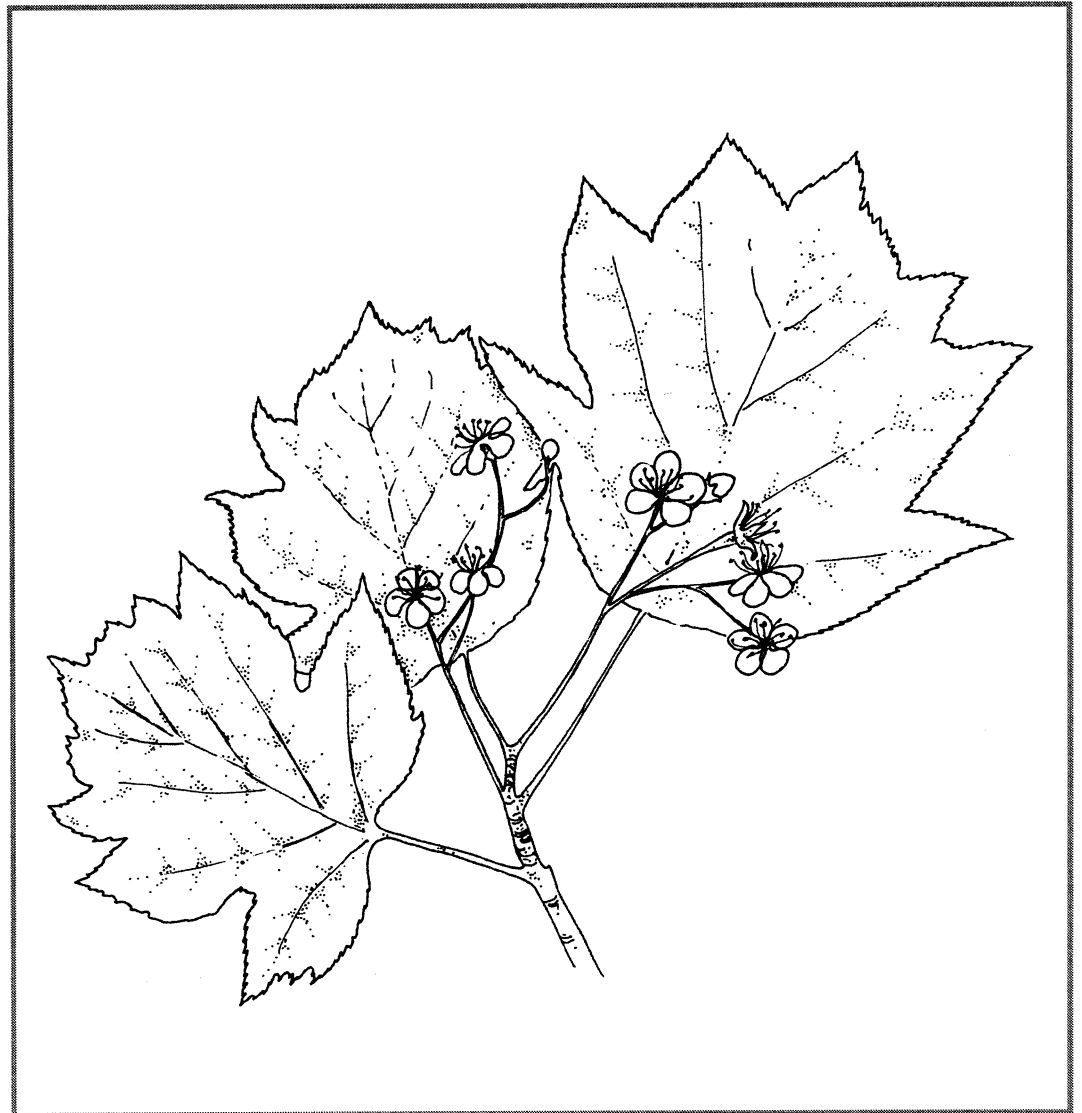


The use of woodland grant schemes on Sites of Special Scientific Interest

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**The use of Woodland Grant Schemes on
sites of Special Scientific Interest**

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Summary

Summaries are given of studies that consider the impact of woodland grant schemes on the nature conservation values of ancient woodland within Sites of Special Scientific Interest (SSSI). Both theoretical work and field surveys are included. The broad aims of this work were to identify ways in which English Nature and the Forestry Authority (FA) could improve delivery of site nature conservation biodiversity objectives through woodland grant schemes. The findings from these studies are being taken forward by both organisations.

On most sites, work carried out under woodland grant schemes was consistent with, and often led to, enhancement of the nature conservation value of the site. However, in a significant proportion of cases management issues associated with woodland grant schemes were identified as causing concern including inadequate deer control; too high felling and restocking rates relative to the size of the woods and the amount of woodland in the landscape; insufficient retention of dead wood and old trees; ride/track creation and maintenance; game management. These issues also apply in ancient woods outside SSSIs.

Administrative/organisational issues that caused concern were: inadequate long-term plans; unclear and inappropriate objectives; insufficient or ineffective consultation between English Nature and Forestry Authority staff; proposals being viewed in isolation rather than in the context of the surrounding woodland resource; inadequate knowledge of the long-term effects of some practices (eg scale of felling); difficulties in analysing the impact of forestry work that arise from the way that Woodland Grant Scheme (WGS) and SSSI data are held.

To some extent the findings from the various reports represent the historical picture; improvements in guidance, administration and liaison are continually taking place. Measures to remedy the shortcomings identified have been put in place and include: increased staff training; more frequent liaison; review of WGS consultation procedures; integration of English Nature Site Management Statements with the WGS application; joint support for deer management groups; development of improved monitoring procedures. In particular current proposals being drawn up jointly by FA Severn, Avon and Wye Conservancy and English Nature's Three Counties Team include the integration of Site Management Statements with the Woodland Grant Scheme and the use of ecological surveys in the management of ancient semi-natural woodland. Valuable lessons have been learnt from the various reports and action is being taken to reduce the risk that past mistakes will be repeated.

Acknowledgements

This work originated with and was driven forward by Mark July (English Nature) and Bill Heslegrave (Forestry Authority). The major study by Pryor & Rickett Silviculture depended on inputs from John Everard, David Martin and George Peterken.

Contents

Summary	i
Acknowledgements	ii
Introduction	1
Forestry Authority audit	3
Local Team comments on Forestry Authority Audit Report	7
Wye and Avon Conservancy WGS Area and SSSI studies	9
Initial analysis from SSSI sample survey results	12
Assessing sustainable woodland management at the local landscape scale	13
Conclusions and recommendations	15
References	19
Appendix 1 Woodland Grant Scheme Seminar, Bronsil House, Eastnor 20 March 1997	21

Introduction

Government forestry policy promotes the concept of multi-purpose forestry. English Nature (EN), like its predecessor, the Nature Conservancy Council, recognises that in most, but not all, ancient semi-natural woodland there is potential to produce wood or timber and maintain and enhance the nature conservation value of the site. However, this does not mean that all forms of forestry operations at any scale are acceptable from a nature conservation viewpoint at a particular site.

The ecological effects of forestry practices in ancient woods were reviewed by Mitchell and Kirby (1989) and various guidelines for, and accounts of, good woodland management practice exist, eg Forestry Commission (1985), Forestry Authority (1994), Peterken (1981), Kirby (1984), Watkins (1990).

However, there have been few attempts to assess the impact of what has actually happened on the ground, in terms of whether the guidance/good practice was applied and whether on the sites concerned it did (or will) produce the nature conservation benefits intended. This report draws together work done during 1995/1996 relevant to these issues, particularly looking at the impact of Woodland Grant Schemes (WGS) (run by the Forestry Authority (FA)) on the management of Sites of Special Scientific Interest (SSSIs). The report also considers, in a preliminary way, how the management of individual sites may be related to what is happening in surrounding woods.

The work being summarised here is drawn from:

- a. an audit of WGS on 64 SSSIs across England carried out by Fred Currie, National Conservation Advisor for FA (England) (Currie 1996).
- b. informal reactions from EN local staff to the audit report (a. above);
- c. a review of management under WGS on SSSIs on 20 sites in the counties of Gloucestershire, Hereford & Worcester, and Wiltshire carried out by Pryor and Ricketts Silviculture on behalf of FA and EN (Pryor & Martin 1998; Pryor *et al* 1998).
- d. initial output from a sample survey of woodland SSSIs where the condition of management units was assessed and linked to whether or not the unit was being managed under a forestry grant scheme;
- e. a theoretical study (Edwards 1996) of what rates of felling might be sustainable, in both wildlife and wood production terms, in different landscape types.

a, c, d, and e have been or are being written up elsewhere and only selected data and summaries of the most relevant findings are presented in this report.

We have drawn together conclusions on the extent to which Woodland Grant Schemes can be used to progress nature conservation objectives; and where they may be inappropriate. This may be because of the nature of the conservation objectives, the nature of the site, or the type of work that can be funded through WGS. From this will flow recommendations as to where WGS should be promoted as the main vehicle for funding woodland management on SSSIs and where alternative mechanisms are needed.

Most of the schemes, and often the management work itself, considered in this study were initiated before the adoption of the latest recommendations on good nature conservation

practice, including for example the UK Forestry Standard. Therefore some of the problems identified do not apply in more recent schemes. Others are being addressed in various ways and where possible this has been indicated in the text.

Further ideas are contained in the Appendix which summarises the results of a joint FA/EN workshop held in Ledbury in March 1997.

Forestry Authority audit

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Wildlife and conservation audits carried out in 1993 and 1994 highlighted the need to look more closely at the effect of the WGS on management intent and practice within Ancient Semi-Natural Woodlands (ASNWs). This study targets woodland SSSIs, most of which are ASNW or Ancient Woodland Sites (AWS), that are within current WGS in England.

The overall objectives of the study set by the Forestry Authority, England in February 1995 were:

- to assess the quality, relevance and effectiveness of WGS work prescribed and carried out;
- to assess the effectiveness of consultation and liaison, principally with English Nature (EN); and
- to identify opportunities for improvement, including application of standard clauses and training needs.

Summary of findings

This report presents findings and recommendations of a study of 64 of the 358 SSSIs in England within the WGS in 1995. A minimum of 14% of ancient semi-natural woodland SSSIs are probably being enhanced by management supported by the WGS but at least 11% are probably being damaged. The results confirm similar findings of WGS studies in 1993 and 1994.

- Deer are having major detrimental impacts on coppice regrowth and natural regeneration and probably overall on conservation values in at least 38% of sites where deer are present. Deer damage prevention is generally retrospective, inadequate and inefficient. There is little evidence of serious attempts at population management, or planning deer management in advance of operations that increase the risk of serious damage such as felling/restocking or coppicing. Deer damage to ASNW SSSIs within WGS is of major concern in parts of East Anglia, West Country, Thames & Chilterns, Cumbria & Lancs, Hants & West Downs and West Midlands Conservancies and to a lesser extent in Wye & Avon and Greater Yorkshire Conservancies.
- Too much felling/restocking and/or coppicing is being proposed over too short a time scale (ie the 5-year contract period) on 73% of sites where size and scale is an issue.
- Positive dead wood measures and old tree safeguards were stated for only 9% of sites, although these features were significant and required proposals on at least 40% of sites visited. Recent (ie current and within the past 3-5 years) poor dead wood practice was evident in 27% of sites visited and positive retention of old trees and dead wood in only 5%. Unnecessary old tree removal was noted on 11% of sites visited and excessive deadwood removal on 27%.
- Engineering work and subsequent restoration associated with ride and track creation and widening gave cause for concern on 11% of sites visited.

- Intensive pheasant rearing was probably having detrimental impacts on 11% of sites visited.

Sites enhanced by WGS demonstrated, both in contracts and in practice, good coppicing, edge and ride management, restoration of semi-natural open habitats, and appropriate felling size/scale balance. Enhancement is associated with the existence of long-term site management plans, an on-site manager and absence of deer. Community support and involvement are also important in some cases.

There is probably a strong relationship between long-term site management plans and 'SMART' (Specific, Measurable, Achievable, Realistic and bounded by Time) WGS contracts, leading to good practice and outcome. Poor outcomes and practice are associated with non-'SMART' contracts and lack of long-term site management plans. Good management intent and practice is probably related more to the quality of long-term site management plans than to ownership type.

There is some evidence (eg general lack of SSSI citations in scheme files) to suggest over-reliance on EN within the consultation process in achieving conservation standards. EN consultation responses resulted in improved proposals in 33% of WGS contracts. Most of these improvements refer to conservation guideline standards and not to requirements of rare species or habitats.

EN consultation responses mainly referred to retention of deadwood and old trees, sycamore control, and preference for natural regeneration. An awareness of deer impacts, however, and the need for deer management was not evident. (This almost certainly applies equally to other conservation bodies.) EN were not generally informed of the final outcome (ie Approved WGS contract).

Consultation with EN did not take place on 6% of sites. Overlooking of consultation generally occurred where the SSSI formed a small part of a larger scheme.

Application of standard management clauses is thought inappropriate for SSSIs as each is unique and needs a similarly unique appropriate management.

Recommendations for Conservancies (comments in brackets refer to subsequent action)

Review existing WGS SSSI contracts. Discuss improved and remedial management with owners and EN where appropriate. Adopt the precautionary principle to management where ecological requirements are not clearly identified. (Adopted.)

Felling/coppice management should be conditional on acceptance of a site management plan and, where necessary, acceptable deer management. (This is being developed by FA National Office and GBHQ.)

Where deer density is high, fencing to ensure protection of coppice coupes should be to an agreed recommended specification. (Adopted.) Arrange a series of deer management and damage prevention seminars, for landowners and countryside advisors in areas where deer management is at present ineffective or where Deer Management Groups (DMGs) need encouraging. (Ongoing.)

For isolated ASNW, or in districts with a low proportion of ASNW cover, resist agreeing to thin, fell or coppice too much within short periods. More guidance is required but long-term site management plans will assist. (Adopted.)

Agree positive and specific deadwood and old tree safeguards where required. Arrange dead wood and ancient tree training seminars. (More guidance required, but progress being made, eg through support for the Veteran Tree Initiative.)

A copy of the approved WGS contract should be sent to EN for all SSSIs in which EN responses to consultation were received. (Adopted.)

EN's SSSI citation is a key document and should be used by woodland officers as a basis on which to judge proposals. The relevant copy should be kept in the scheme file or included as an annex to the WGS contract. EN's Site Objective Statement and Site Management Statements (as they become available) are also key reference documents. (Adopted.)

Tighten consultation and liaison procedures with EN, and re-consult when a new scheme is started for sites previously consulted on under former schemes. Check that consultation has taken place for SSSIs forming small parts of larger schemes (usually private estates). Encourage consistent recording of consultation responses (eg proforma record of 'no comment' response), and keep records of preliminary site meetings. When re-consulting on amendments, make it clear that comments are only allowable on the amended parts of the contract. Contract feedback, see above, will help. (Adopted.)

In ambitious all-embracing contracts, state clearly the priority proposals that need to be implemented to justify a Management Grant. Many optional proposals will possibly take place in any event. (Adopted.)

Include the following standard clauses in the contract:

- 'The landowner(s) require(s) EN agreement for all work in the SSSI that has been approved within this WGS contract'. (Adopted.)
- 'A report of operations carried out during the year should be sent with the annual grant claim'. (Adopted.)

Liaise more with EN on ASNW, make opportunities to share best practice and consider closer working arrangements for ASNW SSSIs. (Work on this being led by Seven, Wye and Avon Conservancy and through the EN/FA joint Statement of Intent.)

Ensure woodland officers and contractors are operating to a consistent standard regarding conservation guidelines and best practice by group training updates and mentoring. Use FA(E) wildlife and conservation support.

Grants and Licences Division

State clearly circumstances where long-term site management plans (as advised in Forestry Practice Guides to the management of semi-natural woodlands) are required. Amend WGS as necessary. (Project on long-term plans being trialed.)

Provide more guidance to applicants on preparing site management plans and to woodland officers on preparing 'SMART' contract proposals. (Ongoing.)

Contribute to effective deer management at the wider scale by supporting the formation and effectiveness of Deer Management Groups. Initial target areas are districts with a high number of ASNWs and largely unmanaged populations of fallow, roe and muntjac deer. This could be a more cost-effective way of enhancing woodland values over wide areas, than WGS

grant aid of particular sites. Beyond the remit of this study (and being taken up separately), a strong case could be made for resourcing, or part-resourcing on a partner-body contribution basis, projects now being identified by the Deer Initiative (DI), including DMG support as above. (Ongoing.)

More research and guidance is required on the ecological effects of working large areas or whole woods over short periods. The scale of working economies often dictate that this is the only option for many sites. (More guidance on this is needed; ongoing discussions.)

More guidance is required on how to assess (monitor) the overall success of WGS in ASNW at the end of each five year period. (Discussions with EN ongoing.)

National Office

Liaise with EN on results and promulgation of findings. Possibilities might include publication, incorporating findings from EN survey, joint training and further study (Adopted.)

Assist conservators with setting up effective DMGs, deer conservation training days and seminars. Continue to develop a DMG network through leading the DI partnership. (Ongoing but slow progress.)

Provide wildlife and conservation advice and support to woodland officers on WGS SSSI/ASNW review and new case work and to conservators on training and liaison. (Adopted.)

Local Team comments on Forestry Authority Audit Report

(Informal feedback from EN staff)

Size, scale and timing of work

- It can be difficult to decide what is acceptable or not and there are sometimes inconsistencies between EN offices.
- Concern expressed about the longer term implications of management work in woods which in itself may not be unacceptable, eg a single felling may set the pattern for later work, or may lead to a need to create new rides. The five year plan cycle, in the absence of longer term objectives, encourages short-term thinking.
- Tendency for schemes to be on too large a scale.

Dead wood

- EN would welcome FA taking a stronger line on dead wood retention. Some owners regard it as a fire risk or source of potential pathogens.
- Support for training for FA staff on the value of dead wood and veteran trees.

Deer

- EN should itself set a better example on deer management and become more involved with Deer Management Groups.
- Deer are a problem limiting use of small scale felling and natural regeneration, and may lead to EN staff accepting more planting in tubes than they would like.

Pheasant rearing

- This often makes a mess of certain areas and it would help if FA took account of this when considering associated forestry operations such as coppicing. However, EN recognizes that FA have no formal influence over pheasant management *per se*.

Consultation procedures etc

- There was support for the need to improve consultation procedures on SSSIs and for EN to be sent a copy of the approved WGS contract.
- There was support for a clearer statement in WGS contract that owners do need to obtain consent for work on SSSIs separately to WGS approval.
- Concern was raised about the reduced consultation with local authorities and record centres on small (non-SSSI) woods as a result of changes in consultation procedures.

Overall assessments of WGS

- Much depends on the individual FA officers and their relationship with EN staff.
- Generally WGS agreements do seem to have improved the state of sites in nature conservation terms.

Conclusion

There is a real difficulty in translating general recommendations on, for example, coupe size or felling rates, into what is acceptable or not on particular sites. In part this must depend on what is happening in the surrounding woods (see later report by Edwards). A leaflet summarising the factors involved in making management choices from a nature conservation point of view has been produced (Reid 1998).

EN itself needs to become more involved in deer management and as a first step has reviewed what happens on our National Nature Reserves (Putman 1996) and has produced a leaflet which sets out our position. We are cooperating with both the Game Conservancy Trust and the British Association for Shooting and Conservation (BASC) over ways to improve the management of woods where pheasant shooting is important in ways that do not damage nature conservation features.

Dead wood and veteran tree management should be improved in future through the outputs of the Veteran Tree Initiative and (separate) joint research on assessing how much dead wood is, and should be, left as fallen logs and branches.

Ways of improving the procedural side of dealing with WGS on SSSIs are being discussed at a national level between EN and FA (Cambridge) and between local FA/EN offices.

Wye and Avon Conservancy WGS Area and SSSI studies

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This work, which looked into woodland with the Three Counties/Wye and Avon Conservancy region, was divided into two parts - a landscape scale survey and a series of detailed site visits (Pryor & Martin 1998; Pryor *et al* 1998). The objectives and summary findings from the landscape scale survey are presented first, followed by a series of discussion points raised at a Steering Group meeting for the site visit stage.

Landscape scale survey

The aim of the area study was to assess:

- The effectiveness of the WGS in its contribution to realisation of nature conservation objectives at a Natural Area level.
- The cumulative impact to date of grant schemes on all the woodland within a representative sample part of a Natural Area (central Herefordshire).
- The extent to which schemes have affected and been sensitive to the conservation resource of the area and their cumulative impact on the woodland age class distribution in space and time.
- The possible future impact on woodland nature conservation at the landscape scale if WGS continues on a similar basis, with either the same or different levels of uptake.

The period over which schemes were to be assessed needed to be sufficiently long to give a proper appreciation of the sum effect of WGS management over time, and yet feasible in terms of the study. The study was therefore widened to look at all Grant Scheme applications approved since the introduction of the Forestry Commission's Broadleaves Policy in 1985. These include all WGS's and Broadleaved Woodland Grant Schemes, and some Forestry Grant Schemes and Felling Licence Applications. The Broadleaves Policy represents a particularly relevant starting point in that it had major significance in terms of the conservation of ancient woodland. It introduced various measures relating to the maintenance and enhancement of Britain's broadleaves, including the adoption of the NCC/EN Ancient Woodland Inventory and the publishing of Management Guidelines which gave much weight to the protection of ancient semi-natural woodland.

The area study sought to reveal:

- the area (and percentage) of woodland under management and hence the percentage not managed;
- the effectiveness of each Grant Scheme at bringing woodlands into management;
- the extent and type of operations approved (ie thinning and felling), and hence the area proposed for active management;
- the amount of felling and restocking actually completed;

- the extent to which the present nature and distribution of schemes allows a set of hypothetical strategic conservation objectives to be met.

Areas of SSSI, Ancient Semi-Natural Woodland, Plantations on Ancient Woodland Sites (PAWS), broadleaves and conifers each have a different level of priority for nature conservation. By looking at differences in the above parameters between such categories of woodland, an insight may be gained into the extent to which grant schemes have been sensitive to nature conservation priorities at the landscape scale.

Projections of felling and restocking rates can be made in order to assess the future impact of continuing with the schemes as they have been. Such a scenario can then be viewed in the light of long term nature conservation, with particular reference to Natural Area Objectives.

Summary of Area Study Findings

- Around two-thirds of the existing woodland is or has been under management during 1985-95;
- the proportion of ASNW under management is significantly less than that for other woodland;
- WGS (II) has been by far the most popular Grant Scheme during this period;
- fellings *approved* were rather high under WGS I (20% of the total area under the scheme) but have fallen to an average of 6-7% of the area included in each Scheme;
- overall felling and restocking has been *completed* on around 7.5% of the area approved for management under a scheme since 1985;
- this gives a theoretical 'rotation length' or 'turnover period' of around 130 years (which may represent over 160 years for the semi-natural woodland);
- approximately 40% of the ASNW is not being actively managed under schemes and it appears that much of the remaining 60% is being managed under a high forest regime.

Two other conclusions have been drawn from this study. Firstly, the manual analysis of Grants Scheme files is difficult and time-consuming, and there is great scope for increasing the use of the WGS computer database. Secondly, carrying out such a study on such a small area is not very productive. There is not sufficient data to draw firm conclusions which can be applied elsewhere, nor to establish trends that can be extrapolated. These conclusions combine to make it unrealistic to repeat this study on a larger scale until WGS records are more readily accessed and analysed directly from the database.

Site survey study

Twenty sites were visited and the condition and management on the ground were assessed against the objectives for the site from a nature conservation point of view and what was proposed on the forestry grant scheme proposal/contract.

Benefits clearly identified on at least some of the sites included: reduction in non-native tree component; diversification of structure; successful re-coppicing; increases in amounts of deadwood. Disbenefits identified on some sites included: retention/favouring of introduced

trees/shrubs; inappropriate felling; use of planting where natural regeneration would have been successful; inadequate deer management; removal of dead wood.

In some cases benefits may arise, but be less obvious, because WGS is being used to arrest decline in the condition of sites (eg from deer browsing or invasion by introduced species).

Most of the improvements and most of the damage were modest relative to the total extent of the interest features. However little of the damage was irreversible and the improvements tended to be long-term in nature.

Recommendations from the site study

Clearer long-term goals for sites and strategies for achieving them are required.

Communication and expression of objectives needs to be improved to ensure that work prescribed under a WGS is developing the SSSI in a direction favourable to nature conservation.

EN needs to make sure that relevant information about the sites and the nature conservation objectives for it are available to FA in an easily usable form.

WGS proposals should be reviewed to ensure they do specifically address the most serious threats to sites and make the most of opportunities to enhance the nature conservation values.

Retention of some dead wood should be expressly stated in all felling thinning prescriptions.

Improvements are needed in the way that operations are monitored with more feedback to managers where operations are either deviating from what was proposed or are not delivering the nature conservation benefits expected.

Initial analysis from SSSI sample survey results

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During 1995 and 1996 Local Team staff assessed the management of 160 SSSIs which had been selected as a random sample across the country of woodland SSSIs. Information was collected via a questionnaire to the owner and a field assessment of management units on the site. The field assessment followed the agreed standard monitoring protocols (Rowell 1993) whereby the condition of an area is assessed as 'favourable' or 'unfavourable', and as 'maintained', 'recovering', 'declining' etc. From the survey results those units under some form of woodland grant scheme can be identified and comparisons made of the condition of those sites within and outside such schemes.

The analysis of these data needs to be done carefully. An initial analysis compared the condition of units which are under some form of woodland grant scheme compares with those not under any sort of grant scheme. Roughly the same proportion of sites are in favourable as in unfavourable state in both groups, but there is a much higher proportion of sites under woodland grant that are either now in a favourable state (having recovered from past damage) or in an unfavourable state but recovering. Those not under any grant scheme tend to be in a 'static' condition. There are too many correlations between the different factors recorded to be able to draw any significant conclusions as to the usefulness of WGS as a tool for conservation management without much more information.

For example:

- a. are there more units in the recovered/recovering state under grant because the sites were 'damaged' by WGS operations and are now recovering; or
- b. were many of these units in an unfavourable-stabilised state (eg neglected coppice), and the WGS is moving them back towards favourable condition?

Further analysis of the data-set is in hand.

Assessing sustainable woodland management at the local landscape scale

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Concern is expressed in Fred Currie's FA audit and Local Team response to it, and in the Wye and Avon Conservancy Study (see earlier sections) that the current rates of felling and re-stocking in ancient semi-natural woods may be too high to be sustainable in the longer-term.

One difficulty is that each WGS application is considered in isolation by the various agencies involved (Forestry Authority, Local Authority, English Nature), whereas ideally we should be looking at what is happening (or proposed) in one ancient wood in the context of the management of its surroundings. Edwards (1996) has developed a model that starts to explore how this might be done, based around the concept of developing a 'normal' forest structure (i.e. all age classes present) at the local landscape scale (defined for study purposes as an area of *c*25 km²). Results from trialing the model at points in West Sussex, Essex and North Yorkshire confirm that current felling rates are indeed likely to be too high to be sustained. More importantly the model provides a way, albeit a relatively crude approach at present, to assess what may be more sustainable rates in a more objective way.

The model is a simple one and based on very few samples but explores the consequences of adopting different forestry and conservation options in well-wooded versus poorly-wooded landscapes. This is important because at present proposals for felling in ancient woodland tend to be treated only in the context of a particular wood by the various authorities involved and in most cases the woods are too small for normality to be achievable at the individual wood level. Using the criterion adopted here - that is a normal forest structure is to be developed it should be sustainable within 25 km² - many sample squares fail the test. There will always be some circumstances where a particular system will fail, so an (arbitrary) test of the general acceptability of an option for a county/Natural Area might be that at least 50% of samples or that at least 70% should meet the normality criterion. On this basis the options tested fall out as follows.

System	Annual felling rate ¹	Incl. small woods ²	Incl. conservation areas ³	Acceptable	Unacceptable
High forest	0.5 ha	✓	✓	W Sussex Essex	N Yorkshire
High forest	0.5 ha	X	✓	W Sussex (Essex) *	N Yorkshire
High forest	0.5 ha	✓	X	W Sussex (Essex)	N Yorkshire
High forest	0.1 ha	✓	✓	W Sussex Essex (N Yorkshire)	
High forest	1.0 ha	✓	✓	(W Sussex)	Essex N Yorkshire
High forest	2.0 ha	✓	✓		W Sussex Essex N Yorkshire
Coppice	0.5 ha	✓	✓	W Sussex Essex (N Yorkshire)	
Coppice	1.0 ha	✓	✓	W Sussex Essex (N Yorkshire)	
Coppice	2 ha	✓	✓	W Sussex Essex	N Yorkshire

Notes:

* Where the county is shown in brackets the option is acceptable if only 50% of samples need to meet the sustainability criterion, but not if 70% must do so.

- 1 The annual felling rate used in the model. The higher it is the greater the area needed to sustain the rate. A greater area is needed for high forest (longer rotations) than for coppice.
- 2 A tick means that woods above 2ha were included, a cross that only woods above 5ha were considered.
- 3 A cross indicates that woods in SSSIs were excluded.

While most options provide acceptable results in West Sussex, very few do in North Yorkshire, and some are borderline in Essex if the more stringent acceptability criterion (70%) is used. West Sussex has one of the highest densities of ancient and ancient semi-natural woodland and therefore in most counties the situation will be more like that in Essex or North Yorkshire. If ancient woodland management is to be sustainable, using this criterion of the development of a normal forest structure, then the context of each individual forestry scheme needs careful appraisal.

Conclusions and recommendations

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Most woods benefit in nature conservation terms from some management and management is inevitable in woods where nature conservation must be integrated with other objectives such as wood production or game management. There are likely to be greater overall gains for wildlife from integration of nature conservation aims within woodland grant schemes than through reliance on separate funding specifically for nature conservation work because more woods can be influenced through WGS. There have, however, been shortcomings in how the WGS has been implemented on SSSIs in the past as the previous sections indicate. These have been recognised and either dealt with or work is in hand to resolve them.

The various studies and comments tended to identify similar sets of issues. These can be considered under two major headings: issues relating to work carried out (or not carried out) on the ground; and those relating to how EN and FA approach woodland grant schemes on SSSIs and consultations between the organisations.

The key issues with regard to work on the ground were as follows:

- *Inadequate deer control.* This is being addressed more firmly in FA consideration of WGS proposals. The profile of the issue in EN has been raised by the review of deer management on NNRs, the production of deer management statements for reserves, as well as a leaflet setting out our position. Both organisations actively support the England Deer Initiative which seeks to improve the management and control of deer in England.
- *Insufficient retention of deadwood and old trees.* The importance of old trees is being stressed through the Veteran Trees Initiative, which FA support, and the retention of both old trees and dead wood is referred to in UK Forestry Standard. Recent research (Kirby *et al* in press) gives us a better idea of how much dead wood to expect under different types of management and FA are working up possible 'standards' to aim at (Hodge & Peterken in press).
- *Ride/track creation and maintenance.* A key point here is that track maintenance may not be specified in the WGS contract and, unless a Management Grant is being paid for the work, FA have no direct control over what is done. It is therefore an area where EN staff may need to lead on discussions with the owner because such work usually does require consent under the Wildlife and Countryside Act. Both FA and EN staff should, on site visits or when considering WGS applications, identify any other operations or works being proposed that may require consent but which may not be part of the WGS contract.
- *Game management.* Again this is an area where FA direct influence is limited to the forestry operations themselves; EN needs to discuss and consent game management operations with the owner. Recent discussions with the Game Conservancy Trust and British Association for Shooting and Conservation have been aimed at improving the advice on nature conservation available to sporting wood managers.

- *Size of coupes and rates of felling.* There is very little information from direct observations on the consequences of using different sizes of coupe or different rates of fellings, although some suggestions have been made for a few species (mainly butterflies, some birds and dormice). It is, however, fairly easy to predict the likely cumulative effects on the structure of a wood of different felling patterns over a number of years, eg Figure 1 (from Mitchell & Kirby 1989). EN and FA staff should carry out such predictive exercises to help them assess the implications of a particular scheme and possible consequences of repeating it in subsequent periods. It might be that the scheme is acceptable when viewed in a five year window, but limits what may be accepted in that wood in future. Simple summary maps for SSSIs updated annually showing what work has been done/proposed might help to make the cumulative past and present impacts more obvious.

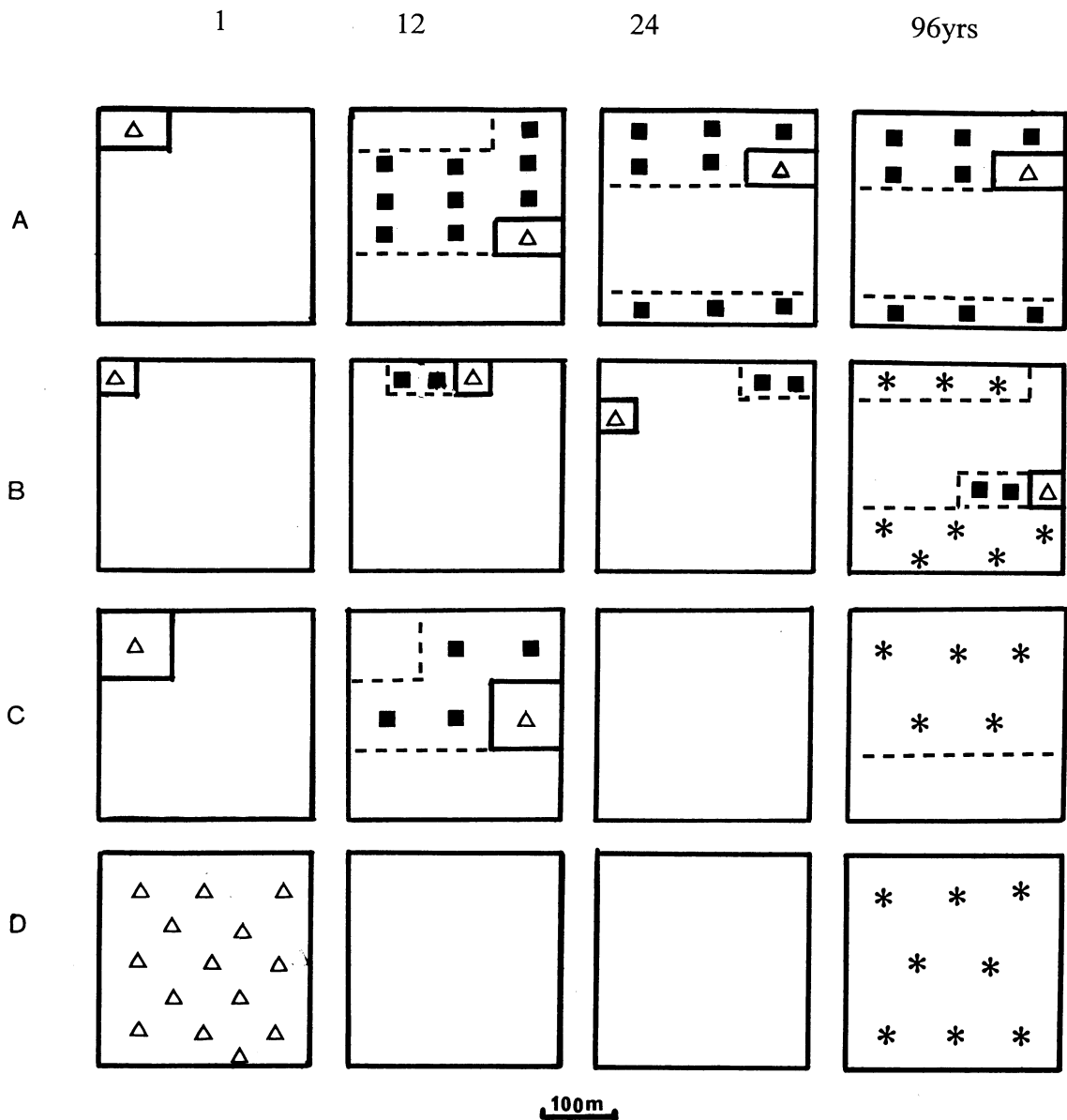


Figure 1. Assessing the implications of different forestry systems. The starting point is assumed to be 18 year-old coppice regrowth in year '0'. The alternative treatments considered are 'A' continue with 18 year coppice cycle with 0.5 ha cut each year; 'B', 'C' & 'D' represent conversions to high forest by 'B' group selection with 0.25 ha cut every 4 years; 'C' clear-fell 1 ha every 2 years; 'D' clear-fell whole 9 ha at the outset.

The predicted state of the wood at years 1, 12, 24, and 96 for each treatment is shown in terms of:
 Triangles - recently cut stands (eg butterfly habitat);
 Squares - stands under 10 years old (eg nightingale nesting sites);
 Asterisks - stands over 80 years old (eg hole-nesting birds appearing)

Key issues that were identified relating to administrative/organisation factors were as follows:

- *Unclear objectives* in terms of what the owner wished to achieve or what was expected in nature conservation terms. Even EN's objectives were not always that clearly expressed. EN's programme for producing Site Management Objectives and simple Site Management Statements for SSSIs should improve matters. These will be made available to FA, so they are aware of EN's and the owner's position (and the reasoning behind it). Wherever possible FA should be party to or kept informed of the development of SMS where it is envisaged that WGS will be the main delivery mechanism. The most relevant elements of background survey data for sites should also be made available to FA in easily accessible forms.
- *Lack of adequate long-term plans* to accompany the specific WGS proposals. This links to the previous point and to the concern about felling rates within a particular wood. FA have a new initiative to encourage owners to take a longer-term view of what is happening in their woods and to set this down so that it provides the context for short-term operations. In addition FA increasingly require ecological surveys and management plans to support WGS applications on SSSIs.
- *WGS proposals viewed in isolation, not in relation to activity in the surrounding woods.* Particular types of management in one wood may or may not be sustainable in both nature conservation and timber terms, depending on what is happening in the surrounding woods. EN and FA staff should consider the local landscape scale context as part of their assessment of particular schemes. This is being fostered by development of local GIS capability, by sharing of data (eg on ancient woodland boundaries) and discussion of landscape-scale nature conservation objectives through the Natural Areas Programme.
- *Lack of knowledge of the impact of some operations.* Both organisations lack detailed long-term research results on the impact of some aspects of modern forestry practice. The impact of different scales of felling has already been noted; other areas include rate of recovery of the ground flora following removal of conifers from replanted areas and recovery after extraction damage. EN and FA should identify which are the operations where we most need information to improve advice and work together to fill the gaps. Joint work on developing improved woodland monitoring will help in this respect.
- *Misunderstandings over the relationship between WGS and SSSI procedures.* Legally an owner needs to consult both FA and EN separately over work on an SSSI where the work involves both a WGS or felling licence application, and work that requires consent under the Wildlife and Countryside Act. The position may become confused in the owner's mind (as well as to EN and FA staff) because FA consult EN over the WGS application. However, work that the owner may be planning associated with the WGS, that is not specified on the WGS application, may still require consent from EN. The following practices would help to address this issue:
 - a. FA and EN promote the development of SMS as a basis for WGS applications on SSSIs (project underway).
 - b. FA to let EN see the final WGS contract (adopted).

- c. FA to make it clearer on the WGS contract and associated literature that owners of SSSIs must seek separate consent from EN (adopted).
- d. Receipt of a WGS consultation by EN should automatically trigger a direct approach by EN to the owner about the scheme to resolve any questions relating to consents for Potentially Damaging Operations, if work is not already covered by an agreed SMS.
- e. Where the agreed SMS covers the WGS work as approved by FA the SMS could be appended to the approved WGS contract to serve as EN's formal consent (work on this underway).
- f. Ideally the owner, FA and EN discuss jointly the proposed scheme and clear up any major concerns at that time.

A protocol on the use of SMS and WGS is being developed jointly by the Severn, Wye & Avon Conservancy (FA) and EN's Three Counties Team.

- *Difficulties of relating WGS and SSSI data.* Difficulties were found by several of the researchers in relating WGS and SSSI information because of the various ways in which it is held. The potential for more data-sharing, common reference names or codes for sites needs to be explored if similar studies to those referred to here are to be followed up in future.

English Nature and the Forestry Authority aim to learn from the various studies described and a number of proposals mentioned above have already happened or are in hand. Liaison meetings at all levels between the two organisations have been increased; opportunities for joint staff training are being explored; consultation arrangements are being reviewed; there is joint support for deer management groups; and discussions are taking place on linking monitoring procedures. EN will involve FA in the development of its site condition assessments for woodland.

One example of this joint approach to understanding and resolving issues relating to the WGS was a seminar involving local and national EN and FA staff held at Ledbury in March 1996 (Appendix 1). Other work is included in the Action Plan that accompanies the EN-FA Joint Statement of Intent.

There seems little doubt that the Woodland Grant Scheme (and any schemes that develop from it) will increase in importance as a mechanism for delivering nature conservation, both on SSSI and in other semi-natural woods as part of Habitat Action Plans under the Biodiversity Action Plan process. EN and FA are committed to improving the efficiency and effectiveness with which WGS does this.

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Appendix 1

Woodland Grant Scheme Seminar, Bronsil House, Eastnor 20 March 1997

M. July, English Nature, Bronsil House, Ledbury, Herefordshire HR8 1EP

S. Scott, Forestry Authority, Bank House, Bank Street, Coleford, Gloucestershire GL16 8BA

Summary of the group discussions

A joint EN/FA seminar was held at Bronsil House, Eastnor, Herefordshire on 20 March 1997 to examine how the Woodland Grant Scheme (WGS) can achieve more for nature conservation within the context of national sustainable forestry. This report summarises the views of four discussion groups who were invited to debate topics around this general question.

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Group 1

The Woodland Grant Scheme and nature conservation objectives for the wider countryside

Ancient woodland is the most important woodland category for nature conservation in Britain, particularly that which remains in a semi-natural condition. However only about 20% of all the ancient semi-natural woodland (in England) is protected through site designation (SSSI). Maintaining and enhancing the nature conservation value of the ancient woodland outside these special sites relies on them being managed sensitively. In addition, further protection can be given to woodland species by appropriate management of all woodland (including non-ancient woodland and commercial plantation) at both the site and landscape scales. Sensitive management at the site level might involve a move away from clearfell silviculture to small scale group fell systems. At the landscape scale there is a need to ensure that the felling rate is sustainable, so that a balanced age class structure is maintained. The main vehicle for all woodland management in Britain is the WGS; however creating sustainable landscapes involves the appropriate management of habitats other than woodland too. Assistance is available through a variety of environmental land management schemes, but at a practical level uptake of these schemes will not be maximised unless they are presented in a simple and integrated way. The impact of grant schemes must be monitored to check if they are achieving the desired nature conservation objectives.

The issues discussed were:

- promotion of silvicultural regimes other than clearfell;
- securing sustainable felling regimes at the site and landscape scale;
- integration of the WGS with other environmental land management schemes (ELMS);
- WGS data recording as a mechanism for analysing the effects of grant-aided management activity on nature conservation values.

Promotion of silvicultural regimes other than clearfell

Often clearfell is seen as the default silvicultural option. However, small scale silviculture helps to maintain a more natural structure in many woodland types thus benefiting certain key woodland species. Coppice (a form of clearfell) is also necessary to benefit some woodland species in particular areas.

Recommendations:

- Use a long-term planning approach to determine woodland objectives.
- Prioritise work according to the objectives for the woodland including those specifically for nature conservation. Clearfell may be a low priority.
- Simplify use of the WGS application and grant rates for alternative silvicultural systems.
- Consider providing continuous payments through WGS for shelterwood and group-fell systems (small grant each year) to encourage the system to be maintained.
- Encourage markets and marketing of high quality hardwood timber, and other forest products from these systems eg fungi.

- Improve awareness of alternative systems through advice and demonstrations - this could be promoted by woodland initiatives and other organisations such as the Small Woods Association.

Securing sustainable felling regimes at the site and landscape scale

"Sustainable" is taken here to mean a constant balance of age classes. At the site scale such a "normal" forest structure may not be possible or desirable on small sites therefore a landscape approach, where groups of woods are managed to achieve a balance of age classes, should be considered. The scale of the landscape operating unit must be considered (eg valley system, or Natural Area, or county, or FA conservancy, or country etc.), and the type of woodland to be included is also important. For example, a balanced age structure across all woodland in any particular 'landscape' would not help a species dependent on mature ancient woodland if all the ancient woodland was in the younger age classes and the older age classes were formed entirely from conifer plantation.

Recommendations:

- Undertake a landscape scale assessment of the total area of all woodland (or ancient woodland only etc) and the average rotation length (eg for broadleaves or conifers or by tree species) to determine the most appropriate felling rate across the landscape.
- Using results from the above assessment ensure the rate of felling is regulated by monitoring WGS applications. Where there is over-felling (ie the rate is unsustainable) introduce measures to reduce the rate, e.g. through felling licences or grants for planned minimum intervention.
- Discrepancies in the felling rate could be more easily predicted and corrected if long term forest planning measures were in place.

Integration of the WGS with other ELMS

The grants system is considered bureaucratic and confusing by many land owners and managers. Simplification of the process would encourage more applications mixing and matching schemes to maximise the environmental benefits. Co-ordination of the advice provided would also help avoid confusion. A single package covering all schemes would be ideal, but because of the different funding bodies and their varying objectives this seems unlikely in the near future. English Nature's Habitat Restoration Project could be used as a model for ELM integration.

Recommendations:

- Determine priority habitats and species to promote across an area, and target these priorities using the various schemes. The priorities could be based on EN's Natural Area objectives and local Biodiversity Action Plans.
- Greater consultation between grant-aiding bodies prior to release of new schemes or alterations to existing schemes.
- Promotion of the 'whole-farm' approach eg through schemes such as the 'Landwise' scheme run by Farming and Wildlife Advisory Groups

- Appoint a project officer to be a single contact point for advice on schemes (this could be done through the various Woodland Initiatives or FWAG officers etc.).
- Contract out monitoring of progress towards meeting environmental objectives for the project area achieved through the variety of grant schemes.

WGS data recording as a mechanism for analysing the effects of grant aided management activity on nature conservation values

The WGS as it stands at present is designed to be a contract between FA and the woodland owner to cover specified works over a limited period (5 years). Already the WGS is seen as relatively complex; adding to the complexity by requiring additional information so that it could be used for analysis is not seen as a feasible option. However, the data base already contains enough information to undertake basic landscape assessment work eg tree species, coupe size and regularity of felling. Information collected by other organisations may also be of use to the FA.

Recommendations

- Utilise the existing WGS information to its full extent for landscape assessment (a study by Kate Edwards - MSc student - investigated a methodology for this approach - available from EN Peterborough library);
- improve data sharing with other organisations eg Wildlife Trusts, Environmental Records Centres, local Authorities etc.;
- encourage management plans to be compiled for every wood with a WGS - these should be long term (20 years +) and give details of felling proposals and other management ideas in a form that could be used for landscape planning;
- provide a grant for the production of the above plan;
- introduce independent WGS monitoring - this could be approached on a sampling basis, eg as a simplified version of the studies carried out in Wye and Avon.

Group 2

Influencing SSSI management

EN has a strategic goal to achieve positive management of all SSSIs by the year 2000, such that their management conserves the interest features for which they were notified. In this, the role and contribution of others' incentives is a key element for success, together with improved integration of mechanisms and procedures around clear, agreed objectives and prescriptions. The WGS will be the preferred management incentive for most woodland SSSIs, and there is a need to sharpen and further best practice in delivering the silvicultural and conservation objectives, both short and long term.

The questions posed to the group were as follows:

- How can EN and FA work most effectively to influence the direction and practice of SSSI management - to secure and enhance 'specialness' - and attain favourable nature conservation status?

- How should SSSI Site Objective Statements and Site Management Statements (SMS), site condition assessments and FA resources/mechanisms be used to inform WGS targeting, promotion and preparation?
- What other information/support should a woodland owner/manager receive to inform WGS applications, approval and monitoring - how, when and from whom?

The group's work concentrated on scoping a process of combining EN's Site Management Statements (SMSs) with the WGS application. A five point proposal was identified:

1. Formal involvement of FA staff with EN in discussions with SSSI owners towards SMS preparation, where the WGS provides the preferred incentive for SMS implementation.
2. Use of the SMS as the text for the WGS.
3. Re-enforce the special attributes and importance of SSSIs by producing a **separate** WGS for SSSIs.
4. Use Woodland Improvement Grants (WIG) through the WGS to target appropriate work derived from the SMS.
5. Make best use of EN and FA resources by integrating monitoring duties and programmes and sharing site inspection reports.

Each point is considered in more detail below:

1. EN are committed to producing SMS - a record of the 'agreed' management practices - for all 'active' owners of all SSSIs by 2000. This will set out what each tenure unit contributes to the objectives for the site as a whole and how the objectives can be achieved in the short to medium term. Agreed SMS are regarded as *de facto* consents under the Wildlife and Countryside Act to carry out the activities within them.

The time span for preparing SMS coincides with the five year revision and potential renewal of WGS' on many woodlands with SSSI notification, hence the obvious tie-up of agreed SMS management actions with agreed WGS plans of operations. It is thus proposed that both EN and FA jointly discuss proposals with the SSSI owner at the initial stages of SMS preparation or when FA is approached to renew a WGS on/affecting an SSSI or when a new WGS proposal is received on/affecting an SSSI without a SMS yet in existence.

2. With some minor modifications, the SMS can then become the basis for the WGS. (If it is agreed that no management work is appropriate at this point in time or indefinitely, or if the WGS is not the preferred route for desired conservation works, it is important that the FA has had input to that decision). SMS are being produced to national guidelines but local discretion and authors styles will mean some variation in approach. There is a need for a minimum essential consistency around information necessary for the WGS, particularly to identify those actions relevant to the agreed 5 year work programme (to satisfy the WGS contract period) and additional use of accurate maps. Guidance on this point is desirable. The WGS computer entry will be limited to crop line entry with the SMS attached as an annex.

3. By making a separate WGS contract for the SSSI area (avoiding the problem of small SSSI compartments being obscured within schemes for large estates), the owner/manager will be able to clearly identify the key area for conservation management within larger blocks with more commercially-oriented objectives. The integration of the SMS will mean only one document to refer to on a day-to-day basis, and compliance with the W & C Act can be satisfied. Some latitude may be required to include adjacent compartments where the SSSI boundary cuts through a stand, but generally the administration should not be difficult and the disadvantages are clearly outweighed by the advantages.
4. Previously, management grant in its various guises has encouraged general silvicultural work to be undertaken in a 5 year period. Latterly, this has concentrated on environmental work only, but even so has placed the emphasis on generalised works such as ride widening, thinning etc. While these works may be appropriate to special sites, by definition individual SSSIs have particular attributes and needs which "routine" works could harm. For instance, a general ride widening prescription may favour common butterflies but fragment a hitherto viable dormouse population. With the SMS/WGS identifying what work needs doing, when and where, the logical grant mechanism is the WIG for Biodiversity, which pays for 50% of agreed costs on specific works on satisfactory completion. Targeted grants is thus used to obtain a specific end result on the key woods for nature conservation.
5. Once the SMS becomes the meat of the WGS, the agreed objectives of the owner and EN become the grant payment responsibilities of the FA. Annual inspection would be possible with EN and FA covering alternate years. A simple inspection checklist could be devised, and copied to the other organisation. Inspection could be lead by a grant claim, in which case EN might act as agent on behalf of the FA to authorise payment. FA's inspections could contribute data for EN's site condition assessments under the corporate SSSI Information System.

Recommendations

It is proposed to trial this arrangement in Seven, Wye and Avon Conservancy before submitting recommendations on a possible national approach to both FA and EN. It is anticipated that resource savings will occur for both organisations and that liaison and co-operation will be greatly enhanced.

Group 3

Management Plans

The importance of management plans for effective nature conservation within ancient and semi-natural woodlands is undisputed and widely endorsed, eg advice within the FA's Forestry Practice Guides and the FC 1990 Forest Nature Conservation Guidelines. Recent research and audits, as reported at this seminar, have underlined the limitations of the 5 year prescriptions of a WGS without an adequate plan identifying the whole site conservation interests, the long term objectives and the associated chosen silvicultural methods. There is a need to incorporate a better forward look alongside the WGS application which fits the purpose ie contains only what is essential to direct and assess each individual scheme's contribution to realising the site's long term management objectives and conservation goals.

The questions posed to the group were as follows:

- How could WGS documentation build in adequate provision for long-term planning by the range of scheme users?
- How might the FA's '*Long Term Forest Plans*' approach be adapted for SSSIs/ASNW?
- What scope is there to incorporate simple assessments of nature conservation interest/management needs as part of WGS approval on 'sensitive sites', and how might existing survey information be better deployed?
- What expertise is required to produce such plans/assessments and how might it be provided?
- What nature conservation aspects or outputs of a plan should attract WGS payments?

The group's views can be summarised thus:

Which sites need a management plan? In many localities, there is no strong distinction between SSSIs and non-SSSI ASNWs on habitat quality, so plans should be required for at least SSSIs, Special Wildlife Sites (identified by County Wildlife Trusts) and ASNWs (including those below the 2ha threshold for listing in the county Ancient Woodland Inventories).

How to link the plan with the WGS application? Scheme approval should be conditional upon its implementation as part of a supporting management plan and upon an agreed, timetabled work plan setting out where, when and how the conservation objectives are to be met.

What is a management plan? A standard simple format based on the EN - Site Management Statement or Nature Conservancy Council 'minimum' site MP (1988), including a work programme. Complexity of the MP should be related to the importance and complexity of the site, but clarity and brevity are crucial.

What should a plan contain?

- survey (or incorporation of existing data) of major habitat types and wildlife features etc;
- conservation objectives;
- work necessary to achieve conservation objectives (that can be utilised as a checklist for the WGS payment form); and
- a long-term ie at least 20 year strategy (vision) for the site, such that the end of the plan of operations under the WGS contract is a 5 yearly review of the strategy's progress.

Benefits to the owner? With a MP the owner (and successors) knows exactly what is of value and what is needed to protect/enhance. The MP must be 'user-friendly' and something that is accessible and easily referred to by all parties concerned.

Who prepares it? Site survey and appropriate evaluation requires a competent ecologist who can also provide an input to the selection of forestry practice which achieves nature conservation objectives and produces a timber income. Such expertise could be supplied from independent specialists, as employees of forestry consultants/agents and through the Wildlife Trusts. Some owners could prepare their own with suitable guidance, eg a worked example.

There is a need for FA Woodland Officers to provide a quality control function for MPs.

Funding options for MPs?

- From special management grant from the first (or more) year(s) of the WGS, followed by linking management grant payment to plan outcomes in the remainder of the scheme period.
- A one-off payment in year 0 followed by adoption of the plan through a WGS in the succeeding 5 years.
- Challenged Funding, whereby the applicant only gets 50% (insufficient incentive?), or if lucky 100%..... but what happens next if the bid is unsuccessful? A back-up system is needed, so why use challenge funding at all - too complex or hit and miss?
- Follow examples of other ELMS? eg Countryside Stewardship has a standard payment for MP preparation.
- MP payment levels should take account of woodland area with a possible scaling factor according to nature conservation importance?

Group 4

WGS development and implementation for woods of high nature conservation value

The Forestry Authority are looking to continuously review and improve the WGS as the main mechanism for achieving multi-purpose, sustainable forestry outside the state owned forests. This process depends on scheme users and interested parties working with the Authority to help to bring about the scheme's strategic objectives, including addressing the management needs of ancient and semi-natural woodlands and achieving the minimum environmental standards for all scheme applications.

Advice and incentives are regarded as the primary means to these ends. As the national and local WGS evaluation studies recognise, it is necessary to examine the effectiveness of these approaches periodically and to consider fresh initiatives which increase the likelihood of successful outcomes. Investing in researching the efficacy and quality of advice given and testing common standards of practice by inter-agency/administrative area exercises are both relevant to this. Reflecting on scheme performance and a forward look at the scheme's contribution to woodland nature conservation objectives has greater pertinence in the context of the UK Biodiversity Action Plan and associated targets for woodland habitats and species.

The questions posed to the group were as follows:

- Should current FA *Guidelines and Forestry practice Guides* give greater recognition to SSSIs?

- Are there additional measures that should be preferred or made conditional for WGS approval and felling regulation on SSSIs (eg tree retentions in high forest coupes, avoidance of planting in re-establishment)?
- How should management grant payments be linked to achieving SSSI/ASNW objectives?
- What scope is there for more discretionary, targeted deployment of the WGS to meet SSSI and ASNW conservation objectives, including support for local and national Biodiversity Action Plan targets?
- What investment in staff competency is appropriate for effective implementation?
- What level of compliance with Guidelines and approved plans of operations is reasonable on SSSIs and ASNW generally, and what reasonable sanctions?
- What is the role of WGS contract-holders, EN and FA in monitoring scheme implementation and evaluation success, and what baselines and monitoring systems are feasible and realistic?

The group's views on these topics can be summarised as follows:

FA Guidelines It was not felt that existing *guidelines* should give greater recognition to SSSIs, but earlier and improved evaluation of nature conservation interest was needed for all woods, including greater emphasis on stated long term objectives and their fit with WGS prescriptions, and additionally, simple management plans for all ASNW. A WGS future condition of entry? For SSSIs, the main area for improvement and national consistency was the pro-active planning of management jointly between the conservation agencies/FA/owners.

Additional measures? As above, more attention to EN/FA dialogue on evaluation and interpretation of desired SSSI management outcomes and the scope of the WGS - **before** schemes are initiated.

As identified by Group 2, integration of SMS preparation into the early stages of WGS consideration and application drafting. A procedure which could be disseminated through the WGS 'Applicant's Pack' and wider channels, to elicit understanding and support among woodland owners/the forestry sector generally.

Management Grant payments for SSSI/ASNW

Should be driven by identified special features and key conservation attributes which require annual management. Precise definition depends on an adequate, applied ecological survey to an agreed EN/FA format.

More targeted deployment of WGS? The Natural Areas objectives for woodland interests, BAP targets and cumulative objectives derived from the SMS programme all point to an increased scope and need for targeting of the WIG and annual management grant elements of the WGS. The WIG in particular, offers a way of increasing levels of flexibility of grant incentives in response to locational and strategic conservation needs. Joint action - perhaps through county Biodiversity fora and Local BAP partnerships - can help to identify shared local priorities and targets for WIG support.

Staff competency. FA and EN could do much more to co-ordinate national staff training programmes (lots of *ad-hoc* participation) around the development of common standards of proficiency, whilst encouraging/funding local FA/EN training initiatives. A focus on identified training needs is important, including knowledge of the ecology of woodland types and the local resource, as well as learning from casework and monitoring - incorporating the lessons from audit of practice and outcomes. The latter is vital to inform judgement on related situations, including the faith that can be attached to adherence to *Guidelines* standards.

Monitoring scheme implementation etc. In principle, owners should be expected to provide an annual mapped summary of work done alongside grant claims, which FA or EN officers could use for site visits and appraisals. Exchange of monitoring information between EN and FA was worth close examination, but the costs and logistics as well as the benefits needed to be identified. FA may be able to make use of EN's site condition assessments in reporting progress towards the national Sustainable Forestry objectives.

Proposed follow-ups to the current ' understanding' around future directions for the WGS.

Nationally

1. Prepare an EN/FA overview document, summarising the findings and common messages of the related studies into the WGS operation.
2. Utilise the document to influence desirable developments to scheme policy and procedure, including new discretionary incentives.
3. EN to develop a Natural Areas product for the Conservancies, interpreting information on the woodland and woodland-dependent species resource and conservation objectives.

Locally

4. Set up a small working group to closely examine responses to (consulting more-widely as appropriate) the specific recommendations of the Pryor & Rickett study, both for local applications and on behalf of the wider organisations, to feed into national policy development.
5. EN to lead a joint EN/FA workshop on furthering Natural Area objectives in the Severn, Wye & Avon Conservancy. The aim being to agree and to identify a programme of measures which explicitly contribute to their achievement.
6. Make further use of the sites appraised by the study for joint staff training and professional development around core issues and themes relevant to quality of nature conservation outcomes.