

FUNDING A FUTURE FOR IRELAND'S NATIVE WOODLANDS: THE DEVELOPMENT AND APPLICATION OF THE NATIVE WOODLAND SCHEME

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Abstract

The Forest Service Native Woodland Scheme represents perhaps the most significant opportunity in the history of the State to contribute to Ireland's native woodlands, and is one of the most proactive initiatives in the area of biodiversity and habitat restoration in Ireland. The scheme represents a major component of the implementation by the Forest Service of Sustainable Forest Management, and contributes significantly to Ireland's National Biodiversity Plan under the UN Convention on Biological Diversity.

The Native Woodland Scheme has become firmly established through a close and intense partnership involving the Forest Service, Woodlands of Ireland, the National Parks and Wildlife Service, the Heritage Council, Coillte, the Regional Fisheries Boards and a wide range of other relevant bodies and representative groups, and through the enthusiasm and commitment of numerous land owners, foresters and ecologists working on the ground. It is beginning to yield wide-ranging benefits in the areas of native woodland protection and expansion, wood and non-wood production, and the application of traditional and alternative silvicultural approaches. The scheme is also enhancing the level of cooperation and understanding between forestry and ecology interests in general.

Over 40 projects have been undertaken under the scheme, including existing and new woodland sites under private, NPWS and Coillte ownership. A wide range of works has been funded, including rhododendron clearance and deer fencing, coupe creation, coppice restoration and the encouragement of natural regeneration. Projects to date have created a wealth of hands-on knowledge and experience of native woodland management. They have also highlighted obstacles limiting progress, and ways in which the scheme can be enhanced. Advances have also been made across a broad range of support measures for the scheme, e.g. the 3-day Native Woodland Scheme Training Course, the development of the list of Participating Foresters and Ecologists, and forthcoming silvicultural guidelines for timber production under the scheme.

This paper reviews the progress of the Native Woodland Scheme to date. It also explores ways in which the scheme can be further refined, in order to enable it to overcome current difficulties and to continue fulfilling its key objective of protecting and expanding Ireland's native woodland resource.

Introduction

Native woodlands once covered most of the island of Ireland, and represent the potential natural vegetation which most of the countryside would revert to in the absence of human activity. They are among our most valuable ecosystems, each comprising a unique community of plants and animals. However, Ireland's native woodlands have been under constant pressure since early history, culminating in significant clearance, exploitation and neglect over recent centuries. Today, surviving fragments scattered across the island account for just 80,000 ha or about one percent of Ireland's land area. Many are under severe pressure from neglect, grazing, invasive species and development, and are in urgent need of sensitive management to secure their survival and long-term regeneration.

The last decade has seen a growing recognition of the immense ecological and cultural value of these unique habitats, leading to several major national initiatives including the establishment of the Woodlands of Ireland group, the People's Millennium Forests project and the Native Woodland Scheme (NWS), which forms the topic of this paper. This new appreciation has developed in line with Ireland's clear obligations to protect important habitats under national, European Union and international legislation, conventions and protocols, including the Wildlife Act, the Habitats Directive, Sustainable Forest Management (SFM) and the UN Convention on Biological Diversity.

The NWS is aimed at encouraging the proactive protection and expansion of Ireland's native woodland resource and its associated biodiversity, using appropriate 'close-to-nature' silviculture. Where compatible, the realisation of wood and non-wood products is also encouraged. The scheme provides financial support for landowners to protect and enhance existing native woodlands and to establish new native woodlands. The NWS was initiated and is being implemented by the Forest Service, Department of Agriculture and Food, in partnership with Woodlands of Ireland, National Parks and Wildlife Service (NPWS), Regional Fisheries Boards (RFBs), the Heritage Council and others, as outlined below. It is funded under the National Development Plan 2000-2006, supported by the European Union.

Unique features of the NWS

The NWS differs from other Forest Service schemes in ways that reflect its specific aims and underlining ecological principles. Some of these differences are outlined below.

- The NWS is divided into two separate elements. *Element 1: Native Woodland Conservation* provides up to €4,444/ha for the protection and enhancement of existing native woodland, including the conversion from non-native to native status. *Element 2: Native Woodland Establishment* provides up to €4,952/ha for the creation of new native woodland. The standard afforestation premium is also available under Element 2, up to €442/ha for 20 years. A unique feature of the scheme is the availability of a continuous Native Woodland Premium under both elements for up to €120/ha/year.
- Planting under the NWS is limited to species deemed native to the island of Ireland. A list of acceptable species is set out in the scheme's brochure, divided into overstorey species, and understorey and minor species. Other natives not included on this list can also be proposed, and are considered on a case-by-case basis. For example, the strawberry tree (*Arbutus unedo* L.) is excluded from the general list as this species has an extremely limited range within Ireland, and would only be considered if proposed for planting on certain sites in areas of the south- and north-west.
- In order to conserve native genetic biodiversity, all plants used under the NWS must originate from seed collected from suitable sources within the island of Ireland. Furthermore, planting in Special Areas of Conservation (SACs), Natural Heritage Areas (NHAs), Nature Reserves, National Parks and known ancient woodland must use plants originating from seed collected from within the respective area or, if unavailable, from some other source acceptable to both the Forest Service and NPWS. To ensure traceability from seed collection to final planting, all material used under the NWS must adhere to the EU Council Directive 1999/105/EC on the marketing of forest reproductive material, and Forest Service regulations.
- The natural woodland cover across Ireland comprises a mosaic of different woodland types – from the acid oakwood of the Wicklow uplands to the yew wood of Killarney to the hazelwood of the Burren – all of which reflect the underlying soils, elevation, climate, etc. Each project under the NWS must promote the most appropriate native woodland type (including species composition and characteristics) for that particular site. Under Element 1, this might entail the underplanting of species characterising the native woodland type but underrepresented within the existing woodland, the removal of exotics such as sycamore or beech, or even the clearfell of an existing conifer crop and reforestation with an appropriate species mix. On Element 2 sites, it usually entails planting with an appropriate species mix, supplemented by natural regeneration from suitable sources.
- Each application under the NWS involves the development of a site-specific Ecological Survey / Management Plan (ES/MP) involving input from both an ecologist and a forester. This document is a key element of the process, setting out the ecological priorities for the site, and how work is to

proceed. Progress is measured against this document: grant payment is dependent on the achievement of the short-term objectives set out in this plan, and spot inspections will be carried out by the Forest Service to ensure continued adherence to the plan in the medium and long term.

- Ecologists and foresters working with the NWS must satisfy the Forest Service that they have the necessary knowledge and expertise to undertake the type of work involved. In order to become a Participating Forester under the NWS, foresters must already be on the list of Forest Service Approved Foresters, and must also undertake training. In order to become a Participating Ecologist, ecologists must satisfy three criteria relating to an assessment of their qualifications and experience, training and professional indemnity insurance.
- Projects within SACs, NHAs and Special Protection Areas (SPAs) are eligible for funding under the NWS, where deemed compatible with the conservation designation. This process involves detailed consultation with NPWS at two separate stages in the application procedure.
- Wood and non-wood production is encouraged under the NWS, where compatible with the primary objective of promoting the most appropriate native woodland type. In the case of wood production, various silvicultural systems (e.g. single tree or group selection, coppicing) can be used to manage the woodland in a way that will promote its natural composition and structure while also creating an opportunity for high quality wood products, from small diameter material to hardwood sawlog. Realising such opportunities forms the basis for the long-term sustainability of Ireland's native woodlands beyond the NWS, by incorporating them directly into rural livelihoods.

Development and implementation of the NWS

The NWS originated in the late 1990s from discussions largely initiated by the late Freda Rountree, then-Chairperson of the Heritage Council, and involving the Forest Service, then-Dúchas The Heritage Service, and the Heritage Council. A subsequent document developed by Woodlands of Ireland in 1999 outlined how a new grant scheme for native woodlands might operate. Details were further developed by the Forest Service in close co-operation with Woodlands of Ireland and its Technical Advisory Group, Dúchas The Heritage Service, the Central and Regional Fisheries Boards, the Marine Institute, the Heritage Council, People's Millennium Forests, Coillte, COFORD, woodland owners, the nursery sector, researchers, forestry consultants and others. This work culminated in May 2001 in an agreed framework document setting out the principles, structure and operational details of the new scheme. This document formed the basis for the scheme's brochure and for the first version of the *Native Woodland Manual: Procedures, Standards and Decision Support for the Native Woodland Scheme*, published in May 2002.

The scheme was subsequently launched in Charleville Castle, Tullamore, in November 2001 by Mr Hugh Byrne, then-Minister of State at the Department of the Marine and Natural Resources. Shortly afterwards, a project involving the restoration of a coppice hazelwood near Castlebar, Co. Mayo, received grant funding, marking the very first step in the protection and enhancement of Ireland's native woodlands under the new scheme.

The above process represented a major investment of time and effort by all of the partners involved, and entailed exhaustive discussion and debate on various aspects of the scheme. However, this process ensured that the scheme was based on the very best knowledge and expertise available in Ireland in the area of native woodland ecology and management, and secured a wide consensus across all of the relevant authorities and interests on how it should operate. Both factors have provided a solid foundation for the implementation of the NWS.

Interest amongst potential applicants grew steadily during the scheme's development period, resulting in a sizable flow of applications throughout 2002. That year also saw the implementation of a comprehensive training programme by the Forest Service and Woodlands of Ireland to 'upskill' people who would be involved in developing projects under the scheme. A major threat emerged in the second half of 2002, with the reduction in funding for forestry in the Government's Book of Estimates. However, an allocation of €620,000 for the NWS was secured for 2003, and this was subsequently distributed to various projects selected on

ecological merit. As interest in the scheme continued to grow, the allocation increased in 2004 to €1.0 million for Element 1 sites, with Element 2 sites to be funded under the general Afforestation Scheme budget. In 2004, sites were allocated funding largely on a 'first-come first-serve' basis, with larger multi-annual projects funded during 2003 receiving a second instalment to progress work. Table 1 sets out work carried out to date (September 2004) under the NWS. As of the end of July 2004, the Forest Service had received 246 applications under the NWS, comprising 173 Element 1 applications, and 73 Element 2 applications. This represented a total area of 4,353.58 ha; 3,619.93 ha under Element 1 and 733.65 ha under Element 2.

TABLE 1. Area under Element 1 and Element 2 of the NWS either completed or in the process of being completed (September 2004). Figures are presented for the private sector, National Parks and Wildlife Service (NPWS) and Coillte.

Ownership	NWS Element	2001	2002	2003	2004 (Projected)	Total
Private	Element 1	0.5 ha		142.44 ha	237.42 ha	380.36 ha
	Element 2			30.1 ha	42.02 ha	72.12 ha
NPWS	Element 1			21.37 ha	c.170 ha	191.37 ha
	Element 2					
Coillte	Element 1		69.7 ha		106.40 ha	176.10 ha
	Element 2					
Total		0.5 ha	69.7 ha	193.91 ha	555.84 ha	819.95 ha

At the time, the reduced funding for the NWS led to widespread disappointment and major concerns about its future. However, it did provide a lifeline for the scheme through a very difficult period for the forestry sector in general. Also, it had the unintended but highly beneficial effect of slowing down the initial rollout of the scheme, allowing time for problems to be ironed out and necessary adjustments to be made, and enabling all those involved – from landowners, foresters and ecologists to Forest Service, NPWS and RFB personnel – to become familiar with the scheme and its workings. It also provided the space to further develop the various support measures for the scheme, such as the continuation of training and the expansion of the Participating Ecologist list.

Achievements to date

As of September 2004, a number of significant achievements have been made under the NWS. It is important to point out that this progress has been due to the continuing partnership of all those organisations and individuals involved in developing the scheme, and also to the enthusiasm and commitment of landowners, ecologists and foresters who have developed and implemented projects on the ground.

The primary achievement is the fact that the NWS is now operational and doing what it was intended to do – funding the protection and enhancement of Ireland's native woodland resource. Projects amounting to approximately 820 ha have been completed or are underway across Ireland (see Table 1), involving a wide range of works, from deer fencing and rhododendron removal, to regenerative coupe restructuring, conversion from non-native to native woodland, and coppice restoration.

Significant progress has also been made in relation to the various support measures for the scheme, which are vital to its long-term development. An overview of some of these measures – training, list of Participating Ecologists, and support literature – is described below.

Training

A significant amount of training has been undertaken, specifically aimed at ‘upskilling’ people involved in NWS projects. From the earliest stages of the scheme’s development, such training was seen as being a vital prerequisite, not only in briefing people as to how the scheme operates, but also in the creation of a baseline of knowledge and awareness of native woodland ecology and appropriate management. The training programme is implemented jointly by the Forest Service and Woodlands of Ireland, with both (the latter through its Training Sub-Group) inputting into course development and content.

The bulk of the training carried out to date has involved a total of nine 3-day Native Woodland Scheme Training Courses. The first, effectively a ‘dry run’ of how the course should be structured, was held in Pontoon, Co. Mayo, in November 2000. The remaining eight were held in the central location of Tullamore, Co. Offaly, in February, July and December of 2002, and July and November of 2003. These courses comprised indoor sessions involving a number of expert speakers delivering papers on various aspects of native woodland ecology and management (e.g. native woodland classification, natural regeneration, rhododendron control, appropriate silvicultural systems). This was complemented by a detailed field exercise in Charleville Estate, whereby small mixed-discipline groups worked on ES/MPs for different areas of the woodland, following the NWS structure. Each group subsequently presented proposals for its area in a plenary session, and these were then compared and contrasted with an official plan for the area. Completion of this 3-day course is one of the conditions involved in becoming a Participating Forester or a Participating Ecologist under the NWS.

To date, over 400 individuals have completed the NWS Training Course. Participants represented all of the different groups directly involved in developing projects under the NWS, as well as a wide range of other interested parties. Participants included Forest Service, NPWS and RFB personnel, landowners, foresters, ecologists, forestry contractors, nursery managers, and representatives from environmental NGOs and third level institutes. These 3-day courses gave participants a common understanding of native woodland ecology and management, a ‘crash course’ in the operation of the NWS, and a direct, hands-on experience of development applications. This in effect has created the necessary skills and knowledge base for the initial start-up of the NWS, as well as creating invaluable feedback as to how the scheme could be enhanced. The courses also created an open forum for discussing the multitude of issues relating to the ecology and management of native woodlands. Feedback sheets indicated a very positive reaction to the courses, with many participants welcoming the opportunity to interact with people from the different professional groups and bodies represented, in an informal learning atmosphere.

In addition to the 3-day course, further training was deemed necessary to focus on groups in key areas. One such group are the forest contractors, whose front-line expertise in forestry operations can dramatically influence how appropriately the site is treated and how successfully the plan is implemented. A total of four 1-day NWS Contractor Training Courses were held in 2004, in Counties Wicklow, Monaghan, Mayo and Cork, targeting forestry contractors within each respective region. The course involved an indoor session outlining how the approach to operations under the NWS differed to that under other schemes such as the general Afforestation Scheme or the Woodland Improvement Scheme. This was followed by a visit to a completed NWS site (St. Savior’s Wood, Brandrum, Ballyvary and Glengarriff) led by those directly involved in the project, to discuss the various operations carried out. Each site had a different focus (conifer clearfell and reforestation with native woodland, coupe felling and replanting, coppice restoration, and rhododendron clearance), and was selected in order to represent some of the general site conditions and issues typical of that region. Over 55 individuals participated in these courses, representing a sizable portion of the forestry contractor sector in Ireland.

Further training is planned for 2004, 2005 and beyond, including repeats of the 3-day NWS Training Course to cater for the current waiting list of over 200 individuals, and a series of 1-day courses on the design, establishment and management of native woodland on riparian sites, targeted primarily at RFB and NPWS personnel. Additional needs are also becoming apparent, such as training on seed collection and nursery management, and regional training days in completed NWS sites, specifically to further ‘upskill’ those who previously completed the 3-day training course.

List of NWS Participating Ecologists

A core aspect of the NWS is the input of a professional ecologist, alongside that of a professional forester, into the development of the site-specific ES/MP. This input is pivotal in identifying ecological considerations and priorities (including the most appropriate native woodland type) which form the basis for what is actually proposed for the site, as set out in the management plan. There exists significant variation in the ecological profession in Ireland, which encompasses people with a wide range of different qualifications, disciplines and expertise. It was therefore realised early in the scheme's development that a procedure was required to assess ecologists wishing to work with the NWS, in order to ensure that they are suitably qualified and experienced in the area. As such, ecologists wishing to be included in the list of NWS Participating Ecologists must fulfil three separate criteria, outlined below.

- Individuals wishing to be included on the list are invited to make a submission to the Forest Service setting out their relevant ecological qualifications and experience, together with an example of recent work authored by the applicant. This submission is subsequently evaluated by the Forest Service.
- Individuals must complete the 3-day NWS Training Course.
- Individuals must also submit proof of Professional Indemnity Insurance (PII) cover for a minimum of €320,000. PII cover is a fact of life in consultancy work across many disciplines, from engineers to accountants to foresters, and is also common amongst consultant ecologists in other countries.

Having fulfilled all three criteria, the applicant is included in the list of NWS Participating Ecologists for general distribution to landowners and foresters, and is in a position to work and sign off on ES/MPs under the NWS, alongside Participating Foresters.

Support literature

In May 2002, the first version of the *Native Woodland Manual* was produced, setting out the procedures and standards of the NWS and details on the classification of native woodland types. This manual was intended as a 'one-stop-shop' for all those involved in the scheme, containing details on its scope, acceptable operations, grant rates, terms and conditions, and the procedure involved in developing applications. It also included a framework governing how ES/MPs are to be developed, in order to ensure consistency. Work on overhauling the manual is due to start shortly, with a view to making it more concise and to incorporate numerous improvements to the scheme arising from experiences gained from its initial implementation. This second version is due to come onstream in early 2005.

During the course of the scheme's development and initial implementation, various experts have written a significant amount of material on topics relating to native woodland ecology and management. It is intended that much of this will be published jointly by the Forest Service and Woodlands of Ireland as a series of 'decision support' information notes in 2005.

Another publication of major relevance to the NWS is the document entitled *Realising Quality Wood from Ireland's Native Woodlands*. This document, developed by Woodlands of Ireland with Forest Service support, is based on a detailed study by leading experts from Ireland, the UK and Germany, into the silviculture and economics involved in managing native woodland for wood production within the context of the NWS. The document, due to be published in early 2005, will represent a useful guide to woodland owners and managers operating under the NWS.

Wider impact of the NWS

The implementation of the NWS is also having wider, and sometimes unexpected, impacts in other areas extending beyond the scheme itself.

- One clear benefit is the close partnership realised between forestry, conservation, fisheries and ENGO sectors in Ireland, both in developing the scheme at a policy level, and in implementing it at a site level.

Given the wide benefits of native woodlands, the scheme advances the cause of each of these sectors, creating a common ground for understanding, proactive cooperation and synergy that can spill over into other areas.

- The implementation of the NWS represents a build-up of expertise regarding the appropriate management of native woodlands. It is also providing a ‘foothold’ for the application of traditional and alternative forms of silvicultural approaches in Ireland. It is likely that, over time, both of these factors will contribute positively to the practice of forestry generally in this country.
- The NWS is also stimulating initiatives involving a more strategic approach to managing the Irish countryside. For example, discussions are underway to explore how best to implement the scheme on a water catchment basis, whereby native riparian woodland projects can be strategically located to optimise benefits vis-à-vis water quality protection and enhancement of the aquatic habitat. Similarly, the NWS is adding to calls for a nationwide programme to control deer, rhododendron and grey squirrel. The experiences gained under the NWS are also inputting into the development by the National Roads Authority (NRA) of guidelines for ecological roadside design and planting, thereby helping to ensure, for example, that species used are compatible with the surrounding natural habitats. Furthermore, the integration of the NWS within the Rural Environment Protection Scheme (REPS) has also been advocated, to secure greater cohesion between the two measures.

Issues arising

Undoubtedly, major progress has been made in establishing the NWS, again thanks to the partnership between the Forest Service, Woodlands of Ireland, NPWS, RFBs and others, and through the enthusiasm and commitment of the landowners, ecologists and foresters involved. Reviewing progress illustrates what is working, and also, what is not working. A number of issues have arisen to date that need to be addressed, if the scheme is to reach its full potential.

- Of major concern is the long-term funding for the NWS. Currently, the scheme is allocated funding on a year-to-year basis, and this is creating a general uncertainty as to whether or not it will continue, and at what level. One major impact is the reluctance of the nursery sector, in the absence of a secure market, to commit to growing large quantities of native material that satisfies the specifications of the scheme. Another effect is the reluctance amongst potential Participating Ecologists to take out the required insurance, due to concerns regarding whether or not future work under the NWS will justify the cost.
- The current year-to-year funding system – whereby funding is announced and allocated in March/April, and the deadline for receipt of invoices set for September/October – is also creating difficulties on the ground. The compilation and approval of the ES/MP and the completion of operations must all take place within this tight timeframe. This places considerable pressure on landowners and can lead to less-than-ideal practices, such as out-of-season planting.
- A major challenge is how best to tackle larger sites. The current system for such sites – whereby applicants are given an allocation to complete discrete areas on an annual basis – is problematic. This system means that the owners can only recoup front loaded costs required for the entire site from the very onset (e.g. ES/MP, deer fencing) gradually over several years, by assigning the *pro rata* cost for these expenses to each area worked on within a particular year. This system is also preventing owners from realising economies of scale in operation. For example, each year requires the same suite of machines to be brought onsite to work on often adjoining areas, as opposed to being brought onsite once and covering the entire area in a single sweep. A possible solution is to issue approval for the entire site over an extended timeframe, and to introduce interim payments as agreed operations are completed.
- Another obvious difficulty surrounds the current specifications for natural regeneration. Currently, areas designated for natural regeneration must reach the required density (i.e. that of planted areas) within 4 to 5 years. If such density is not being reached, the owner is required to fill-in with planting stock in order to draw down the grant payment. This can discourage owners to select the natural regeneration option, foregoing a range of ecological and other benefits, including reduced pressure

on available planting stock, particularly oak and hazel. This perhaps points to an obvious need to introduce a longer timeframe and less stringent density requirements for areas designated for natural regeneration. A similar concern has also been expressed about the appropriateness of standard planting specifications in areas planted under the NWS, and whether or not lower stocking rates and more 'organic' planting patterns are needed.

- Other difficulties surround the application process, which many find cumbersome. The process differs from that of other grant schemes in that it involves a preliminary assessment of whether or not the project is suitable for the NWS, before the applicant launches into the process and expense of developing a detailed plan. It also differs in its requirement for the ES/MP itself. Both aspects are seen as being essential to the NWS process, but could be looked at to see if they can be streamlined. For example, the framework document setting out how the ES/MP is to be compiled can be further refined to avoid unwarranted replication. Much doubt has also been expressed regarding the necessity of the permanent quadrat currently stipulated, particularly regarding cost benefit issues in terms of the time and expense it involves, and the usefulness of the information gathered.
- Another area requiring attention is the differing understanding and interpretations across the various sectors involved regarding the scope of the scheme and the procedures and standards that apply. Again, this is a reflection of the fact that the scheme is breaking new ground, introducing a host of new standards and procedures that require time to bed down. It does, however, underline the importance of the training programme, *Native Woodland Manual* and other communication measures.

These and other issues are currently being looked at by the Forest Service in consultation with Woodlands of Ireland and other partners, with a view to modifying and streamlining the scheme for 2005.

Looking ahead

The NWS is highly innovative in terms of its objectives and principles, requiring a wide range of new procedures and support structures. It is a complicated scheme that relies heavily on a strong partnership between a number of different bodies. However, despite the challenges created by these factors, the scheme is now firmly established as a viable and workable option for Irish landowners. The scheme is also beginning to achieve what it was originally set up to do, i.e. to promote the protection and enhancement of Ireland's native woodland resource.

As described above, a variety of issues have emerged during the initial implementation of the NWS. While these must now be addressed if the scheme is to continue to grow and develop, they indicate that the scheme has now progressed to a stage where it has outgrown its original start-up structures. This need to adapt was foreseen from the very start of the scheme's development, as illustrated by the commitment in the original brochure that the scheme would be reviewed periodically, incorporating any alterations deemed necessary.

The NWS remains one of the most proactive initiatives in the area of biodiversity and habitat restoration in Ireland, and presents perhaps the most significant opportunity in the history of the State to contribute to our native woodland resource. The challenge now is for all of those involved to continue to work in close partnership to fully realise the potential of the Native Woodland Scheme, in order to secure a future for our native woodlands as a living and thriving component of the Irish landscape.