



Te Uru Rākau

Forestry New Zealand

INDIGENOUS FORESTRY SUSTAINABLE MANAGEMENT:
**A Guide to Preparing Draft Sustainable
Forest Management Plans, Sustainable
Forest Management Permit Applications
and Annual Logging Plans**

FORESTRY AND LAND MANAGEMENT

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ABOUT THIS GUIDE

New Zealand's indigenous forest policy is to maintain our indigenous forests in perpetuity. In keeping with this, Part 3A of the Forests Act 1949 (the Forests Act) was enacted in 1993 to promote the sustainable management of indigenous forest land.

This guide will help owners of indigenous forest landholdings understand the sustainable forest management (SFM) provisions of the Forests Act.

It outlines what is involved in preparing:

- › a draft SFM Plan;
- › an SFM Permit application;
- › an Annual Logging Plan.

You should read this guide together with Part 3A of the Forests Act and the *Standards and Guidelines for the Sustainable Management of Indigenous Forests*.

The Forests Act is administered by Te Uru Rākau.

STANDARDS AND GUIDELINES

Standards and Guidelines for the Sustainable Management of Indigenous Forests is available from www.teururakau.govt.nz/growing-and-harvesting/forestry/indigenous-forestry/. Please refer to it when you prepare a draft SFM Plan, an SFM Permit application or an Annual Logging Plan.

OPTIONS FOR HARVESTING AND MILLING INDIGENOUS TIMBER

Under the Forests Act any indigenous timber from privately owned indigenous forest may be milled as long as it is harvested and milled in accordance with:

- › a registered SFM Plan; or
- › a registered SFM Permit; or
- › the other milling provisions listed in the Sawmill Controls section of the Forests Act.

You may harvest indigenous timber from land that is subject to a registered SFM Plan or SFM Permit. Harvesting may be undertaken either annually or periodically – and it must be at a rate that is no greater than the forest's ability to replace the harvested timber. At the same time, the forest must retain its natural values and ability to continue to provide a full range of products and amenities in perpetuity. The management of the forest must protect the forest's flora and fauna through the control of pests and weeds, and through the maintenance of soil and water quality.

OTHER MILLING PROVISIONS

For information on the other milling provisions in the Forests Act, see *Milling Indigenous Timber in Accordance with Milling Statements and Personal Use Approvals* on www.teururakau.govt.nz/growing-and-harvesting/forestry/indigenous-forestry/.

SUSTAINABLE FOREST MANAGEMENT PLANS

Any forest owner may submit a draft SFM Plan to Te Uru Rākau for approval. SFM Plans normally have a minimum term of 50 years.

Te Uru Rākau will examine the draft SFM Plan and may approve only a level of timber harvest that can be sustained. The approved harvest rate will depend on the area and type of forest, the forest's location, and the growth and replacement rates of the species to be harvested. See page 6 for more information on preparing a draft SFM Plan.

SUSTAINABLE FOREST MANAGEMENT PERMITS

Any forest owner may submit an application to Te Uru Rākau for an SFM Permit. An SFM Permit has a term of 10 years.

Within the term of the Permit the forest owner is allowed to harvest and mill capped volumes of timber. While an SFM Permit can be applied to a forest of any size, it is ideal for small forests that may not justify the resources required to prepare a draft SFM Plan.

“OWNER” AND “LANDHOLDING”

In this document the terms “owner” and “forest owner” refer to the person, company or other body that owns or has rights to a landholding. Te Uru Rākau uses the Forests Act's definition of “landholding”, being “an estate, right, title or interest of any kind in or over an area of land by which indigenous timber may be harvested”.

An SFM Permit application requires less information than a draft SFM Plan, but Te Uru Rākau must still be satisfied that the proposed harvest volume is within the limits set in the Forests Act. See page 22 for more information on applying for an SFM Permit.

MILLING

Timber harvested under an SFM Plan or SFM Permit may be milled at any sawmill that is registered to mill indigenous timber.

SUSTAINABLE FOREST MANAGEMENT PLANS

Drafting an SFM Plan requires an understanding of forest ecology and species replacement processes. The forest inventory is the core of an SFM Plan, as it will enable you to determine harvest rates and choose a management system that will achieve long-term sustainability.

To prepare a draft SFM Plan, you may need help from a forestry professional experienced in indigenous forest inventory and management systems. A forestry professional can coTe Uru Rākaule a summary of resources based on the forest inventory, prepare a draft SFM Plan, oversee forest operations and monitor forest management outcomes.

PREPARING A DRAFT SFM PLAN

Your draft SFM Plan must include the following information:

- › land ownership details;
- › land description;
- › forest description, including its history;
- › forest inventory, including proposed harvest volume;
- › proposed forest management systems, including monitoring and record keeping;
- › forest protection measures;
- › the case for representative areas;
- › other values of the forest, and proposed measures to retain and enhance these values;
- › the SFM Plan's term;
- › Resource Management Act 1991 requirements.

Land ownership

You must provide the following details in your draft SFM Plan:

- › the forest owner's full name, physical address and postal address (where the forest owner is a company or corporate body, include the address of its registered office; for Māori land, the address may be the office of the appropriate Registrar of the Māori Land Court);
- › a legal description of the land and other details, such as whether the interest in the land is freehold or a registered lease or forestry right;
- › an up-to-date search copy of the Computer Freehold Register Unique Identifier(s) (Record(s) of Title);
- › a copy of the registered lease or forestry right document, if applicable;
- › the name and address of the person responsible for the draft SFM Plan if the land is owned by more than one person, company or body.

Land description

This section of your draft SFM Plan should describe the topography, geology, soils and climate of the forest area that the SFM Plan applies to. You should use this information to select appropriate management and harvesting systems for the management of your forest.

You should include maps that show the:

- › **Property location:** A scale 1:250 000 topographic map is suitable for this purpose.
- › **Land title boundaries and forest area to be managed:** This map should be at a scale of 1:25 000 or larger to show the forest area reasonably accurately. For larger forest areas the Topo50 map series may suffice. A recent aerial photograph of similar scale can be used instead. You may be able to source aerial photographs from your district or regional council, or from the internet. Shapefiles, gpx files or kml files projected in NZTM are also acceptable for this purpose.

Forest description

The forest description in a draft SFM Plan describes the forest before the SFM Plan is put in place. In this section you must include a description of:

- › forest types;
- › flora and fauna;
- › forest history;
- › natural and amenity values;
- › pests and weeds.

Forest types

As part of the forest description, you must show the forest types on a map. This map must be a different map to the maps outlined in “Land description” (see page 7).

The map should be based on the species-distribution information collected as part of the forest inventory (see “Forest inventory”, page 10). Key each forest type to a legend that includes a written description of the forest type and its total area. Areas already harvested or modified should also be typed and keyed to the legend (see “Forest history”, page 8).

The forest type map can be a topographic map, aerial photograph or plan with the property boundaries and forest type boundaries accurately marked. A scale of 1:25 000 will be adequate to record the required detail. Shapefiles, gpx files or kml files projected in NZTM are also acceptable for this purpose.

Flora and fauna

You are required to describe the forest’s flora and fauna, preferably by forest type. A catalogue of the diversity and condition of flora and fauna before sustainable management operations start establishes a benchmark against which to measure changes and improvements in species distribution and density over time.

Forest history

You should describe the extent, impact and dates of previous logging within the forest area that the draft SFM Plan applies to. This history should include:

- › the area harvested, or an indication of previously logged or otherwise modified (for example, mined) areas;
- › a description of the species removed (if known);
- › the composition and condition of the residual forest in the harvested area and frequency of regeneration of harvested species;
- › the location and condition of any roads and tracks.

The previously harvested areas should be marked on the forest types map.

The history of the forest may assist assessment of the forest's future capacity to recover after being disturbed and may indicate necessary restoration measures.

Natural and amenity values

The Forests Act defines amenity values as “those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes”. Amenity values include noteworthy features such as landscape values, public use of the forest and proximity to other forests with special values. Natural values may include threatened species and locally or nationally important vegetation types or animal habitats.

In the draft SFM Plan, you should describe the likely effects of forest management on any amenity and natural values within and beyond the property. You should also specify how you will protect these values. This information helps build a picture of the importance of the values of the area proposed for management relative to other forest areas in the region.

Pests and weeds

You must describe the presence of introduced animal pests (such as possums, deer or goats) and any damage to the forest that could ensue from such pests. Include details of any noxious weeds such as old man's beard, blackberry, gorse or broom. You should also prescribe control measures for pests or weeds that threaten forest regeneration, the forest canopy or wildlife in the forest.

Forest inventory

A comprehensive forest inventory is a key part of a draft SFM Plan. Successful implementation of sustainable forest management relies on the inventory, together with an understanding of the forest ecology and growth characteristics of the commercial and associated species.

The forest inventory should provide:

- › an accurate picture of the structure of the forest (by stem numbers and diameter, and distribution by species);
- › a reliable estimate of merchantable timber within the forest;
- › information on existing regeneration of timber species.

The extent of the forest inventory may range from measurement of all trees of commercial size in small forests to a sample assessment in larger forests. To ensure that the calculated harvest rates are sustainable, sample estimates should have probable limits of error of no more than plus or minus 10 to 20 percent.

To obtain a reliable estimate of volume, small- to medium-sized forests (up to 100 hectares) may need an assessment of up to 10 percent of the forest area. The

PREPARING A FOREST INVENTORY

If you do not have experience in forest measurement you should seek help from a forestry professional to undertake a forest inventory.

assessment should include any windthrown and dead standing trees in the inventory plots.

In forests greater than 100 hectares, a sample of less than 2 percent of the area is unlikely to give reliable inventory results, except in the most uniform forests. A higher sample level may be necessary for forests made up of multiple forest types and varying composition, for example, podocarp–mixed hardwood or podocarp–beech forests.

Inventory information

You should collect inventory information that includes quantitative information on all canopy species, so that a summary of forest resources can be presented separately and collectively for each forest type, including:

- › density (numbers of trees per hectare);
- › distribution (whether the trees are evenly spread across the forest, or if they are in clumps, or as single trees);
- › basal area;
- › timber volumes for merchantable species;
- › growth rates.

The stages of tree growth should also be assessed (for example, numbers of seedlings, saplings and pole-sized trees) for each of the tree species growing in the forest.

Presenting tables or graphs on each species' size-class distribution will help you:

- › determine growth and harvest levels by indicating the forest's ability to replace harvested trees in the short term;
- › identify opportunities for accelerating growth or improving tree quality, for example, by thinning and pruning;
- › identify potential management opportunities or problems (for example, a large number of small trees could indicate opportunities for thinning, while a lack of young growth could indicate browsing by an undesirably high number of animal pests).

Tree measurement

Measuring the merchantable volume of timber in a standing tree is a specialised task.

There are established procedures for calculating volume by measuring tree diameter at breast height and the length (height) of the merchantable part of the bole of the tree. Similar procedures calculate the volume of merchantable branches (toplogs), using an estimation of the centre girth diameter and length of each branch. Refer to *Measuring Indigenous Trees and Logs: A Field Guide* (Te Uru Rākau, 2013) for guidance. The volume of the bole of individual trees can be calculated by using *Tree Volume Equations for the Major Indigenous Species in New Zealand* (Ellis, 1979). The volume of toplogs is calculated using the booklet *Indigenous Timber Table of Metric Cylinder Volumes* (MAF, 2007). If in doubt, contact Te Uru Rākau (see “Where to go for help”, page 34).

Precision levels

There is no set rule on the precision level of the inventory required to establish appropriate management prescriptions (management prescriptions describe the methods for achieving the long-term management goals). This is because forests differ in size, topography, species, regeneration patterns, tree distribution and density, and the standing quantity and quality of merchantable timber. Guidelines are given in Te Uru Rākau’s *Standards and Guidelines for the Sustainable Management of Indigenous Forests* (Fifth edition, 2013).

Forest growth

Inventory information and individual species’ net growth rates (measured growth rates less an allowance for natural mortality) together determine the number and volume of trees by species that can be harvested annually or periodically.

Growth rates can be estimated using published information. Te Uru Rākau has diameter increment models, derived from National Vegetation Survey data, for a number of species and regions. These models are available on request from Sustainable Programmes. Where forest-specific growth information is limited, you should err on the side of caution when proposing harvest rates until permanent sample plot data showing growth rates becomes available.

You should establish permanent sample plots throughout the forest at the time the inventory is undertaken. Periodic re-measurement of permanent sample plots will enable you to confirm forecast growth rates and monitor the success of forest management operations.

Sustainable harvest rates

The proposed annual or periodic harvest rates must be sustainable, underpinned by the inventory and growth rate information provided for each species and forest type.

In the draft SFM Plan you must specify the:

- › species proposed to be harvested;
- › standing (tree) volumes proposed to be harvested, by species;
- › forest growth information to justify the proposed harvest rates.

The harvest volume of an individual species in a mixed forest is generally expected to be in proportion to its contribution to the forest's structure and growth rates. As it is difficult to predict the amount of defect timber inside a standing tree (particularly in beech), proposed harvest volume calculations should be based on the gross standing volume (being the standing volume including hidden defects).

Management systems

In the draft SFM Plan you must specify the systems to be used for managing the forest, including:

- › management proposals;
- › management prescriptions;
- › monitoring and record keeping.

Management proposals

Management proposals are the proposed silvicultural systems for the long-term management and maintenance of each forest type.

Proposals may include:

- › **Mapping the forest into compartments or management units:** This relates management prescriptions (see the next column) to actual areas and forest types. It helps record completed forest operations according to practical geographical boundaries. You can show the forest compartments and boundaries on the forest type map (see page 8). Compartment boundaries should take into account forest types, topography, roads and tracks. They will probably reflect the proposed cycle of forest operations to be carried out. For example, a 100-hectare silver beech forest may be divided into ten 10-hectare compartments, each with a return harvesting cycle of five 0.2-hectare coupes every 10 years. This will give a total harvest area of one hectare per year.
- › **Mapping of existing major or secondary roading, machine accessways, walking tracks or gridlines:** Examples include tracks that have been used for carrying out inventories and assessments.

Management prescriptions

Management prescriptions describe the methods for achieving the long-term management goals. They should include:

- › criteria for tree selection, such as by species, size, maturity, health or a combination of these, and if they are to be selected as individual trees or in small groups;

- › how the trees to be harvested will be identified, for example, paint marks or tags with markings to indicate directional felling and direction of extraction;
- › the harvesting methods in general terms, for example:
 - tree length extraction by ground skidding with low-ground pressure tractor,
 - milling on site with a chainsaw mill and extraction of sawn timber by helicopter;
- › measures to protect natural and amenity values, including soil protection and water quality, such as the proposed low-impact harvesting technique;
- › quality control methods to ensure harvesting prescriptions are being properly followed, for example, to confirm that only marked trees are being removed;
- › steps to ensure the species being harvested will successfully regenerate;
- › silvicultural practices to be used, for example, thinning and/or pruning of regenerating forest, numbers of trees per hectare in the final crop, timing of operations;
- › frequency of assessment of post-harvest regeneration and any observed mortality.

These prescriptions must take into account the sustainable forest management prescriptions contained in the Second Schedule to the Act (see Appendix 1, page 29), which emphasise sustainability by:

- › requiring low-impact harvesting;
- › ensuring forest replacement through natural regeneration or, if necessary, the planting of seedlings;
- › harvesting forest species by either single tree or small group harvesting, or coupe fellings according to the regeneration characteristics of the species concerned.

Monitoring and record keeping

You must monitor forest operations to ensure the outcomes of forest management are being achieved. In the draft SFM Plan you should describe how you will monitor and record forest operations. Your records should include:

- › stand records, consisting of:
 - map(s) showing the location of annual harvesting operations (beech forest coupes should be numbered and include the harvesting dates),
 - standing volumes harvested by species, including the area of each beech forest coupe harvested and the total area of coupes harvested during the term of each Annual Logging Plan,
 - the species and volume of timber harvested under the SFM Plan, and the names and addresses of sawmills the timber was sent to;
- › other records to enable monitoring of forest diversity, health and growth, including:
 - regeneration survey(s) data,
 - details of supplementary planting and survival,
 - silvicultural (thinning and pruning) operations,
 - reconnaissance (forest description) plot sheets,
 - permanent sample plot sheets and maps (to help relocate the plots). Where available, Global Positioning Systems instruments (GPS) should be used to record plot locations.

These records can be stored electronically or in hard copy. In either case, they should list a location reference for individual coupes (and/or compartments where these are used) and be cross-indexed to correspond to information on a map.

Photographic records (from fixed photo points) may be useful, particularly for monitoring regeneration.

Forest protection

The draft SFM Plan must outline how the forest will be protected from:

- › fire;
- › pests, weeds and diseases (both indigenous and introduced);
- › domestic and feral stock, and damage caused by their grazing and trampling.

You should also include an evaluation of the compatibility between the management systems and the area's topography and soils. This evaluation should address how to reduce risks to soil stability and water quality (such as the placement of accessways, stream crossings and the provision of drainage cut-offs or culverts).

In the draft SFM Plan you should describe measures to maintain forest health, for example, cutting flanges from stumps to reduce suitable brood habitat for pinhole borer in beech species or taking care to avoid damage to residual trees during harvesting operations.

Representative areas

Following consultation with the Department of Conservation, Te Uru Rākau may deem it necessary to set aside a representative area of up to 20 percent of the forest's total area. No harvesting is permitted in representative areas.

Representative areas protect flora and fauna and other conservation values in an unmodified part of a forest. A representative area may be set aside where flora and fauna or other conservation values in the forest are considered to be of regional or national importance provided the representative area is of an adequate size and location to protect the identified values.

In general, representative areas will be set aside only where the values identified and the ability to protect them can be clearly demonstrated.

Other values of the forest

Your draft SFM Plan should list cultural, archaeological, historical and recreational sites. An inventory may be needed to identify such sites, which should be marked, mapped and protected. Special sites or values and any links between them could include:

- › geological features of interest;
- › significant landforms;
- › fossil sites;
- › archaeological sites;
- › wāhi tapu (sacred sites) and other culturally significant land;
- › recreational tracks;
- › scenic corridors;
- › recreational sites;
- › rare or endangered wildlife.

Protecting many of these features may be part of Resource Management Act 1991 requirements (see the next column). Where possible, forest management should provide for the continued use of recreational tracks and sites.

In the draft SFM Plan, you should describe rare or endangered flora and fauna and any particular soil and water values. You should also prescribe measures to maintain and enhance these values, for example, “no harvesting shall take place in areas where rare birds are nesting”.

We recommend that you contact the Department of Conservation when preparing a draft SFM Plan. The Department can help you identify natural values that may need to be considered.

SFM Plan's term

SFM Plans have a minimum term of 50 years unless your interest in the land is for a lesser term, for example, a registered forestry right of 30 years. The term commences from the date of approval of the SFM Plan.

The term of the SFM Plan must be stated in the draft. All SFM Plans must be registered against the land title or landholding interest noted on the title (see “SFM Plan registration”, page 21).

Resource Management Act 1991 requirements

In the draft SFM Plan you must detail any requirements pertaining to the proposed management activities and give references to the relevant regional and district council plan rules.

As a forest owner, you are responsible for checking if regional and district councils require any resource consents for indigenous forestry operations. Such requirements are often defined in district plans as “indigenous vegetation removal”.

You should check resource consent requirements before you prepare your draft SFM Plan, as there may be a significant overlap between resource consent conditions and sustainable forest management obligations. This overlap could affect the content of the draft SFM Plan and when operations can start after the SFM Plan has been approved and registered.

RESOURCE CONSENTS

Regional and district council staff can provide you with helpful information and may be available for site visits to discuss the proposed work (usually as part of the consent application process). There may be some cost involved in obtaining a resource consent and this should be discussed with the relevant council.

Rules in regional and district plans (including transitional plans) that may apply to SFM Plans cover:

- › vegetation removal;
- › selective removal of trees;
- › general forestry operations;
- › earthworks;
- › maintenance of soil and water quality;
- › identification of significant areas;
- › amenity values.

If sustainable management of indigenous forest is provided for as a “permitted activity” under a district plan, it should be stated in the draft SFM Plan.

SFM PLAN APPROVAL PROCESS

To submit your draft SFM Plan for approval, send at least two copies of the draft SFM Plan and any supporting documents to one of Te Uru Rākau’s offices (see “Where to go for help”, page 34).

Te Uru Rākau will normally carry out an inspection of the forest to confirm or adjust the harvest volumes applied for, and to assess any forest protection measures that may be necessary.

Consultation

Te Uru Rākau is required to consult with the Department of Conservation on all draft SFM Plans. Te Uru Rākau also consults with Te Puni Kōkiri on applications concerning Māori land. In addition, Te Uru Rākau must consult with these agencies when reviewing registered SFM Plans.

Forest Inspection

Te Uru Rākau will normally carry out an inspection of the forest to confirm or adjust the harvest volumes applied for, and to assess any forest protection measures that may be necessary.

Approval

Once Te Uru Rākau has consulted on your draft SFM Plan, it may:

- › approve the draft SFM Plan without amendment; or
- › require that the draft SFM Plan be amended before giving approval.

Amendments could include:

- › correcting the area to which the SFM Plan applies;
- › adjusting (up or down) the proposed annual or periodic harvest rate;
- › altering the size, shape or location of a felling coupe;
- › requiring low-impact felling methods involving single tree or small group felling;
- › altering proposed recording systems, or providing recording systems where none are proposed.

Te Uru Rākau will prepare the SFM Plan in a final, legal format and will send two copies of the SFM Plan to the forest owner for signing before it is approved by the Secretary of Forestry. It is this document, along with maps, that is registered against the land title(s) to which it relates.

SFM Plan registration

As soon as practicable after approval, an SFM Plan must be registered against the relevant Computer Freehold Register Unique Identifier(s) (Record(s) of Title) of the land. In the case of Māori land without separate title, an SFM Plan can be registered through the local District Registrar of the Māori Land Court. Registering an SFM Plan will not constitute a subdivision under the Local Government Act 1974 or the Resource Management Act 1991.

ANNUAL LOGGING PLAN

Following registration of the approved SFM Plan, an Annual Logging Plan must be approved by Te Uru Rākau for each year harvesting is to take place (see “Preparing an Annual Logging Plan”, page 27).

APPROVAL

The Annual Logging Plan must be approved by Te Uru Rākau before you begin any work or harvesting in the forest.

SUSTAINABLE FOREST MANAGEMENT PERMITS

SFM Permits allow you to harvest and mill specified volumes of timber within a 10-year period. Usually, an application for an SFM Permit does not require as much detail as a draft SFM Plan, but there are a number of features common to both, including the principle of management for long-term sustainability of the forest.

PREPARING AN SFM PERMIT APPLICATION

Your SFM Permit application should contain the following:

- › landowner/landholder contact details;
- › land description;
- › forest description and history;
- › a basic description of the topography, soils/geology, wildlife and any other special features;
- › estimated standing volume of target species, including the source of the information;
- › proposed harvest volume by species, within the permissible limits;
- › silvicultural and harvesting systems/equipment to be employed;
- › proposed follow-up management, for example, replanting of seedlings;
- › forest protection measures, including pest control, stock control and protection of waterways;
- › a map showing the property location);
- › a map showing the land title boundaries and forest area to be managed, preferably at a scale of 1:25 000 or larger to show the forest area reasonably accurately. A recent aerial photograph of similar scale can be used instead. You may be able to source aerial photographs from your district or regional council, or from the internet.) Shapefiles, gpx files or kml files projected in NZTM are also acceptable for this purpose.

Application form

To apply for an SFM Permit, please use the SFM Permit application form.

You can download a copy of the form from Te Uru Rākau’s website (www.teururakau.govt.nz) or request a printed copy from one of the regional offices (see “Where to go for help”, page 34).

Harvest rate

The maximum harvests (standing volume) allowed within an SFM Permit’s 10-year term is:

- › 250 cubic metres of podocarp, kauri or shade-tolerant, exposure-sensitive, broad-leaved hardwood species; and
- › 500 cubic metres of beech or other light-demanding hardwood species;

providing these harvests do not exceed 10 percent of the timber standing on the landholding, by species.

If Te Uru Rākau considers there are insufficient forest resources to support the proposed harvest rate, or that the application does not meet Section 10 of the Second Schedule of the Forests Act’s sustainable forest management prescriptions (see Appendix 1, page 29), Te Uru Rākau may request additional forest resource information that clearly justifies your proposed harvest rates.

PREPARING AN APPLICATION

Te Uru Rākau recommends you seek help from a forestry professional who has experience in indigenous forest appraisal and management.

They will be able to help you complete the application form and assess timber resources within a forest. Accurate assessment of timber resources is critical as the assessment is used to set the harvest volume allowed under an SFM Permit.

Te Uru Rākau will normally complete an inspection of the forest prior to issuing an SFM Permit.

As with SFM Plans, the forest's structure and natural values must be maintained, so the harvest of timber species will generally be proportionate to their presence in the forest area. Harvesting under an SFM Permit may be done as either:

- › a single harvest in any one year during the term of the SFM Permit; or
- › as a number of small harvests over successive years during the term of the SFM Permit.

Management prescriptions

You must incorporate the management prescriptions outlined in Section 10 (Sustainable Forest Management Prescriptions) of the Second Schedule to the Forests Act in your application (see Appendix 1, page 29).

In the SFM Permit application you must outline measures to protect the forest from:

- › fire;
- › pests, weeds and diseases (indigenous and introduced);
- › domestic and feral stock, and damage caused by their grazing and trampling;
- › erosion and the impacts of forest operations on water quality.

Resource Management Act 1991 requirements

Regional and district plans may contain rules for indigenous vegetation felling or clearance. As an applicant or forest owner, you are responsible for meeting any pertinent rules under the relevant regional or district plans. (See “Resource Management Act 1991 requirements”, page 18 for more information.)

SFM PERMIT APPROVAL PROCESS

Consultation

Te Uru Rākau is required to consult the Department of Conservation on all SFM Permit applications. Te Uru Rākau also consults Te Puni Kōkiri (the Ministry of Māori Development) on applications concerning Māori land.

This consultation process may take up to three months. You should allow for this time in your planning process.

Forest Inspection

Te Uru Rākau will normally carry out an inspection of the forest to confirm or adjust the harvest volumes applied for, and to assess any forest protection measures that may be necessary.

SFM Permit registration

As soon as practicable after approval, an SFM Permit must be registered against the relevant Computer Freehold Register Unique Identifier(s) (Certificate(s) of Title) of the land. In the case of Māori land without separate title, the SFM Permit can be registered through the local District Registrar of the Māori Land Court. Registering an SFM Permit will not constitute a subdivision under the Local Government Act 1974 or the Resource Management Act 1991.

Your interest in the land (if not freehold title) as it relates to the SFM Permit must be at least 10 years from the time the SFM Permit is registered.

You must register your SFM Permit within 18 months of the date of issue. SFM Permits are operative from the date of registration. If you do not register the SFM Permit within 18 months, it will expire.

ANNUAL LOGGING PLAN

An Annual Logging Plan must be approved by Te Uru Rākau for each year harvesting is to take place (see “Preparing an Annual Logging Plan”, page 27).

SUBSEQUENT SFM PERMITS

After an SFM Permit expires (10 years after it was registered), a second or subsequent SFM Permit may be issued for the same forest area. A subsequent SFM Permit may be issued only if the quantity of each species harvested under the previous permit has been replaced through growth. For example, if 50 cubic metres of rimu are harvested, those rimu not harvested will have to have grown by 50 cubic metres before another SFM Permit can be issued. In addition, there should be sufficient replacement and recruitment occurring with naturally regenerated or planted seedlings, saplings and poles to replace the harvested trees.

In the case of kauri, podocarps and many broadleaved hardwood species, it is unlikely that growth will be sufficient to enable permit renewal immediately after the expiry of the previous permit.

If you are planning to apply for a second or subsequent SFM Permit, Te Uru Rākau recommends you establish permanent sample plots in the forest early into the term of the initial SFM Permit. Permanent sample plots will provide a basis for monitoring forest condition and growth. If you have not established permanent sample plots, Te Uru Rākau may require additional resource appraisals to confirm that the forest has replaced the quantity of timber removed.

APPROVAL

The Annual Logging Plan must be approved by Te Uru Rākau before you begin any work or harvesting in the forest.

PREPARING AN ANNUAL LOGGING PLAN

An Annual Logging Plan is required for any year in which harvesting is proposed under a registered SFM Plan or SFM Permit. It covers harvesting systems and the proposed harvest in more detail than the registered SFM Plan or SFM Permit.

The Annual Logging Plan must be approved by Te Uru Rākau before you begin any work or harvesting in the forest.

Your Annual Logging Plan must:

- › describe your proposed methods of harvesting, including the machinery you will use;
- › specify all special logging requirements, such as directional felling;
- › include maps showing:
 - the proposed harvest locations or areas from which individual trees or small groups will be harvested during the term of the Annual Logging Plan,
 - the locations of roads, tracks and landings present or to be established for extracting timber during the term of the Annual Logging Plan,
 - all waterways and topography, supplemented by written description.

Te Uru Rākau may require you to mark (tag), measure and record the location (using GPS) of all kauri and podocarp trees that are to be harvested, and to include this information in the Annual Logging Plan. This will help Te Uru Rākau confirm, through a field inspection, that your proposed harvest does not exceed approved harvest rates and check that your proposals are consistent with approved forest management prescriptions.

Providing all the necessary information is supplied, an Annual Logging Plan is usually approved within 10 working days. If a field inspection is required approval will take longer.

You can download an Annual Logging Plan template from www.teururakau.govt.nz/growing-and-harvesting/forestry/indigenous-forestry/ or request a printed copy from one of the regional offices (see “Where to go for help”, page 34).

MORE ABOUT SUSTAINABLE FOREST MANAGEMENT

Te Uru Rākau’s *Standards and Guidelines for the Sustainable Management of Indigenous Forests* (Fifth Edition, 2013) provides auditable performance benchmarks for forest management operations. It provides a framework for the management and monitoring of indigenous forests pursuant to the Forests Act. It is a valuable reference for planning a forest inventory, and preparing a draft SFM Plan, an SFM Permit application or an Annual Logging Plan.

You can download a copy from Te Uru Rākau’s website or request a printed copy from Te Uru Rākau.

APPENDIX 1

SUSTAINABLE FOREST MANAGEMENT PRESCRIPTIONS

The Forests Act distinguishes between podocarps (rimu, matai and kauri) on one hand and beech forests on the other, in terms of the methods by which they may be managed. It also considers the management of shade-tolerant and exposure-sensitive broad-leaved hardwood species within these or other broad forest types.

The sustainable forest management prescriptions contained in the Second Schedule to the Forests Act recognise the specific growth habits of major species groups. At the same time the prescriptions seek to avoid forest degradation (for example, through harvesting damaged or windthrown trees) and create conditions conducive to regeneration of the timber species removed.

The following management prescriptions must be incorporated into all SFM Plans and SFM Permits, and management practices must follow these prescriptions.

The principal prescription is that the rate of harvest from a forest, or a group of forests managed as a unit, shall be limited to a level at which the forest can continue to supply an annual or periodic non-diminishing yield in perpetuity. That yield shall include the harvest of windthrown or dead trees as they become available.

The other prescriptions are that:

1. An area that is representative of the forest area and does not exceed 20 percent of the total forest area may be set aside and be unavailable for logging.
2. Podocarp and kauri species shall be harvested only by single tree or small group harvesting, using low-impact harvesting techniques. Harvesting shall,

as far as possible, be restricted to selectively removing trees predisposed to windthrow or early death. Throughout the term of the SFM Plan or SFM Permit the character and structure of all parts of the forest shall be maintained.

3. Shade-tolerant and exposure-sensitive broad-leaved hardwood species shall be harvested only by single tree or small group harvesting using low-impact techniques. In creating gaps, the natural regeneration characteristics of the species targeted for harvesting shall be considered.
4. The Second Schedule recognises the ecological requirements of beech forest by prescribing harvesting in coupes (small clear cuts), which do not exceed 0.5 hectares. Group harvesting of beech may be preferable in a mixed podocarp-beech forest and may be suited to shade-tolerant silver beech forest. Currently, beech management is most commonly undertaken through group and small coupe harvesting (for example, 0.05–0.2 hectares).
5. Where any podocarp, kauri, or shade-tolerant and exposure-sensitive broad-leaved hardwood species is harvested and there is not enough advance growth, there shall be planted for each tree removed at least five nursery-raised seedlings of the same species at least 60 centimetres in height. These seedlings shall, where practicable, be raised from seed collected from the district in which they are to be planted. This is because the genetic and visual characteristics of many species can vary from place to place, and it is desirable to retain the particular geographical characteristics of flora and fauna.
6. Where there is a failure of regeneration in a light-demanding hardwood forest, the failure shall be corrected by planting nursery-raised seedlings. Preference will be given to using seedlings of the same species that shall, where practicable, be raised from seed collected from the district in which the seedlings are to be planted.
7. Before harvesting any beech forest coupe within a distance from a harvested coupe equal to the width of the harvested coupe, regeneration on the harvested coupe must have reached a predominant mean height of four

metres (being the average height of the tallest defect-free tree in a sample of a 10-metre by 10-metre (0.01 hectare) plot). The coupe must also have reached a stocking of the harvested species equal to or greater than the forest before harvesting.

APPENDIX 2

GLOSSARY OF TERMS

Amenity values: Defined in the Forests Act 1949 as “those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes”.

Approved: In relation to an SFM Plan, means approved by the Secretary of Forestry under section 67F of the Forests Act 1949.

Coupe: An area of clear-cut (felled) forest where all trees are felled in the designated area.

Forest owner: Any person who owns a landholding and includes the owners of any landholding where it is owned by two or more persons and a group of owners of landholdings who are operating under the same sustainable management plan.

Indigenous species: A species of flora or fauna that occurs naturally in New Zealand or arrived in New Zealand without human assistance.

Indigenous forest land: Defined in the Forests Act 1949 as “land wholly or predominantly under the cover of indigenous flora”.

Introduced species: A species of flora or fauna that is not an indigenous species.

Landholding: Defined in the Forests Act 1949 as “an estate, right, title, or interest of any kind in or over an area of land by which indigenous timber may be harvested; but does not include an interest by way of charge or security”.

MAF: The Ministry of Agriculture and Forestry. MAF was merged with the New Zealand Food Safety Authority and then with the Ministry of Fisheries in 2012, to become the Ministry for Primary Industries.

Te Uru Rākau: Forestry New Zealand.

Registered: (a) In relation to an SFM Plan or SFM Permit, recorded in accordance with section 67K of the Forests Act 1949; (b) In relation to a sawmill, registered in accordance with section 67D of the Forests Act 1949.

Sustainable forest management (SFM): The management of an area of indigenous forest land in a way that maintains the ability of the forest growing on that land to continue to provide a full range of products and amenities in perpetuity while retaining the forest's natural values.

SFM Permit: A Sustainable Forest Management Permit issued under section 67M of the Forests Act 1949.

SFM Plan: A Sustainable Forest Management Plan approved under section 67F of the Forests Act 1949.

Timber: Defined in the Forests Act 1949 as “trees (excluding cuttings, suckers and shoots), woody plants able to be milled, and includes branches, roots and stumps of trees and other woody plants able to be milled, logs woodchips, wood products, veneer, tree ferns and tree fern fibre”.

Trees: Defined in the Forests Act 1949 as “not only timber trees, but also all other kinds of trees, shrubs, and bushes, seedlings, saplings, cuttings, suckers, and shoots of every description”.

WHERE TO GO FOR HELP

For further information about SFM Plans, SFM Permits and Annual Logging Plans, or copies of publications mentioned in this guide, please contact:

Te Uru Rākau

14 Sir William Pickering Drive

Bishopdale

Private Bag 4765

Christchurch 8140

Tel: 03 943 3700

Te Papa Tipu Innovation Park

99 Sala Street

PO Box 1340

Rotorua 3040

Tel: 07 921 3400

To speak to a Te Uru Rākau adviser, contact either one of the offices above, or one of the regional offices

You can download the following publications from www.teururakau.govt.nz/growing-and-harvesting/forestry/indigenous-forestry:

Standards and Guidelines for the Sustainable Management of Indigenous Forests (Sixth Edition, 2019)

Indigenous Forestry on Private Land – Sustainable Indigenous Forest Management in Accordance with Part 3A of the Forests Act 1949 (March 2019)

Milling Indigenous Timber in Accordance with Milling Statements and Personal Use Approvals (March 2019)

Measuring Indigenous Trees and Logs: A Field Guide (May 2019)

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