters is already at some increased risk as compared to those who neglect or simply ignore their woods. Obviously it is of importance and in the owner's interest that any public right of way that traverses or skirts his wood is clearly defined, waymarked and has adequate stiles and gates.

Not to invite the public in may appear churlish given the grants involved, but small woods, if they are to serve as refuges for wildlife, have a very limited capacity. The case is quite different, of course, where they are in public ownership, where recreation may take precedence over other uses.

Achievements: 1979-84

All enquiries and responses to publicity were followed up by the Project Officer and case files opened for any enquiry that went beyond telephone calls and a single meeting. The numbered cases total over 100 of which more than 60 have continued to the point where action followed, be it felling, thinning, planting, restocking or fencing. Some action would have taken place without the Project but in the majority of cases this would have been unlikely. In many cases it is difficult to say when the input by the Project Officer exceeded that expected of an FC Private Woodlands Officer, particularly in relation to straight-forward felling licence cases and more recently to new planting where the Forestry Grant Scheme (FGS) greatly reduced 'project input' over the final two years.

The major activities where the Project is judged to have made a substantial contribution are summarised in Table 1 by forest years based on planting seasons (October through September) which reflect the annual cycle of forest work better than calendar or financial years (April through March). Each major operation is considered in the succeeding sections but the overall result may be summed up, including cases currently in hand at July 1984:

- a. Of 28 ha felled, 12 ha (c.40 per cent) were converted to agriculture, almost entirely for the extension of existing permanent grass, leaving 16 ha for restocking. The 19 felling coupes and the eight additional areas thinned in each case averaged 1½ ha. Of the total of 27 parcels, the Project Officer was involved in valuing or selling 23 which totalled 4100 m³ and realised £8.20/m³, some £33 500 overall.
- b. There are about two years, on average, between sale of the timber and restocking after felling, and the total of 8 ha for the latter operation matches the 8 ha nett for restocking up to 1981-82.
- c. The area of 12 ha cleared for agriculture is exceeded by the new planting of 15 ha on bare land so that, so far as the Project cases are concerned, there was a nett increase in woodlands – but see pages 21-22 for consideration of Gwent as a whole.
- d. Fencing as an operation in its own right started in 1980 and totalled around 55 ha using the Countryside Commission's experimental grant.
- e. It is difficult to quantify the more irregular forms of forest operation, e.g. partial or selective felling where the expectation is that coppice regrowth or seedlings will fill the gaps. The only major area was the one wood coppiced as a whole, which accounts for 9 of the 10 ha so treated. However, coppice regrowth and natural regeneration will play an important part in the future of many of the felled woods and those fenced. Small numbers of trees have been planted into such woods, some of whip size and some in tree shelters.
- f. The total area affected by the Project, eliminating double counting of areas felled and restocked, was some 121 ha of which 12 went to agriculture.

The areas of woods proposed for work have ranged from 0.25 to 10 ha; but sometimes smaller copses or belts were included within the scheme. Where several adjoining farmers became interested in the Project, it allowed the development of a woodland scheme over a relatively large area. Each of these 'peer groups' has involved a joint sale of timber, thinning, felling and restocking, clearance for agriculture and new planting on land less suitable for agriculture. The results overall have been that all the woods of the group of farms have been 'brought into management' with benefit certainly to agriculture, forestry and landscape conservation, and at least without worsening the position of nature conservation. One such group is described in Appendix I as Case Study 2.

TABLE 1 Achievements 1979-84. Number of cases, areas, volumes and values

Forest Years (Oct. - Sept.):	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	Totals 5/6 years
Planting season:	P79	P80	P81	P82	P83	P84	Number of cases
Number of cases							Area to nearest ha
Areas to nearest ha							
Planting bare land	-	5	4	6	1	-	16
Restocking of felled	-	4.6	2.4	8.0	0.2	-	15
Fenced (1)	-	1	2	1	2	2	8
Coppiced	-	0.6	5.1	1.6	0.6	0.5	8
	-	-	3	4	6	8	28
	-	-	4.7	13.3	6.5	12.9	55 (1)
	1	1	-	-	1	-	3
	9.0	0.7	-	-	0.3	-	10
Totals: Number of cases	1	7	9	11	10	10	55
Area to nearest ha	9 ha	6 ha	12 ha	23 ha	8 ha	13 ha	88 ha
Felled: Total	2	4	1	1	6	5	19
less to agriculture	4.7	7.4	2.0	1.6	4.1	7.8	28
	1	2	1	-	1	3	8
	0.8	4.9	2.0	-	0.3	3.8	12
Nett for restocking	3.9	2.5	Nil	1.6	3.7	4.0	16 ha
Thinning	-	2	1	2	2	1	8
	-	1.8	1.0	2.6	4.6	3.3	13
Timber valued or sold (2)	2	5	2	3	6	5	23 cases
Number of cases	540	1200	140	260	430	1530	4100 m ³
Volume (m ³)	3500	13000	1100	2100	4100	9700	£33 500
Value £							

Notes: (1) Area fenced additional to that for planting. Total includes seven woods totalling 17 ha currently being fenced with materials supplied under the Project, to be completed early in 1985.

(2) These volumes and values relate to those cases in the areas noted as felled or thinned where project staff were involved in valuing or marketing the produce.

Planting

In the first three seasons 45 000 trees were planted, of which over two thirds were Japanese larch while 8000 were native broadleaves. The remaining 4000 were pine, Douglas fir and Southern beech. For reasons explained already there has been far less involvement in planting during the last two years of the Project.

All the woods planted, coppiced, or fenced for natural regeneration during the three seasons 1980-82 were visually assessed early in 1984 and the results are given in Table 2 below.

TABLE 2 Survey of planting and regeneration P. 80-82

Planting season:	80	81	82	Total
Number of woods:	7	7	9	23
<i>Areas (ha)</i>				
New planting	4.6	2.6	8.0	15.2
Restocking	0.6	5.1	1.6	7.3
Natural regeneration/coppice	0.7	0.6	1.2	2.5
Total	5.9	8.3	10.8	25.0
<i>Stocking based on % cover</i>				
Conifer	4.3	4.3	5.1	13.7
Broadleaved	1.0	2.8	3.4	7.2
Failed or no NR as yet	0.6	1.2	2.3	4.1
Total stocked	5.3	7.1	8.5	20.9

Notes: Growth on some 7 ha of the 21 stocked was classed as very good. Apart from the failures, that on a small area was poor and the majority were classed as fair or good.

NR = Natural regeneration.

At the time of the visits the woods were 2 – 4 years old so that while the oldest were clearly established this was not true of the youngest. Much variation in the figures between years is due to chance, e.g. the amount of felling completed in time to allow planting the same season rather than the next, and the heavier losses in P82 which were almost entirely of Japanese larch in the drought of 1983. However, there are some trends worthy of note: first, the virtual doubling of the area regenerated within two years as the Project developed and secondly, the increase in the proportion of broadleaved cover from under 20 per cent in the 1980 woods to 40 per cent in 1982 – though this would only have been 30 per cent had the larch not failed.

The species used were varied but among the broadleaves oak and beech predominated with some ash and alder, while the conifers were as noted very largely Japanese larch with some pine. It remains a question how far a Project Officer should go in dissuading owners from using species which, although they can be regarded as commercial, are minority ones which have no assured market and may be considered an intrusion in the countryside. Species used in small numbers in these three years included Red oak, Southern beech and Lawson cypress, all planted by the express wish of the owner.

The estimate of cover took into consideration natural regeneration, some of it present before planting but helped by fencing. The most striking was of oak, some reaching over a metre by the time of survey. Birch, rowan, cherry and alder all featured in places and it is to be hoped that, with the relaxed management likely in these woods, all will feature in the crop to continue the local strains. It is noteworthy that although the broadleaves planted were only one fifth of the total, stocking is already over one third. Few of the areas fenced without planting have been enclosed long enough to make it possible to foresee the success of natural regeneration but in places seedlings, mainly of the species already noted, are present. Such seedlings will, whenever there has been felling, have to compete with coppice and, again, it

is too early to foresee the outcome. Since many of the stools are very old and their distribution irregular it is to be hoped that there will be a good proportion of maidens in the new crop.

Clearly, when the effect of the fencing programme becomes clear one would expect the broadleaved stocking to increase further to at least half and this could be substantially increased if, as may be expected, much of the larch is cut early for fencing and other farm needs.

Fencing

Fencing is the main requirement for most of the schemes be they bare land planting, restocking or protection of existing woodland.

As shown in Table 1 the total area fenced, other than as preparation for planting, amounted to some 55 ha and, from a relatively small part of the Project in 1980/81, it has become the major activity over the last two years. The length of fencing, either erected by MSC in the first year or grant aided subsequently with cash or materials, rose steadily from 1000 m in the first year to over 4000 m in the fourth and fifth. The purpose of the fencing was in every case the exclusion of farm stock; no rabbit netting has been used. The silvicultural purpose is diverse in that the existing tree cover varies widely both between and within woods. Where areas are well stocked protection will merely prevent trampling, poaching of the ground and future deterioration of the stand, while close by in more open areas existing seedlings may be able to develop and new regeneration appear, which in some woods may be supplemented by planting small numbers of trees, often as whips or with the use of tree shelters. It is at the present stage too early to assess developments apart from the occasional observation of regeneration noted in the survey reported above.

The question of grant aid in relation to fencing was however raised by DART in two contexts. First, that the grant then applicable under the Small Woods Scheme was quite inadequate for small areas given the high fencing cost. Secondly, that areas for natural regeneration received no grant until five years after the main expenditure – the fencing – had been incurred. In making this comment they used theoretical fence perimeters based on squares which it is now possible to compare with actual cases. Similarly, it is possible to compare the grant currently available for planting under FGS with that paid for fencing; £1 per metre in recent years under the Project or a 50 per cent grant on the agreed standard cost.

TABLE 3 Perimeters and areas fenced by size classes

FGS size class (ha)	PROJECT CASES				Theoretical perimeter (square)	GRANTS	
	Number of woods	Average area (ha)	Average length of fence (m)	(m/ha)		Actual at £1/m	Theoretical under FGS*
0.25-0.9	11	0.5	390	(770)	284	390	425
1.0 -2.9	11	2.0	600	(300)	550	600	1400
3.0 -9.9	5	5.4	790	(145)	980	790	3240

* FGS is only paid for the area actually planted/regenerated within a wood of the appropriate size class. Figures given assume the whole area is eligible at the broadleaved rate.

The first contrast to be drawn is that while poor shape means an even larger perimeter compared to the square for the smallest size class – under one hectare – this is not true of the largest class, while the middle class approximates to the square. Despite poor shape – some areas were in long dingles – the presence of fences on some part of the perimeter – often farm boundary or roadside fences – meant that in reality a substantial part of the perimeter was not fenced under the Project in almost every one of the larger woods.

Given the low grant paid for fencing areas over one hectare in comparison with the FGS grant for an equivalent area, it would appear that there is room for an alternative approach and **it is recommended** that the Forestry Commission look into this matter at the next review. To increase flexibility a fencing grant based on the actual needs of woods over 0.25 ha could be combined with a grant for individual trees planted to upgrade a wood or fill gaps. Such trees would need to be of the highest standard: good provenance planted as whips or, if of normal forest size, with tree shelters, guards, etc., as appropriate. Such a system would also obviate the criticism that FGS is geared to clear felling and replanting and is inapplicable to irregular or selective silvicultural systems, or indeed to storing coppice.

Coppicing and irregular forestry

The difficulty of quantifying some of the less formal or irregular operations has been noted. Some examples of the types of operation involved are now set out since these are the cases where grant aid has been by contribution to fencing costs and in places a proportion – usually 50 per cent – of other costs.

Apart from one large wood felled as a whole as the Project started and subsequently fenced, where the regeneration will be mainly of coppice with some maidens, all such examples are small scale and it remains to be seen whether a single example of a coppice rotation, e.g. for firewood, will result; this despite the considerable publicity over the last decade for woodburning stoves and more recently for coppice working as a means of supplying them.

A number of the timber licences issued over the period were for selective felling rather than clear felling and, in these cases, as well as certain of those clear felled, the restocking conditions were defined in terms of coppice regrowth, natural regeneration and subsequently filling gaps as necessary by planting. Usually the time limit is five years, the licence itself being for two years, and thus no examples of *planting* at the end of such a process have been recorded. Though in several cases it is clear no planting is likely to be needed, in others the outcome is uncertain and should planting, in fact, be insisted on, it is clear that it will be very expensive owing to dense brambles and other shrub growth and the condition will be very difficult to enforce. Given the very high proportion of broadleaved high forest in Gwent arising from war fellings which coppiced and were in 1965 described as scrub (see footnote to Table 7) one could query whether such a last resort condition is worth imposing. Given the conservation and landscape value of these woods and the variety and interest resulting from irregular stocking, **it is recommended** that the FC review their conditions so that if the option of protection and coppicing/natural regeneration is accepted by the owner a fencing grant is paid on its completion and the obligation remains only to protect regrowth. This would simplify the procedure whereby a felling may be carried out under the FGS scheme and payments made over a period as restocking is achieved. The silvicultural results are unlikely to be very different.

In two or three cases fencing or thinning has been accompanied by the planting of small groups of container grown trees, whips or forest stock in tree shelters. **It is suggested** that where public access is difficult to control, less attention is aroused by container grown plants or whips; there is one successful example of such work. One hopes this selective approach will continue and be encouraged in order to keep small woods visually unchanged and as permanent features in the landscape.

Such work if carried out on any scale presupposes that one can grow valuable trees worth harvesting in small numbers and from difficult sites often across fields or in dingles. Individually each tree planted is expensive but the numbers needed are small if the ground is already stocked with coppice, less valuable or smaller tree species. Hence the recommendation already made in connection with fencing, for grant aid on a limited number of species when used for enrichment. This proposal depends to a considerable extent on the fact now becoming clear that such work using tree shelters or other special methods is likely to bring results far superior to the 'enrichment' carried out in 'derelict woodlands' during the immediate post war period.

Yet other examples of small scale working are woods made irregular by early removal of all but the best formed poles of a crop and subsequent inter or under planting. One example was combined with use of this open area for beehives. One area of Sweet chestnut was being

established with a view to coppicing for fencing materials. One advantage of all the irregular and small scale systems of working is that they dovetail better with the annual cycle of farm work. There is a real clash between hay making and the need to weed young plantations formed in the traditional manner. Planting of whips, with tree shelters or in partial shade, or the acceptance of coppice, all reduce the need for summer weeding. In contrast, fencing, singling and thinning for farm use can all be done at slacker times in the farmer's year.

Conclusion on planting and regeneration under the Project

The problem of assessing results from the novel, in the case of tree shelters, or irregular systems within a period of five years suggests that much information will be lost if a number of the 'Project cases' are not looked at again after some years. For this reason **it is recommended** that the sponsoring departments, principally the Forestry Commission and the Countryside Commission, support an assessment, essentially of the broadleaved woods involved in the Project, in about 1989-90 when the regenerated woods will be 5-10 years old. Such a survey could perhaps most economically be undertaken by the County Council's Forest Officer, or if an independent report is required, by a consultant. To this end an index to the Project cases, a location map and a summary by principal operations are being deposited with FC and Gwent County Council as the bodies with local officers involved in woodlands.

Note on Planting in Gwent 1968-1984 in Relation to the Project

From the preceding sections it is clear that the Project input into planting was considerable for three years and then tailed off. To put matters in perspective it is desirable to assess the total planting which took place in the county over this period and indeed to compare the level with earlier periods because there is considerable variation, accentuated by the fact that over the last 17 years three different grant schemes relating to small woods were administered by FC while for three years there was no specific scheme at all. The results have been summarised from FC records and are presented by varying periods according to the grant scheme currently in force.

TABLE 4 FC grant aid under various schemes paid on small woods (under 10 ha) 1968-84

Scheme	Planting seasons	Duration (years)	Average number and areas (ha) per annum by category					
			Number of grants	Total area	New planting	Re-stocking	Conifer	Broad-leaved
Small Woods Planting Grant	68-74	7	4	13	4	9	10	3
Basis III Dedication	75-77	3	Nil	—	—	—	—	—
Small Woods Grant	78-81	4	4/5	7	3	4	4½	2½
Forestry Grant Scheme	82-84	3	7	13½	11½	2	6½	7

Note: There was a slight overlap in some years, schemes already approved being grant aided on an earlier basis when this was more favourable than the current scheme.

The Project started midway in the short life of the Small Woods Grant and in a period of rapid inflation and lagging grants. In 1980 the first full year of the Project, out of six plantings four were aided by the Project in addition to the FC grant, mainly by the supply of MSC labour, while a fifth was similarly assisted by the National Park Authority.

Since the setting up of the Forestry Grant Scheme with scales both for decreasing size and thus increased cost per hectare and for the broadleaved supplement, planting has risen by over 50 per cent while Project aid has fallen virtually to nil. It is for others to assess whether the trend is the same in counties without a comparable project; perhaps the most that can be

claimed is that Gwent was poised to take advantage of the increased grants. There is no doubt that an owner putting in his own labour or that which has to be paid anyway, e.g. farm labour in slack periods, can cover the material costs of fencing and plants from the grant so that no nett cash outlay is necessary.

Even so it is salutary to note that the rate of planting attained over the first three years of FGS just matches that reached for seven years prior to 1974 of around 13 ha/year while in the intervening seven years a total of only 27 ha was planted in small woods with FC aid.

There are two further considerations arising from this; firstly, that restocking is currently at a low level, partly due to the poor timber market and reduced felling of 1980-82 and partly to the acceptance of natural regeneration and coppice regrowth which is not yet eligible for grant. The second point is that despite the non eligibility of such broadleaved restocking there has been a marked swing from over three quarters conifer under the old Small Woods Planting Grant to less than half in the first years of FGS.

Note on Felling in Gwent 1968-84 in Relation to the Project

Again in an attempt to assess the effect of the Project against a changing economic background it is worth a brief analysis of the trend in licencing for felling in the County as a whole.

TABLE 5 Clear felling licenced 1968-84

Period	Number of years	Average licenced per year:				
		Number of cases	Total area	of which unconditional	Volume (m ³)	
					Conifer	Broadleaved
Pre Project forest years 1968-78	11	—	19 ha	9 ha	—	—
Project period financial years 1979/80 to 1983/84	5	12	18½ ha	4½ ha	800	1650

These figures suggest that overall there has been little change except that the area licenced unconditionally has been halved within the same total and this may be attributed partly to the efforts made to discuss and consider each proposal with the owner in the light of the objectives set.

As already noted under marketing, the five years of the project showed great variation, best exemplified by the total volume licenced for felling in each year:

Financial year	1979/80	80/81	81/82	82/83	83/84	: Total
Cubic metres	4400	2250	2100	1100	5650	: 15 250
					Average	: 3050

In these figures areas and volumes *relicensed* have only been included on the second occasion.

Comparison with the volumes valued or sold by the Project Officer, given in Table 1, show his role in that he valued or marketed some 4000 m³ of the total of 15 000 licenced in the period. It should be noted that the figure for the year to March 1984 is the highest volume licenced in any recent year and it remains to be seen whether this level will be sustained.



Plate 1. Typical countryside near Raglan.



Plate 2. New planting in a coalfield valley. The plantation includes small tips and quarries.



Plate 3. A wood of 1 ha fenced against stock.



Plate 4. Inside the wood shown in Plate 3; good oak and areas ripe for regeneration.



Plate 5. Dampoak/alder cut over in 1939-45(?). Now fenced.



Plate 6. A wood partly cleared for agriculture; remainder thinned and fenced.



Plate 7. The farm and two woods described in Appendix I Case 1 (page 41 and Figure 2), seen from the east.

Reconciliation of Objectives and Achievement

The achievements, even though minor in relation to the total woodland in Gwent, are not without their controversial aspects. Any felling of a small wood is far more significant in the landscape than planting; re-arrangement of the woods on a farm can give rise to criticism, as can a trend to use conifers or mixtures in place of pure broadleaved, the use of exotic species, or indeed any action at all! Certain safeguards have been introduced in that the Project Officer has always referred to the Gwent County Council survey to establish the landscape or nature conservation interest of each wood and consulted GCC and/or Nature Conservancy Council as appropriate. The information on ancient semi-natural woods available from the latter body will now augment such information.

It was essential that felling play a substantial part in early cases so that woods could be seen to be a source of revenue even though subject to market variations. Only thus could farmers reasonably be expected to plant other than small areas purely for amenity or indeed to encourage their woods to regenerate whether naturally or by planting. The market fluctuations, the variation in grant aid and the undoubted development in the community as a whole of the concept of conservation in the widest sense, make it difficult to draw conclusions after only five years.

There is no doubt that the Project Officer concept has been successful in achieving results within the farming community. In particular, they welcome the ease of dealing with one man with a practical bias, able to offer advice on grant aid, sell timber, and consult with other statutory authorities where necessary. It remains true, however, that the initiative has come from the owners as a response to publicity rather than from 'knocking on doors'.

The 1980 FC Census - Analysis and Conclusions

The Forestry Commission's recent census of all woodlands (defined as 0.25 ha and over) together with trees on smaller areas and individual trees, gives the following figures for Gwent. It should be noted that the aim was to give precision for total woodland in counties of England and Wales but only $\pm 25\%$ for individual trees so that the figures need to be used with caution and have been rounded here.

TABLE 6 Summary of census for Gwent

Woodlands	Number of woods, etc.	Area (ha)	Timber volume (000 m ³)	Notes
Forestry Commission + dedicated private estates	—	11 300	1160	
Other woods:				
10 ha and over	(less than 200)	2 110	} 895	*Total 1570 small woods 3490 ha
2.0 to 9.99 ha	580 } *	2 430 } *		
0.25 to 1.99 ha	990 } *	1 060 } *		
Total woodland		16 900	2055	
Non woodland trees:				
Clumps	66 000 clumps	} 3 800	} 2761	
Linear features	1320 km			
Isolated trees	217 000 trees			—
Grand total		20 700	2816	

Thus it is possible to state with some confidence that small woods in Gwent – those between one quarter and ten hectares – total 3500 ha, just over 20 per cent of all woodland. When one comes to assess their species composition and the volume of timber they contain, estimates are less precise because the census figures include the 2100 ha of larger woods which are likely to contain more timber and probably more of the conifers.

However, on the basis of the figures given for all 'other woodland' the following may be deduced:

TABLE 7 Areas and volumes in small woods

Composition of 'other woodland'			Areas for small woods (ha)	Timber volume (000m ³) (2)
High forest				
Mainly broadleaved	70%	(1)	2450	} 2730
Mainly conifer	8%		280	
Scrub	22%		770	nil
Total			3500	560 (approx. ½M m³)

Notes: (1) While one quarter of the broadleaved high forest was of coppice origin the census suggested only 27 ha of coppice with standards now existed.

(2) The 895 000 m³ have been divided in proportion between the woods over and under 10 ha.

The species composition of all high forest in 'other woods' applied to the 2730 ha in small woods suggests the following approximate areas. Similarly, the percentage of species in scrub given for all ownerships has been applied to the area of scrub in 'other woods', where over 90 per cent of the scrub is in fact found.

TABLE 8 Estimated species composition of small woods

Species % in 'other woods' applied to area of small woods				Species % for scrub in all ownerships applied to area in small woods				
Conifers 12%		Broadleaves 88%						
Larches	5%	140 ha	Ash	18%	520 ha	Oak	36%	280 ha
Pines	4	100	Oak	16	440	Birch	29	220
Spruces	1½	40	Beech	16	440	Alder	7	55
Other	1½	40	Birch	8	210	Willow	6	45
			Other	15	400	Other	22	170
			Mixed	15	400			
Totals: Conifer high forest		Broadleaved high forest				Scrub 100% 770 ha		
320 ha		2410 ha				Total Broadleaved 3180 ha		

Notes: Totals do not agree with Table 7 owing to allocation of mixed woods to 'Mainly' Broadleaved or Coniferous.

It is suggested that these figures for area, approximated though they are, can serve as a basis against which to check overall forestry activity in the small woods of Gwent whether it be planting, felling or other operations.

First it should be noted that the census estimated gains and losses in Gwent over the period 1968-1980 were:

Losses: 1230 ha ± 18%

Gains: 1180 ha ± 67%

Despite the large standard errors this does suggest that overall the area of 'other woodland' in Gwent is static rather than falling.

Next it is relevant to consider the age structure as shown in the census, set out in Table 9.

TABLE 9 Age classes for high forest in 'other' woodland as % of total area (1)

Age in 1985	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	Over 84
Planting year classes	P71-80	61-70	51-60	41-50	31-40	21-30	11-20	01-10	Before 1901
Conifers %	4	56	4	33	—	—	—	3	—
Broadleaved %	1	3	8	30	5	6	4	11	32 (2)

Notes: (1) These percentages apply to all 'other woods', the conifers are probably in the larger rather than the smaller woods.

(2) An average of 7% for each of the four decades 1861-1900 with 4% pre 1861 i.e. over 125 years old.

These figures suggest that the conifers are very much treated as a crop, to be felled before they are 50 years old, apart from a small proportion retained to a much greater age. While half the conifers were probably planted 1961-70, the contrast with the 1950s and 1970s is probably over-emphasised by sampling within the small total area of about 300 ha.

The broadleaved woods show a much better age structure than might be expected from popular belief. If the average rotation was 120 years some 8 per cent of the total area would be expected to lie within any 'decadal age class'. Again, given the wide standard errors for this type of data it is clear that only the 41-50 age class, mainly overgrown coppice resulting from war time fellings, is over represented, while the last two decades, 1961-80, are badly under-represented. Hopefully, current work will bring the present 1981-90 class much more nearly into line.

Practical Application to Gwent of FC Census Results

Small woods

The clear felling licenced over the Project period may be compared with the estimate of the volume of standing timber and thus the potential cut. One may estimate from the volumes and areas given in Table 5 that of the 19 ha licenced per year some 5 ha will be conifer and 14 broadleaved. Applying these figures to those derived from the census one may make a rough estimate of the average annual cut in terms of rotation – how long it will take to cut all such woods – and of the percentage of standing volume cut.

TABLE 10 Comparisons of estimated areas and volumes of small woods with clear felling licenced 1979-84

High forest	Total area and volume	Licenced for clear fall/year	Deduced rotation and % cut
Broadleaved	2410 ha 520 000 m ³	c. 14 ha 1650 m ³	170 years under ½%
Conifer	320 ha 40 000 m ³	c. 5 ha 800 m ³	60 years 2%

Areas and volumes from Tables 5, 7 and 8.

Clearly these figures give no cause for concern and suggest that *where restocking can be undertaken* there should be as few restrictions as possible on felling proposals based on sound silvicultural principles. This conclusion is reinforced by Table 9 showing that the older age classes of broadleaved woods are well represented and any foreseeable increase in felling followed by regeneration will improve the age structure as a whole rather than the reverse.

The structure plan objectives for Gwent have been summarised on page 8 and according to the census the first objective of maintaining the overall woodland area was apparently achieved over the 12 year period prior to the commencement of the Project. To further explore this point, Table 5 shows that for the five years 1979-1984, 93 ha were licenced for felling, of which only 22 were unconditional, i.e. could be cleared at will. Not all the remainder will be replanted, some will be 'conditional' on conversion to agriculture rather than on regeneration. In neither case is the outcome checked in every instance and the felling or conversion may never take place, but this shortfall is probably more than offset by attrition of woods by piecemeal cutting and grazing.

In the same period FC grant aided planting totalled 53 ha so there is, on the face of it, a loss of some 40 ha over the period (8 ha/year). Such an apparent loss would be offset by areas which coppice or regenerate naturally without FC grant aid plus those small areas which are in fact planted without such aid. Perhaps half of the 55 ha fenced under the Project in the past four years is likely to result in regeneration rather than protection of the existing crop.

On the basis of these figures it is concluded that the current rate of felling as compared with planting and regeneration in Gwent remains approximately in balance and thus the Policy is being fulfilled. The County Council already receives details of all felling licences and can thus assess the current rate of felling. **It is recommended that** the rate of planting

under the FGS scheme be monitored by the County Council on an annual basis and that fencing for regeneration continues to be grant aided. Other considerations set out below might influence the level to be aimed at.

The second objective of the structure plan 'to encourage positive management of broadleaved woodland' has been promoted by the Project but it is more difficult to quantify needs against achievement. To summarise Table 8, of 3200 ha of such woodland, three quarters is high forest and one quarter is scrub, while of the total area, oak, ash, beech and birch each occupy between 400 and 700 ha while all other species and mixtures contribute 900 ha. The progression of war fellings from 'felled' in the 1949 census, to 'scrub' in 1965 and on to 'broadleaved high forest' by 1980 is a most important and encouraging fact.

It is clearly desirable to perpetuate all these diverse elements and to a large extent rely on natural means rather than planting which is so often of stock not of local origin but with imported seed or plants. If one assumes an average rotation life span of 100 years – it will in fact vary from perhaps 50 years for birch to 150 or more for oak – then a target figure would be the regeneration of about 30 ha/year. Table 11 suggests that the rate of working over recent years is about half this figure.

TABLE 11 Estimate of annual rate of regeneration of small broadleaved woods over recent years

Activity and assumptions	Figures from	Number of years	Ha/year
Broadleaved planting under FGS P82-84	Table 4	3	7
Coppicing – 10ha over Project period	Table 1	5	2
Fencing for regeneration/coppicing. Half of total area fenced	Table 1	5	6
Total area treated for restocking per year			15

In the light of this estimate **it is considered** that the fencing programme should be increased, aiming principally at areas which may be expected to regenerate naturally at least in part.

It is also considered that selective planting in such woodlands, where natural regeneration is not expected or is incomplete, be confined to the major timber species using small numbers of high quality stock planted with modern aids, principally tree shelters.

Non woodland trees

Much of the overall wooded appearance of the Gwent countryside depends on the features defined in the census as clumps, linear features and individual trees. These fall outside the scope of the Project which defined woods as over 0.25 ha. However, it has been made clear that there was overlap in the work of the Project Officer, basically using FC and special grants, and the County Forest Officer, using the Countryside Commission's Amenity Tree Planting grants. While there is this specific definition, there is also potential flexibility by objective; potential timber production defining the FC grant. Again, it is possible from the census to compare the stock of such non woodland trees in the county with the programme of the County Forest Officer.

It is noteworthy that the estimated area of the clumps and linear features at 3800 ha exceeds that of the small woods while in addition the individual trees were estimated at over 200 000.

The number of amenity trees planted by the County has, over the past eight years, risen from 12 000 in 1976 to 50 000 in 1983, a total of over 200 000. Assuming an average life of 100 years and the need to plant six for one individual tree and at an average of 2000/ha (just over 2 m spacing) for clumps and linear features, one may estimate the desirable rate of replacement.

TABLE 12 Estimate of replacement rate for non woodland trees

Census figures	Planting over 100 years	
3800 ha of clumps and linear features	38 ha/year at 2000/ha	= 76 000 trees/year
217 000 individual trees	2000/year x 6 per present tree	= 12 000
	Estimated total needed each year	88 000

Thus the County's programme could be taken to be covering over half of the total necessary replacement. Given that there is a good deal of private planting, particularly in gardens, and of other planting, e.g. on motorways and trunk roads* and by District Councils and the National Park, besides a good deal of natural restocking, it can be questioned whether it is necessary to increase the programme further; indeed it could be considered worth switching resources to the protection of existing trees both in such features and in small woods.

The future

Assuming that in the immediate future the County Council will continue with an integrated programme for non woodland trees and those aspects in small woods which do not meet the current criteria of the Forestry Grant Scheme, there remains the problem of carrying out such work in the areas where it is most needed, e.g. with woods or clumps of high landscape value which are at risk or in areas where it is considered desirable that overall tree cover should be increased.

It has been made clear in relation to the pilot survey area and the 'action area' subsequently defined in Gwent, how difficult it has proved to take positive action in places where the local authority or other statutory body wished to do so, as compared to those where the initiative comes from the owner. Such difficulties may be assisted if the authority gives high priority in certain areas and pays for all necessary work; the trees or woods becoming or remaining the property of the landowner. Clearly such high priority must be for limited areas of special features but the effectiveness can be seen in the National Park where the authority has entered into management agreements to plant or protect woods or trees, paying a high proportion or indeed the whole cost and often carrying out all the work on behalf of the owner.

*Footnote: Over the past 15 years FC has planted for the Welsh Office some ¼ million trees along 50 miles of such roads in Gwent. This is equivalent to over 100 ha of linear features and clumps; about 80 per cent is broadleaved.

Cost of the Project

The costs may be regarded as marginal to the activities of the Countryside and Forestry Commissions in that both organisations were grant aiding planting in Gwent at the start, while Gwent CC had an established Countryside Unit using MSC resources. The additional expenditure incurred by CC is set out in Table 13.

TABLE 13 Expenditure (£) on Project met from Countryside Commission's experimental budget

	Financial years 1980/81	1981/82	1982/83	1983/84
Grants (1)	2365	5240	4267	5371
Vehicle (2)	1500	1500	1700	1725
Other (3)			41	392
Total	3865	6740	6008	7488

Notes: (1) 'Grants' include purchase of materials disbursed in that or the following year.

(2) 'Vehicle' run by Gwent CC under various MSC schemes to give the mobility essential for woodland work.

(3) 'Other' includes expenses incurred on the seminar on small woods held in 1983.

Table 14 shows the approximate allocation of time by the Project Officer to work directly on the Project and in the later years to private woodlands work.

TABLE 14 Allocation of Project Officer's time taking a working year to comprise 230 days

	Financial years 1979/80	1980/81	1981/82	1982/83	1983/84
On Project	91%	65%	74%	39%	39%
On Private Woodlands			13%	35%	48%
Total	91%	65%	87%	74%	87%

While the original intention was to use a full time Project Officer, various emergencies – loss of staff in the district and notably the discovery of the Great spruce bark beetle *Dendroctonus micans* – led to his being allocated other part time duties. In addition as the Project progressed, with changes in grant arrangements, it became more difficult to distinguish Project work from routine administration of private woodlands. With first a staff reduction and then a major re-organisation of the Forestry Commission's District and Forest staff it was obviously sensible for the Project Officer to take on all private woodlands work in Gwent when he was so deeply involved in part of it, and from a small start in the middle year 1981/82 private woodlands work exceeded Project work by 1983/84 and to this extent ensured a smooth hand over to his successors, the County Forest Officer and the FC's Private Woodlands Officer.

At 1983 rates of pay, a forester with accommodation and allowance for travelling will cost about £13 000-£14 000/year. On this basis the cost of the Project as such to FC declined from £12 000 in the first year to £5500 in the last two years. While it is difficult to justify overheads well over 100 per cent on grants disbursed over the five years as a whole, the marked reduction from about 400 per cent in 1980/81 to about 100 per cent in the last year is noteworthy.

No calculation of turnover was maintained during the Project, perhaps a mistake, but a facet that if implemented would have involved much extra work. However, it is possible to contrast the 'officer' cost of £5500 in each of the last two years with work carried out on a total of about 40 ha and on selling almost 2000 m³ of timber. If the average worth of a hectare is set at £1000 – not unreasonable given FC grant currently £400-£700 for this type of woodland – then the officer cost would be balanced if allocated in the form of an overhead:

15% on 40 ha, each valued at £1000	=	£ 6000
£2.50 per m ³ on 2000 m ³	=	£ 5000
Total = two years Project Officer time at £5500	=	£11000

To be effective a Project Officer should have wide experience in both silviculture and harvesting. It is unrealistic to expect a newly trained forester to carry out the full duties except perhaps in an organisation where he is backed by experienced seniors. The arrangements now proposed to continue the work of the Project in Gwent are that the Steering Group will remain in being and that the close liaison between the County Council Planning Department and the FC officers will be developed. While the Project Officer approach has proved invaluable in launching the work it is believed the dual arrangement can now continue it. Indeed, given suitable grant arrangements and this close liaison it may be questioned whether the addition of a third party in the form of a Project Officer would be essential or even desirable in other areas.

Wider Considerations Arising from the Seminar on Small Woods in Lowland Britain

The seminar held in Abergavenny enabled the Project staff to meet others working in the field and to test their tentative conclusions. While there were clearly wide differences in the problems due to different physical conditions and varying attitudes of farmers, the various local authorities and statutory bodies, there were wide areas of agreement.

Before setting these out it is worth noting some of the variations. In areas of larger farms and estates the level of grant aid appeared not to be decisive once interest was aroused, while with small farmers it was, as shown in Gwent, all important. Fencing, the most important single operation in stock raising country, would be far less important in cereal areas.

Agreements and grants

1. Some local authorities favour agreements under Section 39 of the Wildlife and Countryside Act 1981 as legally binding on the owner and successors. The Countryside Commission will fund such agreements and regard them as an alternative to standard grant conditions. However, there was apprehension that this Act could lead in future to compensation payments and there was a general reluctance to pay for inaction. The agreement on the owner's part could be regarded as being in return for the management expertise of the local authority and it was possible to cover all aspects, not only the grant aided operations as did the grant conditions, so such an agreement safeguarded all aspects of 'the agreed compromise'.
2. There was general agreement that Countryside Commission grants should be channelled through the local authority and while there was a call for an integrated system (FC, CC, NCC) no proposal was made that appeared to resolve the problem given the varying objectives.
3. It was clear that Countryside Commission grants are increasingly flexible and in many counties paralleled the 'discretionary grant' operated in Gwent after the first year. The merit of this method was that no precise set of rules was needed, they could be used to support fencing in stock farming country, maintenance generally, and could be directed to higher grade woods or particular areas. Clearly they would be finite in any year but a comparatively small sum could do a great deal. It might be preferable to continue with arrangements along the present lines rather than have an overall scheme with its probably more rigid conditions and accompanying bureaucracy.

Objectives

The following objectives were agreed as desirable for small woodlands.

1. To retain existing small woodlands for their nature conservation, landscape and economic values.
2. To use or perpetuate species in line with the scientific or scenic status of the individual wood.
3. To ensure their future well being by suitable management that must inevitably have an economic basis.

Means

The following means were proposed to achieve these objectives.

1. Recognition of the need to have clear management aims for any particular wood or group of woods. The achievement of these aims will usually be based on timber marketing on which owners are unlikely to have expertise.
2. Provision of a single point of advice to woodland owners – mainly farmers in the case of small woods. For the initiation of a scheme the Project Officer approach has great merits but in the long term it is probably more realistic to see the work as that of the Local Authority's Forestry Officer. Close liaison is essential between the various statutory bodies – Local Authority, Countryside Commission, Nature Conservancy Council, Forestry Commission and Agricultural Development and Advisory Service/Welsh Office Agricultural Department; and with farming and landowning interests – National Farmers Union/Farmers Union of Wales, Country Landowners Association, Timber Growers Organisation.
3. Compilation of data on the scientific, scenic and economic value of woods so that priorities can be established for treatment and where necessary for selective grant aid.
4. Development of minimum input methods so as to reduce the burden of high costs traditionally associated with small woods.
5. Voluntary co-operation is considered to be the most effective way of ensuring the retention of small woods, with statutory methods being used with discretion.
6. Finally, it should be recognised that a reasonable compromise between the various outside interests and those of the owner will be essential in most cases if progress is to be made and the objectives achieved. Given good will and adequate grants those cases where one interest predominates can be given exceptional treatment.

Records

Given the approach set out above it should be possible to quantify targets, e.g. for maintenance or protection of woodland necessary to achieve structure plan policies, and also to record actual achievement over the long periods involved. (The type of information which it is considered it would be necessary to record is set out at Appendix II).

Conclusions and Recommendations

A. GENERAL

See page

Objectives, organisation and allocation of responsibility

1. Objectives for small woods should aim at their retention, relate to their natural composition and, where possible, ensure their future on an economic basis. 36
2. Priorities should be determined by their ranking in terms of their silvicultural history, conservation interest and scenic worth as well as their economic value to farming, sporting or forestry. 37
3. **It is recommended** that the basic data on these subjects, which emanate from various statutory bodies, be collated by the appropriate Local Authority in relation to its planning objectives. In this work the distinction between small woods and non woodland trees should be ignored where appropriate, e.g. in landscape appraisal. 32-33
4. It is concluded that in tackling the practical problems of management of small woods and associated non woodland trees the 'Project Officer' approach has proved successful, particularly in providing a single point of advice and an 'honest broker' between owners and other parties. 13-14 27 37
5. It is now proposed, having closed the Project as such, to maintain a close liaison between officers of the Forestry Commission, who will take the lead where the importance of timber production predominates, and of the County Council for all other interests. The latter will be well aware of special arrangements which apply where amenity or nature conservation considerations are predominant and require the involvement of NCC, e.g. on SSSI. It is for consideration whether given the current grant arrangements and the possibilities raised in *Broadleaves in Britain – a consultative paper* (Forestry Commission, 1984) whether such a project could be launched elsewhere by direct collaboration of officers of the Local Authority and the FC supported by other agencies. 15 35
6. The main grant sources should be from the Forestry and Countryside Commissions, the latter via the Local Authority, while Nature Conservancy Council grants are available for notified sites (NNR and SSSI). It may be doubted if Ministry of Agriculture/Welsh Office Agricultural Department or other (e.g. Welsh Development Agency) grants for planning are of much importance in the lowlands except in the context of larger overall developments, e.g. Farm Improvement Schemes or restoration of derelict land, where planting forms a relatively small part of the scheme. 36
7. Given the dual arrangement proposed, **it is recommended** that the Forestry Commission's Private Woodlands Officers draw as necessary on colleagues' marketing expertise and that Local Authorities' Forest Officers seek to develop marketing experience in addition to their silvicultural and woodland management skills. 11
8. The role of ADAS/WOAD officers is vital in that they should be in a position to advise farmers of the potential value of their woods seen within the context of the farm as a whole. To meet this need their training is important and it is to be hoped it will continue, particularly in association with the Farming Forestry and Wildlife Advisory Groups (FFWAG). 10 13

9. With the many interests involved, not least those of the owners and, indeed, the taxpayer, compromise would appear inevitable and flexibility in the application of policies to be essential. Particularly important is the re-allocation of land between woodland and agriculture which has in Gwent provided the key to much desirable achievement, not least in the field of conservation. 13-15

Grant aid

10. It is for consideration as to whether rates currently operating are satisfactory for planting and restocking of clear falls in that after the vacuum created by the ending of the Small Woods Planting Grant in 1974 the Forestry Grant Scheme has led, over three years from 1981, to a satisfactory level of activity in small woods in Gwent. 21-22
11. There are, however, two causes for concern: the first is the continued loss of ancient semi-natural woods as indicated by the NCC survey; and the second is the deterioration of woods due to attrition by cutting and grazing in the absence of silvicultural management. This latter the Project sought to rectify by fencing and the acceptance of irregular silvicultural systems and of coppice regrowth. 8 19-21
12. The priority to be accorded to ancient semi-natural woods can be an important factor in decisions on felling applications and grant aid, but the experience in Gwent suggests additional grants are necessary for any area of broadleaves not managed on a clear fall system and **recommendations** are as follows:
13. That the Countryside Commission continue their widened support for such operations as fencing and small scale planting where these do not fall within the FC's area of grant aid, thus supplying a useful element of flexibility and discretion – to be exercised by the Local Authority. 36
14. That the Forestry Commission consider:
- i the necessity, or indeed value, of imposing 'last resort' replanting conditions where they have accepted natural regeneration or coppice as the first alternative; 20
 - ii an alternative grant aid system for small broadleaved woods to support fencing and individual tree planting to accommodate systems for natural regeneration and irregular silviculture, where present grant arrangements do not match the pattern of financial outlay. Such an alternative might be discretionary as compared to the FGS which, in common with all previous FC schemes, is open ended. 20 32

Recording and control

15. **It is recommended** to Local Authorities that, on the basis of the FC census, the NCC's Ancient Woodlands Inventory and other relevant surveys, they should attempt to quantify, in broad terms, their structure plan policies relating to trees and woodland and then to monitor performance. 31-33
16. **It is recommended** that the statutory bodies most involved, the Countryside and Forestry Commissions with the Nature Conservancy Council and County Councils, should consider an investigation to set up a model format with particular reference to the need for data retrieval when monitoring such a long term activity as forestry. 37
17. **It is suggested** that until any new policies for small woods, and in particular for ancient and broadleaved woods, have been sustained and adequately monitored for not less than a decade, will it be possible to say whether further – probably statutory – action is necessary to conserve adequately this important biological resource and heritage. 37

18. Finally, the problems that remain as the Project closes would appear to be:
- i That despite all offers of advice and aid up to 100 per cent, little action results where the initiative does not start with the owner. 12
 - ii To reach such large numbers of owners with advice at the appropriate time.
 - iii To provide guidance on marketing given the small packages of timber available at infrequent intervals from any one owner. 11

B. SPECIFIC TO GWENT

19. The evidence from the FC census and from the work of the Project suggests that the County Council's first objective of maintaining the woodland area is being achieved in broad terms. However, positive management of broadleaved woodland is not being achieved at a desirable rate. 31-32
20. **It is recommended** that the Forestry Commission and County Council consider increasing their support for the protection and management of existing woods, with particular reference to the ancient semi-natural woodlands. 8
15
32
21. The *ad hoc* steering group is to remain in being to follow up the work of the Project and **it is recommended** that an early task should be to develop an appropriate grant agreement and record system pending the investigation proposed at 16 above. 36-37
22. It is recommended that certain of the cases recorded be re-surveyed in five years time, particularly to assess the results achieved by fencing and by irregular methods of regeneration. 21

Appendix I

CASE STUDY 1 (Figure 2)

This example includes three types of operation which went to make up the Project, namely felling and replanting of one wood, fencing a second for regeneration and extending it to form a shelter belt, all the operations being carried out over a two year period and involving FC and CC grants together with MSC input. Certain parts of each wood were converted to grazing, in part with park trees, while their new fences contributed to grazing control on a previously rundown hill farm.

The Project Officer sold the timber standing, mainly natural birch and alder with old hazel coppice as turnery wood. The net loss of woodland is about 0.5 ha but over 4 ha previously open to grazing is now fenced. While two thirds of the first wood was restocked with larch there is an admixture of broadleaves and an area of coppice alder, probably the basis for a fuel wood coupe.

The cost of the grants then ruling and MSC input was c.£750/ha for the larger and £1000/ha for the smaller wood. The cost to the owner, after allowance for timber receipts of c.£1500, was c.£800 or about £200/ha established. Under recent grant conditions as applied to the Project, an owner carrying out his own weeding would have a very small nett cash outlay.

CASE STUDY 2 (Figure 3)

This involved a group of four farms, three of which are included in the map. They had all formed part of one estate where woods of beech and oak had been felled 1914-18 and subsequently coppiced. Following an initiative from one farmer, his neighbours joined in a joint sale of timber in 1979 and the overall result was:

- i Areas on two farms of 3.5 and 0.7 ha were felled. On one the flatter lower slope (1.7 ha) was converted to agriculture, enlarging a field, while the remaining 1.8 ha was replanted using Japanese larch on part, beech and ash on the rest; seedling ash, birch and sycamore have added variety. The intention of the second farmer was to retain standards in open parkland – wood pasture – but in fact the area has coppiced with some seedlings – a gain to nature conservation.
- ii 0.7 ha of Japanese larch on the first farm, originally planted with a small woods grant, received its first thinning at 25 years.
- iii A steep bracken bank of 1.4 ha, formerly woodland, was cleared of residual hedgerow timber and the area planted with ash and Japanese larch.
- iv On the fourth farm nearby – not on the map – three small areas amounting to 1.4 ha were planted with larch.

Some £5500 was realised from the sale by three owners and it is unlikely that either of the smaller coupes could have been sold on their own. Of 4.2 ha felled 1.7 ha went to agriculture but 2.8 ha of new planting, in addition to 2.5 ha of restocking, gives overall gains for both improved pasture and woodland at the expense of bracken banks.

This scheme proved complex to organise and implement and market conditions from 1980 to early 1983 would have made it impossible. As it was, those farmers with timber made a useful profit while the cost of the grants and MSC labour amounted to some £700/ha; very roughly equivalent to the FC grants which were introduced a year later for woods of 1 to 3 ha.

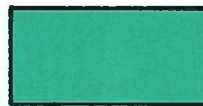
This scheme has been described at some length because it was an early 'peer group' example and the planting has been successful on a variety of sites. It has also aroused interest among the farmers in that one has experimented with tree shelters for individual oak with satisfactory results, one farmer's son is considering woodland contracting as a method of staying 'on the farm' while one farmer financed buildings from the proceeds, which in the view of his ADAS advisor he could not have afforded by borrowing. The existing Japanese larch plantation could be thinned again now, or felled within two years, thus sustaining interest in the woods and for this farm, at least, providing crop and age variation.

KEY TO CASE HISTORY MAPS IN APPENDIX I

Key

Woodland

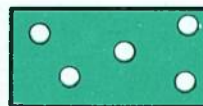
Closed Canopy



Opened for regeneration



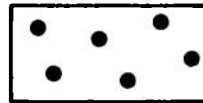
Thinned



Regenerated



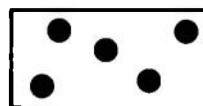
Parkland



Felling of Woodland

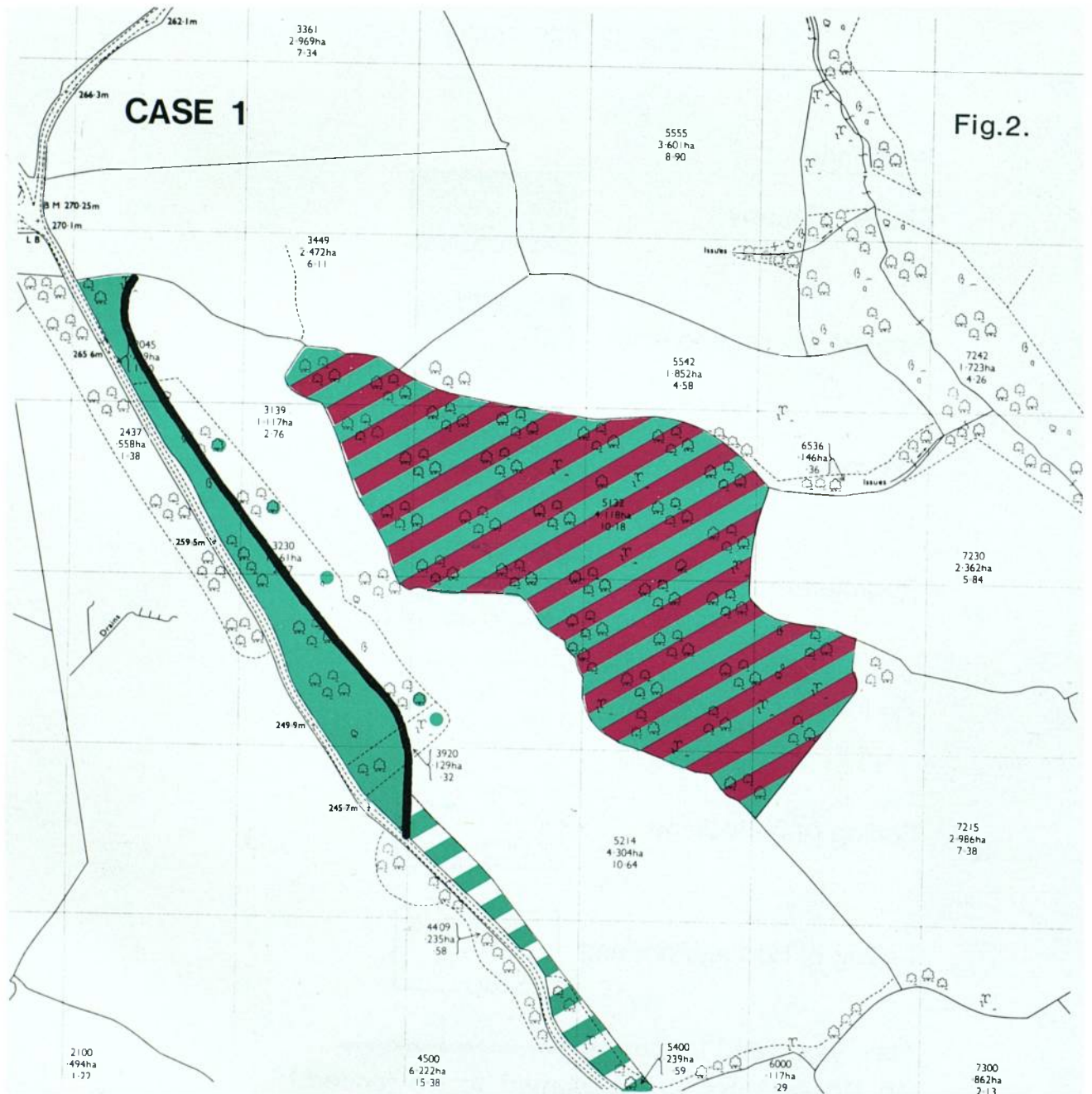


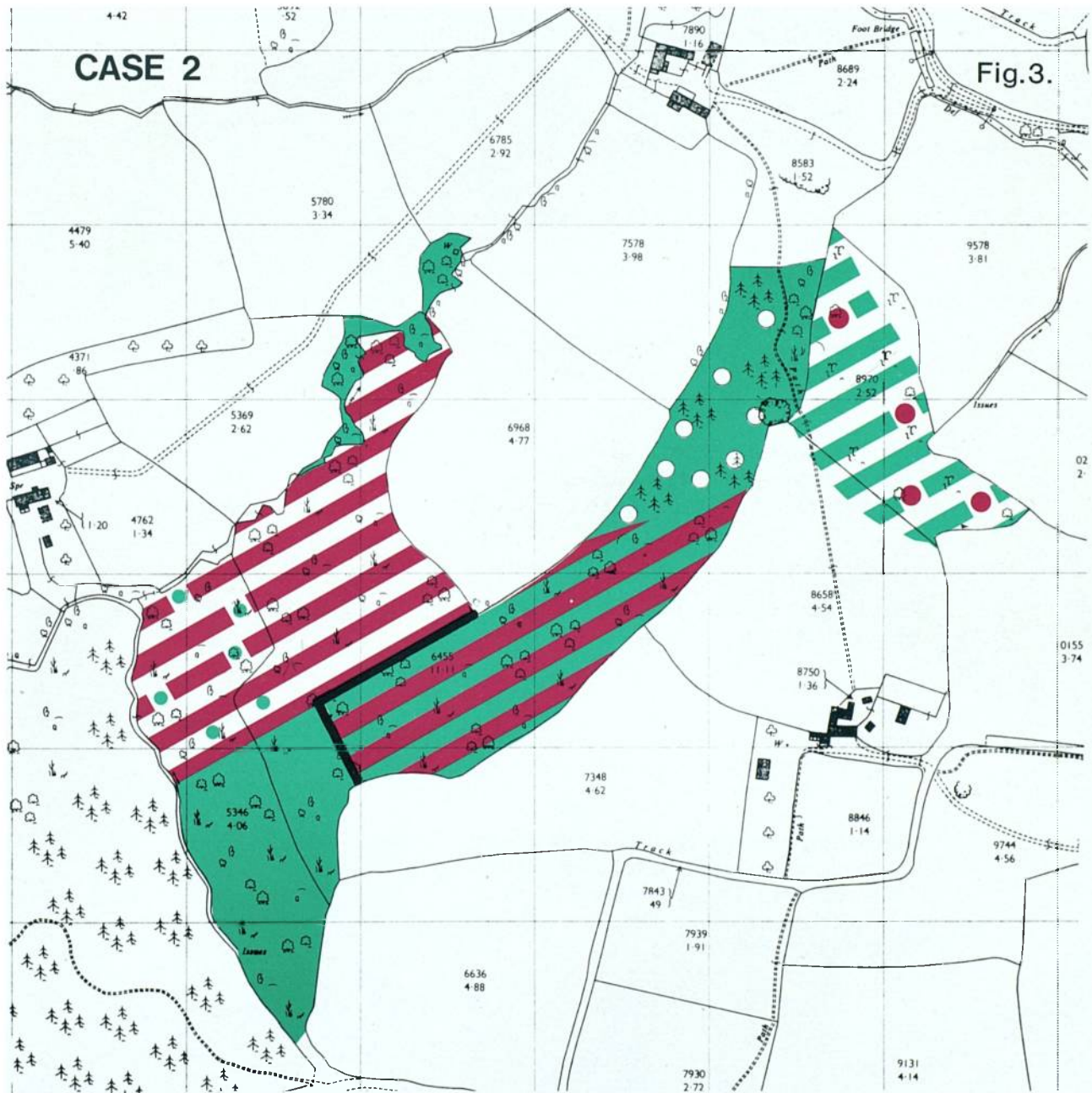
Felling of Hedge/Parkland



New woodland fences 

(All Regenerated are presumed to be fenced.)





Appendix II

Check list for information on small woods or tree features required to assess their value and record change

Name of wood or feature
Location (National Grid reference)
Area
Ownership
Description and classification where available:
 Historic status
 Present stocking and age class(es)
 Nature conservation status
 Landscape status
 Special features (ancient monument – rare species)
 Public access and recreational use

Overall assessment of importance
Current statutory and legal position, NP, AONB, SSSI, TPO, Felling Licence, FGS or earlier scheme. Quote names of areas involved, e.g. of SSSI, and reference numbers.

Note: If under FGS the following will *not* be required, provided data can be obtained from FC records:

Current proposals
Grant aid proposed
Record of operations completed and grant aid received:
 clear/selective felling, thinning, coppicing, restocking, planting, fencing.

A supporting map at not less than 1:5000 or equivalent scale would show:
 Stands within the wood – area, species and age
 Fence lines existing/proposed
 Areas proposed for treatment
 Definitive rights of way

Appendix III

Organisations and members comprising Steering Group and Project staff

Countryside Commission: R Lloyd to 1979; M Fitton

Country Landowners Association: C Watson to 1979; C R C Inglis 1980-82; R Dean 1983

Farmers Union of Wales: B E Edwards

Forestry Commission: J W LI Zehetmayr – Chairman

District Forest Officer: J Morgan to 1978; A D Parsons

Private Woodlands Officer: R Lewis to 1979; H Davies from 1983

Gwent County Council: R Godefroy

Nature Conservancy Council: Dr P Williams

National Farmers Union: J Delbridge to 1980; A K Williams

Timber Growers: Col. P B Winstanley

Welsh Office Agricultural Department (ADAS): A Ford

Project Officer 1979-83: K Hawkins (FC)

A number of other officers of the statutory bodies and County Council attended meetings from time to time but were not members of the group. Members of the Steering Group record their thanks for the contributions of those officers, as they do to Mrs J Doré who typed the final report.

Appendix IV

References

- Dartington Amenity Research Trust (1978). *Small woodlands on farms*. Interim report, WP12 Countryside Commission.
- Dartington Amenity Research Trust (1983). *Small woods on farms*. CCP 143 Countryside Commission.
- Forestry Commission (1983). *Seminar on small woods in lowland Britain*. Unpublished report. Forestry Commission, Edinburgh.
- Forestry Commission (1984). *Broadleaves in Britain – a consultative paper*. Forestry Commission, Edinburgh.
- Forestry Commission (1985). *Forestry Commission census of woodlands and trees, 1979-82, county of Gwent*. Forestry Commission, Edinburgh.
- Gwent County Council (1976). *Woodland survey summary report*. County Planning Officer, Gwent.
- Gwent County Council (1978). *Gwent Structure Plan: policies and proposals*.
- Nature Conservancy Council (1982). *Inventory of ancient woodlands in Gwent*. Unpublished paper.
- Nature Conservancy Council (1984). *Nature conservation in Great Britain*. (Fig. 6c, p. 56).
- Zehetmayr, J.W.L. (1981). Small woods in Gwent. *Arboricultural Journal* 5(4), 301-313.

Forestry Commission

Occasional Paper No. 14

Enquiries relating to this publication should be addressed to the Publications Officer, Forestry Commission Research Station, Alice Holt Lodge, Wrecclesham, Farnham, Surrey GU10 4LH.

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Price £3.50 net

ODC 907:(429)

ISBN 0 85538 192 2

Published by the Forestry Commission
231 Corstorphine Road, Edinburgh EH12 7AT
and printed by Ashford Overload Services,
Curdridge, Southampton, Hampshire SO3 2DY