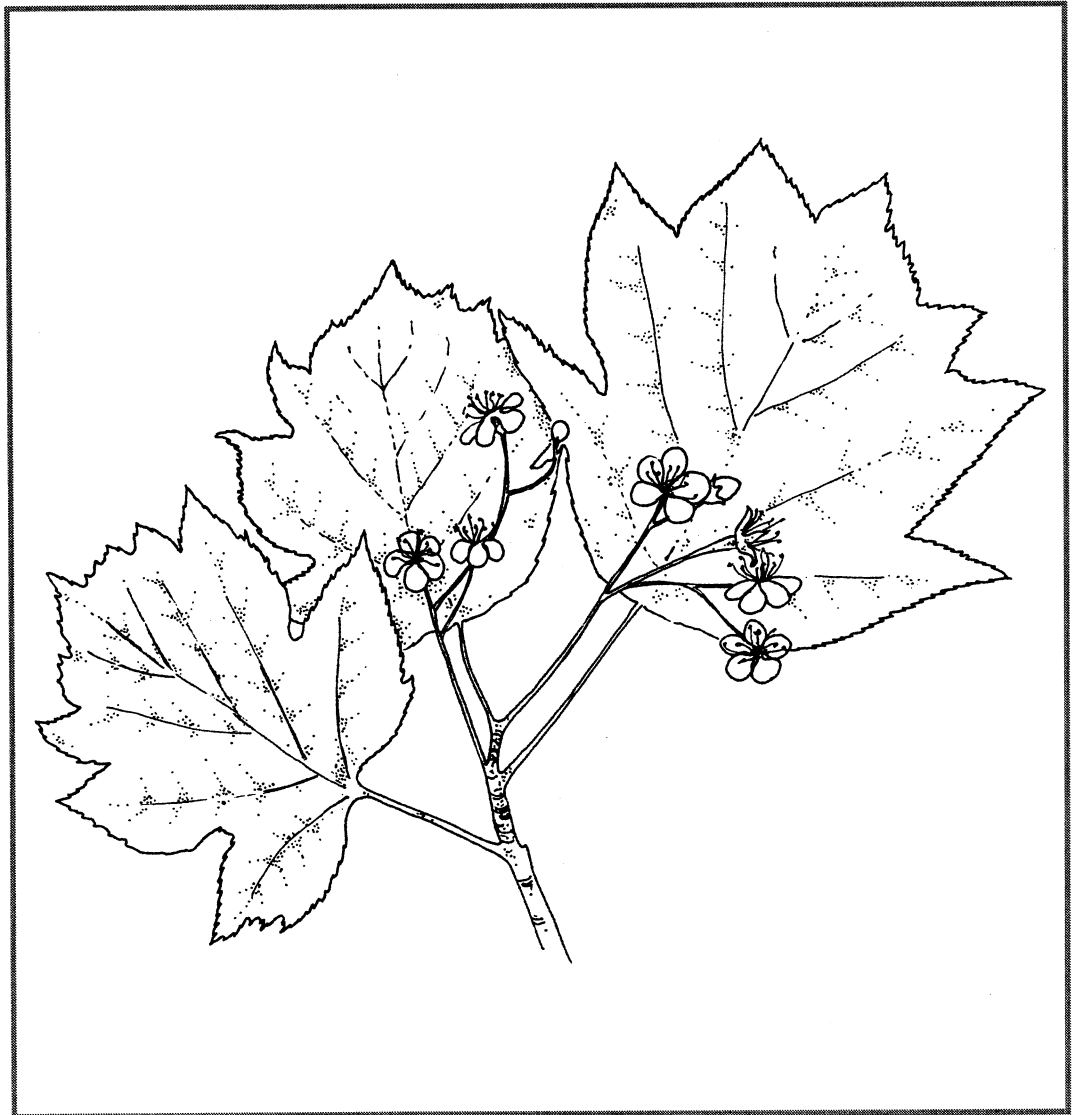


New native woodland in Dartmoor

No. 417 - English Nature Research Reports



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English Nature Research Reports

Number 417 :

New Native Woodland on Dartmoor

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Final Report To

English Nature
Devon, Cornwall and Isles of Scilly Team

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The views expressed in this report are those of the author. They do not necessarily represent those of English Nature.

1. Introduction

The English Nature New Native Woodland on Dartmoor Project was initiated in July 1999. Project objectives were designed to encourage the establishment of new native woodland under the Forestry Commission National Park Challenge Grant Scheme. Initially, the project was to focus on the Dart River basin to compliment the work of the Dart Biodiversity Project, with further expansion if required to make contact with additional landowners. The consultant, Richard Ince, under English Nature Contract No. F14/01/653, began work in co-operation with staff of Dartmoor National Park, the Forestry Commission, the Dart Biodiversity Project, private landowners, and other interested organisations and individuals. The project was undertaken over a 6-month period, and was scheduled for completion in January 2000.

This report outlines the objectives identified by English Nature, the procedure undertaken in achieving those objectives, and the results and accomplishments of the project. The report also points to problems encountered in achieving the objectives, and the positive and negative factors that affect the establishment of new native woodland in Dartmoor National Park. Several major recommendations are also included in this report for consideration in future implementation of new native woodland initiatives.

2. Project Objectives

English Nature developed three principal objectives for the New Native Woodland on Dartmoor project:

- To initiate work towards creating a substantial area of new native woodland;
- To successfully attract grant aid through the Woodland Grant Scheme National Park Challenge to help establish the new woodland; and to
- Assess factors motivating and discouraging landowners from creating native woodland.

In order to achieve these objectives, a minimum of 20 landowners were to be contacted within the Dart Biodiversity Project area of Dartmoor. From the total of landowners contacted, the aim was to assist 6 landowners in creating new native woodland with grant aid provided through the Forestry Commission, Woodland Grant Scheme National Park Challenge.

The consultant was to review all pertinent documentation, discuss the project with appropriate co-operating organisations and individuals, define criteria for new woodland creation, select potential grant applicants, and complete Woodland Grant Scheme application to meet the December 31, 1999 deadline. In addition, to satisfy the third objective, an assessment of issues that motivate or discourage landowners from considering new planting was to be undertaken during the process of interviewing landowners.

Phase II August	1-2	<ul style="list-style-type: none"> • Compile list of potential collaborating landowners based on referrals, documentation, and field identification; aim for at least 25 suitable ownerships.
	2	<ul style="list-style-type: none"> • Begin interviews with landowners
	3	<ul style="list-style-type: none"> • Continue interviews with landowners.
	4	<ul style="list-style-type: none"> • Continue interviews with landowners and field reconnaissance.
Sept	1	<ul style="list-style-type: none"> • As above.
	2	<ul style="list-style-type: none"> • As above.
	3	<ul style="list-style-type: none"> • Shortlist of WGS applicants prepared.
	4	<ul style="list-style-type: none"> • Prepare and submit progress report.
Phase III Oct	1	<ul style="list-style-type: none"> • Final selection of at least 6 WGS applicants.
	2	<ul style="list-style-type: none"> • Discussions with WGS applicants regarding woodland plans.
	3	<ul style="list-style-type: none"> • As above and preparation of preliminary woodland plans.
	4	<ul style="list-style-type: none"> • Registration of intent to submit WGS NP Challenge Grant applications to the Forestry Authority.
Nov	1	<ul style="list-style-type: none"> • Begin preparation of final woodland plans and WGS applications.
	2	<ul style="list-style-type: none"> • As above.
	3	<ul style="list-style-type: none"> • As above.
	4	<ul style="list-style-type: none"> • Prepare and submit progress report.

Table I outlines the consultant's programme of work, which included a breakdown of the project by stages.

Table I Project stages – general programme of work

Stage 1: Consultation and document review

Confirm project objectives, establishment methods, define target area, and prepare general plans and maps.

Time commitment: 5 days

Stage 2: Landowner contact, promotion and assessment

Individuals, communities, and user group interviews; approximately 25 landowners intensively assessed.

Time commitment: 16 days

Stage 3: WGS Challenge Grant applications

Landowner contact; site analysis; woodland design; applications and maps prepared; submission to Forestry Authority.

Time commitment: 20 days

Stage 4: Final reporting

Preparation of draft and final report.

Time commitment: 6 days

Total Project:

Time commitment: 47 days

3. Project implementation

3.1 Site selection criteria

The criteria identified by the Forestry Commission for new native woodland in National Parks which is outlined in the Challenge Fund leaflet, formed the basis for initial selection of suitable new woodland sites. Discussions with Dartmoor National Park staff further refined the selection criteria and outlined the range of possible sites that would not be appropriate for woodland creation, due to their present ecological interest and natural heritage.

The Institute of Terrestrial Ecology report titled, *Developing New Native Woodland in the English Uplands* (Good *et al* 1997) was used as a guide with particular reference to the Dartmoor National Park study areas and provisional areas for upland woodland expansion, including the Widecombe in the Moor area. Additional guidance was obtained from information stored in the Dartmoor National Park GIS system. Specific selection criteria development during the process of undertaking this project are included below:

Sites suitable for creation of new native woodland

- Sites adjacent to existing Ancient Semi-Natural Woodland (ASNW) to increase their relative size
- New sites that link existing ASNW
- Areas of improved grassland to create opportunities for native broadleaf woodland within agricultural landscapes
- Areas of conifer plantations where conversion to native broadleaf is feasible
- Areas of scrub with little or minimal ecological interest.

Sites to be avoided for selection to include:

- Sites with high ecological interest, such as species rich unimproved grassland
- Heather moorland
- Areas of ecologically important scrub such as gorse and bracken
- Rhos pasture in river systems

3.2 Landowner contact

Landowners on Dartmoor National Park were initially contacted from a list of prospective applicants furnished by project collaborators. Subsequent contacts were made as referrals from the initial list or were obtained from a variety of other sources, including the consultants existing Dartmoor clients. Several contacts were made “cold” on the basis of field reconnaissance and observation of potential sites.

Prospective applicants were made aware of the English Nature project, the scope of the National Park Challenge Grant, and the benefits to landowners, through direct contact or via telephone. A letter of introduction (see Appendix) was prepared outlining English Nature’s involvement and the role of the consultant. A fact sheet titled *Woodland Grants Applicable to Dartmoor National Park*, was also prepared and distributed to the landowners.

Overall, about 45 landowners were contacted by telephone, and from that number, almost 25 landowners consented to a meeting and discussion of their interests, a review of the scope of

project assistance, and a review of grant availability. The *Landowner Interview* forms, which list the contact and summarise information obtained on each landowner were provided to English Nature but are not included with this report. Map 1, shows the relative location of the collaborating landowners, and illustrates the high concentration of interviewees in the Holne, West Buckfastleigh, and Buckland areas of the Dart Biodiversity Area.

Project interviewees included owners with land holdings ranging from less than 5 acres to over five hundred acres. Major landowners held parcels of two hundred to three hundred acres. About 80 percent of those interviewed were farmers or retired farmers, and another 10 percent were farming part-time. Sheep and beef farming were the principal livestock operations. Over one-half of the landowners interviewed were in the lower part of the Dart River basin, and as already indicated, large portions were centred in the parishes of Holne, West Buckfastleigh, and Buckland.

As a result of these landowner interviews, seven owners agreed to proceed with National Park Challenge Grant applications. This involved eight areas of potential new woodland.

3.3 Preparation of applications

Seven applications were prepared over the period from late October 1999 up until the deadline for receipt of National Park Challenge Grant applications on 4 January 2000. Completion of grant applications required site visits, further assessment of the suitability for woodland creation, and preparation of maps and documentation.

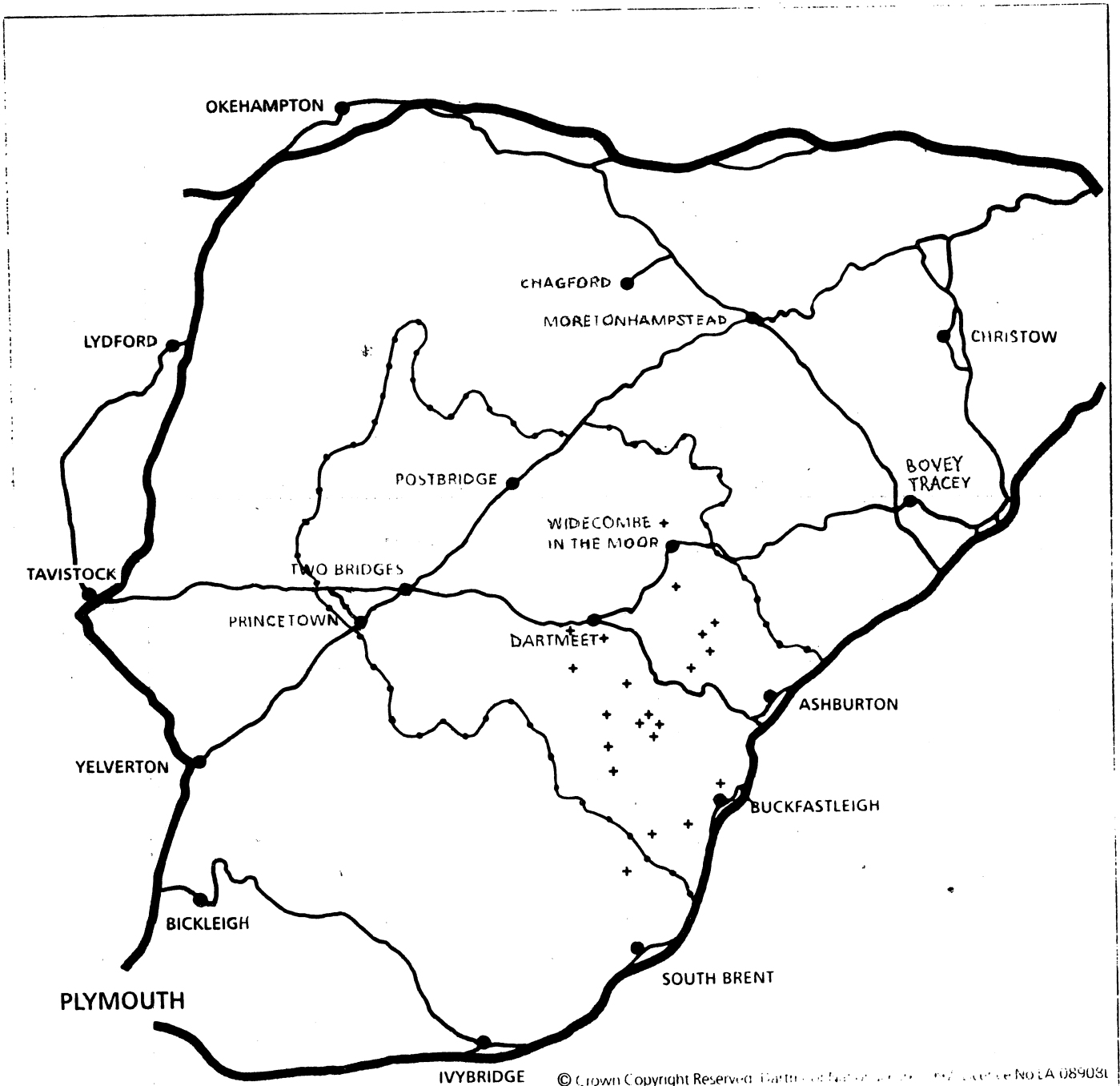
Areas proposed for creation of new broadleaf woodland ranged from 0.55 hectares to a maximum size of 3.04 hectares. The total area of applications encompassed 13.70 hectares, and the average size was 1.71 hectares. All parcels covered within the applications were, or had been, in agricultural use, and about four hectares (or almost 30% of the total) was abandoned or inactive grazing land. About 25% of the total application area was considered improved grassland. Five of the eight parcels involved were expected to qualify as suitable (as improved or unimproved grassland) for the MAFF Farm Woodland Premium Scheme. These applications will be processed in July 2000.

Elevation, slope, aspect and other factors varied considerably between sites within the applications, with height above sea level ranging from 80 metres to 350 metres, and slopes varying from near level to about 40 degrees.

As was evident in the landowner interview process, a majority of the applicants came from the southern part of the Dart River basin, with Holne and West Buckfastleigh being the principal source of applicants (see Map 1). Kingshead Farm at Widecombe-in-the-Moor was the most northerly site, and was also the site at the highest elevation.

Over one-half of the submitted applications involved sites which adjoined existing broadleaf woodland, and if successfully established, the new woodland would extend and enlarge those existing woodland, at least marginally.

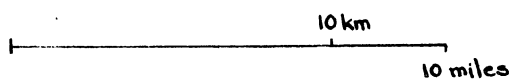
Initial applications were all forwarded to the Forestry Commission during the early part of November 1999, and supplementary information and bid forms, stating the amount of grant required, were submitted in December. The Forestry Commission processed applications on the basis of information provided within the applications. Additionally, further detail on the National Vegetation Classification for several sites and proposed species composition for planting sites was provided in response to Forestry Commission request.



Map 1 National Park Challenge Grant
Map of Interviewed Landowners

+ Landowner

— Boundary of the Dart Valley Prime Biodiversity Area



Copies of the Woodland Grant Scheme applications prepared for the 7 applicants, indicating the range of sites and biophysical characteristics of the individual landholdings were provided to English Nature, but have not been included in this report.

3.4 Results

In March 2000 the Forestry Commission announced the successful National Park Challenge Grant applicants. Of the seven applications submitted under this English Nature initiative on Dartmoor, two were selected for funding. This is significant in that only three Challenge Grant applications were approved for Dartmoor National Park in total. The area of new woodland involved in the winning applications and the level of grant approved are as follows:

3.04 hectares – grant of £13,700
3.54 hectares – grant of £13,320

It is also expected that several of the unsuccessful Challenge Grant applicants will continue with their plans to establish new woodland using the standard Forestry Commission Woodland Grant Scheme funding, and MAFF Farm Woodland Premium Scheme grant.

4. Factors motivating and discouraging landowners from creating woodland

In the process of meeting landowners and discussing the National Park Challenge Grant scheme, landowners were asked to identify factors which would encourage them to establish native trees, or in some cases, what encouraged new planting in the past. Factors that limited or discouraged new woodland creation were also noted during these discussions. No attempt has been made to rate these factors, but they are listed below on a scale of relative importance on the basis of the personal interviews.

- **The environment:** Planting woodland would enhance environmental values such as the visual landscape, wildlife, and contribute to sustaining human life. Of particular importance was the benefit to farming landscapes with the addition of woodland blocks and groupings of trees to improve local aesthetics.
- **Grant income:** The Farm Woodland Premium Scheme pays an annual payment to farmers who establish trees to compensate for loss of agricultural income. On Dartmoor, payment for broadleaf plantations on withdrawal of improved grassland from agricultural use totals £140 per hectare per year, for 15 years. Although this results in a loss of grazing income per hectare, many farmers appreciated this opportunity to generate income with minimal inputs.
- **Diversification:** In spite of long rotation periods and potentially unreliable future markets, tree planting represented an important consideration in terms of meeting farm diversification objectives. The multitude of benefits attributable to trees, and in some cases the relative ease of establishing trees as an alternative land use made woodland based diversification an early option for farmers. In many cases, landowners considered tree crops favourably in terms of low input and relatively high yield on marginal lands.
- **Timber income:** Most landowners looked at timber income as a very long-term alternative land use. In spite of this limitation, some owners mentioned future timber

production as a motivating factor in woodland establishment. The income potential to future farming generations, especially on farms that have been held in family ownership for substantial periods, is considered an important reason to establish timber species.

- **Planting to improve shooting opportunities:** Creating blocks of woodland for game bird cover with the objective of increasing suitable habitat and better shooting chances was mentioned by several landowners.
- **Availability of labour and other assistance:** A few landowners, especially family farming operations, mentioned the availability of labour to help in tree planting as a positive, or motivating factor. Also, the ready access to technical assistance in terms of professional guidance, and reliable commercial sources of plant material, tree guards and stakes, and other materials to facilitate planting operations, was seen as a motivating factor.

Discussions with landowners often stressed the limitations or discouraging factors that have prevented further establishment of woodland. The most notable factors identified include the following:

- **Lack of ready cash to undertake planting schemes:** In spite of WGS funding, and the potential for sourcing Challenge Grant money, many landowners would be hard pressed to pay for tree planting labour and materials in light of current farm income. Many landowners expressed the potential difficulty of paying in advance for the cost of planting and then waiting for Woodland Grant Schemes payments to be received. In addition, in the more usual situations where costs are not fully covered by the grant scheme, landowners would need available funds to pay the difference between the grant and the full cost of planting. In many cases, grants would cover only about 50 percent of the total planting cost.
- **Level of grant and cost of planting:** Some landowners assumed planting grants would fully compensate for the costs of planting, and other landowners were not aware of the relative high cost per hectare associated with the establishment of woodland. Many quite enthusiastic landowners consider the Forestry Commission Woodland Grant Scheme payments insufficient to meet the overall costs of woodland establishment. In addition, the staged payments of WGS, whereby 30 percent of the planting grant is not paid until the fifth year of successful growth, is considered a limiting factor for future planting.
- **Record of past National Park Challenge Grant approvals:** Although not mentioned in specific terms a number of landowners mentioned the limited success rate of past National Park Challenge Grant applications. A variety of factors may have substantially reduced the number of potential schemes, including size of application areas, which may have averaged between 2 and 3 hectares. However, the lack of financial resources to fund more than a maximum of 1 or 2 Challenge Grant schemes per year over the past three years has kept the impact of the scheme at its best to a modest level. This rate of success has undoubtedly led to a lack of enthusiasm amongst landowners for the Challenge Grant.

More minor factors which landowners indicated as constraints to their implementation of new native woodland development schemes include:

- A lack of time to pursue the landowners' interest in trees. This was a factor particularly frequently expressed among full-time farmers.

- The competition of tree crops versus agricultural crops in areas of limited available land, such as occurs within Dartmoor National Park.
- The landowners' mistaken belief that accepting and implementing a WGS planting requires provision of public access to tree plantation sites.
- Deer, rabbit and potential livestock damage to plantations of trees would be excessive, and measures to control damage were excessive in comparison to planting stock and labour costs.
- The paperwork involved in preparing applications for planting grants were challenging and time consuming.
- There was a lack of available technical assistance to help in the planning and design of planting areas, and in the grant application and execution process.

5. Recommendations to further encourage new native woodland on Dartmoor

5.1 Improved co-ordination between agencies

The Forestry Commission, Dartmoor National Park Authority, the Ministry of Agriculture, Food and Fisheries, Local Authorities, and other governmental and non-governmental organisations have direct or indirect review and consultation on applications for woodland establishment within Dartmoor.

In order to limit and control potential conflicts of land use, particularly in reference to Environmentally Sensitive Area agreement holders wishing to establish woodland, a closer working relationship between agency staff should be co-ordinated. This would apply not only to review of National Park Challenge Grant (or similar) applications, but also to the promotion of future woodland initiatives, and the development of a more comprehensive and co-ordinated strategy for expanded woodland establishment. A small working group of representatives from the various agencies and other groups should be considered to facilitate future woodland projects.

5.2 Ongoing outreach initiative

Native woodland has been promoted on Dartmoor by various government and non-government agencies for a number of years. Grants to encourage native woodlands have been available through the Forestry Commission's Woodland Grant Scheme, and more recently the National Park Challenge Grant has provided a source of increased funding for tree planting. In spite of these efforts, many landowners remain relatively unaware of the scope of grant aid available to establish woodlands and the variety of technical assistance to implement planting schemes.

An ongoing outreach programme would aim to increase awareness of all grant schemes, and provide vital forestry information to the broad spectrum of landowners, and tenants working the land. The initiative would require a co-operative effort involving the National Park,

Forestry Commission, MAFF, and other agencies, and would include regional projects, such as the current Dart Biodiversity Project. In addition to the government sector, forestry consultants and local woodland managers might be brought into the effort to provide opportunities for all interested parties.

A variety of publicity and informative leaflets, and the development of a comprehensive list of landowners would be required, as would periodic workshops and demonstrations to promote woodland planting. The services of a part-time professional might be needed to co-ordinate the effort, with that individual taking responsibility for preparing promotional materials, undertaking mailings, schedule events, contacting landowners, answering enquiries, and meeting with landowners.

Initially, such an outreach programme might be proposed for a twelve or eighteen-month period with well defined objectives developed from the input of the co-operating agencies. The services of private woodland managers might be promoted through a list of consultants willing to meet with landowners on an initial no-fee arrangement to provide information and basic technical advice.

5.3 Innovative funding sources for woodland planting

A larger and more stable source of funding for native tree planting schemes could result in greater numbers of new woodlands, and encourage larger blocks of planting. The partial grant available under the Forestry Commission Woodland Grant Scheme may not be enough of an incentive for many landowners, and the limited number of successful National Park Challenge Grants available over the past two years has undoubtedly discouraged some landowners.

Ideal sources of funding would not only help to establish woodlands, but also provide some assistance towards their maintenance, including initial silvicultural practices, could help create additional opportunities for agricultural diversification and provide some financial assistance for farmers.

One possible source of funding, although speculative at present, is through the sale of carbon credits. Credits would be made available to electricity generating companies, and other producers of carbon dioxide emissions at fixed rates per ton for future carbon sequestration in new woodlands. The sale of credits would fund the establishment and protection of new woodlands in the National Park and other suitable areas. A notable project presently being undertaken by Future Forests, of Castle Cary, Somerset is planting trees, both in urban and rural sites using such resources, and a major carbon offset project is underway in Central America.

The advantage offered by native woodlands in National Parks, in terms of storing carbon, centres on the long rotation period of native broadleaf species, and the probability that amenity will be the principal objective of planting. In such cases timber production is minimal or non-existent. Such a scenario could appeal to a number of carbon producers looking for secure sources of long-term storage. The value of carbon storage units could range from between £20 and about £65 per tonne. On average in the UK a broadleaf rotation will store 150 tonnes of carbon per hectare over 120 years.

Further investigation of the potential of carbon offset opportunities is needed, particularly on a regional basis, and a steering committee for the Southwest may soon be formed. A pilot

project focussing on regional needs established under the guidance of the World Bank could be adapted for use in this area.

5.4 Tree Planting Bank

Creating a source of funds to sustain a planting project between the approval stage, and the payment of grant by the Forestry Commission could be an important incentive for some landowners. This would be particularly useful to landowners undertaking planting in their spare time during the season using their own labour. Under such circumstances a significant time elapses before grant is claimed and payment is received. During this period a landowner is faced with the financial obligation of paying for materials, including tree guards, seedlings, and stakes, and possibly paying for additional help during planting. The Tree Planting Bank would advance financial resources to allow a project to proceed with repayment expected upon ultimate payment of grant.

To provide further incentives to establish woodland, the Tree Planting Bank could also offer the landowner a portion of the remaining 30 percent of the Woodland Grant Scheme (normally paid after 5 years) as an advance payment. This would help to defray the *up-front* cost of establishment otherwise born by the landowner. Projected FWPS payments could help to sustain the Bank in the long term.

Appendix 1

August 1999

Dear Landowner

Thank you for your interest in the Dartmoor woodland project. I am a contractor responsible for implementing the project work on behalf of English Nature, and will be working on the New Native Woodland Project for the next six months. Part of the work involves meeting with landowners to explain the Woodland Grant Scheme and National Park Challenge Grant, to look at potential sites for new woodland, and to assist landowners in completing applications for the park grant.

With landowners, I will also be discussing factors that motivate them for planting native trees, and also the limitations that discourage them from establishing new woodland. I look forward to explaining the range of tree planting grants and discussing your interest in trees when we meet. There is of course no obligation on your part to proceed with an application for a tree-planting grant or have any further involvement with the New Native Woodland Project. I am however hopeful that the information you gain from our meeting will be helpful. English Nature will be most grateful for your comments regarding expanded woodland planting.

Should you require further information on the project or my involvement directly from English Nature, the Devon and Cornwall office in Okehampton will be pleased to hear from you. Simon Bates is the project officer with overall responsibility in the office, and is overseeing my work. The English Nature telephone number is 01837 55045.

I will be pleased to provide more detailed information on all the available woodland schemes including the National Park Challenge Grant, and will be available to look at potential planting sites with you. I can be reached through my office telephone number, 01278 733511 for a future appointment.

Yours sincerely

Richard Ince

Woodland Grants

Dartmoor National Park: The following grants would apply for planting broadleaf woodland within Dartmoor National Park (MAFF: Less Favoured Area/Severely Disadvantaged).

Planting Grant: *Forestry Commission.* Pays £1350 per hectare (£546* per acre) towards the cost of establishing trees; 70% (£945/hectare; £382/acre) payable upon planting, and the 30% (£405/hectare; £164/acre) remaining, payable after 5 years of successful growth of trees; there is a 10 year commitment to care for the trees and ensure they become fully established on the site; minimum stocking of 1111 trees per hectare. After the first year of planting it is usual to expect replacement of dead trees during years 2 and 3 to maintain full stocking, and to control competitive weeds and grass with herbicides around each tree.

Better Land Supplement: *Forestry Commission.* Pays an additional £600 per hectare (£243/acre) for planting improved grassland or arable land; improved grassland is considered to have a sward composition of more than one-third rye grass, timothy or white clover, or cocksfoot, either singly or in mixture; arable land is land which is eligible for the “Arable Area Payment Scheme”.

Farm Woodland Premium Scheme: *Ministry of Agriculture, Fisheries and Food.* Pays an annual payment over a fifteen year period as compensation for removing planted land from productive agricultural use; improved grassland attracts a grant of £140 per hectare per year (£57/acre/year); arable land attracts a grant of £160 per hectare per year (£65/acre/year); unimproved land qualifies for a grant of £60 per hectare per year (£24/acre/year).

Total Grant: As an example, for planting improved grassland with broadleaf trees with the Planting Grant, Better Land Supplement and Farm Woodland Premium Scheme, the total grant over the 15 years would be: £4050 per hectare (£1639 per acre). For planting unimproved grassland with broadleaf trees with the Planting Grant and Farm Woodland Premium Scheme, the total grant over the 15 years would be: £2250 per hectare (£911 per acre).

National Park Challenge Grant: *Forestry Commission.* This is a competitive grant designed to establish broadleaf woodlands in National Parks. If selected, the applicant is paid the full cost for planting, including seedlings, other material and labour costs, the cost of fencing, building tracks for accessing the planting site, maintenance, management costs, fees for design of the woodland, and other costs which can be justified.

Applicants are chosen on merit against the priorities for the Challenge Grant. In deciding which bids to accept, consideration is given to quality, value for money, public benefit, the degree of partnership involvement, and public support. The 31st of October is the current deadline for registering intent to apply to the Challenge Fund.

Other grants are available for managing and improving existing woodland (Forestry Commission). * Acreage amounts are rounded to nearest whole £.

English Nature New Native Woodland on Dartmoor

LANDOWNER INTERVIEW

Name Date

Address

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Telephone No. Type

Principle source of income

Land Holding details

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Previous contacts

Reasons interested in woodland planting

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Follow-up

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