Promoting Sustainable Forest Management

PEFC Irish Forest Certification Standard

Standard approved by the PEFC Irish Forest Certification Standard Forum on October 13th 2010

Introduction

Forest Certification

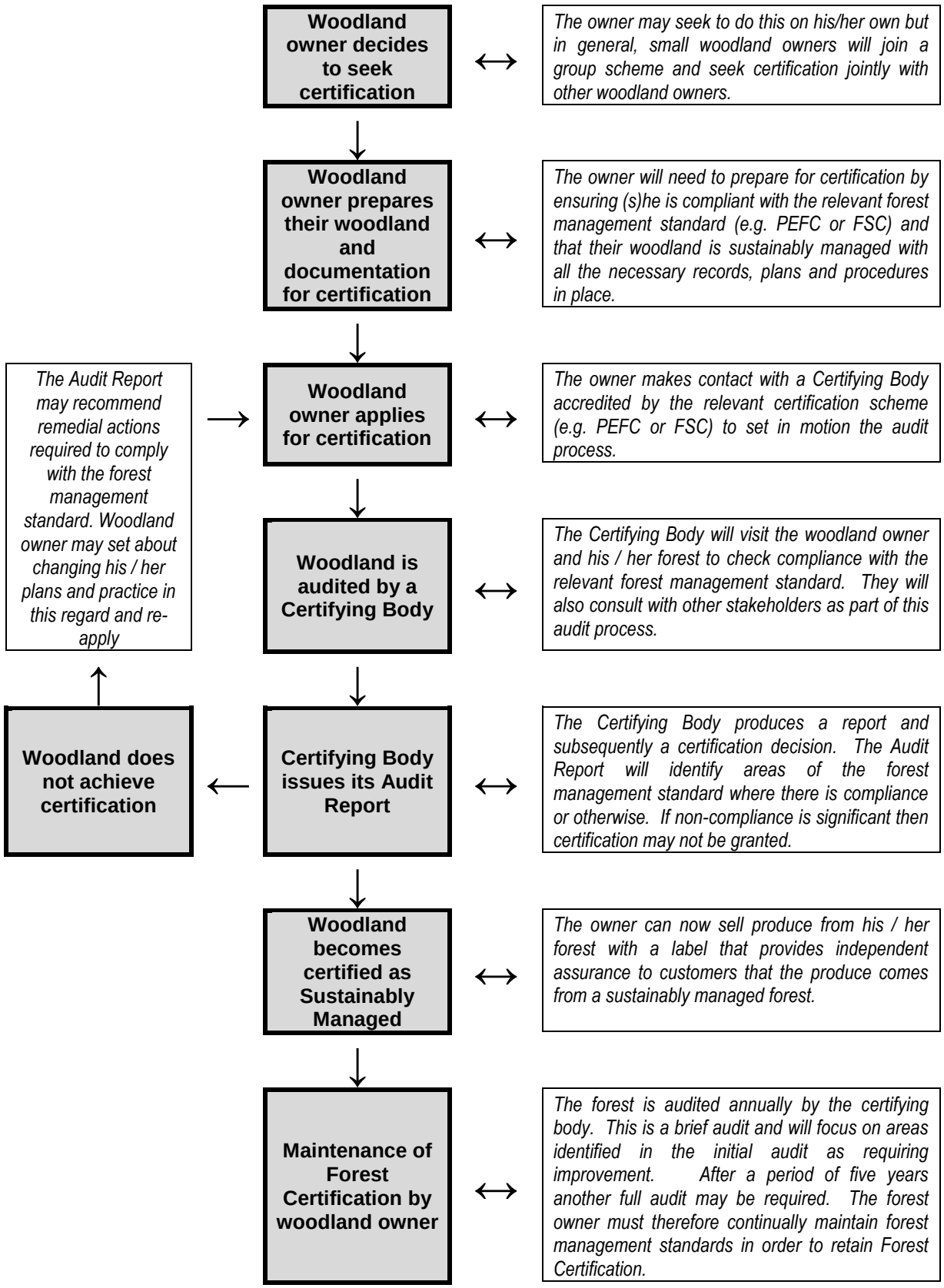
The international forest products market is increasingly seeking assurance about the quality, environmental and social impacts of forest management. One way to provide this assurance is through independent verification against a published standard which defines appropriate and effective forest management. Forest products from forests which meet these standards can then be identified as such when offered for sale in the market place. Consumers then have the option of buying forest products which they can be sure come from well managed forests. Forest certification is a voluntary process whereby forest owners decide whether or not to submit their forests for an audit carried out by an accredited certification body against an agreed forest management standard. There are a number of different forest certification schemes in operation around the world. In Europe, the two most active schemes are operated by the Forest Stewardship Council (FSC) and the Programme for the Endorsement of Forest Certification Schemes (PEFC). This document is a draft forest management standard for Ireland for PEFC Certification. The Flow chart on the following page outlines in general terms the steps involved in forest certification.

Programme for the Endorsement of Forest Certification Schemes (PEFC)

The PEFC Council is an independent, non-profit, non-governmental organisation, founded in 1999 which promotes sustainably managed forests through independent third party certification. The PEFC provides an assurance mechanism to purchasers of wood and paper products that they are promoting the sustainable management of forests. PEFC is a global umbrella organisation for the assessment of and mutual recognition of national forest certification schemes developed in a multi-stakeholder process.

PEFC (Ireland) Ltd (hereafter referred to as PEFC Ireland) is the National Governing Body of the PEFC in Ireland. The company was registered in August 2008 and became a full member of the PEFC Council at the General Assembly held in Canberra in October 2008. Sponsored by the Irish Timber Growers Association, and with members drawn from economic, environmental and social stakeholders, PEFC Ireland administers the PEFC Council's schemes and initiatives in Ireland, and promotes sustainable forest management and the use of credibly certified timber and wood-based products.

Flow Chart Outlining the Forest Certification Process



Preparation of the PEFC Ireland Forest Certification Standard

This document is a forest management standard for forests in Ireland being considered for certification under the Programme for the Endorsement of Forest Certification Schemes (PEFC). The standard has been drawn up following an inclusive and transparent process which has involved a balanced representation from economic, social and environmental interests with knowledge of the Irish forestry sector. It has also been designed to comply with existing Irish and European forest management guidelines and legislation, including the Pan-European Operational Level Guidelines for Sustainable Forest Management agreed at the third Ministerial Conference on the Protection of Forests in Europe in Lisbon in 1998. The standard was developed in accordance with the *Rules for Standard Setting* contained in Annex 2 to the PEFC Council Technical Document, and with reference to a similar standard successfully developed and operational in the UK called the UK Woodland Assurance Standard (UKWAS).

The standard was approved on 13th October 2010 by the PEFC Irish Forest Certification Standard Forum which is structured to have equal representation from those with environmental, social and economic interests in forest management. The draft standard was prepared by a Technical Working Group (TWG) appointed by the Forum. The TWG is also structured to have equal representation from those with environmental, social and economic interests in forest management. The Chairman of both the Forum and the TWG is independent.

The draft standard was submitted for public consultation on 25th March 2010. To encourage participation in the public consultation exercise, key stakeholders were notified directly and invited to respond, the process announced to the relevant media, and the draft standard was posted on the internet, together with a response form. The public consultation process lasted for a period of 79 days, closing on 11th June 2010, after which all responses were sent to an independent consultant for analysis. Following receipt of the analysis, the Forum discussed the findings and agreed amendments.

During the public consultation period, pilot testing of the draft standard was conducted in two State (Coillte) and one private forest by an accredited forest auditor. The results from the pilot testing were considered by the Forum and the agreed improvements and recommendations incorporated into the standard prior to submission to the PEFC Council for endorsement and mutual recognition by the national members organisations.

Certification Options for Forest Owners

There are currently two different options open to forest owners seeking to attain PEFC Certification for their forests in Ireland. These are as follows:

Group Certification

Group Certification is where a number of (usually small) forest owners group their forests together and make a single Forest Certification application. The group is co-ordinated by a single person who ensures that all members of the group are compliant with the relevant forest management standard. Forest Certification auditors then evaluate a sample of woodland properties. All woodland properties are evaluated over time / subsequent audits.

Individual Certification

Individual Certification is where forests belonging to a single forest owner (whether an individual, company or other entity) are assessed under a single process with a single certificate issuing to successful forest owners.

The Structure & Content of the Standard

The structure of the certification standard relates to the way in which forest management is implemented, addressing specific aspects of management or types of operations in turn. The sections of the standard are as follows:

Section 1: *Compliance with the law and conformance with the requirements of the certification standard*

Section 2: Management planning
Section 3: Woodland design: creation, felling and replanting
Section 4: Operations
Section 5: Protection and Maintenance
Section 6: Conservation and enhancement of biodiversity
Section 7: The community
Section 8: The Forestry Workforce

Each section is broken down into sub-sections and within each sub-section are specific requirements. Each requirement is set out as follows:

<table>
<tr><td>Requirement
A requirement is a compulsory element of the standard. Woodland management must meet all relevant requirements and auditors will check that requirements are being met. Requirements are stated as “shall” implying that they are compulsory elements of the standard.</td><td rowspan="2">Guidance
Guidance is provided to assist both the woodland owner / manager and the certification body to understand how requirements should be applied in practice. Guidance may also suggest other sources of information which will help both parties understand a particular issue in more detail. Guidance may also elaborate on some requirements and explain the meaning of certain terms or phrases used in the requirements.</td></tr>
<tr><td>Means of Verification
These suggest the type of objective evidence, in the form of documents, actions, site conditions or discussions, that certification bodies may consider in order to verify that the requirement is being met. The verifiers suggested are not exclusive or exhaustive – certification bodies will not always use all the verifiers suggested, and may seek verification in other ways.</td></tr>
</table>

Procedures for Use of the Standard
The standard is used equally by both woodland owners / managers seeking certification and independent accredited auditors or certification bodies when assessing compliance. The following sections seek to provide clarity for all parties with regard to how the standard should be used and interpreted.

Accreditation
Accreditation is the process used to ensure that those who undertake the certification audit are truly independent and professionally competent. Certification bodies conducting audits against the standard must be accredited to undertake woodland management certification by a national or international accreditation body. Accreditation bodies must be members of the International Accreditation Forum (IAF) or a member of IAF’s special recognition regional groups and implement procedures described in ISO/IEC 17011:2004 and other documents recognised by the above organisations.

Area Specificity
The areas to be certified under the PEFC Irish Forest Certification Standard shall be individually identified and delineated Woodland Management Units (WMUs). A WMU is a forest property or properties covered under a single forest management plan and within a landscape unit[1]. A WMU may be owned by an individual, a group of individuals (sharing the one property), a company, a charity or any other legal entity. WMUs may contain smaller units e.g. compartments and sub-compartments but they should not be split for certification purposes. If the owner of a WMU owns other WMUs in different landscape units they need not necessarily be obliged to submit these for certification. The owner / manager of each WMU shall have made a formal commitment to meet the requirements of this standard[2].

[1] A Landscape Unit is an area of broadly homogenous landscape character.
[2] This is detailed in requirement 1.1.4 of the standard.

Scale of Application of the Requirements

All requirements of this standard must be satisfied at Woodland Management Unit (WMU) level. This means that where, for example, there is a requirement for a percentage of the woodland area to be managed with biodiversity as a priority, this must be the case within each individual WMU. A WMU may be made up of a series of fragmented woodlands (e.g. on a farm or an estate) and in such cases requirements must be satisfied at WMU level and not necessarily within each fragmented parcel of woodland. However, in such cases:

- Plans for implementing a requirement unevenly in different parcels are based on good practice which aims to meet the purpose of the requirement.
- Wherever appropriate, management is based on a design plan

Application to Different Scales of Woodland

All woodlands seeking to obtain certification, regardless of size, must comply with the requirements of this standard. However, in some instances, specific thresholds for specific requirements are stated (e.g. Requirements 2.3.2, 3.2.3, 3.2.4, and 5.1.2).

Flexibility in Meeting Requirements

It is recognised that a woodland owner or manager may feel that certain requirements of this standard are either inappropriate for or irrelevant to a particular woodland. In such circumstances, the professional judgement of the independent certification body will be called upon to assess whether flexibility should be shown in this regard. In making this assessment, the independent certification body may seek the opinion of an appropriate specialist and in all cases shall ensure that there is compliance with the spirit of the standard.

Timing for Full Implementation of the Requirements Relating to Woodland Structure & Layout

A special feature of woodland management is its long term nature. Decisions made in the past have a strong influence on the woodlands of today. Therefore, when assessing conformance with the certification standard, independent certification bodies will not evaluate woodlands solely on the present structure and layout, but will consider the plans for management in the short, medium and long term.

Where present structure and layout fail to meet the requirements, due to historic reasons, woodland owners / managers will need to demonstrate through management planning documentation, design plans and on-going activities in the woodland that they are taking active measures to achieve conformance with the requirements. They will also need to demonstrate that there is a time frame for achieving full conformance based on sound management principles.

Stakeholder Consultation

Certification to the PEFC Irish Standard shall provide an opportunity for, and take account of, inputs from stakeholders. Responsibility for undertaking consultation lies with the applicant in accordance with the requirements of this standard[3]. The applicant shall invite consultees, through direct communication and public notification, to copy their responses direct to the certification body. Where this is undertaken as an integral part of a wider consultation, such as by a government department, there should be no requirement to present a copy to the certification authority, provided that the information is available to the public. As part of the evaluation process, each time a certificate is issued or renewed, it shall be the responsibility of certification bodies to assess and verify stakeholder comments using appropriate sampling, independent of the applicant's own procedure. Feedback shall be provided by the certification body, on request, to respondents on how their comments have been addressed.

[3] Requirements with regard consultation are detailed in Section 7.1 of the standard.

Peer Review
The certification body carrying out forest certification shall have technical competence in forest management, on its economic, environmental and social impacts, and on the forest certification criteria. Audit reports shall be subject to a separate independent review by competent experts. Peer reviewers shall have access to all comments from the stakeholder consultations, the applicant and the certification body, together with an assessment of how they have been addressed.

Transparency
The process of certification to the PEFC Irish Forest Certification Standard is transparent and includes the production of an informative, publicly available summary for each certificate. The summary shall provide information on how and why the certification decision was made, to allow stakeholders to see for themselves what happened. This should include an explanation of how any areas of non-conformity with the requirements of the standard have been addressed to the satisfaction of the certification body, and a clear statement of any outstanding conditions which need to be addressed.

Dispute Procedures
Certification bodies must have formal procedures for dealing with disputes. This must be open to all parties at any time to deal with non-conformance and challenges (ISO/IEC Guide 62:2.1.4; Guide 65:4.5 and the specific rules of the accreditation authority). This procedure shall be implemented when it has not been possible to resolve challenges regarding a decision made by the certification body in an assessment against this standard. Information on how a decision was made must be made available by the certification body on request in a way which does not breach commercial confidentiality,

PEFC Ireland is documenting procedures for the establishment of an independent body for the settlement of disputes that may arise over the interpretation or implementation of the standard and that cannot be addressed in the dispute settlement procedures of the certification body, or the accreditation authority. If PEFC Ireland is concerned with the way in which a certification body is using the standard it shall raise a dispute through the certification body's own procedures. If this fails to resolve the matter then PEFC Ireland shall pursue it through the disputes procedure of the accreditation authority. If this fails to resolve the matter it shall be taken up through the disputes procedure of the International Accreditation Forum.

Periodic Monitoring
The standard and its implementation shall be periodically monitored and reviewed in the light of new scientific knowledge and practical experience. A full review of the standard will be undertaken at least every five years and the revision procedures shall be in accordance with the PEFC Council *Rules for Standard Setting.*

Interpretation and Revision of the Standard
As the National Governing Body, PEFC Ireland coordinated the development of this standard. PEFC Ireland is a company limited by guarantee (Company Registration Number 461250) and is managed by a Board of Directors appointed by its members. Its objectives are "*to establish mechanisms for the recognition of schemes in Ireland for forest certification*, *for the certification of wood processing, manufacturing and associated activities, and for the certification of custody of materials used in the wood chain, which meet the criteria laid down by the Council of the PEFC"*

For the purposes of interpretation and revision of the standard, the members of PEFC Ireland will appoint a broadly based steering group which will have responsibility for interpreting the standard and ensuring its periodic revision, taking account of experience from its application and new information that arises. The steering group will provide advice to users of the standard on its interpretation.

Periodic revisions of the standard will be communicated by PEFC Ireland to the PEFC Council and the revisions will be dealt with by the PEFC Council in accordance with the rules relating to the *Endorsement and Mutual Recognition of National Schemes and their Revision"* (Annex 7 to the PEFC Council Technical Document).

Supporting Templates

Over time, PEFC Ireland may provide, by way of the website www.pefc.ie, sample templates of documentation that may assist forest owners / managers in preparing for certification. Such templates may include management plans, site monitoring forms, hazard identification and risk assessment forms, and any other relevant documents. It may also assist other stakeholders in understanding the nature of information required and procedures followed by forest owners / managers in preparing for certification.

Certification Standard

Section 1
Compliance with the law and conformance with the requirements of the certification standard

1.1 Compliance and conformance

1.1.1 **Requirement** There shall be compliance with the law. There shall be no substantiated outstanding claims of legal non-compliance related to woodland management.	**Guidance** Certification is not a legal compliance audit. Certification authorities will be checking that there is no evidence of non-compliance with relevant legal requirements including: • Management and employees understand and comply with all legal requirements relevant to their responsibilities. • All documentation including procedures, work instructions and contracts meet legal requirements. • No issues of legal non-compliance are raised by regulatory authorities or other interested parties.
Means of Verification • No evidence of non-compliance from audit.	

1.1.2 **Requirement** There shall be compliance with any relevant codes of practice, guidelines or agreements.	**Guidance** Appendix A lists relevant current guidelines and codes of practice. Certification authorities will be checking that there is no evidence of non-compliance with relevant codes of practice, guidelines or agreements and that: • Management and employees understand and comply with all requirements relevant to their responsibilities. • All documentation including procedures, work instructions and contracts are in compliance. • No issues of non-compliance are raised by regulatory authorities or other interested parties.
Means of Verification • No evidence of non-compliance from audit	

1.1.3 **Requirement** Property rights and land tenure arrangements shall be clearly defined, documented and established for the relevant forest area.	**Guidance** The forest owner must be able to prove legal ownership or tenure of the land for which certification is sought, if required. (See also Section 7.2)
Means of Verification • Copy of folio documents or other legally accepted proof of ownership or tenure **OR** • A signed declaration from a solicitor detailing nature and status of tenure documentation.	

1.1.4 **Requirement** The forest owner, manager or occupier shall be committed to conformance to this certification standard and has declared an intention to protect and maintain the ecological integrity of the woodland in the long term.	**Guidance** In cases where there has been a previous substantial failure of compliance with this standard, resulting in the withdrawal of forest certification, then changes in ownership, control and management regime shall have been implemented, or a two year track record of conformance established before certification can be re-considered.
Means of Verification • Signed declaration of commitment. • Evidence of authority to act on behalf of the owner (where the commitment is signed by the manager / agent)	

1.2 Protection from illegal activities

1.2.1 **Requirement** The forest owner / manager shall take all reasonable measures to stop illegal or unauthorised uses of the woodland which could jeopardise fulfilment of the objectives of management.	**Guidance** Illegal and unauthorised uses of woodland may include activities such as: • Dumping • Trespass of livestock • Anti-social behaviour
Means of Verification • The forest owner / manager is aware of potential and actual problems • Evidence of pro-active response to actual current problems	

Section 2
Management planning

Forest management planning should aim to maintain or increase the area of forest or woodland, and enhance the quality of the economic, ecological, cultural and social values of forest resources, including soil and water. This should be done by making full use of available expertise in areas such as land-use planning and nature conservation. The forest management planning process shall incorporate:

- Inventory and mapping of the resource
- Setting of forest management objectives
- Stakeholder consultation
- Operational planning (for a defined planning period)
- Securing the productive potential of the forest
- Provision for revision of the plan

2.1 Documentation

<table>
<tr><td>2.1.1
Requirement
Identification, inventory and mapping of the forest resources shall be established and maintained. These shall include:
• An inventory of the timber and non-timber resources
• Identification and mapping of
  • designated areas (see also 3.1.1)
  • special areas, features, characteristics and sensitivities of the forest
  • management units</td><td rowspan="2">Guidance
Inventory and mapping of the woodland resource shall include appropriate aspects of physical, silvicultural, ecological, archaeological, social and landscape issues and any special characteristics or designations.

The documentation and level of detail associated with the forest management planning process should be appropriate to:
• The size of the woodland
• Its environmental and social sensitivity
• The intensity of management
• The likely impact of the planned operations
• Context in the landscape

The PractiSFM Multi-Resource Inventory Manual provides guidance on the forest resources which should be considered as well as methodologies for data collection and data collection forms.</td></tr>
<tr><td>Means of Verification
• Management plan
• Maps and records
• Field inspection</td></tr>
</table>

<table>
<tr><td>2.1.2
Requirement
The forest management plan shall incorporate a long term policy for the woodland in which forest management objectives are set and prioritised. A silvicultural system(s) best suited to achieve these objectives shall be nominated and a rationale provided for this selection.</td><td rowspan="2">Guidance
The management objectives and priorities, in tandem with the multi-resource inventory will form the basis of decision making in the management plan.</td></tr>
<tr><td>Means of Verification
• Management plan</td></tr>
</table>

2.1.3 **Requirement** There shall be an operational plan listing all the planned forest operations for a five year period. This shall include specific measures based on the appropriate assessment for any designated areas. It shall also include specific measures relating to any special areas, features, characteristics and sensitivities of the woodland as identified in the inventory. A rationale for prescribed management and operational techniques shall be provided. An outline felling and regeneration plan for a 20 year period shall also be provided. The five year operational plan shall be reviewed and updated every 5 years. **Means of Verification** • Management plan • Field inspection	**Guidance** The documentation and level of detail associated with the management plan should be appropriate to: • The size of the woodland • The intensity of management planned • The ecological and social sensitivity of the woodland • The context of the woodland in the landscape • The likely impact of planned operations The management planning documentation should cover all elements of the requirement but may also refer to other documents as appropriate, including surveys or permissions from statutory or regulatory bodies.

2.1.4 **Requirement** While respecting the confidentiality of commercially and/or environmentally sensitive information, woodland managers, upon request, shall make publicly available management planning documentation, or a summary of its primary elements, including those listed in 2.1.1, 2.1.2 & 2.1.3. **Means of Verification** • Evidence that the forest owner / manager has recorded and responded to any reasonable requests for copies of this documentation • Discussion with owner / manager	**Guidance** The public provision of management planning documentation is an important element in the fulfilment of sustainable forest management, particularly in relation to social responsibility. There is no requirement to make available financial information.

2.2 Productive Potential

2.2.1 **Requirement** Forest management systems and operations shall be planned and carried out in a way that maintains or enhances the health, vitality and productive capacity of the site. Where the inventory (2.1.1) has identified degraded forest ecosystems there shall be a plan to rehabilitate these, where possible and appropriate, by silvicultural means.	**Guidance** The productive capacity of the site refers to the ecological, social and economic functions of the woodland. This means that forest operations should adopt techniques that avoid direct or indirect damage to forest, soil or water resources. Degraded forest ecosystems may include: • Overgrazed woodlands • Woodlands where there has been considerable soil compaction • Woodlands that have been over-run with invasive species such as rhododendron or laurel
Means of Verification • Management plan • Operational plans • Field inspection	

2.2.2 **Requirement** Harvesting and regeneration plans shall not jeopardise the long-term productive potential of the woodland and are consistent with management objectives.	**Guidance** Examples of growth and yield estimates include : • Average growth rates or Yield Class for major species on different site types. • Forecasted harvest areas and yields (thinning and felling) for different crop types in future years. Accuracy of growth and yield estimates should be appropriate to the scale and intensity of the operation. There may be some circumstances (e.g. during restructuring), where harvest levels will exceed the increment. There may be some circumstances (e.g. replacing exotic species with native species), where management intervention may legitimately reduce the productive potential of the woodland.
Means of Verification • Inventory records • Management plan • Growth and yield estimates • Production records • Demonstrated control of thinning intensity • Discussion with forest owner / manager • Field inspection	

2.2.3 **Requirement** Authorised harvesting of non-timber woodland products shall not permanently exceed, or diminish, the long term productive potential of the woodland.	**Guidance** Non-timber woodland products include foliage, moss, fungi, berries, seed, venison and other game products. The management plan should encompass the sustainable management of the non-timber resource if a significant quantity is being harvested.
Means of Verification • Discussion with forest owner / manager • Field inspection • Records of sales of non-timber woodland products • Management plan	

2.2.4 **Requirement** Harvesting and timber sales documentation shall enable all timber sold to be traced back to the woodland of origin.	**Guidance** This is to ensure that timber can be traced back to the point of sale from the woodland (standing, at roadside or delivered). The forest owner / manager is responsible for ensuring that, at this point of sale, sufficient documentation is provided to prove that timber is from his / her woodland. This is then used by other entities along the supply chain (known as the chain of custody) to identify and trace timber back to the forest of origin.
Means of Verification • Harvest records (contracts / output records / contractor invoices) • Timber invoices • Despatch dockets • Chain of custody codes on all invoices and delivery documents	

2.3 Implementation and revision of the plan

2.3.1 **Requirement** The implementation of operations shall be in close agreement with the details included in the management planning documentation. In cases where there is a material deviation from the planned rate of progress or methods used, this shall: • be justified by the forest owner / manager • be consistent with the overall forest management objectives • not compromise the ecological integrity of the woodland.	**Guidance** Changes in planned timing of operations may be justified on ecological, social or economic grounds if overall management practices continue to comply with the other requirements of this standard.
Means of Verification • Cross correlation between management planning documentation and operations on the ground • Discussion with forest owner / manager • Field inspections	

2.3.2

Requirement

The forest owner / manager shall implement a monitoring programme designed to measure progress in the achievement of the forest management objectives (2.1.2) and compliance with this certification standard.

Monitoring procedures shall be consistent and replicable over time to allow useful comparison of results and assessment of change. To this end, the monitoring records shall be kept in a consistent format and shall be made publicly available, upon reasonable request.

The parameters monitored will at a minimum include:

- Harvesting yield
- Woodland composition and structure
- Fauna and flora, in particular key species
- Other ecological, social and economic aspects

Means of Verification

All Woodlands

- Monitoring records and / or field notes

Woodlands larger than 100 ha.

- A documented monitoring plan
- Baseline information from studies in similar woods
- An analysis of data collected
- Summary of results

Guidance

Monitoring should consist of :

- Supervision during forest operations to ensure compliance with the management plan
- Regular management visits and systematic collection of information
- Long term studies, where appropriate, particularly on changes to the woodland ecosystem. Information from studies (particularly research programmes) carried out on one site can be extrapolated and the results used to assist management of other similar sites. For more complex long term studies it is often more important for the forest owner / manager to be aware of the results and conclusions of such studies than to try and replicate them in their own woodland.

Key species are regarded as those listed in Annex 2, 4 and 5 of the EU Habitats Directive and those listed in Irish Red Data Books and Lists (Appendix D)

Detail of information collected should reflect the:

- Size of the enterprise
- Intensity of operations
- Management objectives
- Sensitivity of the site

Monitoring should include means to identify any significant changes, i.e. those likely to have sufficient impact to alter existing ecosystems or endanger the flora and fauna present, in particular any rare species.

Sensitive data may be withheld where justified in the interest of protecting any special species or feature.

2.3.3

Requirement

The implications of the results of monitoring (2.3.2) shall be taken into account by the forest owner / manager, particularly during revision of the management planning documentation.

Means of Verification

- Monitoring records
- Management planning documentation
- Discussion with forest owner / manager
- Field inspections

Guidance

The monitoring results, similar to the multi-resource inventory, are important in informing management decisions. The management plan will be reviewed every 5 years and at this stage monitoring results should be formally incorporated into the revised plan.

Section 3
Woodland design: creation, felling and replanting

3.1 Assessment of environmental impacts

<table>
<tr>
<td>3.1.1
Requirement
The potential environmental impact of new planting and other woodland plans shall be assessed before operations are implemented and shall be in full compliance with current Forest Service guidelines and regulations.</td>
<td rowspan="2">Guidance
Environmental assessments are separate to the monitoring programme (see 2.3.2 and 2.3.3) as they are carried out in advance of any operations.
These assessments include the checks listed below (as per Forest Service Requirements, Guidelines and Code of Best Practice). In many cases an initial environmental assessment by the forest owner / manager will lead to plans being referred to other expert agencies for their input. Situations where this is the case are indicated with an R.
• In an acid sensitive area (R)
• In an area sensitive for fisheries (R)
• In a Local Authority designated water scheme area (R)
• In or within 3 km of a designated area (pNHA, SAC, SPA or National Park) (R)
• Identification of existing habitat areas or features of value
• Identification of an aquatic zone
• Identification of fauna and flora present on or frequenting the site
• Presence or proximity of an archaeological site or feature (R)
• In a designated prime scenic area or outstanding landscape (R)
• Identification of areas of potentially high erosion risk

Thresholds for requirement of a full Environmental Impact Assessment are currently:
Afforestation: > 50 ha. (or < 50 ha. where a proposed development is deemed by the Minister to have a significant environmental impact)
New Forest Roads: > 2000 metres</td>
</tr>
<tr>
<td>Means of Verification
• Grant and Felling Licence applications and approval documentation provided for and by the Forest Service
• Environmental assessment documents (where relevant)
• Discussions with forest owner / manager</td>
</tr>
</table>

3.1.2 **Requirement** The results of the environmental assessments (as carried out in 3.1.1) shall be incorporated into planning and implementation in order to minimise adverse impacts and to secure and enhance environmental gains. This shall be done in full compliance with current Forest Service guidelines.	**Guidance** It is essential that the results of environmental assessments are fully integrated into management planning and decisions.
Means of Verification • Management planning documentation • Field inspections • Discussions with forest owner / manager • Review of contract documents and instructions provided to contractors	

3.2 Location and design

3.2.1 **Requirement** New woodlands shall be located and designed in ways that will maintain or enhance the visual, cultural and ecological value and character of the wider landscape. Particular attention shall be paid to using naturally occurring and locally appropriate species to create a diverse woodland edge.	**Guidance** Full guidance is given in the Forest Service "*Forestry and the Landscape Guidelines*" and this includes consideration of: • Size • Arrangement • Location • Shape • Pattern • Proportion • Edge • Margin, texture & colour • Roadsides • Waterbodies
Means of Verification • Management planning documentation • Design plan • Maps • Field inspections	

3.2.2 **Requirement** New planting shall be designed in such a way as to ensure the creation over time of a diverse woodland. **Means of Verification** • Management planning documentation • Discussions with the forest owner / manager • Maps • Field inspections	**Guidance** A diverse woodland may be achieved through one or more of the following: • Use of diverse species and provenances • Planting mixed stands • Variation in site types and productivity • Phased planting • Retention of open ground • Design and creation of wind firm edges • Adoption of management systems that avoid the need for final felling over a short time period. See also Requirement 3.3.2 The Forest Service Afforestation Grant Scheme, Forestry & Environment Protection Scheme (FEPS) and Native Woodland Scheme all require and provide incentives for the creation of diverse woodland through both the rules of each scheme and the requirement for compliance with the various Forest Service Guidelines and Code of Best Practice.

3.2.3 **Requirement** Even aged woodlands shall be gradually restructured to diversify ages and habitats using a design plan (See Requirement 3.2.4) which is reflected in the management plan. This requirement does not apply to woodlands of < 5 hectares. **Means of Verification** • Design plan • Management planning documentation • Maps • Discussions with the forest owner / manager • Field inspections	**Guidance** Restructuring should be planned and implemented following current best practice in forest design. Guidance on forest design and the landscape is provided in the Forest Service "*Forestry and the Landscape Guidelines*". For detailed guidance on undertaking forest design planning the Forestry Commission Great Britain Forestry Practice Guide, "*Forest Design Planning – A Guide to Good Practice*" should be used. The diversification of even aged woodland of all sizes is also influenced by the requirements set out in 3.2.4, 3.3.2, 6.1.2 & 6.2.1.

3.2.4 **Requirement** Clearfelling and regeneration shall be in accordance with the principles and guidelines set out in the Forestry Commission GB Forestry Practice Guide, "*Forest Design Planning – A Guide to Good Practice*" and in Forest Service guidelines and policy documents. All felling and replanting shall be in accordance with a design plan appropriate to the scale of the proposed felling and the sensitivity of the landscape. The rate of felling shall be in accordance with the design plan and shall not exceed 25% of the woodland area in any five year period except in one of the following circumstances: a) The wind hazard classification is ≥ 4 b) There is a strong landscape reason for felling > 25% in a 5 year period c) Where felling is being undertaken to enhance environmental values and satisfies Requirement 3.5.1 d) Where the owner / manager can demonstrate that there is a substantial financial penalty in premature or delayed felling to achieve re-structuring.	**Guidance** Guidance on forest design and the landscape is also provided in the Forest Service "*Forestry and the Landscape Guidelines*". The Forest Service allow a maximum coupe size of 25 hectares. Felling is regulated by the Forest Service under the Felling Licence system in which statutory bodies and Local Authorities are consulted before the issuing of a licence. Where a woodland area is made up of contiguous stands under different ownerships, this requirement should be applied to the total woodland area.
Means of Verification • Management plan • Design plan • Discussions with the forest owner / manager • Field inspection	

3.3 Species selection

3.3.1 **Requirement** a) Species selected for new woodlands, natural regeneration and restocking shall be suited to the site and matched to the objectives b) Where broadleaves are being planted, native and naturalised species shall be preferred to non-native. If non-native species are used it shall be shown that they will clearly outperform native or naturalised species in meeting the objectives.	**Guidance** Results of research into site suitability of different species shall be used to assist in species selection. Because of the uncertain effects of climate change, selecting a range of reproductive material may be prudent. Where appropriate and possible use natural regeneration or planting stock from parental material growing in the local native seed zone (native species) or region of provenance (non-native species). A list of naturalised species in Ireland is provided in Appendix F.
Means of Verification • Discussions with the forest owner / manager demonstrate that consideration has been given to a range of species, including native species, in meeting management objectives • Provenance certificates • Field inspection	

3.3.2 **Requirement** The proportions of different species in new planting, or planned for the next rotation of an existing plantation, shall be as follows: <65% primary species >20% secondary species >10% open space >5% native or naturalised broadleaf The requirement in relation to open space does not apply to woodlands less than 10 hectares in size.	**Guidance** Refer to Section 6.2.1 which gives the requirements relating to areas managed with biodiversity as a major objective. Additional open space and / or native shrubs can be provided instead of native broadleaved trees if they are not suited to the site. Open space with wildlife value contiguous with the woodland can be counted towards the requirement if it is managed as part of the woodland. Where appropriate and possible, use natural regeneration or planting stock of native provenance for native species.
Means of Verification • Management planning documentation • Field inspections	

3.3.3 **Requirement** a) Non native plant (non-tree) and animal species shall only be introduced if they are non-invasive and bring environmental benefits. b) All introductions shall be carefully monitored by owner / manager	**Guidance** The requirement includes the re-introduction of once native animals not currently present in Ireland. Forest owners are not held responsible for introductions prior to entering into the certification process. Appendix G provides a list of banned invasive species in Ireland.
Means of Verification • Documented impact assessment of any introductions made after the first certification • Discussions with the forest owner / manager • Field inspections	

3.4 Silvicultural systems

3.4.1 **Requirement** a) A silvicultural system(s) best suited to achieve the forest management policy and objectives as set out in 2.1.2 shall be selected and a rationale provided for this. b) For WMUs greater than 100 hectares in size, 10% of this area will be identified and plans made for the phased implementation of low impact silvicultural systems with a preference for use of natural regeneration where parent seed is suitable. c) Where there are a range of silvicultural options on wind-firm sites, lower impact silvicultural systems shall be increasingly favoured where they are suited to the soil conditions and species. **Means of Verification** • Management Plan • Rationale for selected silvicultural system(s) • Discussions with the forest owner / manager	**Guidance** Low impact silvicultural systems are ones other than clearfelling which use natural structures and processes to maintain and enhance the health and vitality of forests and in so doing the multiple products and services they provide. The choice of silvicultural system should take into account: • Silvicultural characteristics of the species • Site limitations including potential growth rates and wind firmness • Intended stem size and quality • Current and future markets for timber products • Impacts on the landscape and wildlife • Age structure and felling plan of nearby woodlands • Ecological processes and natural disturbance regime for that woodland type • Historical management practices • Views of local people The 10% of area in WMUs greater than 100 ha. where low impact silvicultural systems are required can be inclusive of: • areas satisfying requirement 6.2.1 • areas retained as part of the restructuring requirements outlined in 3.2.3 and 3.4.2 • areas being restored to semi-natural woodland or non-woodland habitats as outlined in requirements 3.5.1, 6.3.1, and 6.3.2.

3.4.2 **Requirement** Traditional management systems that have created valuable ecosystems, such as coppice, shall be maintained and where appropriate, developed. **Means of Verification** • Management Plan • Map showing any areas of traditional systems • Discussions with the forest owner / manager • Field inspection	**Guidance** Traditional management systems may, in addition to being associated with valuable ecosystems, be play an important social or cultural function worthy of being supported and maintained.

3.5 Conversion to non-forested land

<table>
<tr>
<td>3.5.1
Requirement
Felling of part of a woodland and restoration and/or transformation of that part to non forested land shall only be carried out:
a) Where planning permission has been obtained for the change
Or
b) Where both of the following conditions are met:
1. there is approval from relevant authorities
2. the new land use meets at least one of the following criteria:
• the new land use will be more ecologically valuable than the woodland
• the new land use constitutes an improvement in the landscape
• the new land use is required for cultural or archaeological maintenance or restoration</td>
<td rowspan="2">Guidance
Tree felling in Ireland is regulated by the Forest Service under the terms of the 1946 Forestry Act. While it is normal for the Minister to attach a replanting obligation as a condition of felling permission, it can be waived at the Minister’s discretion.

In many cases, particularly on sensitive sites or for larger areas, felling licence applications are referred by the Forest Service to other expert agencies for their input.

This requirement does not apply in cases where the state has compulsorily purchased the area in question.

See Section 3.1.1 for guidance on threshold requirements of an EIA.</td>
</tr>
<tr>
<td>Means of Verification
• Management Plan
• Records of consultations, felling licence and associated conditions
• Consultation with interested parties
• Ecological assessments
• Field inspection</td>
</tr>
</table>

Section 4
Operations

4.1 General

4.1.1 **Requirement** The planning of woodland operations shall involve: a) An assessment of the potential impacts of that operation on the woodland's social, economic and ecological value. b) Identifying suitable equipment and systems to avoid negative impacts and enhance positive impacts. c) Giving special consideration and care to operations on soils which are particularly prone to erosion and compaction and where operations might lead to excessive erosion of soil into watercourses. d) Obtaining relevant permission(s), consultation with directly affected local people and giving any formal notification required. e) A full briefing with staff / contractors with regard to the proposed operations and where heavy machinery is to be used, a written operational plan and map shall be provided to staff / contractors.	**Guidance** Good forest management operations take into account all of the functions of the forest (social, ecological and economic) and ensure that these functions are positively served. For example, this means that forest operations should have low or positive impacts on: • Soil structure • Water quality • Biodiversity • Recreational values • Timber quality • Internal views • Landscape • Rate of water run-off • Growth rates • People
Means of Verification • Management Plan • Operational Plan • Documented permissions • Consultation records • Discussions with forest owner / manager • Documented environmental appraisal	

4.1.2 **Requirement** Implementation of operational plans shall be monitored by the forest owner / manager.	**Guidance** Appropriate monitoring may range from regular supervision of active operations to internal audits of active and completed sites. The scale and intensity of monitoring operations will be determined by the scale of the forestry enterprise and the intensity of the operations being carried out.
Means of Verification • Discussions with forest owner / manager • Monitoring records	

4.2 Harvesting operations

4.2.1 **Requirement** Harvesting operations shall conform to best practice as detailed in the relevant sections of the Forest Service "*Forest Harvesting and the Environment Guidelines*" and "*Forestry and Water Quality Guidelines*". **Means of Verification** • Field Inspections • Discussions with forest owner / manager / employees / contractors • Completed harvesting site monitoring forms • Contract documents and instructions provided to contractors	**Guidance** The relevant part of the Forest Service "*Forest Harvesting and the Environment Guidelines*" is in the section titled Harvesting Operation Guidelines. The relevant part of the Forest Service "*Forestry and Water Quality Guidelines*" is in the section titled Harvesting.

4.2.2 **Requirement** Where harvesting operations which involve the removal of more than just the timber stem are planned and where there is a risk of significant negative effects on soil structure or productivity, an environmental appraisal shall be undertaken. **Means of Verification** • Field Inspections • Management Plan • Documented environmental appraisal	**Guidance** This requirement refers to whole tree harvesting, residue bundling and any other form of harvesting involving more than just the timber stem. Potential significant negative effects include: • Leaching • Soil compaction • Nutrient loss • Loss of soil carbon • Run-off

4.2.3 **Requirement** There shall be no burning of lop and top. **Means of Verification** • Field Inspections	**Guidance**

4.2.4 **Requirement** Timber shall be harvested efficiently and with minimum loss or damage. **Means of Verification** • Field Inspections	**Guidance** Harvesting should particularly seek to avoid: • Damage to soil and water courses during felling and extraction • Damage to standing trees during felling and extraction • Timber degrade • The breakage or loss of merchantable timber • Damage to habitats / features identified in the inventory of resources (See 2.1.1)

4.3 Forest roads

4.3.1 **Requirement** For new roads, all legal consents shall be obtained. **Means of Verification** • Record of consents • Field inspection	**Guidance** New roads that are greater than 2 km in length require the completion of an Environmental Impact Assessment. Where new entrances are being made onto public roads planning permission from the local authority may be required.

4.3.2 **Requirement** Roading operations shall conform to best practice as detailed in the COFORD Forest Road Manual and the relevant sections of the Forest Service "*Forest Harvesting and the Environment Guidelines*" and the "*Forestry and Water Quality Guidelines*". **Means of Verification** • Field Inspections • Discussions with the forest owner / manager • Completed forest road monitoring forms	**Guidance** The relevant section of the Forest Service "*Forest Harvesting and the Environment Guidelines*" is the section titled Roading. The relevant section of the Forest Service "*Forestry and Water Quality Guidelines*" is the section titled Roads. The Key Construction and Operational Issues identified in the COFORD Forest Road Manual are: • Tree clearance • Road drainage • Formation methods • Construction guidelines (reversal roads) • Completion • Construction problems • Construction materials • Quarries, pits and spoil disposal areas • Embankments • Access to the road from the forest • Streams and water crossings • Road curves, junctions, passing and turning places • Interaction with public roads • Loading bays along public roads

Section 5
Protection and Maintenance

5.1 Planning

5.1.1 **Requirement** Risks to the forest from wind, fire, pests and diseases shall be assessed and measures to minimize these risks shall be incorporated in planting, design and management plans.	**Guidance** Examples of risks and appropriate mitigation measures are provided in the Forest Service "*Forest Protection Guidelines*". These risks include: • Competing vegetation • Livestock, including trespassing livestock • Deer • Rabbit • Hare • Grey squirrel • Bank vole • Large pine weevil • "Fomes" butt rot • Fire • Wind • Spring frost
Means of Verification • Management planning documents • Discussions with forest owner / manager • Field inspection	

5.1.2 **Requirement** Tree health and grazing impacts shall be monitored and results shall be incorporated into management planning together with guidance arising from national monitoring on plant health.	**Guidance** The Forest Service, through their Forest Protection Division, oversee a national tree / forest health monitoring programme.
Means of Verification • Discussions with forest owner / manager shows awareness of potential risks • Evidence of unhealthy trees is noted and appropriate action taken **Woodlands over 100 ha. in size** • Documented systems for assessing tree health • Notes or records of monitoring and responses to problems	

5.1.3 **Requirement** Management of wild deer shall be based on a written Deer Management Plan which includes the management objectives. Deer population control shall be carried out by competent deer hunters who have completed the HCAP and shall where possible be in co-operation with adjoining landowners. Where there is evidence of significant damage to trees or ground flora, action to control the population shall be taken to protect the forest.	**Guidance** The Hunter Competency Assessment Programme (HCAP) is an agreed deer hunting standard drawn up by a joint forum including Coillte, the Deer Alliance, the National Parks and Wildlife Service, The Forest Service, An Garda Siochana, the Irish Farmers Association and the Irish Timber Growers Association. Deer hunters can be trained, assessed and certified against this standard. See also Section 6.4.1. A template Deer Management Plan and guidance for drawing up a Deer Management Plan are available from the English Deer Initiative website (www.thedeerinitiative.co.uk)
Means of Verification • Written deer management plan • Awareness of potential problems and description of appropriate action • Evidence of liaison with adjoining landowners • Evidence of cull targets and achievements • Written agreement with deer hunter • Evidence of HCAP training and certification	

5.1.4 **Requirement** Management of damaging wild mammals (other than deer) shall where possible be in co-operation with adjoining landowners.	**Guidance** Damaging wild animals are described in the Forest Service "*Forest Protection Guidelines*" and include: • Rabbit • Hare • Grey squirrel • Bank vole
Means of Verification • Awareness of potential problems and description of appropriate action taken • Records of liaison with adjoining landowners • Records of liaison with local NPWS Conservation Ranger	

5.1.5 **Requirement** On becoming aware of the presence or new arrival of invasive mammals in the WMU, the owner / manager shall report this to the National Parks and Wildlife Service.	**Guidance** The owner / manager should also consider reporting such incidences to the Forest Service and other authorities as appropriate.
Means of Verification • Records of liaison with NPWS	

5.1.6
Requirement
When, following an assessment (see 5.1.1), a significant risk of fire is identified, a fire plan shall be prepared.
	Guidance
	A fire plan should include:
	• A fire plan map – 6" scale or metric equivalent showing features such as
	  ○ Firebreaks
	  ○ Access routes (vehicular and pedestrian)
	  ○ Water sources
	  ○ Hazards
	• A location map – Ordnance Survey Discovery Series
	• A document showing the location of necessary equipment, site features and contact details of the fire brigade and people who can be called upon to help if a fire occurs

Means of Verification • Fire plan • Discussions with forest owner / manager	

5.1.7 **Requirement** Areas that fulfill specific and recognized protective functions, either ecologically or for society, shall be mapped and forest management plans shall take full account of these.	**Guidance** Such areas may include: • Riparian and buffer areas • Sensitive catchments • Steep forested slopes above roads, houses or built up areas • Areas vulnerable to soil erosion • Other designated areas Guidance on the management of riparian areas and sensitive catchments is given in the Forest Service "*Forestry and Water Quality Guidelines*", "*Forestry and Otter Guidelines*" . Guidance is also provided in the programme of supplementary measures for forestry in the River Basin Management Plans under the EU Water Framework Directive. Guidance on the identification, design, establishment and management of native riparian woodland is provided in the Woodlands of Ireland Publication "*Native Riparian Woodlands – A Guide to Identification, Design, Establishment and Management*".
Means of Verification • Maps • Management plan • Field inspection	

5.2 Pesticides, biological control agents and fertilisers

5.2.1 **Requirement** Where an assessment (see 5.1.1) identifies a significant risk from pests or diseases, an integrated pest management strategy shall be prepared and implemented.	**Guidance** An integrated pest management strategy seeks to address the problem using a strategic approach based on the site conditions, the ecology of the pest and the status of the outbreak. It will use an appropriate combination of statutory, chemical, physical and biological measures.
Means of Verification • Integrated pest management strategy • Discussion with forest owner / manager • Management plan • Field inspection	

5.2.2 **Requirement** It shall be a forest management objective to minimise the use of chemical pesticides in the forest.	**Guidance** This requirement is associated with requirement 5.2.1 whereby pesticide use, where necessary, is only used as part of an integrated pest management plan and not as the only solution to a pest problem.
Means of Verification • Written forest management objective in management plan • Discussion with forest owner / manager • Field inspections	

5.2.3 **Requirement** Where pesticides and/or biological control agents are to be used: a) The forest owner / manager shall justify the reasons for selecting the chosen method b) The forest owner / manager, staff and contractors shall be aware of and implement legal requirements and non-legislative guidance for use of pesticides in forestry. c) The forest owner / manager shall keep records of pesticide usage and biological control agents as required by current legislation.	**Guidance** Guidelines for the use of pesticides in Irish forests are clearly laid out in the Forest Service "*Forest Protection Guidelines*" and the Guidelines for the Use of Herbicides in Forestry (Ward, 1998). Usage of pesticides should be recorded in a clear and consistent manner that facilitates year on year comparison. The record should include details of: • The pesticide used • The amount used • The reasons for use • The date of use • The site and area it was used on • The soil type • The prevailing weather conditions This will enable the recognition of any trends which will inform future planning and operations.
Means of Verification • Pesticide use records • Evidence that personal protective equipment is used • Discussion with forest owner / manager • Field inspections	

5.2.4 **Requirement** Storage, handling, use and disposal of chemicals shall be in compliance with the Forest Service "*Forest Protection Guidelines*" and any other up to date published advice.	**Guidance** Guidelines for the use of pesticides in Irish forests are clearly laid out in the Forest Service "*Forest Protection Guidelines*" and the Guidelines for the Use of Herbicides in Forestry (Ward, 1998). Disposal of empty containers to be in accordance with procedures as set out in 5.4.1.
Means of Verification • Visit to chemical store • Discussion with forest owner / manager • Disposal records • Field inspections	

5.2.5 **Requirement** Fertilisers (inorganic and organic): a) Fertilisers shall only be used where they are necessary to secure establishment or to correct subsequent nutrient deficiencies based on foliar analysis b) Where fertilisers are to be used the forest owner / manager, staff and contractors shall be aware of and shall be implementing legal requirements and best practice guidelines for their use in forestry. c) As detailed in Section 3.1, the potential environmental impact of fertiliser use shall be assessed prior to use. This assessment shall determine whether or not the use is appropriate and if it is appropriate, how it should be carried out in order to minimise adverse impacts and to secure or enhance environmental gains.	**Guidance** Unnecessary use of fertiliser may be avoided through the use of appropriate species. Appropriate fertiliser use is described in the Forest Service "*Code of Best Forest Practice – Ireland*" and in the Forest Service "*Forestry and Water Quality Guidelines*".
Means of Verification • Discussion with forest owner / manager • Records of fertiliser use • Field inspections • Documented environmental appraisal	

5.3 Fencing

5.3.1 **Requirement** Where appropriate, wildlife management and control shall be used in preference to fencing. Where fences are used, opportunities shall be taken to minimise negative impacts on access, landscape, wildlife and sites of public interest.	**Guidance** Decisions to erect fences, their alignment and specification should take account of: • Landscape • Public rights of way • Existing users of the woodland • Wildlife • Archaeology
Means of Verification • Discussion with forest owner / manager demonstrates and awareness of impacts of fence alignments and the alternatives • Field inspections	

5.4 Waste Management

5.4.1 **Requirement** Waste disposal shall be in accordance with current waste management legislation and regulations.	**Guidance** Waste includes: • Surplus or out of date chemicals • Chemical containers • Plastic waste • Fuels and lubricants • Planting bags Plastic tree shelters should not be allowed to create a litter problem at the end of their effective life. The relevant waste management legislation is the Waste Management Act (1996), The Litter Pollution Act (1997) and the Waste Management (Amendment) Act (2001).
Means of Verification • No evidence of impacts from waste disposal • Documented policy on waste disposal including segregation, recycling, return to manufacturer	

5.4.2 **Requirement** Plans and equipment shall be in place to deal with accidental spillages.	**Guidance** Detailed guidance on this requirement is provided in the Forest Service: • "*Forest Harvesting and the Environment Guidelines*" • "*Forests and Water Quality Guidelines*" • "*Code of Best Forest Practice – Ireland*"
Means of Verification • Discussions with forest owner / manager, staff and contractors • Appropriate equipment available in the field • Reports of any accidental spillage to relevant authority • Contract documents and instructions provided to contractors • Any post spillage event monitoring records	

Section 6
Conservation and enhancement of biodiversity

6.1 Protection of rare species and habitats

6.1.1 **Requirement** National Parks and statutorily designated areas shall be identified and mapped. Management in the form of notifiable actions shall be agreed in consultation with the relevant statutory agency. **Means of Verification** • Maps showing designated areas • Management Plans • Field Inspection • Documented evidence of consultation with statutory agencies	**Guidance** Statutorily designated areas include established and proposed • Special Areas of Conservation (SACs) • Special Protection Areas (SPAs) • Natural Heritage Areas (NHAs) • Nature Reserves Notifiable Actions are certain activities or operations In Designated Areas that might be damaging. Notifiable Actions can only be carried out with the permission of the Minister for the Environment, Heritage and Local Government. These vary depending on the type of habitat that is present on the site. Such activities or operations are not prohibited but require the landowner/occupier to consult (in practice with the local Conservation Ranger) in advance. Notifiable Actions do not apply where a licence or permission is needed from a planning authority (e.g. planning permission) or another Minister (e.g. a felling licence or afforestation approval)

6.1.2 **Requirement** Features and small areas of high biodiversity value shall be identified, mapped and managed to maintain or enhance biodiversity as the primary management objective. **Means of Verification** • Maps indicating presence of features / areas of high biodiversity value • Evidence of a pro active approach to the identification of these features and areas • Field Inspection • Management Plans	**Guidance** Examples of such features and areas include veteran trees, hollow trees, ponds, old hedgerows, rocky outcrops etc. More comprehensive lists are provided in the Forest Service "*Forest Biodiversity Guidelines*" and in the Forest Service "*Forestry Schemes Manual*". These features and areas may include other non woodland semi-natural habitats e.g. moorland, heathland, wood pasture or grassland that is adjacent to or influenced by the woodland. Management of these features and areas should be in accordance with the Forest Service "*Forest Biodiversity Guidelines*", and with Local Biodiversity Plans prepared by the Local Authority. Identification and mapping of these features may be carried out on an ongoing basis, provided that it has been completed prior to significant woodland management operations taking place.

6.1.3 **Requirement** Where a rare or endangered species is known to be present in the woodland, the relevant statutory authority shall be notified and appropriate management shall be agreed with them. **Means of Verification** • Evidence of consultation and agreement with statutory authority	**Guidance** Rare and endangered species in Ireland are listed in Irish Red Data Books and Lists which are fully referenced in Appendix D. For some rare and endangered species, the National Parks and Wildlife Service has prepared Species Action Plans (SAPs) and Threat Response Plans (TRPs). For these species, the SAP and TRP should be consulted and conformed with.

6.2 Maintenance of biodiversity and ecological functions

6.2.1 **Requirement** A minimum of 15% of the WMU area shall be managed with conservation and biodiversity as the primary objective. This shall include a minimum of 10% retained woodland and/or scrub habitat. **Means of Verification** • Maps showing areas where biodiversity is a primary objective • Field inspections • Management plan	**Guidance** Management in these areas should be in accordance with the Forest Service "*Forest Biodiversity Guidelines*". This area can be inclusive of: • areas and features identified in 6.1.1 and 6.1.2 • areas retained as part of the restructuring requirements outlined in 3.2.3 and 3.4.2 • areas being restored to semi-natural woodland or non-woodland habitats as outlined in requirements 3.5.1, 6.3.1, and 6.3.2.

6.2.2 **Requirement** Standing and fallen deadwood habitats and some over-mature trees shall be retained throughout the woodland where this does not compromise the safety of the public or forestry workers or the health of the woodland. **Means of Verification** • Harvesting contracts • Field inspections • Management plan • Discussions with forest owner / manager, staff and contractors	**Guidance** Guidance on the retention of standing and fallen deadwood and over-mature trees is provided in the Forest Service "*Forest Biodiversity Guidelines"*.

6.3 Conservation of semi-natural woodlands and plantations on old woodland sites

6.3.1 **Requirement** Woodland areas identified as semi-natural woodland shall: a) not be converted to plantations or non-forest land. b) be managed using a low impact silvicultural system c) follow the prescriptions of any plan agreed in consultation with the National Parks and Wildlife Service Adverse ecological impacts of non-native species shall be monitored in semi-natural woodlands.	**Guidance** A National Survey of Native Woodlands was completed in 2009 on behalf of the National Parks and Wildlife Service. Areas of semi-natural woodland not identified in the above survey will also exist and this survey should not be regarded as an exhaustive record.
Means of Verification • Maps showing any semi-natural woodlands • Field inspections • Management planning documentation agreed with the National parks and Wildlife Service • Monitoring records	

6.3.2
Requirement
Forest owners and managers shall:
• identify action which will progressively improve the biodiversity, environmental and cultural values of plantations on old woodland sites (POWS), considering the site, landscape context and management objectives.
• maintain and enhance remnant features of old woodlands on all POWS. This process shall be achieved by:
  ○ Undertaking field assessment and evaluation of the biodiversity, environmental and cultural value of POWS to identify threats, ongoing declines and potential gains
  ○ Prioritising action taking account of the degree and immediacy of threats to remnant features and potential biodiversity gains at a site and landscape level
• identify management prescriptions that
  ○ maintain old woodland features by addressing threats and ongoing decline on all POWS
  ○ secure potential gains identified as a priority
  ○ adopt appropriate silvicultural systems that minimise negative impacts and have an emphasis on gradual change
• implement management prescriptions that ensure that:
  ○ field assessments are carried out prior to
	Guidance
	For the purpose of this standard, plantations on old woodland sites (POWS) are considered to be plantations on sites that were recorded as woodland on the 1830's Ordnance Survey Map Series.
	
	A more detailed definition of POWS in Ireland may be agreed at a future date but in the meantime the above definition is agreed.
	
	The overriding principle for POWS is that their current biodiversity and heritage values should be enhanced. This will probably be best achieved over a long period with a gradual process of change favoured over sudden changes.
	
	It is essential that the forest owner / manager has a strategy to achieve this based on a good knowledge of the current state of the site and a precautionary approach to operations. The effect of all operations on the biodiversity and heritage values of the site are to be monitored. If, despite careful planning, the operations are adversely affecting these values then they should be halted and a new strategy adopted.

planned operations to ensure remnant features are safeguarded ○ operations are implemented in a manner that does not adversely impact the sites' values • implement a monitoring plan that includes: ○ monitoring and reviewing the condition of old woodland features and the effect of forest management actions on them ○ monitoring the status of threats ○ monitoring the condition of cultural heritage features	Remnant features of old woodland may include for example: • Flora (including fungi and microbial flora) and/or fauna associated with a particular type of woodland • Old coppice or other stumps • Veteran trees retained in hedgerows, copses or inaccessible areas such as gullys, ravines and crags.
Means of Verification • Maps showing any POWS and highlighting remnant features • Assessment of current state of biodiversity and heritage value of POWS and associated features • Written management strategy for any POWS • Field inspections • Monitoring plan and completed records	

6.3.3 **Requirement** Where appropriate and possible, forest owners / managers shall use natural regeneration or, in the case of native species, planting stock of native provenance. In the case of semi-natural woodlands, natural regeneration and seed / planting stock of native provenance shall be the only means of regeneration used. In the case of POWS, where native species are being sown or planted, only seed and planting stock of native provenance shall be used.	**Guidance** Forest nurseries trace the source of all seed used in their production of transplants and provide provenance certificates for all transplants sold. The island of Ireland is considered a single provenance for all native species. In the case of use of non-native species and provenances there should be clear justification on grounds such as tree vigour or timber quality. A list of tree species native to Ireland is provided in Appendix F.
Means of Verification • Provenance certificates • Field inspections	

6.4 Game management

6.4.1 **Requirement** Hunting, game rearing and shooting and fishing shall be carried out in accordance with licence conditions and in a sustainable manner that does not threaten the viability of the local population of any particular species. In the case of deer hunting, all hunters shall have successfully completed a Hunter Competency Assessment Programme (HCAP) (see 5.1.3).	**Guidance** Wildlife management is legislated for in the Wildlife Act (1976) and the Wildlife Amendment Act (2000). Deer hunting licences are issued by the National Parks and Wildlife Service and require written permission from the landowner in question.
Means of Verification • Licences from National Parks & Wildlife Service and Gardaí • Letting agreements • Records of hunters qualifications • Field inspections • Hunting records (including dates, numbers, species, ages, sex and location) • Insurance records • Discussions with forest owner / manager	

6.4.2 **Requirement** Game management shall not be so intense as to cause long-term or widespread negative impacts on the woodland ecosystem.	**Guidance** Feeding and rearing areas should be located in areas where there will be low impact on ground flora. Some predator species are legally protected and predator control should only be carried out if: • In compliance with the law • Carefully planned • Species specific • Only carried out when essential • Aimed at reducing rather than eradicating predator populations
Means of Verification • Management planning documentation and specific game management plans • Field inspections	

Section 7
The community

7.1 Consultation

7.1.1 **Requirement** Local people and relevant organisations and interest groups shall be made aware that: • New or revised management planning documentation, as specified in Section 2.1, is being produced • A new or revised Forest Service scheme application and associated documents are available for inspection • High impact operations i.e. clearfelling and road construction, are planned • New or revised design plans are being produced • The woodland is being evaluated for certification The forest owner / manager shall ensure there is full co-operation with the Forest Service and other statutory consultation processes. The owner / manager shall consult adequately with local people and relevant organisations and make a reasonable response to issues raised or requests for ongoing dialogue and engagement. At least 30 days shall be allowed for people to respond to notices, letters or meetings before certification.	**Guidance** For all grant and felling licence applications, the Forest Service operate a referral and notification system the details of which are presented in Appendix E. The forest owner / manager should be able to justify the level of consultation undertaken and the certification body will look for corroborating evidence. Examples of methods for making people and relevant organisations aware include: • Statutory consultations by the Forest Service on the forest owner's behalf • Voluntary consultation with relevant bodies • Letters to individuals or groups • Temporary or permanent signs in or near the affected woodland • Information in local press / media (including internet) • Meetings The certification body is also required to consult with relevant stakeholders as part of the certification audit
Means of Verification • Consultation with the Forest Service and other statutory agencies • Evidence of communication with stakeholders	

7.1.2 **Requirement** Records shall be kept of consultation undertaken, resulting actions and responses.	**Guidance** Records can be in the form of a log or diary but should clearly record the identity of the consultee, the matter discussed, the views of the consultee and any resulting actions from the meeting or reasons for non-acceptance of the consultees suggestions.
Means of Verification • Consultation records • Discussions with stakeholders	

7.2 Woodland Access and Recreation Including Traditional and Permissive Use Rights

7.2.1 **Requirement** Legal, customary and traditional use rights relating to forest access shall be clarified, recognized and respected.	**Guidance** See also Section 1.1.3.
Means of Verification • Documentation or maps of all existing permissive and traditional uses of the woodland • Evidence of discussions with interested parties • Field observations of public rights of way • Evidence presented to justify any restriction to permissive or traditional uses	

7.2.2 **Requirement** The forest owner / manager will positively consider any reasonable and formal request for access to the forest for recreational or educational purposes. The forest owner / manager may refuse such a request in certain circumstances.	**Guidance** Examples of circumstances where access may be denied are: • Small woodlands that are a private amenity • Areas adjoining dwellings or private gardens • Woodlands where there is evidence of serious and sustained abuse or damage • Woodlands with features or areas that may be particularly vulnerable to disturbance • Where there may be public safety concerns • When access will jeopardise other enterprises or recreational activities on the land • Where there is a cost to the forest owner
Means of Verification • Evidence of discussions with interested parties • Field observations • Evidence presented to justify any refusal of access following a formal request • Discussions with the forest owner / manager	

7.3 Sites with Recognised Specific Historical, Cultural or Spiritual Significance

7.3.1 **Requirement** Sites with recognised specific historical, cultural or spiritual significance shall be mapped and protected or managed in a way that takes due regard of the significance of the site.	**Guidance** Such sites may include archaeological sites, historic monuments, holy wells, mass paths etc.
Means of Verification • Maps • Field inspections • Management Plans	

7.4 Rural Economy

7.4.1 **Requirement** The forest owner / manager shall promote the integration of woodlands into the local economy and respond positively to local requests for forest products and services subject to compliance with the management plan, the principle of sustained yield and an economic return for these products and services.	**Guidance** Promotion of integration into the local economy may be achieved by: • Making reasonable provision for local employment for contractors and suppliers to provide services and supplies. • Allowing local or specialist markets opportunities to purchase small scale or specialist products • Promoting and encouraging enterprises which will strengthen and diversify the woodland or local economy An example of how the forest owner / manager might help to diversify the processing industry is that a proportion of timber parcels are advertised and sold by open tender or auction.
Means of Verification • Evidence of reasonable provision for local employment and suppliers • Evidence of action taken on local or specialist market opportunities • Evidence of promoting or encouraging enterprises to strengthen and diversify the local economy	

7.5 Minimising Adverse Impacts

7.5.1 **Requirement** The forest owner / manager shall mitigate the risks to public health and safety and the wider impacts of woodland operations on local people.	**Guidance** Examples of impacts include: • Smoke • Timber haulage on minor roads close to the woodland • Natural hazards to operators and public e.g. unsafe trees
Means of Verification • Evidence that complaints have been recorded and dealt with constructively • Discussions with interested parties • Risk assessment records • Tree safety inspection records • Evidence of actions taken in response to identified risks	

Section 8
The Forestry Workforce

8.1 Health and Safety

<table>
<tr>
<td>8.1.1
Requirement
There shall be:
a) Compliance with Irish Health and Safety Legislation
b) Compliance with HSA approved Codes Of Practices
c) Emergency Plans for fire and other plans appropriate to the safe management of forests, employees and contractors
d) Health and safety training and information to any forestry employees in the necessary skills for the safe operation of tasks</td>
<td rowspan="2">Guidance
Guidance on the legal requirements relating to health and safety is provided in the Health and Safety Authority (HSA) Code of Practice for Managing Safety and Heath in Forestry Operations.

The Safety Health and Welfare at Work Act, 2005, Part 3 details the following requirements
• S18. Protective and Preventative measures
• S19. Hazard Identification and risk assessment.
• S20. Provision of the Safety statement
• S21. Duties of Employees to cooperate with employers

Relevant legislation and guidance also includes:
• The safety, health and welfare at work, General Applications Regulations 2007.
• The safety, health and welfare at work, General Applications Regulations 1993 (S.I. No. 44/1993), Part X which covers regulation with regard to notification of accidents and dangerous occurrences.
• The Safety toolkit and short guide to the general Application regulations 2007 (Small business edition)
• HSA Guidelines on Risk Assessments and Safety Statements
• HSA Guide to the Safety, Health and welfare at Work Act 2005
• HSA Guide to workplace Safety and Health Management.</td>
</tr>
<tr>
<td>Means of Verification
• Field observations to ensure that health and safety practices and procedures set out in safety statement and method statements are being implemented.
• Discussions with employees and contractors to determine that they have had sight of and are aware and understand the requirements of relevant safety statements and method statements for tasks being carried out in the forest.
• Copies of the risk assessments and hazard identification are available to staff and contractors
• Records of training and the provision of appropriate information provided to employees and contractors. Copies of all certification of competencies required in connection with the safe operation, use of equipment and control of forest operations
• Record of contractors safety and methods statements
• Records of insurance for Public and Employers liability</td>
</tr>
</table>

8.2 Training and Continuing Development

8.2.1 **Requirement** Only those with relevant qualifications, training and / or experience shall be engaged to carry out any work unless working under proper supervision if they are currently undergoing training.	**Guidance** There are a number of different training providers in Irish forestry and training courses are co-ordinated by Forest Training and Education Ireland (FTEI) who are funded by the Forest Service.
Means of Verification • Copies of appropriate certificates of competence • Discussions with staff and contractors • System to ensure that only contractors who are appropriately trained or supervised work in the woodland • No evidence of personnel without relevant training, experience or qualifications working in the woodland • Documented training programme for staff • Documented system to ensure that only contractors who are appropriately trained or supervised work in the woodland • Training records for staff	

8.2.2 **Requirement** a) The forest owner / manager shall actively participate in training or education in order to keep up to date in relation to sustainable forest management. b) The forest owner / manager shall encourage and provide opportunities for employees to further develop their skills and knowledge in relation to sustainable forest management.	**Guidance** In addition to formal training courses there are a number of different forestry organisations in Ireland that run informative field days and forest visits which provide opportunities for forest owners / managers to keep up to date with developments in sustainable forest management. These organisations include: • The Society of Irish Foresters • The Irish Farmers Association • The Irish Timber Growers Association • Pro Silva Ireland • Teagasc • Irish Natural Forestry Foundation • The Tree Council of Ireland
Means of Verification • Discussions with staff and contractors • Records of training courses / field days attended	

8.3 Workers Employment Rights

8.3.1 **Requirement** Employers shall conform with all Irish related employment legislation, regulations, codes of practice and guidelines.	**Guidance** Workers employment rights are enshrined in law and in a number of International Labour Organisation (ILO) Conventions as detailed in Appendix C. Employers, in the discharge of their responsibilities to their employees, must take into consideration all fair employment practice.
Means of Verification • No evidence of non-compliance • Discussions with workers	

8.4 Insurance

8.4.1 **Requirement** Forest Owners / managers, employers and contractors shall hold adequate public liability and employer's liability insurance, copies of which are available for inspection.	
Means of Verification • Insurance documents	

Glossary of terms

Accreditation: Accreditation is the process used to ensure that those who undertake the certification audit are truly independent and professionally competent. Certification bodies conducting audits against the standard must be accredited to undertake woodland management certification by a national or international accreditation body.

Appropriate Assessment: An appropriate assessment is an assessment carried out under Article 6(3) of the Habitats Directive of the implications of a plan or project, either individually or in combination with other plans and projects, on a Natura 2000 site in view of the site's conservation objectives.

Auditor: A competent professional engaged by a Certification Body (qv),to conduct the assessment on which the outcome of an application for forest management certification will be determined.

Biodiversity: The variety of ecosystems and living organisms (species), including genetic variation within species.

Biological Control Agents: Living organisms used to eliminate or regulate the population of other living organisms.

Broadleaves: Broadleaved trees are characterized by their broad leaves and most are deciduous. They produce hardwood timber.

Certification Body: An organisation that is accredited by an accreditation authority to certify (by giving written assurance) that forest management conforms to the specific requirements of a forest management standard.

Clearfelling: Cutting down of all or the vast majority of trees in an area of woodland.

Conifers: Coniferous trees are characterised by their needle or scale like leaves and most are evergreen. They produce softwood timber.

Designated Areas: Designated areas are areas statutorily designated for conservation or protection and include Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Natural Heritage Areas (NHAs), National Parks and Nature Reserves.

Environmental Impact Assessment: Environmental Impact Assessment (EIA) is the process and documentation associated with the statutory requirement under the EU Environmental Assessment Directive.

Forest: Predominantly tree covered land. When in large tracts it is generally referred to as forest and when in smaller units as woodland. The terms woodland and forest are used interchangeably throughout the standard.

Forest Service: The Forest Service is part of the Department of Agriculture, Fisheries and Food and is the regulatory authority with regard to forestry practice in Ireland.

Game: Animals, either wild or reared, managed for hunting or shot for food.

IAF: International Accreditation Forum. The IAF is the world association of Conformity Assessment Accreditation Bodies and other bodies interested in conformity assessment in the fields of management systems, products, services, personnel and other similar programmes of conformity assessment. Its primary function is to develop a single worldwide programme of conformity assessment which reduces risk for business and its customers by assuring them that accredited certificates may be relied upon. Accreditation assures users of the

competence and impartiality of the body accredited. IAF members accredit certification or registration bodies that issue certificates attesting that an organisation's management, products or personnel comply with a specified standard (called conformity assessment).

ILO: International Labour Organisation. The ILO is the specialised agency of the United Nations which seeks the promotion of social justice and internationally recognised human and labour rights. The ILO formulates international labour standards in the form of Conventions and Recommendations setting minimum standards for basic labour rights.

ISO: International Organisation for Standardisation. ISO is the world's largest developer and publisher of International Standards. It is a network of the national standards institutes of 158 countries with a central secretariat based in Geneva that coordinates the system.

Invasive Species: Introduced, non-native species which spread readily and dominate native species.

Landscape Unit: An area of broadly homogenous landscape character.

Lop and Top: Woody debris from felling operations, mainly consisting of branches and tree tops.

Low Impact Silvicultural Systems: Forest Management Systems that do not involve clearfelling and that use relatively unintensive management interventions, if any.

Notifiable Actions: Notifiable Actions are certain activities or operations In Designated Areas that might be damaging. Notifiable Actions can only be carried out with the permission of the Minister for the Environment, Heritage and Local Government. These vary depending on the type of habitat that is present on the site. Such activities or operations are not prohibited but require the landowner/occupier to consult (in practice with the local Conservation Ranger) in advance. In the case of NHAs, 3 months written prior notice is required to be given to the Minister before undertaking any notifiable activities. Notifiable Actions do not apply where a licence or permission is needed from a planning authority (e.g. planning permission) or another Minister (e.g. a felling licence or afforestation approval).

Pesticides: Any substance used to protect plants or other plant products from harmful organisms, to regulate the growth of plants, to give protection against harmful creatures, or to render such creatures harmless.

Plantations on Old Woodland Sites (POWS): Plantations on old woodland sites (POWS) are plantations on sites that were recorded as woodland on the 1830's Ordnance Survey Map Series.

Provenance: Location of trees from which seed or cuttings are collected. Designation of Regions of Provenance under the Forest Reproductive Materials regulations is used to help nurseries and growers select suitable material.

Regeneration: Regeneration refers to the establishment of new young trees on a site whether using planting of nursery raised stock, sowing of seed or using seed dispersed naturally from trees already present on the site.

Thinning: Tree removal, which results in a temporary reduction in basal area, made after canopy closure to promote growth and greater value in the remaining trees.

Windthrow: Uprooting of trees by the wind.

Wind Hazard Classification: A classification system used for determining the risk of windthrow on any particular site.

Woodland: (see forest)

Woodland Management Unit (WMU): A WMU is a forest property or properties covered under a single forest management plan and within a Landscape Unit (qv). A WMU may be owned by an individual, a group of individuals (sharing the one property), a company, a charity or any other legal entity. WMUs may contain smaller units e.g. compartments and sub-compartments but they should not be split for certification purposes. If the owner of a WMU owns other WMUs in different landscape units they need not necessarily be obliged to submit these for certification.

Appendix A
Forest Service Guidelines, Other Industry Codes of Practice and Rules and Selected Bibliography

The following are the current Forest Service Guidelines and Other Industry Codes of Practice and Rules relevant to this standard. The list is presented under different subject categories although many of these codes and guidelines are relevant across a number of categories.

Biodiversity

Forest Service (2000). Forestry Biodiversity Guidelines. Published by the Forest Service in the Department of Marine & Natural Resources.

General Forestry Practice & Management

Forest Service (2000). Code of Best Forest Practice – Ireland. Published by the Forest Service in the Department of Marine & Natural Resources.

Forest Service (2003). Forestry Schemes Manual. Published by the Forest Service in the Department of Marine & Natural Resources.

Forest Service (2001). Forestry and Aerial Fertilisation Guidelines. Published by the Forest Service in the Department of Marine & Natural Resources.

Forest Service (2000). Irish National Forest Standard. Published by the Forest Service in the Department of Marine & Natural Resources.

Forest Service (2000). Forestry & Archaeology Guidelines. Published by the Forest Service in the Department of Marine & Natural Resources.

Forest Service (2002). Forest Protection Guidelines. Published by the Forest Service in the Department of Marine & Natural Resources.

Ward, D (Ed.) (1998) 2nd Edition. Guidelines for the use of Herbicides in Forestry. Published by Coillte Teo., Dublin.

Anon. (2003). Code of Practice for Managing Safety & Health in Forestry Operations. Published by the Health and Safety Authority.

Forest Service (2006). Forest Recreation in Ireland; A Guide for Forest Owners and Managers. Forest Service, Department of Agriculture, Fisheries and Food, Johnstown Castle Estate, Wexford.

Forest Service (2008). Forestry and Freshwater Pearl Mussel Requirements. Site Assessment and Mitigation Measures. Forest Service, Department of Agriculture, Fisheries and Food, Johnstown Castle Estate, Wexford.

Forest Service (2008). Forestry and Kerry Slug Guidelines. Forest Service, Department of Agriculture, Fisheries and Food, Johnstown Castle Estate, Wexford.

Forest Service (2009). Forestry and Otter Guidelines. Forest Service, Department of Agriculture, Fisheries and Food, Johnstown Castle Estate, Wexford.

Forest Planning

Forest Service (2000). Forestry & the Landscape Guidelines. Published by the Forest Service in the Department of Marine & Natural Resources.

Water

Forest Service (2000). Forestry & Water Quality Guidelines. Published by the Forest Service in the Department of Marine & Natural Resources.

Forest Roads, Harvesting & Haulage

Forest Service (2000). Forest Harvesting and the Environment Guidelines. Published by the Forest Service in the Department of Marine & Natural Resources.

Anon. (2004). Road Haulage of Round Timber Code of Practice. Published by the Irish Forestry Industry Chain (IFIC) and the Forest Industry Transport Group (FITG).

Ryan, T., Phillips, H., Ramsay, J. and Dempsey, J. (2004). Forest Roads Manual. Guidelines for the Design, Construction and Management of Forest Roads. Published by COFORD, Dublin.

Appendix B:
Selected Bibliography

Bell, S. (1998). Forest Design Planning – A Guide to Good Practice. Published by the Forestry Commission GB and the Northern Ireland Forest Service.

COFORD. COFORD Connects. A series of information notes relating to Forest Reproductive Material, Silviculture / Management, Timber Harvesting / Transport, Wood Processing / Products, Socio Economic Aspects of Forestry and Environmental Aspects of Forestry. Published by COFORD, Dublin.

Forest Service (2005). Native Woodland Manual. Published by the Forest Service in the Department of Agriculture & Food.

Fossitt, J. A. (2000). A Guide to Habitats in Ireland. Published by The Heritage Council.

Giller, P.S., Johnson, M. and O'Halloran, J. (2002). Managing the Impacts of Forest Clearfelling on Stream Environments. Published by COFORD, Dublin.

Hamilton, G.J., and Christie, J.M. (1971). Forest Management Tables (Metric). Forestry Commission Booklet 34, HMSO, London.

Hendrick, E. and MacLennan, L. A. (Eds) (2002). Forests and Water. Proceedings of a COFORD Seminar, 15th November 2000, Cork. COFORD, Dublin.

Horgan, T., Keane M., Mccarthy, R., Lally, M., and Thompson, D. (Ed. O'Carroll, J.) (2004). A Guide to Forest Tree Species Selection and Silviculture in Ireland. Published by COFORD, Dublin.

Maguire, B. (2001). A Review of Legislation that Impacts on Irish Forestry. Published by COFORD, Dublin.

McHugh, D and G. Gallagher. (2004). Trees, Forests and the Law in Ireland. COFORD, Dublin.

McLennan, L. (Ed.) (2004). Opportunities for Biodiversity Enhancement in Plantation Forests. Published by COFORD, Dublin.

Purser, P., F. Wilson and R. Carden (2010). Deer and Forestry in Ireland: A review of current status and Management Requirements. Report commissioned by Woodlands of Ireland.

Rooney, S. and Hayden, T. (2002). Forest Mammals – Management and Control. Published by COFORD, Dublin.

Society of Irish Foresters. (2000). Code of Ethics and Professional Conduct. Published for Members of the Society of Irish Foresters.

Woodlands of Ireland. Native Woodland Information Notes – In support of the Native Woodland Scheme. A series of Information Notes relating to the management of native woodlands. Woodlands of Ireland, Dublin.

Appendix C:
Irish Laws and International Agreements and Protocols Pertinent to Forest Management in Ireland

The following is a list of Irish national laws pertinent to forest management.

Legislation	***Potential Impact***
Wildlife Acts, 1976 and 1999 *Wildlife Amendment Act (2000)*	*Flora, fauna, environment and forest management*
Forestry Acts, 1946, 1956 and 1988	*Forest management*
Local Government (Planning and Development) Acts, 1963 to 1999	*Control of development and forest management*
Planning and Development Act, 2000 *Commencement (No. 3) Order, (2001) S.I. No. 599 of 2001.* *Planning and Development Regulations (2001) S.I. No. 600 of 2001.*	*Control of development and forest management*
National Monuments Acts, 1930 to 2004 (Including Approval of Consent (1) Order, 1995)	*Forest management in relation to archaeology*
National Cultural Institutions Act 1997	*Forest management in relation to archaeology*
Occupiers Liability Act, 1995	*Forest management*
Safety Health and Welfare at Work Act 2005. *Safety Health and Welfare at Work - General Application Regulations (2007) and Construction Regulations (2001)*	*Forest management both in forest and in office*
Environmental Protection Agency Act, 1992	*Forest management and environment*
Heritage Act, 1995	*Heritage protection*
Environmental Impact Assessment – S.I. No. 100 of 1996	
European Communities (Environmental Impact Assessment) (Amendment) Regulations, 1996. S.I. No. 101 of 1996.	
Fisheries Consolidation Act 1959 and all amendments, Fisheries Act 1980 and all subsequent amendments. *S.I. regulation for the Water Framework Directive: S.I. No. 722 of 2003*	*Forest management in relation to water and fisheries*
Local Government (Water Pollution) Acts, 1977 to 1990	*Forest management and environment*
European Communities (Environmental Impact Assessment) (Amendment) Regulations, 2001. S.I. No. 538 of 2001.	
Waste Management Act, 1996	*Forest management and environment*
Local Government (Special Amenity and Conservation Orders) Act, 1976	
Litter pollution Act, 1997	*Forest management and environment*
Occupiers Liability Act 1995	*Forest Management*
Roads Act, 1993	*Haulage*
Road Transport Acts, 1932 to 1999	*Haulage*

The following is a list of European (EU) laws pertinent to forest management in Ireland.

Legislation	***Potential Impact***
Council Directive (92/43/EEC) and amending directives on the conservation of natural habitats of wild fauna and flora	*Flora and fauna and forest management*

Council Directive (79/409/EEC) and amending directives on the conservation of wild birds	*Wild birds and forest management*
EU (Conservation of Wild Birds) (Amendment) Regulations 1999	
European Communities (Natural Habitats) Regulations, 1997	
European Communities (Natural Habitats) (Amendment) Regulations, 1998	
Council Directive (2000/60/EC) establishing a framework for community action in the field of water policy	*Forest management and the environment*
Council Directive (2000/29/EC) on protective measures against the introduction into the Member States of harmful organisms of plants or plant products and against their spread within the Community	*Forest protection*
Council Directive (1999/105/EC) on the marketing of forest reproductive material	*Tree improvement and forest protection*
Council Directive (85/337/EEC) and amending directives on the assessment of the effects of certain public and private projects on the environment	*Control of development*
Environmental Liability Directive (2004/35/EC).	*Preventing and Remedying Environmental Damage*
EU Water Framework Directive (Directive 2000/60/EC)	*Water*
Council Regulation (EEC3528/86) on the protection of forests against atmospheric pollution	*Environment*
EU Strategic Environmental Assessment Directive (Directive 2001/42/EC)	*Environment*

Information in the above tables was resourced from the following two publications which contain a more detailed analysis of these laws:

- Maguire, B. 2001. A Review of Legislation that Impacts on Irish Forestry. COFORD, Dublin.
- McHugh, D and G. Gallagher. 2004. Trees, Forests and the Law in Ireland. COFORD, Dublin.

The following is a list of international agreements and protocols pertinent to forest management in Ireland:

a. International Labour Organisation - Conventions

- Freedom of Organization
  Convention 87 on Freedom of Association and Protection of the Right to Organise, 1948
  Convention 98 on the Right to Organise and Collective Bargaining, 1949
- Abolition of Forced Labour
  Convention 29 on Forced Labour, 1930
  Convention 105 on Abolition of Forced Labour, 1957
- Equal Rights / No Discrimination
  Convention 100 on Equal Remuneration, 1951
  Convention 111 on Discrimination (Employment and Occupation), 1958
- Child Labour
  Convention 138 on Minimum Age for Admission to Employment, 1973

b. International Agreements

Ireland has signed the following international agreements, among others:

- the *Bern Convention* of 1979 for the preservation of Europe's wild animals and native plants and their natural habitats;
- the *Convention on Biological Diversity* of Rio de Janeiro of June 5, 1992, concerning biological diversity;
- the *Bonn Convention* of June 23, 1979, for the preservation of migrating wild animal species;
- the Washington *Convention on International Trade in Endangered Species* (CITES) of March 3, 1973, concerning the international trade in endangered species of wild animals and plants.
- the *Ransar Convention on Wetlands*, 1971 - an intergovernmental treaty which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are 45 Ramsar sites in Ireland.
- the *Kyoto Protocol*, negotiated by more than 160 nations in December 1997, aims to reduce net emissions of certain greenhouse gases (primarily carbon dioxide (CO_2)).
- the *International Tropical Timber Agreement* of 1994 which seeks to improve the international market conditions for sustainably grown tropical timber.
- the *Helsinki Protocols* resulting from the Ministerial Conference for Protection of Forests in Europe, 1994.
- the *Lisbon Protocols* resulting from the Ministerial Conference for Protection of Forests in Europe, 1998.
- The Vienna Protocols resulting from the Ministerial Conference for Protection of Forests in Europe, 2002.
- The United Nations *Framework Convention on Climate Change* in 1992.
- *Convention Concerning the Protection of the World Cultural and Natural Heritage*, Paris, 1972
- *the Aarhus Convention*
- *The European Landscape Convention, 2000.*
- *The European Convention on the Protection of Archaeological Heritage*

Appendix D
Irish Red Data Books and Lists

The International Union for the Conservation of Nature and Natural Resources (IUCN) in the 1960's developed the first established approach in dealing with the presentation of information on rare and threatened species.
More formal IUCN Red List Categories and Criteria were developed in the early nineties to further objectively assess and prioritise species for conservation purposes at a global scale. A review of these categories and criteria was completed in 1998 and 1999 and the current version the IYCN Red list categories and criteria (Version 3.1) is now widely used around the world for species assessments. The IUCN also produce regularly updated guidelines for using the categories and criteria, and have produced guidelines for applying the criteria at a regional level.
The following are the currently published Irish Red Data Books and Lists.

Invertebrates
Byrne, A., Moorkens, E.A., Anderson, R., Killeen, I.J. & Regan, E.C. (2009). Ireland Red List No. 2: Non-marine Molluscs, National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.

Foster, G. N., Nelson, B. H. & O Connor, Á. (2009). Ireland Red List No. 1: Water beetles, National Parks & Wildlife Service, Department of Environment, Heritage & Local Government, Dublin, Ireland.

Fitzpatrick, U., Murray, T.E., Byrne, A., Paxton, R.J. & Brown, M.J.F. (2006). The Regional Red List of Irish Bees 2006.

Vertebrates
Marnell, F., Kingston, N. & Looney, D. (2009). Ireland Red List No. 3: Terrestrial Mammals, National Parks and Wildlife Service, Department of the Environment, Heritage and Local Government, Dublin, Ireland.

Whilde, A. (1993) Irish Red Data Book 2: Vertebrates

Vascular Plants
Curtis, T. G. F & McGough, N. (1988) Irish Red Data Book 1: Vascular Plants (Out of Print, but the list can be downloaded from the website of the National Botanic Gardens.

Birds
BirdWatch Ireland and the RSPB NI have produced a list of Birds of Conservation Concern (BoCCI) in Ireland. This was updated by: Lynas, P., Newton, S.F. & Robinson, J.A. (2009) The status of birds in Ireland: an analysis of conservation concern 2008-2013. *Irish Birds*, 8(2): 149-166.

The National Parks and Wildlife Service and the Northern Ireland Environment Agency are currently formulating All-Ireland red lists and books, which will include many more Irish species in need of conservation assessment. Red data lists and books are underway for the following groups; Fish, Moths, Butterflies, Dragonflies, Lichens, Bryophytes, and Seaweeds as well as an update of the Red list for Vascular Plants.

Appendix E
Forest Service Referral and Notification System

The Forest Service in the Department of Agriculture, Fisheries and Food operate a referral and notification system for all applications received for grant aid (e.g. afforestation or forest roads) and for felling licences. This involves a consultation process which is summarized as follows:

Areas	Consultation Type	Consultation Period
Areas of all Sizes	If proposed afforestation is within 60m of a dwelling or associated building the applicant must consult with the owner occupier.	N/A
Areas >2.5 ha.	The Forest Service supplies details to the public through an appropriate provincial paper of County, District Electoral Division, Townland and area for all proposals > 2.5 hectares.	1 month from date advertisement appears in the paper.
Areas > 5 ha.	Areas > 5 ha. Where there is a fisheries consideration designated sensitive for water quality considerations are referred to the relevant Regional Fisheries Board.	Normally 1 month
Areas > 25 ha.	All sites > 25 ha. Are sent to the relevant local authority for their observations.	Normally 1 month
Areas > 40 ha.	Areas > 40 ha. Where there is a fisheries consideration designated non sensitive for water quality are referred to the relevant Regional Fisheries Board.	Normally 1 month
Areas > 50 ha.[4]	An EIA and planning permission is required for these areas.	Varies
Special Areas of Conservation (SAC) & Special Protection Areas (SPA) & Natural Heritage Areas (NHA)	Applications for operations in these areas received by the Forest Service are referred to the National Parks and Wildlife Service.	Normally 2 months
Outstanding Landscapes	The Forest Service refer these to the Local Authority.	Normally 1 month
Airport	The Forest Service refer these to the Aviation Authority.	Normally 1 month

More details of the types of situations where referral, notification and consultation is required by the Forest Service are provided in their Forestry Schemes Manual in the chapter entitled "Environmental Protection and Controls Consultation Process" That chapter sets out the environmental standards governing forestry and the consultative process undertaken when an application for approval is made to the Forest Service.

[4] In accordance with SI No. 538 of 2001, all applications for afforestation are subject to an Environmental Impact Assessment (EIA) screening process undertaken by the Minister. The screening determines whether an application requires an EIA. An Environmental Impact Assessment must accompany applications for the afforestation of areas of under 50 hectares where a proposed development is deemed by the Minister to have a significant environmental impact.

Appendix F
Native and Naturalised Tree Species in Ireland

Native Tree Species[5]
Holly *(Ilex aquifolium)*
Alder *(Alnus glutinosa)*
Common birch *(Betula pendula)*
Downy birch *(Betula pubescans)*
Hazel *(Cotylus avellana)*
Elder *(Sambucus nigra)*
Spindle *(Euonymus europaeus)*
Strawberry tree *(Arbutus unedo)*
Sessile oak *(Quercus petraea)*
Pedunculate oak *(Quercus robur)*
Ash *(Fraxinus excelsior)*
Scots pine *(Pinus sylvestris)*
Alder buckthorn *(Frangula alnus)*
Buckthorn *(Rhamnus cathartica)*
Wild cherry *(Prunus avium)*
Hawthorn *(Crataegus monogyna)*
Rowan *(Sorbus aucuparia)*
Irish whitebeam *(Sorbus hibernica)*
Common whitebeam *(Sorbus aria)*
Crab apple *(Malus sylvestris)*
Aspen *(Populus tremula)*
White willow *(Salix alba)*
Yew *(Taxus baccata)*
Wych elm *(Ulmus glabra)*
Bird Cherry *(Prunus padus)*

Naturalised Tree[6] **Species**
Sycamore *(Acer pseudoplatanus)*
Scottish laburnum *(Laburnum alpinum)*
Sweet chestnut *(Castanea sativa)*
Beech *(Fagus sylvatica)*
Horse chestnut *(Aesculus hippocastanum)*
Devon whitebeam *(Sorbus devoniensis)*
English whitebeam *(Sorbus anglica)*
Wild pear *(Pyrus pyraster)*
Hornbeam *(Carpinus betulus)*

[5] Native tree species are as listed in E. Charles Nelson and Wendy F. Walsh (1993) *"Trees of Ireland Native and Naturalized"* and in *"Our Trees – A Guide to Growing Ireland's Native Trees in Celebration of a New Millenium",* the People's Millennium Forests Project, 2000.
[6] Naturalised tree species are as listed in E. Charles Nelson and Wendy F. Walsh (1993) *"Trees of Ireland Native and Naturalized"*

Appendix G
Invasive Species of Threat in Ireland

Under the Communities (Birds and Natural Habitats) Regulations 2010, the species listed below are cited as invasive in Ireland. Greater detail is available from:
http://www.environ.ie/en/Legislation/Heritage/NatureConservation/FileDownLoad,23675,en.pdf
and in an explanatory note found at:
http://www.environ.ie/en/Legislation/Heritage/NatureConservation/FileDownLoad,23676,en.pdf

Part 1: PLANTS
Three Cornered leek *Allium triquetrum*
Cape pondweed *Aponogeton distachyos*
Water fern *Azolla filiculoides*
Hottentot-fig *Carpobrotus edulis*
Red valerian *Centranthus rubber*
New Zealand pigmyweed ; Australian swamp-stonecrop *Crassula helmsii*
Large-flowered waterweed *Egeria densa*
Waterweeds *Elodea* (all species)
Japanese knotweed *Fallopia japonica*
Giant knotweed *Fallopia sachalinensis*
A red algae *Grateloupia doryphora*
Brazilian giant-rhubarb *Gunnera manicata*
Giant-rhubarb *Gunnera tinctoria*
Giant hogweed*Heracleum mantegazzianum*
Spanish bluebell *Hyacinthoides hispanica*
Floating pennywort *Hydrocotyle ranunculoides*
Himalayan balsam *Impatiens glandulifera*
Curly waterweed *Lagarosiphon major*
Water-primrose Ludwigia (all species)
Parrot's feather *Myriophyllum aquaticum*
Fringed water-lily *Nymphoides peltata*
Wild Rhododendron *Rhododendron ponticum*
Wireweed *Sargassum muticum*
Wakame *Undaria pinnatifida*
Dwarf eel-grass *Zostera japonica*
Sea-buckthorn *Hippophae rhamnoides*
Cord-grasses *Spartina* (all species and hybrids)

Part 2: ANIMALS
Muntjac deer *Muntiacus reevesi*
Chinese Water deer *Hydropotes inermis*
Roe deer *Capreolus capreolus*
Brown hare *Lepus europaeus*
Grey squirrel *Sciurus carolinensis*
American mink *Neovison vison*
Wild boar *Sus scrofa*
Ruddy duck *Oxyura jamaicensis*
Tawny owl *Strix aluco*
Common toad *Bufo bufo*
A colonial sea squirt *Didemnum spp.*
A colonial sea squirt *Perophora japonica*
Stalked sea squirt *Styela clava*
Asian oyster drill *Ceratostoma inornatum*
American oyster drill *Urosalpinx cinerea*
Asian river clam *Corbicula fluminea*
Slipper limpet *Crepidula fornicata*
Asian rapa whelk *Rapana venosa*
Japanese skeleton shrimp *Caprella mutica*

Chinese mitten crab *Eriocheir sinensis*
Bay barnacle *Balanus improvisus*
Chub *Leuciscus cephalus*
All freshwater crayfish species except the whiteclawed crayfish *Austropotamobius pallipes*
Greylag Goose *Anser anser*
CanadaGoose *Branta Canadensis*
Dace *Leuciscus leuciscus*
Roach *Rutilus rutilus*
Carp *Cyprinus carpio*

Part 3: VECTOR MATERIALS
Blue mussel (*Mytilus edulis)* seed for aquaculture taken from places (including places outside the State) where there are established popultations of the slipper limpet *(Crepidula fornicata)* or from places within 50 km. of such places

Soil or spoil taken from places infested with Japanese knotweed *(Fallopia japonica)* or giant knotweed *(Fallopia sachalinensis)*