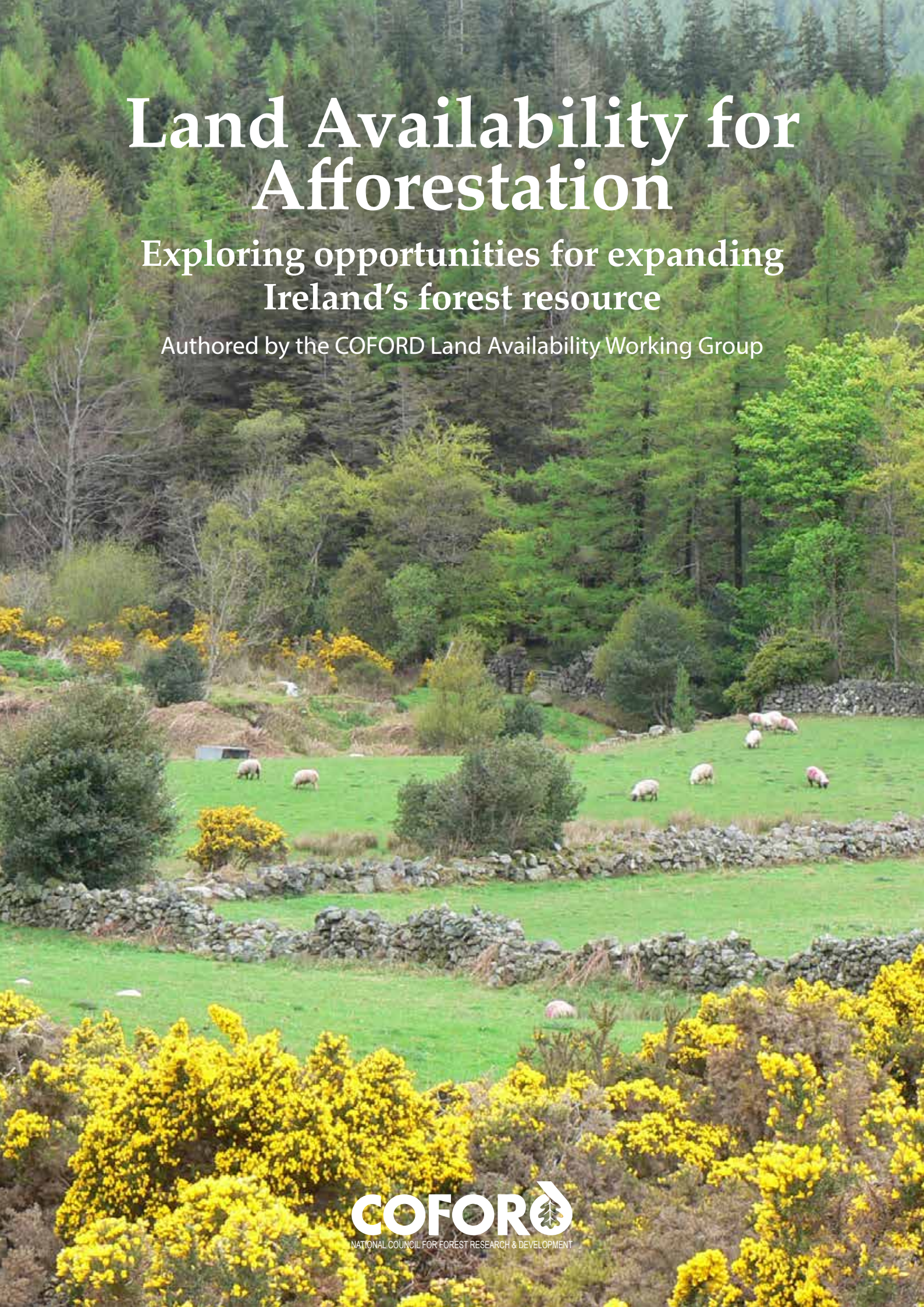

Land Availability for Afforestation

Exploring opportunities for expanding Ireland's forest resource

Authored by the COFORD Land Availability Working Group

COFORD
NATIONAL COUNCIL FOR FOREST RESEARCH & DEVELOPMENT

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Statement by the Minister of State for Forestry

Ireland's national forest project over the past century has largely been the restoration of forest cover, from the 1% of the early 1900s, to the current 11% - some 750,000 ha. The fruits of past endeavours and investment are to be seen in the walks and trails through state woodlands, and in the increasing wood harvest that helps to build and warm our homes and provide lasting employment. In an age of climate change, forests and forest products play an important part in the effort to slow down and halt global warming.

In more recent times forest policy has also been guided by the sustainable development imperative, enshrined in the principle of sustainable forest management. What this means is the implementation of measures that will sustain Ireland's forest resources, state and private, for future generations. In the Irish context it also means sustaining anticipated increases in wood supply for energy and product manufacture over the coming decades, while ensuring that other services such as recreation and climate change mitigation continue into the future.

These are strong and compelling reasons to maintain a vigorous afforestation effort over the coming decades. They are reflected in the forest policy review *Forests, products and people*, which aims to have a forest cover of 18% by mid century. A significant contributor to this ambition will be the 43,000 ha of afforestation which has provided for in the national Forestry Programme 2014-2020. The programme makes forestry a good investment for land-owners and their families. The establishment grant and annual forest premium provide worthwhile incentives to afforest all or part of a land holding, and there is a growing market for forest produce.

Which brings me to this important report on land availability for afforestatation which was compiled under the auspices of a working group of the COFORD Council. It identifies the land resource that is available for afforestation, and suggests ways to bring more of it under tree cover. Among these is the implementation of a new site classification system for forestry, developed in tandem with the working group. I am glad that aspects of the classification are now being used in selecting land for afforestation grant aid. It is also important to recognise that Budget 2016 has made fundamental and far-reaching changes to the tax treatment of forestry income, an issue that is among the recommendations in the report. That being said, there are other important issues raised and recommendations made in the report, with a focus on how the forest sector as a whole encourages more land into forestry. These issues will be carefully considered and appraised by the Department.

Last but by no means least I want to thank Dr Nuala Ní Fhlatharta and all of the members of the working group for their hard work and dedication in bringing this body of work to a successful conclusion.

Tom Hayes, TD
Minister of State for Forestry

Statement by the COFORD Chairman

One of the strengths of COFORD is its ability to bring together scientists and practitioners, forestry professionals and policy makers, to address topical issues and come forward with a set of considered recommendations. Availability of land for afforestation is one such issue. It is set in the context of one of the policy objectives in *Forests, products and people* – to achieve a forest cover of 18% by mid-century, compared with the current 11%. Mobilising and planting the additional half million hectares that it will take to meet the objective will be no small task, particularly in the context of what could be regarded as competing policy supports for dry stock farming on land that is well suited to economic forestry.

The COFORD Land Availability Group, ably chaired by Dr Nuala Ní Fhlatharta, has worked over an extended period to address its terms of reference, and to tease out the many issues around land availability for afforestation. It has commissioned and completed pioneering work on quantifying the available land resource, and on classifying its suitability for forestry. This work, together with other analyses and recommendations, are captured in the group's report Land Availability for Afforestation - Exploring opportunities for expanding Ireland's forest resource. Additional supporting reports are available on the COFORD website.

This body of work represents the considered views of forest sector stakeholders on how best to move towards forest cover goals, in the context of increasing and sustaining wood production, and growing the public goods contribution of the forest sector. It has been a difficult task successfully achieved. I thank all those who have been involved in the process, from the Forest Service to the National Parks and Wildlife Service, the EPA and Teagasc, and the COFORD members and other stakeholders, for their commitment and determination to arrive at a set of agreed recommendations. Their combined efforts have already influenced practice and I am sure will continue to do in the future, and will support the national afforestation effort.

Michael Lynn
Chairman

Preface

The potential of Irish forests to contribute to our environmental, economic and social well-being is now well recognised. There is a greater appreciation of the benefits of expanding the forest resource in the context of wealth creation through the supply of raw material for our timber processing sector and fuel for our rapidly expanding bioenergy sector. New and existing forests contribute to rural communities through the package of grants and incentives on offer and the sale of timber. The ecosystem services (including climate change mitigation) provided by forests is increasingly acknowledged and quantified.

It is incumbent on those charged with overseeing the forest sector to ensure that our forest estate is developed in a sustainable manner and that public funds are well spent. As the natural resource that is our forest estate expands structures must be created and developed to support the leveraging of this asset to optimise its return to the owners, the community, industry and to the state.

It is in this context that the COFORD Land Availability Working Group set about our task of identifying the factors that impact on the availability of land and making recommendations on how these can be addressed. The group met over 20 times over a 3-year period and, following discussion, robust debate and presentations from subject-matter experts, came through a process of deepening our understanding of the issues involved. The submissions received from the public consultation process served to inform our work and brought a range of perspectives to the discussions.

The group has already submitted recommendations to the Department of Agriculture, Food and the Marine that contributed to the consultation process in relation to the Forestry Bill and the Forestry Programme 2014–2020. The 28 recommendations in the report remain and it is heartening to see that several of the recommendations from the group are already being addressed through proposed changes in the classification of land for grant and premium purposes, DAFM COFORD funding calls and changes in relation to the taxation of profits from timber sales in Budget 2016. The group believes that this report is only the first step in addressing the issues identified and there needs to be an Action Plan to proactively address the recommendations. As economic, social and environmental circumstances change the recommendations will need to be revisited.

I would like to thank Minister of State Tom Hayes TD for his interest and support during this process. The Chairman of the COFORD Council, Michael Lynn and Dr Eugene Hendrick were invaluable to the process and I would like to express my gratitude to them for their encouragement.

This report represents the work of all the members of the CLAWG and I would like to thank them for contributing and persevering with the process. I would particularly like to express my appreciation to Liam Kelly and Emer Eagle of Teagasc who provided secretarial and administrative support to the group.

Dr Nuala Ní Fhlatharta
Chair
COFORD Land Availability Working Group

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Summary

In order to examine the factors surrounding land availability for afforestation the COFORD Council Land Availability Working Group (WG) was established in February 2012 to consider issues relating to land availability and to examine both constraints and incentives to achieving forest cover goals. The group, one of four established by the 2011-2014 COFORD Council, comprised council members as well as representatives of the forest sector (forest owners, professional bodies, and industry representatives) and of government departments and state agencies (Appendix A).

Its terms of reference were:

- To identify and document, the area of land suitable for afforestation.
- To consider Government and EU legislation and policy, the work of the Forest Policy Review Group (FPRG), research and any other information pertaining to land availability.
- To identify and quantify the productivity thresholds and environmental designations and planning issues as they impact on land availability for afforestation, taking into account species considerations.
- To consider other factors including procedural, socio-economic and policy measures, taking into account the work of the FPRG, the Malone Report (2008) and other relevant research relating to land availability for afforestation.

Recommendations

The recommendations of the Working Group are as follows:

Site Classification for Irish Forestry (SCIF)

Recommendation 1
The Site Classification for Irish Forestry (SCIF) (Farrelly & Gallagher, 2013) to be used in assessing site suitability for afforestation (both grant aided and non-grant aided) from a productivity perspective. Training in the use of the system to be provided to foresters involved in afforestation. Teagasc to provide a field-based guide to the operation of the classification.

Recommendation 2
In conjunction with Recommendation 1, the Forest Service, EPA and NPWS undertook work to refine habitat, water quality and other requirements related to the afforestation of land currently classified as being unenclosed. This work took into consideration cumulative and in-combination impacts, and relevant national and EU legislation and regulations.

It needs to be determined (with effective stakeholder consultation and involvement) how best to take this work forward to achieve good environmental outcomes while not overburdening the application process or applicant.

Recommendation 3
The definition of Grant and Premium Categories to be reviewed in the context of the proposed SCIF.

Recommendation 4
Further work in refining SCIF category E (limited) to be undertaken, with a view to identifying those sites that will not need a second fertiliser application.

Research and Innovation

Recommendation 5
The Forest Service and forest sector to continue to engage directly with the NPWS on the development of the Hen Harrier Threat Response Plan, with a view to (inter alia) creating opportunities for afforestation in Hen Harrier SPAs as soon as possible.

Recommendation 6
Research the potential application of a critical loads, catchment-based approach to:

- *afforestation levels in acid sensitive catchments (taking into account recent reductions in air pollution and rainfall acidity); and*
- *afforestation and harvesting in the context of aquatic ecology and sensitive species.*

Recommendation 7
The Forest Service to update its environmental guidance documentation, taking into account more recent scientific information on issues such as acidification and siltation. The update will consider the potential of buffer zone management options to mitigate the potential negative impacts of eutrophication and sedimentation. The update will involve the participation of scientists from relevant areas of research.

Recommendation 8
Any further proposed designations of land for environmental purposes to be referred to Forest Service and forestry stakeholders, to consider the potential impact on the availability of land for afforestation.

Recommendation 9
Review Forest Service policy on high pH sites following an investigation on the impact on various trees species of high pH and free calcium in the topsoil and subsoil and their relationship to water table levels.

Recommendation 10
Assess the suitability of alternative species, provenances and species mixtures for afforestation of low productivity sites and those potentially impacted by climate change.

Recommendation 11
Reliable sources of native planting stock to be made available for afforestation. Birch to be an approved species under the Forest Service Afforestation Scheme, using selected and improved planting stock and the continuation of the ongoing improvement programme.

Recommendation 12
Continued national and company-led investment in forest-related R&D and innovation to take place, including in the following areas:

- *short-rotation forestry;*
- *evaluation of the benefits of agro-forestry;*
- *sustainable forestry practices and policies; and*
- *the use of afforestation to advance environmental objectives and to deliver ecosystem services.*

Socio-economic issues and taxation

Recommendation 13
The forest premium to be guaranteed at entry level rate and the landowner to be entitled to any increases in the rate that may occur in the future.

Recommendation 14
Forest premium to be on a comparable footing with other farm enterprises: compensation for incomes foregone (forest premiums) should be at a comparable level to other profitable farming enterprises.

Recommendation 15
Continue 100% grant aid for afforestation, with a review of grant levels and structure to be undertaken.

Recommendation 16
Forestry income to be excluded from the High Earners income restrictions for taxation purposes. The forestry premium should be disregarded when determining pension entitlements for those entitled to a non-contributory old-age pension.

Recommendation 17
Forestry income to be allowed to be declared over a number of taxable years (the averaging of sugar-beet restructuring payments over a 6-year period is an example of a similar approach).

Recommendation 18
A Tax Clearance Certificate need only be provided by the applicant for the Afforestation Scheme, and not by other joint owners of the land. Old age pensioners not registered with Revenue for taxation purposes and/or not required by Revenue to provide annual accounts, should not have to provide current Tax Clearance Certificates to the Forest Service on availing of the Afforestation Scheme.

Administration of the afforestation scheme

Recommendation 19
The DAFM customer charter to be used to ensure that standards to streamline protocols and the application process for all schemes are in place. Forest Service documentation to be reviewed to ensure that it is positive and encouraging towards afforestation.

Recommendation 20
The maximum timeframe for the processing of straightforward afforestation approvals and subsequent payments to be three months.

Recommendation 21
The Forest Service to develop a system, in consultation with Registered Foresters and others, to reduce the level of multiple applications that are received for the same land.

Recommendation 22
For the purposes of the Afforestation Scheme, a Certificate of Title signed and stamped by a solicitor to be sufficient proof of ownership.

Recommendation 23
The possibility of a multi-annual budgeting approach to the Forestry Programme to be investigated and considered.

Recommendation 24
Where an application for afforestation is refused, the reasons for the refusal to be set out clearly and in greater detail to the applicant by the Forest Service.

Recommendation 25
A cost/benefit analysis be undertaken to determine the impacts of changes to schemes, before such changes are implemented.

Recommendation 26
The role of the Agriculture Appeals Office be expanded to cover all forestry appeals.

Promotion of the afforestation programme

Recommendation 27
That an active promotion campaign be continued and expanded to encourage afforestation and woodland creation.

Recommendation 28
Amend the Forestry Act (2014) to remove the power to register a replanting order as a burden on land, or register the licence or replanting order as a deed following the granting of a licence.

Photo courtesy of Steven Meyen, Teagasc

Section 1
Land Availability Working Group – terms of reference and process

Overview

Ireland faces a number of challenges to realise the policy to expand forest cover, from the current 11% of the land area of the country to 18% by mid century as outlined in *Forests, products and people* (Department of Agriculture Food and the Marine, 2014) and as recently endorsed by *FoodWise 2025* (Department of Agriculture Food and the Marine, 2015). Such an expansion and the associated rate of afforestation is needed to provide a sustainable level of wood supply from 2030 onwards, and to continue to provide environmental services from existing and new forests.

An afforestation programme is dependent on the availability of previously un-forested land for planting. Land is a limited resource for which there are competing uses. Besides afforestation, these include agriculture (the dominant use category), infrastructure, and housing. Serious constraints exist in relation to land availability for afforestation. These relate to the large areas considered essential for the existing and expanding agricultural enterprises and sizeable areas with environmental constraints.

Some 1.50 million ha are already under forest cover (ca 735,000 ha) or are otherwise not physically available for forestry (urban areas, roads and rail, lakes and watercourses). Although the remaining 4.6 million ha are capable of achieving a forest productivity level equivalent to yield class 14 cubic metres/ha/yr, or more, some 0.90 million ha lie within the main environmental constraint areas (Natura 2000 sites, fresh water pearl mussel areas, etc.). Most of the balance is currently being farmed, leaving an area of circa 0.28 million ha outside the main environmental constraint areas, made up of 0.10 million ha of grassland and 0.18 million ha of productive unenclosed land. Given these constraints on land availability, the afforestation targets over the coming years are challenging.

In order to examine these issues the COFORD Council Land Availability Working Group (WG) was established in February 2012 to consider issues related to land availability for afforestation and to examine both constraints and incentives to achieving afforestation goals. One of four groups established it was comprised of members of the council and representatives of the forest sector (forest owners, professional bodies and industry representatives), as well as representatives of relevant government departments and state agencies.

Terms of reference

The terms of reference of the WG were:

- To identify and document, in view of Government and EU legislation and policy, the area of land suitable for afforestation, while taking into account the work of the Forest Policy Review Group (FPRG), research and any other information.

- To identify and quantify the productivity thresholds and environmental designations and planning issues as they impact on land availability for afforestation, taking into account species considerations.

- Other factors to be considered include procedural, socio-economic and policy measures, taking into account the work of the FPRG, the Malone Report and research findings.

- A stakeholder consultation process to be undertaken to ensure that the broader views in relation to afforestation are considered.

- Recommendations should be made on ways to ensure achievement of afforestation goals.

The full Working Group met on 20 occasions, including site visits to Cos Kerry and Wicklow. Presentations were made by a number of organisations and individuals whose background, interests and expertise related to land availability for afforestation and environmental protection. There was also ongoing engagement between the Forest Service, the NPWS and the EPA, which were represented on the group. The public was invited to submit views and proposals on land availability for afforestation to the group as part of a consultation process. Submissions received are listed in Appendix B.

Public consultation and other consultative processes and matters arising

As outlined in the terms of reference, a public consultation process was initiated in July 2012. This also included a number of presentations to the WG from individuals and organisations.

Nineteen submissions were received. The group considered each of the submissions and these informed their discussions and the drafting of recommendations.

A workshop on unenclosed land was held in June 2012. Further presentations on the Birds and Habitats Directive and on the possible impact of reductions in pollutant content in precipitation were made to the WG in December 2012 (these and presentations from the workshop are available at www.coford.ie/landavailability). The Forest Service rationale and legislative basis for its policy on unenclosed land was presented and is outlined at www.coford.ie/landavailability.

It was generally agreed by members of the group that unproductive sites, below yield class 14 Sitka spruce (or equivalent) should not be considered for afforestation under the standard afforestation scheme due to environmental sensitivities, low productivity and poor economic returns. The issues raised were primarily in relation to areas capable of growing yield class 14 or higher, in the context of the number of fertiliser applications required to sustain productive growth, and the implications for water quality and biodiversity, particularly the impact on sensitive species such as the freshwater pearl mussel and salmonids.

A number of issues were identified as having an impact on the availability of unenclosed land. Recommendations to address them ranged from immediate policy changes to longer-term measures. Some require further research before they can be implemented. In addition, it will be necessary to investigate the potential environmental impact of afforestation on some classes of land identified as suitable for afforestation from a productivity perspective. These research recommendations (Appendix E) informed the work of the COFORD Council Research Needs Working Group – see report at https://www.agriculture.gov.ie/media/migration/research/whatsnew/ForestResearchIreland20143Layout1091014.pdf

However, the requirement for environmental assessment at development application stage will remain for certain sites. It is recognised that the recommendations made will need to be implemented in a manner consistent with EU Environmental Law and relevant national transposing legislation.

Focus of discussions

The working group focused in particular on the development and use of a site classification system for unenclosed land outside of the main areas with environmental constraints. The system was developed as a result of research commissioned by the WG and carried out by Niall Farrelly (Teagasc) and Gerhardt Gallagher (forestry consultant). Termed - Site Classification for Irish Forestry (SCIF) - the system enables unenclosed land in particular to be classified and assessed for afforestation using criteria relating to site productivity.

Besides the introduction of SCIF for classification purposes, the group has made a number of other recommendations which it considers can impact positively on land availability for afforestation. These relate to refinement of criteria used to protect and enhance habitats arising from afforestation, particularly on unenclosed lands; the development of woodland schemes and silvicultural systems for areas with conservation constraints; more active engagement between the Forest Service and the NPWS and stakeholders on the Hen Harrier Threat Response Plan; research on the application of critical loads and a catchment approach in acid sensitive areas. Other recommendations relate to socio-economic and regulatory factors affecting the afforestation programme and how it is perceived by potential participants, its associated grant and premium schemes and promotion.

Section 2

Forestry in Ireland – A wider context

This section gives an overview of various aspects of Irish forestry, afforestation, and land availability, all of which influenced discussions within the Working Group throughout the process.

Afforestation screening and SEA procedures - role of the Forest Service and the other regulatory bodies

All afforestation applications undergo the following screening and assessment:

- an EIA sub-threshold screening, to assess whether or not the proposed development is likely to have significant environmental effects S.I.558/ 2010 (relating to the EIA Directive),

- Appropriate Assessment Screening, following the Forest Service Appropriate Assessment Procedure (AAP), to identify if there is a possibility of a significant effect on a NATURA site (SAC or SPA) - under S.I. 477/ 2011 (relating to the Birds and Habitats Directives),

- assessment in terms of water quality and possible impact on waterbody status, in accordance with regulatory responsibility under S.I. 722/ 2003 (relating to the Water Framework Directive).

All the assessments must take into account ex-situ impacts (e.g. impacts on a downstream SAC) and cumulative impacts (e.g. recent afforestation and existing forest cover within a particular waterbody). The Forest Service also undertakes referrals to prescribed consultation bodies (NPWS, Inland Fisheries Ireland, County Councils, EPA, An Taisce). Responses received are evaluated as part of the environmental assessment process.

In some cases, an assessment may result in further information being sought, for example, an EIS or a NATURA Impact Statement, to enable the Forest Service to evaluate the project further.

National forest policy and national afforestation programmes or plans are subject to the Strategic Environmental Assessment Directive.

Forest cover and recent afforestation trends

The total area under forest cover in Ireland at the end of 2012 was 732,000 ha, which accounted for 10.5% of the land area of the country (National Forest Inventory, 2013). 342,000 ha were privately-owned, with 389,000 in public ownership (most of which is owned and managed by Coillte, the State Forestry Board).

The annual afforestation target as outlined in *Forests, products and people* envisages 18% forest cover being achieved by mid century. This will entail an afforestation programme of 15,000 ha per year from 2020 (as the Forestry Programme 2014-2020 envisages 43,400 ha being afforested up to the end of 2020).

In 2014, 6,252 ha were afforested, 6,249 ha by private individuals. The ownership profile was such that 6,009 ha (or 96%) qualified for the farmer rate of premium. Approximately 76% of the area was planted with conifer species, the balance comprising broadleaves. The average area planted was 6.5 ha. This profile was similar to planting in recent years, although the average forest size has fallen slightly. Some 106 ha of unenclosed land were planted in 2013, compared with 114 ha in 2012.

Land resource potentially available for afforestation

The WG agreed to consider all land that could potentially be available for afforestation, irrespective of owner objectives and end-use. Opinions as to the relative merits of different owner objectives e.g. wood/bioenergy production, recreation, biodiversity, income streams were not considered.

In order to clarify the overall availability of land for afforestation, taking into account productivity and environmental constraints, a study (funded by DAFM) was undertaken by Dr Niall Farrelly (Teagasc) and Dr Gerhardt Gallagher (forestry consultant). The work also included the development of a site classification system, which is discussed further on in the report.

The study found that of the total land area of the Republic of Ireland (c. 6.9 million ha):

- 1.49 million ha was under forest, waterways or otherwise being utilised (urban areas and transport) and was therefore unavailable for afforestation,
- of the 4.6 million ha capable of achieving yield class 14 or more:
    - 0.9 million ha occurred within the main environmental constraint areas for afforestation (e.g. Natura 2000 sites, fresh water pearl mussel areas, etc.),
    - leaving a balance of 3.8 million ha,
    - of which 3.5 million ha was being farmed, 0.28 million ha was not being farmed and occurred outside the main environmental constraint areas (comprising 0.10 million ha of grassland and 0.18 million ha of productive unenclosed land).

The total area potentially suitable for forest expansion (i.e. 4.6 million ha) was assessed in relation to agricultural use range and afforestation potential. On the better quality land, classified as having a "wide" usage range, representing 2.8 million ha, the availability of land currently in agriculture will continue to depend on farmers changing from traditional enterprises to forestry. This may prove to be challenging, as these lands will continue to be the focus of expansion in dairy enterprises (particularly with the recent removal of milk quotas), tillage and the more profitable beef systems. On these lands the availability of land for forestry can be expected to be limited, judging by the high usage rate (c. 96% of grassland being farmed), the wide range of agricultural options available and margins in dairying and tillage. However, within this usage range there are 64,000 ha of potentially suitably productive land not currently in farming and outside the main environmental constraint areas.

On lands classified as being "limited" for agriculture, representing 1.8 million ha, there is wider scope for afforestation. These lands have a higher proportion of difficult soils, often economically marginal for agriculture, with forestry presenting a viable alternative land use option. However, while the returns to forestry are comparable to cattle and sheep systems, farmers seem to be unwilling to afforest for a variety of reasons. The future availability of land for forestry in this category will depend on agriculture commodity prices and whether farmers will invest in drainage and reclamation work to expand or enter dairying. Also, some farmers are unwilling to enter forestry for social reasons and for other reasons such as permanent land-use change (Casey & McHugh, Teagasc 2013, www.coford.ie/landavailability). A significant area of land suitable for afforestation (c. 220,000 ha) exists in this usage range that is not currently in farming, and which is outside the main environmental constraint areas.

The achievement of 18% forest cover would require an additional 510,000 ha of land to be planted. In order to achieve this target it may be necessary to consider afforestation on land that has little or no agricultural output value. This is discussed in the next section.

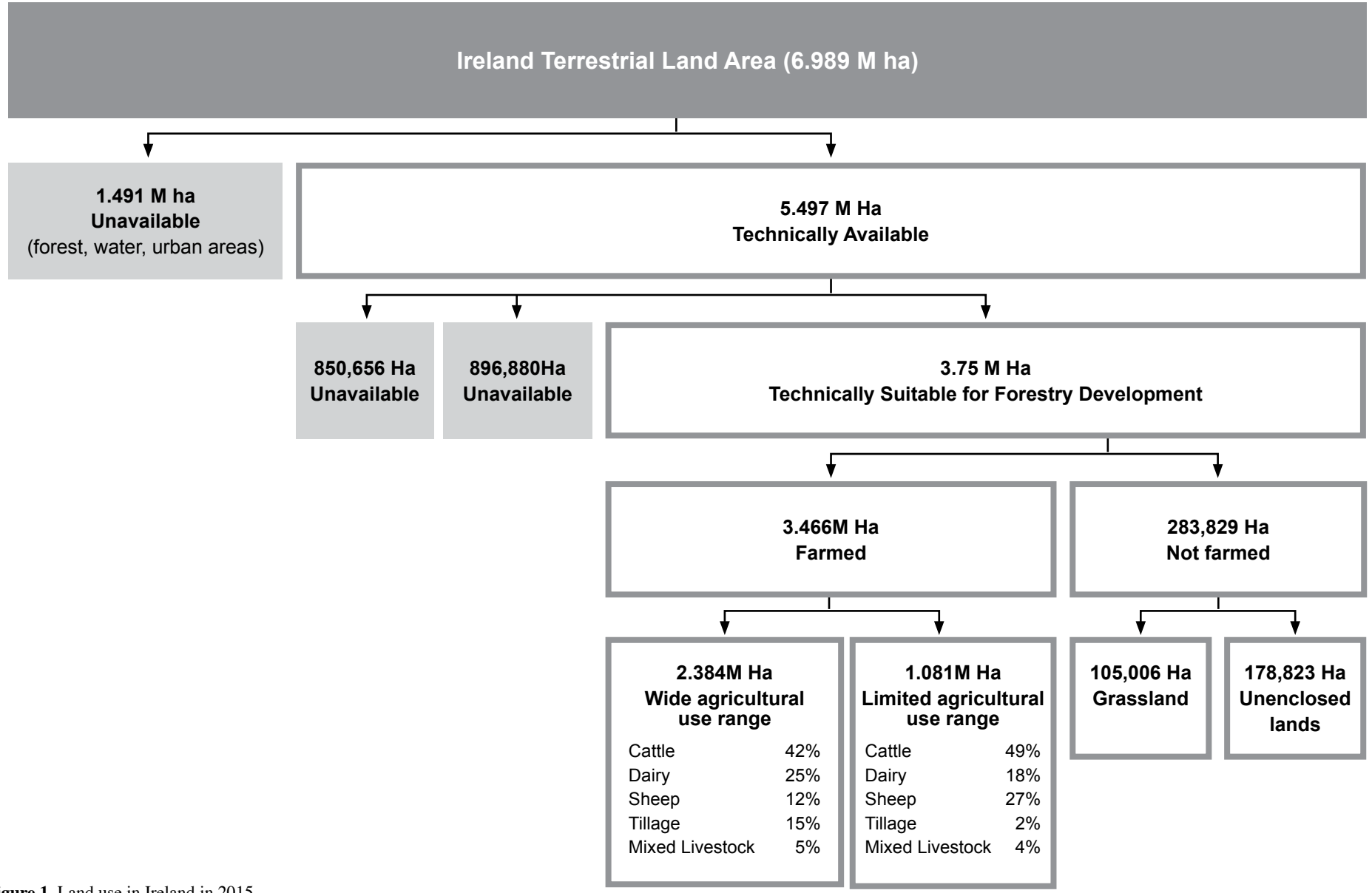

Figure 1. Land use in Ireland in 2015.

Table 1: Land availability for forest expansion in the Republic of Ireland, stratified according to four levels of availability (after Farrelly and Gallagher, 2015).

Level	*Landuse*	*Area (ha)*	*% Ireland*	*Total*
Level 1: Land biophysically unavailable for forest expansion	Forest	735,511	10.5	
	Other woodland	16,720	0.2	
	Scrub	27,543	0.4	
	Water	171,368	2.5	
	Urban	160,966	2.3	
	ESB	29,554	0.4	
	Rail	8,115	0.1	
	Public Roads	118,684	1.7	
	Buildings	223,467	3.2	1.49 million ha (21.3%)
Level 2: Land biologically unsuitable for forest expansion	Bare rock and outcrops	230,432	3.3	
	Coastal Sands	5,928	0.1	
	Raised Bogs and Fens	107,907	1.5	
	Salt Marsh	352	0.0	
	Deep Peat	298,014	4.3	
	Heathland	61,985	0.9	
	Unproductive	145,620	2.1	0.85 million ha (12.0 %)
Level 3: Land affected by National and EU designations and policies	Area designated for protection of Hen Harrier	54,399	0.8	
	National designations (Natura 2000 sites, NHA and Nature reserves)	180,632	2.6	
	Fresh water pearl mussel (6 km priority catchment area)	362,507	5.2	
	Fresh water pearl mussel (catchment)	146,522	2.1	
	Potentially acid sensitive	153,061	2.2	0.90 million ha (12.9%)
Level 4: Land most likely to have potential for forest expansion	non fishery sensitive	3,259,524	46.6	3.75 million ha (54.0%)
	fishery sensitive	490,894*	7.0	
Total land area		**6,989,537**	100.0	

*Where screening of afforestation applications may be locally applicable.

Unenclosed land and afforestation

"Unenclosed land" refers to areas that were not enclosed for agriculture or other purposes over the past two centuries. Although a large area of unenclosed land was afforested over the second half of the twentieth century, there has been a sharp reduction in its afforestation over the past two decades. This is because of growing awareness of its low potential productivity for forestry, the level of fertiliser inputs required to sustain productive growth, and associated ecological values. Only 114 ha of unenclosed land were afforested in 2012, a figure that dropped to 106 ha in 2013.

The concept of enclosed and unenclosed land dates to the late 1960s when it was found there was a relationship between Ordnance Survey map ornamentation and the need for fertiliser phosphorus application on afforestation sites. It was later used in conjunction with the Sitka spruce yield class 14 threshold to determine site suitability for afforestation.

Because of the environmental and forest productivity concerns regarding the planting of unenclosed land, the Forest Service of the Department of Agriculture, Food and Marine changed the rules governing the approval and associated grant and premium conditions for afforestation of such land in 2010 (www.coford.ie/landavailability - Forest Service Circular 18/2011 – Land Types). At the same time, the annual forest premium for any unenclosed land deemed suitable for afforestation was reduced. The change was a significant cause of concern for the sector, particularly among affected landowners and companies involved in afforesting and managing such sites. It was also considered by the WG to have an impact on the availability of land for afforestation, such that any recommendations emerging would be considered and adopted without delay. Arising from these considerations a new system for classifying land availability for afforestation - SCIF - was developed by Farrelly and Gallagher (2013).

Photo courtesy of Steven Meyen, Teagasc

Section 3

Output of the Working Group

The following sections present the outputs of the working group based on its re-evaluation of the recommendations of the Malone Report, and its recommendations under the headings:

- Site Classification for Irish Forestry (SCIF)
- Woodland creation schemes, silvicultural systems and ameliorative measures on sites with conservation and environmental issues and constraints
- Research and innovation
- Socio-economic issues and taxation
- Administration of the Afforestation Programme
- Promotion of the Afforestation Programme.

Review of the Malone Report

As outlined in the terms of reference, the group revisited recommendations made in the Malone Report: *Factors Affecting Afforestation in Ireland in Recent Years*, which was completed in 2008

Of the 18 recommendations made by Malone, the group was of the view that recommendations 10 and 11 were no longer relevant (see Appendix D). One (recommendation 14) was considered to be outside the terms of reference of the WG. It was agreed that many of the remaining recommendations made by Malone were still relevant and merited re-evaluation in the light of policy, environmental and socio-economic changes in the interim

The recommendations of the Malone report informed the work of the WG in as much as they may influence land availability for afforestation.

Site Classification for Irish Forestry (SCIF)

Overview

An afforestation programme is dependent on the availability of non-forest land for planting. Land is a limited resource and there are competing land uses including agriculture, infrastructure and housing. In addition, factors such as environmental protection, low productivity and the current Forest Service policy, whereby in any one afforestation project the amount of unenclosed land that can be included cannot exceed 20% of the area of enclosed land[1], restricts the amount of land that may potentially be planted.

The Forest Service stipulation that former unenclosed land that has been modified since 1 January 2004 may not be classified as E/I (enclosed/improved) for the purpose of the afforestation schemes may have resulted in the exclusion of productive land from the afforestation programme. In addition the increased targets for agriculture (FoodWise 2025 www.agriculture.gov.ie) and other competing land uses may result in afforestation not being considered an option by some landowners.

The 20% unenclosed land threshold, irrespective of productivity, removes areas of land that potentially could be suitable for planting. However, unenclosed land accounted for just 4% of the afforestation programme in 2010 (the year prior to the rule change).

The SCIF (Site Classification for Irish Forestry) system (Table 2) identifies and characterises land using indicators of productivity potential (soil type, nutrient status and/or plant community analysis). Its further development and use should result in a more reliable classification of land based on its productivity potential and its ability to support forest growth, and whether land is suitable for afforestation/woodland creation and for grant aid.

Development and proposed use of the SCIF

The SCIF system devised by Farrelly and Gallagher (2013) outlined in Table 2 utilises soil and vegetation data to provide an indication of site fertility and productivity. It has seven fertility classes (referred to as site types A - G in descending order of afforestation suitability), and provides criteria for evaluating whether land is suitable for productive tree growth. Land can then be determined as suitable or not for afforestation grant aid, based on its capacity to grow a commercial crop of Sitka spruce with a productivity potential of yield class 14. The classification approach has been devised so it can be understood and used by qualified foresters. It will be supported by a field guide. Sites with permanent pasture (A and B), rush-pasture (C) and bracken (D) will generally be most suitable for afforestation with a range of conifers and some broadleaves. Where fertility indicating plants, such as soft rush (*Juncus effusus*) and vernal grass (*Anthoxanthum odoratum*) occur on site type E they indicate suitability for afforestation, with lower than standard rates of fertiliser being required. The work that accompanied the development of the classification showed that certain classes of unenclosed sites have good potential productivity with the capacity to achieve yield class 14 and above.

Further research will be needed to determine whether site type E can be subdivided and if purple moor grass (*Molinia caerulea*) dominated sites may be suitable for afforestation with targeted fertiliser inputs. Further refinement of the SCIF system would entail a calibration of indicator values for common plants under Irish conditions, and further characterisation of forest tree species suitability.

The current Forest Service policy whereby the amount of unenclosed land in any afforestation project cannot exceed 20% of the area of enclosed land, restricts the amount of land that may be potentially planted. In addition, the Forest Service procedure whereby former unenclosed land that has been modified since 1 January 2004 may not be classified as E/I (enclosed/improved) for the purpose of the afforestation schemes, may have resulted in the exclusion of land at or above the productivity threshold from the afforestation programme. The 20% unenclosed land threshold, irrespective of productivity, results in land being excluded that potentially could be suitable for planting. The introduction of the SCIF system (Table 2) enables these issues to be addressed

[1] The unenclosed portion must meet the yield class 14 productivity threshold.

in a more scientific manner and supports the identification and characterisation of land using indicators of productivity potential (soil type, nutrient status and/or plant community analysis). Its development and use will result in a more reliable classification of land based on its productivity potential, bearing in mind ecological and other constraints that may arise.

The report recommends that a biannual assessment of land sources for afforestation be carried out to take account of pre-existing afforestation, the impact of agricultural intensification and/or other land use designations. This would complement the assessment of land use to cater for issues such as population growth and urban expansion, food and renewable energy production, and environmental and planning issues.

The introduction of the SCIF system for site classification represents one of the main recommendations arising from the group's deliberations. Its introduction and refinement over the coming years, together with a training programme on its use by forest practitioners, should enable more suitable land to become available for afforestation and at the same time ensure protection of important habitats, species and watercourses.

Table 2: Site classification for Irish forestry (Farrelly & Gallagher 2013).

Site type	*Forestry potential*	*Nutrient class*	*Soils included*	*R+N Score*	*Yield class (Sitka spruce) m^3/ha/yr*	*Fertiliser requirement*[l]	*Species suitability*
A	Very wide	Extremely fertile (hyper-eutrophic)	Grey-brown podzolics, brown earths, some reclaimed fen peats	>11.7	>26	None	Sitka spruce and diverse broadleaves & conifer species
B	Wide	Very fertile (eutrophic)	Grey-brown podzolics, brown earths, brown podzolics, gleys, reclaimed podzols & peats	9.7-11.6	22-26 (24)	None	Sitka spruce and diverse broadleaves & conifer species
C	Moderately wide	Moderately fertile (Sub eutrophic)	brown earths, brown podzolics, gleys, peaty gleys, some reclaimed podzols & peats	7.7-9.6	18-22 (20)	None	Sitka spruce and diverse conifer and some broadleaves
D	Somewhat limited	Moderately to poorly fertile (mesotrophic)	peaty gleys, peaty podzols, lithosols, cutaway blanket peats	5.7-7.6	14-18 (16)	Phosphorus	Sitka spruce, western red cedar, western hemlock and Macedonian pine
E	Limited	Mod. infertile (sub-mesotrophic)	blanket peats, gleys, peaty podzols, lithosols, some peaty gleys	5.0-5.6	14	Phosphorus applications	Lodgepole pine and Sitka spruce
F	Very limited	Very infertile (oligotrophic)	Blanket peats, some peaty gleys, peaty podzols, lithosols	4.0-4.9	10-12	Phosphorus and nitrogen applications	Lodgepole pine
G	Extremely limited	Extremely infertile (dystrophic)	Intact blanket peats/ raised bogs	<4.0	-	-	-

Recommendations regarding Site Classification for Irish Forestry (SCIF)

Recommendation 1

The Site Classification for Irish Forestry (SCIF) (Farrelly & Gallagher 2013) to be used in assessing site suitability for afforestation (both grant aided and non-grant aided) from a productivity perspective. Training in the use of the system to be provided to foresters involved in afforestation. Teagasc to provide a field-based guide to the operation of the classification.

Recommendation 2

In conjunction with Recommendation 1, the Forest Service, EPA and NPWS undertook work to refine habitat, water quality and other requirements related to the afforestation of land currently classified as being unenclosed. This work took into consideration cumulative and in-combination impacts, and relevant national and EU legislation and regulations.

It needs to be determined (with effective stakeholder consultation and involvement) how best to take this work forward to achieve good environmental outcomes while not overburdening the application process or applicant.

Recommendation 3

The definition of Grant and Premium Categories to be reviewed in the context of the proposed SCIF.

Recommendation 4

Further work in refining SCIF category E (limited) to be undertaken, with a view to identifying those sites that will not need a second fertiliser application.

Woodland creation schemes, silvicultural systems and ameliorative measures on sites with conservation and environmental issues and constraints, research and innovation

Opportunities for afforestation and the creation of different forest and woodland types on different categories of land, and which are complementary to other land uses should be explored. Environmental and biodiversity conservation considerations, designations and constraints may render land unsuitable and/or unavailable for standard afforestation in some circumstances, e.g. Natura sites (SPAs and SACs including adjacent areas) and NHAs and pNHAs. However, there may be opportunities for the establishment of certain woodland types in these areas.

The productivity threshold set by Forest Service (equivalent to yield class 14 Sitka spruce) excludes areas of land unsuitable for commercial forestry. Carefully planned woodlands may be established within environmentally sensitive areas. Appropriately located new native woodlands and riparian woodland can contribute to biodiversity conservation and water quality and flood risk reduction objectives. Such afforestation could for example, retain areas of open habitat for specific ground-nesting birds. There is also the potential to use silvicultural systems such as continuous cover forestry to contribute to these objectives.

In this context the cumulative impact of loss of unenclosed land nationally, given its importance as a breeding and foraging area for vulnerable and threatened upland bird species is a further consideration that must be taken into account.

Research and innovation

Continued national and company-led research and innovation are needed to support the implementation of a number of the recommendations made in this report. In this regard forestry is prioritised within the FORFÁS Report of the Research Prioritisation Steering Group 2012.

The new national forest research strategy FORI, developed by DAFM and the COFORD Council was published in 2014. A number of the priority areas outlined in the strategy have implications for land availability for afforestation and provide a basis for a number of the recommendations in this report.

Recommendations regarding research and innovation

Recommendation 5
The Forest Service and forest sector to continue to engage directly with the NPWS on the development of the Hen Harrier Threat Response Plan, with a view to (inter alia) creating opportunities for afforestation in Hen Harrier SPAs as soon as possible

Recommendation 6
Research the potential application of a critical loads, catchment-based approach to:

- *afforestation levels in acid sensitive catchments (taking into account recent reductions in air pollution and rainfall acidity); and*
- *afforestation and harvesting in the context of aquatic ecology and sensitive species.*

Recommendation 7
The Forest Service to update its environmental guidance documentation, taking into account more recent scientific information on issues such as acidification and siltation. The update will consider the potential of buffer zone management options to mitigate the potential negative impacts of eutrophication and sedimentation. The update will involve the participation of scientists from relevant areas of research.

Recommendation 8
Any further proposed designations of land for environmental purposes to be referred to Forest Service and forestry stakeholders, to consider the potential impact on the availability of land for afforestation.

Recommendation 9
Review Forest Service policy on high pH sites following an investigation on the impact on various trees species of high pH and free calcium in the topsoil and subsoil and their relationship to water table levels.

Recommendation 10
Assess the suitability of alternative species, provenances and species mixtures for afforestation of low productivity sites and those potentially impacted by climate change.

Recommendation 11
Reliable sources of native planting stock to be made available for afforestation. Birch to be an approved species under the Forest Service Afforestation Scheme, using selected and improved planting stock and the continuation of the ongoing improvement programme.

Recommendation 12
Continued national and company-led investment in forest-related R&D and innovation to take place, including in the following areas:

- *short-rotation forestry;*
- *evaluation of the benefits of agro-forestry;*
- *sustainable forestry practices and policies; and*
- *the use of afforestation to advance environmental objectives and to deliver ecosystem services*

Socio-economic issues and taxation

The Working Group identified a number of socio-economic issues as impacting on afforestation:

- the interaction between afforestation and CAP post-2013 scenario
- issues with farmer/non farmer status for premium rate purposes
- implications of the Early Retirement Scheme on farmer status
- taxation issues, including recent taxation changes
- Social Welfare conditions, including pensions and the Farm Assist Scheme
- the rate of Forest Premiums and the security of these rates into the future
- competition from other agricultural schemes
- farmers' attitudes toward forestry.

A UCD study[2], which examined farmers' goals and values with regard to afforestation, provided a useful background for the socio-economic discussions of the Working Group. The study found that financial incentives and the income from forestry are an integral part of a farmer's decision to plant. However, the decision to plant is not guided by profit maximisation alone.

The study showed that farmers typically follow economic rationale when planting marginal land but when it comes to displacing conventional agricultural enterprises, deeply held values about the appropriate use of "good" farmland can be the barrier to afforestation. The values include: preference for a farming lifestyle, control over land, continuing a family farming tradition, meeting a challenge, to pride of ownership. A common view in the farming community is that "good" land should not be planted even if it returns a higher income.

The Malone Report stated that: "the decision to covert a parcel of land or a farm to a forest is not a decision taken in isolation but is based on a variety of factors, family and personal circumstances as well as the relative attraction of premiums available. It is a major irreversible decision and removes other options for land use".

A national survey undertaken by the IFA (internal) in 2012 showed that the main motivation to afforest is the forest premium (45%) and the good return from forestry on marginal or unused land (33%). According to the survey the main reason farmers did not plant was the lack of available land, the land was needed for agriculture. Other barriers included the uncertainty of forest premiums (following the cuts in 2009), replanting obligation and the long-term nature of investment

[2] Duesberg, Stefanie, Vincent Upton, Deirdre O'Connor, Aine Ni Dhubhain (2014) Factors influencing Irish farmers' afforestation intention. *Forest Policy and Economics* 39:13-20.

A study undertaken by Teagasc in 2012 on the Non-Activation of Afforestation Approvals shows the main reasons a farmer did not plant was land ownership issues (29%), family issues (17%), current level of premiums (13%), long-term nature of forestry (10%). Other issues included uncertainty over CAP, unenclosed land not qualifying, required for farming and lack of confidence in the return on investment (Casey & McHugh, 2013).

The Working Group discussed the need for an educational and promotional programme to improve public perception of forestry and increase knowledge of the type of forests now being planted in Ireland. A better understanding of sustainable forest management, the social and environmental benefits of such management practices and amenity and recreational value of forests was also discussed.

Forest premium payments and recent developments in relation to the Afforestation Schemes and GLAS

The Forest Service promotes afforestation as an alternative land use for landowners through the provision of planting grants and annual premiums.

There have been a number of increases in forest premium payments, the last being 2007, when forest premiums increased by 15% under the Social Partnership Agreement. Since then there has been an 8% cut to premiums in the emergency budget in 2009. In addition, forest premiums are now liable for PRSI and USC. The reductions in forest premiums and the introduction of new "taxes" have seriously undermined confidence in the Afforestation Scheme. The Working Group's general recommendations on premium and grant rates are included in Recommendations 13 and 14.

Since the completion of the main body of work undertaken by the WG the final terms of the Afforestation Scheme and GLAS have been announced by DAFM and put in place. These developments are likely to impact on the level of afforestation. An outline of the measures is presented here, based on A Whole Farm Planning Approach published in the Irish Farmer's Journal in January 2015 (Houlihan 2015). A whole-farm planning approach forms an integral part of the new afforestation programme and the interaction of forestry with other farm schemes and eligibilities is critical (Box 1). The material is presented for information only, and while it is of relevance to some of the recommendations, it has not been considered by the WG as such, and therefore the recommendations remain as drafted.

Box 1 – A whole-farm planning approach to afforestation

Eligibility for Forestry Premium Payments
The new Forestry Programme 2014-2020 does not differentiate between 'farmer' and 'non farmer' premium rates. Enhanced premiums will be paid to all eligible applicants over a 15-year period to compensate for potential income foregone.

Forestry and the Basic Payment Scheme (BPS)
Eligible land planted with forestry since 2009 and which will be afforested under the new Forestry Programme 2014-2020 can be used to activate BPS entitlements, subject to similar criteria as previously applied. This is a major advantage for applicants in a position to benefit.

Forestry and Greening
While all farmers are required to comply with greening requirements, the majority will automatically qualify for the Greening Payment based on current farming practices (permanent pasture). Arable farmers may have commitments. For example, arable farmers with more than 15 ha of arable land must ensure that at least 5% of their arable land is an 'Ecological Focus Area' (EFA). Existing SPS-eligible forestry and newly planted BPS- eligible forestry can be accepted towards meeting EFA requirements.

Forestry and the Early Retirement Scheme (ERS)
The Early Retirement Scheme (ERS) is closed to new entrants and the new single category for forests premium may act as an incentive to retired farmers to plant, particularly where lands they had leased to qualify under the ERS are returned to them.

Forestry and Areas of Natural Constraint (ANC)
The current area threshold for Less/More Severely Handicapped Lowland is 30 ha, while the equivalent for Mountain type grazing is 34 ha. Planting a forest plot on a farm holding whose total eligible area is equal to or lower than the threshold (30 or 34 ha) would result in a pro-rata reduction in ANC payment. In the case of holdings above the threshold area, there may be opportunities to maximise ANC payment and also plant some land.

Forestry and the GLAS Agri-environmental Scheme
The GLAS scheme is not a whole-farm scheme and land parcels not associated with GLAS participation may be considered for the Afforestation Scheme. However, once land parcels are committed to GLAS, they cannot be planted without claw-back of GLAS payments already made. Forward planning is therefore required for potential GLAS applicants, which may allow the planting option to be considered on appropriate land parcels during the GLAS commitment period.

Taxation

Under the Taxes Consolidation Act 1997 Section 232, profits or gains from the commercial occupation of woodlands in the State are exempt from income tax. This exemption recognises that the physical profit from forestry is only realised when the timber is cut, which occurs only once in every generation. The relief on profit from sales is also in recognition of the fact that farmers who enter the afforestation scheme commit their land to forest in perpetuity.

The Finance Act of 2006 introduced restrictions which were aimed at ensuring that high income earners pay a minimum effective rate of tax annually. The "High Earners Restriction" limits the tax reliefs which can be used by any individual in order to reduce their tax liability for a specific year. Income from forest land was included under the associated reliefs subject to this restriction.

Forestry is a long-term capital intensive investment. The current tax provisions do not recognise the fact that income from forestry sales does not occur on an annual basis, and that farm foresters who earn this income do not fall into the general category of high income earners. Currently we have 732,000 ha of forest land. The majority (60%) is Sitka spruce, which has a rotation length between 35-40 years. Broadleaves (for example oak and beech) have an even longer rotation length at anything from 60 to 140 years. Forestry income is, therefore, based predominantly on a lump sum every 35 years plus (at clearfell). In summary, forestry income for farm foresters represents a once-off payment for years of inputs and accumulation.

The "High Earners Restriction" inadvertently impacts ordinary forest owners who are not high net worth individuals and could result in them being liable for income tax on income from woodlands realised at the end of the growing cycle which is compressed into a single tax year. The restriction is unfair and will reduce land availability as well as having consequences for roundwood mobilisation in the private sector.

The landowner's decision to plant is a long-term land use change needing consideration of socio economic implications, including how it compliments other farming enterprises, including future objectives and succession planning.

Farmers need to review the profitability of their current farm enterprise(s) and compare with the short and long-term indicative returns from forestry. Potential tax benefits and tax planning should also be considered.

Recommendations regarding socio-economic issues and taxation

Recommendation 13
The forest premium to be guaranteed at entry level rate and the landowner to be entitled to any increases in the rate that may occur in the future.

Recommendation 14
Forest premium to be on a comparable footing with other farm enterprises: compensation for incomes foregone (forest premiums) should be at a comparable level to other profitable farming enterprises.

Recommendation 15
Continue 100% grant aid for afforestation, with a review of grant levels and structure to be undertaken.

Recommendation 16
Forestry income to be excluded from the High Earners income restrictions for taxation purposes. The forestry premium should be disregarded when determining pension entitlements for those entitled to a non-contributory old-age pension.

Recommendation 17
Forestry income to be allowed to be declared over a number of taxable years (the averaging of sugar-beet restructuring payments over a 6-year period is an example of a similar approach).

Recommendation 18
A Tax Clearance Certificate need only be provided by the applicant for the Afforestation Scheme, and not by other joint owners of the land. Old age pensioners not registered with Revenue for taxation purposes and/or not required by Revenue to provide annual accounts, should not have to provide current Tax Clearance Certificates to the Forest Service on availing of the Afforestation Scheme.

Administration of the Afforestation Scheme

The Working Group identified a number of avenues to improve the administration of the scheme and thus aid uptake, and these are detailed below.

Procedural issues

- Joint ownership issues and tax clearance requirements in relation to owners who are not applicants for grant aid.
- Proof of ownership requirements.
- Lack of multi-annual budgets for forestry schemes leading to uncertainty and stop/go.
- The nature and the operation of the appeals process.

The WG discussed options to improve and streamline administrative process to reduce application timeframes and simplify the process. The Teagasc reports on the Non-activation of Afforestation Approvals (Appendices G and H) identified a number of procedural barriers to farmers engaging in forestry including land ownership, qualification for farmer rate as well as processing delays.

Administrative process

A number of elements in the afforestation scheme process were also identified as potential constraints, including:

- time taken to process afforestation applications
- administrative processes including level of complexity
- proof of ownership requirement for grant aid too demanding
- multi-annual budgeting needed to remove some of the uncertainty, as well as the stop/start approach associated with annual budgets, and provide greater confidence for landowners to plant and manage their forests.

The average timeframe for an afforestation application is four months. The length of time required to process applications[3] has been shown to be a deterrent in landowners deciding to afforest.

The application process involved in the afforestation scheme was seen as overly complex and in need of streamlining and simplification. Inconsistencies in the treatment of applications and implementation of rules can act as a disincentive to the success of afforestation applications. In addition, a positive engagement with applicants will enhance the potential to convert approvals to actual afforestation.

[3] Casey and McHugh (2013). Teagasc study on the decision to plant – a survey of non-activated approvals. www.coford.ie/landavailability

There is a differential of approximately 50% between the number of applicants who receive approval on an annual basis and those who proceed to plant their land. This is a significant waste of Forest Service and forester resources and needs to be addressed. The Teagasc survey found that land ownership issues were the reason for non-activated approvals in 29% of cases. In addition, Forest Service has reported that a significant number of applications are duplicates, submitted by different Registered Foresters.

Proof of ownership

The proof of ownership requirement for grant aid is too demanding. Land suitable for forestry is being excluded even though there is no dispute over ownership. Some of the issues discussed in the Working Group included lands in the Registry of Deeds, lands not registered, land recently purchased or transferred, deceased joint owner, registered owner deceased and next-of-kin applying for planting approval and registration not completed by one or more generations.

Multi-annual budgeting

Under the EU/IMF Programme of Support, Ireland committed to implementing a range of reform measures in the area of budgetary management, including multi-year fiscal planning and effective prioritisation of public expenditure over the medium term. The introduction of a new system of "performance budgeting" could bring a sharper focus on the actual outputs and outcomes delivered with scarce public resources. Performance-based budgeting is the practice of developing budgets based on the relationship between programme funding levels and expected results from that programme. It is a tool that programme administrators can use for more cost-efficient and effective budgeting outlays.

Multi-annual budgeting would remove some of the uncertainty, as well as the stop/start approach associated with annual budgets, and provide greater security to landowners in planting and managing their forests.

Legal issues

There are potential issues of legal liability for the state and from the landowner's perspective regarding the issuing of approval for planting unenclosed land, notwithstanding the unproductive nature of the land, where the crop subsequently fails. There are also potentially serious legal issues from failures at assessment stage to identify accurately the potential individual and cumulative impacts of projects on biodiversity and water quality.

Recommendations regarding administration of the afforestation scheme

Recommendation 19
The DAFM customer charter to be used to ensure that standards to streamline protocols and the application process for all schemes are in place. Forest Service documentation to be reviewed to ensure that it is positive and encouraging towards afforestation.

Recommendation 20
The maximum timeframe for the processing of straightforward afforestation approvals and subsequent payments to be three months.

Recommendation 21
The Forest Service to develop a system, in consultation with Registered Foresters and others, to reduce the level of multiple applications that are received for the same land.

Recommendation 22
For the purposes of the Afforestation Scheme, a Certificate of Title signed and stamped by a solicitor to be sufficient proof of ownership.

Recommendation 23
The possibility of a multi-annual budgeting approach to the Forestry Programme to be investigated and considered.

Recommendation 24
Where an application for afforestation is refused, the reasons for the refusal to be set out clearly and in greater detail to the applicant by the Forest Service.

Recommendation 25
A cost/benefit analysis be undertaken to determine the impacts of changes to schemes, before such changes are implemented.

Recommendation 26
The role of the Agriculture Appeals Office be expanded to cover all forestry appeals.

Promotion of the Afforestation Programme

Given the difficulties in sourcing adequate suitable land to sustain a viable planting programme, and the future of the forestry industry, it is imperative that the promotion of afforestation is given priority.

The uptake environment for afforestation changes as economic and environmental policies shift in relation to forestry and also in related areas, including agriculture. This, in conjunction with changes in land ownership and landowner circumstances, means that there is an ongoing need to promote afforestation. The approach to promotion needs to be re-examined, updated and adapted, particularly as the profiles of potential forest owners change.

The Working Group raised concerns about the power conferred on the Minister in the Forestry Act (2014) to register a replanting order as a burden on land and believe this will be a significant deterrent to landowners considering forestry as a land use option.

Recommendations regarding promotion of the afforestation programme

Recommendation 27
That an active promotion campaign be continued and expanded to encourage afforestation and woodland creation.

Recommendation 28
Amend the Forestry Act (2014) to remove the power to register a replanting order as a burden on land, or register the licence or replanting order as a deed following the granting of a licence.

Appendix A

Members of the COFORD Council Land Availability Working Group

Mr Paddy Bruton	Forestry Services Ltd, Forest Companies' Representative
Dr Michael Carey	Irish Timber Growers Association
Mr Peter Carvill	National Parks and Wildlife Service
Dr Catriona Douglas	National Parks and Wildlife Service
Mr Seamus Dunne	Forest Service (COFORD Council)
Dr Niall Farrelly	Teagasc
Mr Michael Fleming	Irish Farmers Association (COFORD Council)
Dr Gerhardt Gallagher	Society of Irish Foresters
Mr Liam Kelly	Teagasc
Mr John McCarthy	None-so-Hardy Nurseries (COFORD Council)
Tom McDonald	Forest Service
Dr Nuala Ní Fhlatharta	Teagasc (Chair and COFORD Council)
Mr John O'Reilly	Greenbelt Ltd.
Ms Geraldine O'Sullivan	Irish Farmers Association
Mr John Roche	The Forestry Company Ltd.
Dr Deirdre Tierney	Environmental Protection Agency

Appendix B

Submissions received during the public consultation process

Bernard Carey	Mid Western Forestry
Peter Carvill	NPWS
Fiachra Daly	
Michael Farrelly	
Kevin Hutchinson	Coillte
Fons Jaspers	Member Waterford Irish Wildlife Trust
Dr Roy Johnston	
Fearghal Kealey	
Camilla Keane & Roisin Kearney	An Taisce
Daragh Little	IFFPA
Tom McDonald	Forest Service
Aaron McNulty	IFA
Anja Murray	BirdWatch Ireland
Dr Áine Ní Dhubhain	UCD
John O'Reilly	Green Belt Ltd
Pat O'Sullivan	Society of Irish Foresters
John Phelan	Woodland Group Ltd.
Imogen Rabone	One Million Trees In One Day
Jack Tenison	Lough Bawn Woods
Deirdre Tierney	EPA

Copies of submissions are available on the website: www.coford.ie/landavailability

Appendix C

A summary of issues in submissions to the public consultation process

Introduction

A total of 19 submissions were received.

Three questions were asked: (1) what are the main issues affecting the availability of land for afforestation, (2) what are the main constraints to achieving afforestation target goals and (3) what are the incentives that would support the achievement of goals.

There was considerable comment, providing anecdotal evidence, on the reasons behind constraints to achieving afforestation goals, and in the rationale for not planting areas. In addition, there was a strong response on what types of forests/forest management should be promoted. In collating the substantial issues, only those relating directly to (1), (2) and (3) above were considered. Issues were ranked in order of their frequency of occurrence.

The main issues affecting the availability of land for afforestation

Environmental restrictions together with competition from agriculture were the two issues that respondents felt were affecting land availability for afforestation (Table C.1); others were acid sensitive sites and restrictions on the planting of unenclosed land. Issues raised in one submission only are not listed.

Table C.1: The main issues affecting the availability of land for afforestation as received in submissions.

Obstacles	***Frequency***
Environmental restrictions and designations	7
Agricultural competition/food production	7
Acid sensitivity	5
Unenclosed land	5
The afforestation targets should drive land suitable for forestry should drive afforestation targets	3
NPWS referrals	2
CAP Reform	2
Diminishing pool of landowners willing to plant	2

The main constraints to achieving afforestation target goals

The issue as to the security of the forest premium, together with the replanting obligation were the main constraints to achieving afforestation targets according to submissions. Other important issues were acid sensitivity designations, single farm payment uncertainty, tax implications, and the administration of grant applications (Table C.2). Some overlap between questions 1 and 2 was evident, environmental regulation was both an issue and constraint.

Table C.2: The main constraints identified as affecting the availability of land for afforestation.

Constraint	*Frequency*
Premium security	5
Replanting	5
Acid sensitive areas	4
Single farm payment uncertainty	4
Taxation treatment of forestry	4
Quick turnaround by FS/Scheme administration/bureaucracy	4
No Integrated land use planning	3
Farmers not aware of financial supports	2
Competition for land	2
Value of land decreasing/land prices	2
Environmental Regulations	2

What are the incentives that would support the achievement of goals?

A uniform interpretation of planting requirements by Forest Service personnel was important in providing certainty around the afforestation scheme, particularly in the evaluation of land suitability for planting using assessment of potential yield class. Other incentives included flexibility in replanting of harvested areas, a guaranteed forest premium rate, removal of the 20% threshold on unenclosed land, promoting a more positive forestry image, maintenance of the tax-free status of forestry and the introduction of additional measures to support Riparian/ Native woodland and agroforestry (Table C.3).

Table C. 3: The main incentives that would support achievement of afforestation goals.

Incentive	*Frequency*
The need for a uniform interpretation of site suitability/yield class assessment	5
Replanting flexibility	4
Guaranteed premium	4
Remove 20% ceiling on unenclosed lands	3
Forestry image not well enough promoted	3
Tax free income	3
Introduction of Riparian schemes/Agroforestry/NWS	3
Site by site assessment	2
Funding ringed fenced	2
Strategic mapping of land availability/Landuse together with site ecological assessment	2
SFP clarity	2
Benefits of carbon and ecosystem services	2
Positive demand for timber	2
Fencing may result in uneconomic investment	2

Appendix D

Review by the WG of Factors Affecting Afforestation in Ireland in Recent Years (John Malone, March 2008)

The recommendations from the Malone Report are listed, with comments by the WG.

Malone Report recommendation	***WG Comments***
1. *There should be an immediate review of processes between the Forest Service and National Parks and Wildlife with a view to eliminating duplication and unnecessary referrals. Clear protocols and time-frames between the two services should be put in place as a matter of urgency.*	*Although significant progress has been made in this area since the Malone Report, it was considered by the group to be an outstanding issue that still needs to be addressed. See Recommendation 22 of the current report.*
2. *The Forest Service should acquire additional expertise in regard to ecological issues and avoid the referral of a large proportion of cases.*	*Although the Forest Service has, since the report, employed an ecologist and an archaeologist, discussion centred on the number of cases that were still being referred to agencies outside the Forest Service and whether this continues to be necessary. This issue is addressed in the recommendations in current report.*
3. *An Appeals System should be put in place with immediate effect, either within the existing Departmental Appeals system or separately.*	*Progress has been made on this issue and, although an appeals process is now in place, the industry representatives on the Working Group had concerns as to whether the appeals process was fully independent, and made the point that the original decision-makers should not be involved in the appeals process.*
4. *An on-going survey should be carried out by the Forest Service to establish the reasons for withdrawals of applications.*	*A survey was carried out by Teagasc in 2005 and 2007 to establish the reasons for withdrawals, and was repeated in September/October 2012 as part of the work of the Working Group. Teagasc forestry advisers surveyed 2011/2012 applicants who were approved for afforestation but who had not progressed to planting their land. This is discussed in the current report and reported on in Casey & McHugh, 2013.*
5. *Any scope to further front load the premium should be exploited, with a view to overcoming concerns about land values.*	*The Working Group identified this as an issue that yet needed to be addressed. The need to preserve and guarantee the rate of the premium was a concern in relation to potential applicants*

Malone Report recommendation	***WG Comments***
6. *The distinction between farmers and non-farmers in the context of the Support Schemes should be reviewed.*	*This was an outstanding issue and was discussed during the work of the current group and recommendations were made in this context.*
7. *There is clearly an absence of hard data on a number of the environmental issues. Forestry interests have argued that they are unfairly targeted. The sector itself should assemble as much scientific data as possible. COFORD should give priority to these issues in its programme of activities.*	*COFORD-funded research has provided, and continues to provide, new information in relation to environmental issues. This information needs to be collated and interpreted and used to inform policy change. Any information gaps should be identified and research carried out to fill these gaps.*
8. *A greater emphasis should be given to achieving a balanced approach on a regional basis where environmental considerations arise. A decision to afforest should not always be a simple yes or no, especially in the context of acid sensitive soils.*	*This is still an outstanding issue. It was suggested that a more scientific approach would be beneficial in relation to these issues (see Recommendation 21). In addition it is proposed that woodland creation options encompassing other commercial opportunities and benefits should be developed that would address the sensitivities of appropriate sites (see Recommendations 8 & 9).*
9 *The absolute requirement to re-afforest should be amended in legislation. There should be clarity in whatever amendment is provided.*	*In surveys of landowners carried out this is still considered to be a disincentive to planting. This issue may be addressed, to some extent, by new legislation. There may, in some cases, be a good argument not to replant or not to replant immediately.*
10. *The balance between REPS and FEPS is critical. The lower limit of 8 ha in FEPS should be reduced and the upper limit of 40 ha extended on a scaled basis.*	*No longer relevant as scheme has effectively closed.*
11. *An assurance should be given that FEPS will be continued for the lifetime of REPS.*	*No longer relevant as scheme has effectively closed.*
12. *Heretofore the programme has been operated on a national basis. There is certainly a case for having a more targeted strategy. Access and tourist benefits are more appropriate to some parts of the country than others. This implies a wider menu of grant options, especially between timber and recreational.*	*The issue of a wider menu of grant options has been discussed by the working group members in the context of unenclosed land.*

Malone Report recommendation	***WG Comments***
13. *There is a case for the European Union to review its approach to afforestation. Some Member States are adequately afforested, while others such as Ireland are below average.*	*The group generally agreed with this recommendation and that decision makers and the formulators of European Union policy and legislation should consider the exceptional position of Ireland in relation to afforestation because of our low forest cover percentage.*
14. *Coillte should consider using a proportion of its profits to fund afforestation in lieu of paying a dividend to the Government.*	*Considered to be outside the terms of reference of the Working Group.*
15. *A Forestry Council should be established. Such an entity should be representative of the total sector with a balance in favour of practitioners in the sector. The Council would be non-statutory and should be mandated to generate a stronger forest culture, represent the totality of views in the sector and formulate views on promotional initiatives. It should inter-act with COFORD on its research activities.*	*The working group debated the need and potential format of such a council. The Forest Policy Review makes recommendations in relation to this issue.*
16. *A review of promotional strategies and initiatives should be carried out.*	*It was agreed that strategies and initiatives to promote forestry should be reviewed on a rolling basis having regard to changing circumstances.*
17. *Bord na Móna should be facilitated in converting a proportion of cut-away bog to forestry, through the BOGFOR Scheme.*	*The option to make submissions to the working group at the consultation stage was available in relation to this issue. However no submissions were received on this issue and it has not formed part of the discussions of the working group to date.*
18 *Greater clarity needs to be given to the role of forestry in regard to the climate change agenda, particularly as regards the wider carbon balance equation.*	*This is an important ongoing issue and the contribution of forests and forest owners to the climate change mitigation agenda should be recognised and acknowledged.*

Appendix E

Further research requirements

(The following research requirements were identified by the WG and submission was submitted to the COFORD Council Research Needs Working Group on 05/10/2012.)

The COFORD Council Land Availability Working Group is charged with examining the issues related to land availability for afforestation. Initial meetings explored and identified the range of issues involved and subsequent meetings focussed primarily on the issues surrounding the afforestation of unenclosed land. It is therefore premature at this stage to submit the full list of research needs related to land availability for forestry as identified by the group.

However, the members of the Working Group would be anxious that the research needs as identified by the group at future meetings are considered and incorporated into the document as prepared to by the COFORD Council Research Needs Working Group. It is apparent that many of the issues raised to date are unresolved and require further study/research before informed recommendations can be made.

The following is an interim list of research needs as identified in discussions, primarily but not exclusively related to the afforestation of unenclosed land.

1. Land availability for afforestation is a combination of many factors. In addition to the technical and legal constraints on afforestation, shifts in policy and changes in economic and socio-economic environment directly impact on afforestation levels. These include changes in EU schemes, including the CAP and in national economic and regulatory policy. Landowner attitudes, current land use and the relative profitability of competing land use all impact on land availability. There is need for ongoing research to assess the impact of changes at EU, national and local level and to provide information to policy makers on appropriate structure and incentives to ensure that appropriate planting targets are achieved.

2. Further information and quantification of the amount of lands that can produce crops of yield class 14 or greater that are without environmental constraint is necessary to guide forest policy in Ireland. An integration of all current information to characterise the nature and extent of land availability and suitability for afforestation and a quantification of the extent of various land use types, their potential suitability for forestry using soil and related spatial datasets needs to be provided.

3. To address the issues and concerns relating to afforestation of sensitive sites it may be possible to propose alternatives to conventional forestry that may improve the biodiversity value, reduce the impact or provide alternative end uses. However, many of these alternatives are poorly understood on such sites under Irish conditions. These include continuous cover forestry, short rotation forestry, agroforestry and other alternative silvicultural systems. Research is necessary to identify which systems are suited under Irish conditions on different site types.

4. Research on developing silvicultural and forest management systems appropriate for different types of sensitive sites is necessary. The development of ecologically-sensitive afforestation, management and harvesting protocols should be investigated and researched. This would inform the development of protocols for the afforestation of sensitive sites e.g. acid sensitive sites, fresh water pearl mussel sites, fisheries sensitive sites.

5. The potential and impacts of a catchment-based approach to afforestation on peatlands and other sensitive sites needs to be investigated. Research is needed to establish parameters to quantify the critical load of afforestation and afforestation type per catchment. Previous COFORD Council Discussion Papers introduced this concept. This presents a complex question as the impact of the full life cycle of crops are not fully understood. Research in this area would help move towards such an approach, if appropriate on e.g. hen harrier sensitive sites, water-sensitive sites.

6. Research on the ecology of forest tree species is necessary to ensure a sustainable forestry programme in Ireland. The suitability of different species and productivity and the role of site classification systems classifications, such as those based on soil or vegetation can provide practical guidance on species suitability and on potential yields. Site classification methods, such as the multifactor systems currently operated in Canada and Britain should be validated and/or modified for use in Irish forestry.

7. The relative impact of afforestation and success of afforestation with different tree species, including Scots pine, on peatland sites needs to be assessed.

8. The potential to increase yield class on unenclosed land by using improved Sitka spruce should be investigated. Although some work has been done on investigating its potential on productive sites there is very little assessment of its potential on lower productivity sites.

9. The potential to plant native broadleaves on unenclosed sites exists. However, there are questions regarding the productivity of such species on these sites and we also need a reliable source of broadleaves well adapted to such sites if we are to advocate afforestation with these species.

10. The potential for birch and alder exists but we do not yet have a source of improved native material and birch it is not an approved species under the Grant and Afforestation Scheme. Further work needs to be done to develop a good quality source of birch. The work should progress to ensuring that birch is an approved species for afforestation.

11. The impact on various trees species of high pH and free calcium in the topsoil and subsoil and the depth of same needs to be further investigated in relation to different woodland types. This information can then be used to inform the current policy.

12. The potential of buffer zone management, including seeding with grasses and the use of broadleaves, to mitigate the potential negative impacts of eutrophication and sedimentation needs to be further investigated and research should continue in this area.

13. Research should continue on other mechanisms to reduce the impacts of sedimentation, acidification and eutrophication at establishment, management and harvesting stages in forest crops.

14. The potential for alternative management and silvicultural systems that would limit the potential negative effect of afforestation should be investigated on sensitive sites e.g. CCF, limited coupe size.

15. The impact of other management practices including earlier planting after clearfelling and the use of “mop-up species” to manage the P spike should be researched.

16. The use of permanent riparian woodlands to control eutrophication and sedimentation on sensitive sites should be investigated.

17. New methodologies for more effective targeting fertilizer should be investigated under Irish conditions.

18. The impact of afforestation on specific bird populations is not yet fully understood e.g. hen harrier, merlin. Further work is needed on the impact of forestry on the bird population through the life cycle of the bird and also the life cycle of the forest.

19. Research is necessary to investigate how other countries handle forest management on environmentally sensitive sites and how these practices can be adapted for Irish conditions. The work should focus on countries with similar conditions e.g. Scotland.

Appendix F

Submission by the National Parks & Wildlife Service on environmental issues related to afforestation

The National Parks and Wildlife Service, recognising that Ireland historically lost almost all of its forest cover, supports afforestation. It will be understood that from the perspective of Irish wildlife, NPWS has a preference for the planting of trees of native species, among which the Scots Pine, which is believed to have died out in early historic times prior to its re-introduction, is included.

NPWS recognises that commercial conifer plantations using North American species provides habitat for native species such as the red squirrel, pine marten, and many species of birds. However, afforestation with these species radically alters the ecology and leads to the destruction of the habitats that existed prior to afforestation. For that reason, where there are scarce or vulnerable habitat types that are important in their own right or for the role they play in supporting elements of native biodiversity, afforestation using these species, or even native species, is likely to pose problems.

The framework of Irish law regarding the protection of habitats and species is set out in the Wildlife Acts 1976 to 2012, in the European Communities (Birds and Natural Habitats) Regulations 2011, and in the Planning and Development Acts 2000 to 2011. These operate by the protection of SITES, designated for the protection of specific habitats and or species, and for the protection of SPECIES, generally wherever those species occur.

Outside of the designated sites, the Birds and Habitats Directives impose certain additional requirements, e.g. Article 4(4) of the Birds Directive requires Member States to avoid the pollution or deterioration of bird habitats generally; Article 10 of the Habitats Directive requires Member States to encourage the management of features of the landscape which are of major importance for wild fauna and flora, such as rivers, field boundaries, ponds and small woods that act as stepping stones for migration, dispersal and genetic exchange of wild species.

In Ireland, there are different categories of designated site. Under the Wildlife Acts, these comprise nature reserves, refuges for flora and fauna, and Natural Heritage Areas (NHAs). Under the Birds Directive there are Special Protection Areas (SPAs) to protect birds and essential bird habitats, and finally, under the Habitats Directive, there are Special Areas of Conservation (SACs) to protect habitats and species that depend on those habitats. SPAs and SACs (including candidate sites that have been notified) are known collectively in Irish law as European sites, and they are often also referred to as Natura 2000 sites (the collective term used for designated sites in the Habitats Directive).

It is a requirement that, in considering the location, extent and nature of afforestation projects, these legal obligations will be fully met. Under the Planning Acts and the Birds and Habitats Regulations, all such projects require to be subject to screening for appropriate assessment and, if necessary, appropriate assessment. Screening must determine whether the possibility of a project, on its own or in combination with other plans and projects, having a significant effect on a European site. The potential to affect a site is not confined to a project that is within that site. For example, a project upstream of a sensitive river SAC may, by leading to a reduction in water quality, affect the site. Unless a significant effect can be ruled out, then an appropriate assessment of the implications of the project for the site must be undertaken, and the forestry project may be proceeded with only if it has been ascertained by the Forest Service that it will not adversely affect the integrity of the European site concerned.

Some areas that are not within a European site or other designated site may contain populations of protected species of flora or fauna, including both resident and migratory bird species. Under the various strands of legislation it is in many cases an offence to remove, damage or disturb those species. Accordingly it will be necessary to determine if there are populations of protected species at the proposed afforestation site. If EIA is to be carried out on a project, then it would be appropriate to address these issues in the scoping of the project. Otherwise they could be addressed at the same time as screening for appropriate assessment in being undertaken.

In brief, the Department of Arts, Heritage, Gaeltacht and the Islands needs to emphasise that in regard to the location of afforestation projects, there is a body of national and EU law that must be complied with. In regard to such projects, the Forest Service is the competent authority in providing consent for such projects.

Environmental /Legislative

- 1946 Forestry Act – especially the replanting obligation following clearfelling
- Water Framework Directive and transposing regulations
- The European Communities (Birds and Natural Habitats) Regulations 2011, which also fully transposes the Birds Directive (S.I. No. 477 of 2011) http://www.irishstatutebook.ie/2011/en/si/0477.html
- Birds Directive and European Communities (Birds and Natural Habitats) Regulations 2011
- EIA Directive and relevant transposing national regulations especially S.I. 558 of 2010 European Communities (Forest Consent and Assessment) Regulations and European Communities (Environmental Impact Assessment) (Agriculture) Regulations 2011 (S.I. 456 of 2011)
- Nitrates Directive and transposing national regulations
- Wildlife Acts 1976 and Wildlife (Amendment) Act 2000
- Flora Protection Order 1999
- Planning and Development Acts 2000 to 2011. The vast majority of development activities that can affect Natura 2000 are regulated by the planning system http://www.irishstatutebook.i./2010/en/act/pub/0030/index.html
- European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations 2009 – to support the achievement of favourable conservation status for the freshwater pearl mussel. The regulations set environmental quality objectives for the habitats of the freshwater pearl mussel populations in named catchments. http://irishstatutebook.ie/2009/en/si/0296.html
- Other relevant legislation including the Environmental Liability Regulations
- Particular importance was placed on the implications for land availability for afforestation of areas designated for:
    - Hen Harrier
    - Acid sensitivity.

Photo courtesy of Steven Meyen, Teagasc

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