

**SUBMISSION ON
PROPOSED NATIONAL POLICY STATEMENT FOR INDIGENOUS BIODIVERSITY**

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Submission: **Oppose** the Proposed NPS and seek that it be substantially amended in response to the concerns expressed below or otherwise withdrawn entirely.

Introduction

- 1 Timberlands Limited (TL) manage the 200,000 hectare Central North Island Kaingaroa Forest estate on the behalf of Kaingaroa Timberlands. This includes the world renowned Kaingaroa Forest which is New Zealand's largest production forest, operating non-stop. We produce almost 5 million tonnes of logs and replant over 8,000 hectares annually and in doing so engage over 1,000 local businesses. Most of our forest is situated on Maori owned land recently returned through Treaty settlements. The land is leased through a number of different arrangements and our iwi landlords are becoming increasingly influential in our biodiversity management.
 - 2 As a productive landscape Kaingaroa has a vibrant ecology of its own, a mix of exotic plantation species and associated natural and exotic biodiversity. There are a number of studies that demonstrate the role Kaingaroa plays in NZ's environment, but none better than those on falcon which found Kaingaroa to have New Zealand's highest density of karearea (NZ falcon). There are many reasons for this, including a mosaic of age classes, the positive effect of clearfelling, pest control and simply that it is a forest landscape. We believe our voluntary and certification methods to maintain and improve Kaingaroa's biodiversity work, but are now threatened by a draconian national instrument.
 - 3 Timberlands Limited **opposes** the Proposed NPS on Indigenous Biodiversity (the **Proposed NPS**) in its current form.
 - 4 Overall Timberlands Limited considers unless the document is substantially modified it will result in significant costs, without stopping the decline in natural biodiversity. In particular we believe it will create an undesirable rift between productive rural land owners and Government agencies, which will be counterproductive for both biodiversity and productivity. We can envision situations where willing land managers will be discouraged from undertaking existing goodwill work that improves biodiversity in order to avoid regulation.
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Support for indigenous biodiversity

- 5 Timberlands Limited supports the broad objective of the Proposed NPS, to maintain and enhance biodiversity, and is very conscious of the value of biodiversity. It prides itself on being an environmentally responsible company that adopts sustainable management techniques throughout its forestry operations, for example:
- 6 Timberlands Limited hold both FSC® (Forest Stewardship Council) and Responsible Wood certification, both which verify our forests are well managed. In particular for FSC we must meet a number of stringent biodiversity requirements to manage rare and threatened species (including within the plantation), reserve setasides and riparian and stream management. We have attached Principal 6 from the current (agreed) draft of the Revised (FSC) National Stand for Plantation Management in NZ. Noting the standard has been revised with a group including Forest and Bird and ECO members in good faith, with good outcomes from all perspectives.
- 7 Further to our certification commitments we also undertaken many other initiatives to support natural biodiversity, and have listed some as follows:
- 8 Examples of some of Timberlands Limited commitment to natural biodiversity:
 - (a) An environmental management system that protects and enhances natural biodiversity including best environmental practices (BEPS) for land disturbance operations and specific BEPS for falcon and bat management.
 - (b) \$500,000 support for Wingspan Trust centre, plus \$15,000 per year to support nest checks and banding, and now include drone pilot training course. Also, contribution to falcon research on various projects. Active operational management around nesting, where we will move harvesting or land preparation with potential to affect the nest activities
 - (c) Management of 7,000 ha Tarawera Forest reserves with agreement from iwi owned Tarawera Land Company, with focus on wilding control on Mount Tarawera, invasive weed control on significant wetlands, and associated pest (mostly possum) control.
 - (d) Partnership with Ngati Whaoa/Ngati Tahu and DoC to manage Waiotapu geothermal vegetation and reserve areas.
 - (e) Funding of items for Rotoehu Ecological Society work on kokako, including track cutting and traps for pest control.
 - (f) Assistance with Ngati Whare to re-establish ex-plantation into natural forest, including land preparation and weed control.
 - (g) Significant program of wilding control on Rangitaiki wetlands and riparian areas in excess of \$200,000 per annum.
 - (h) Assisting Orchid Society with managing Iwitahi Orchid reserve, including cutting maintenance access tracks, growing and planting replacement canopy species.

- (i) Commenced a pilot on bird assessments when undertaking mid-rotation inventory.

9 Notwithstanding its substantial and active support for indigenous biodiversity, Timberlands Limited does **not** support the Proposed NPS in its current form because it is likely to result in unnecessary additional costs without achieving any material gains in maintaining indigenous biodiversity within plantation forest. We fear a worst case scenario of requiring resource consents across our forest, with a plethora of conditions and restrictions on harvesting. This will not advance the overall objective of the NPSIB, and is likely to impose unreasonable and unnecessary constraints. The cost to us and the local community (where we contribute in excess of \$250 million annually) would be significant, and creates the potential for significant job losses.

General concern with Proposed NPS

- 10 Timberlands Limited acknowledges that the Proposed NPS contains some recognition that plantation forest should be treated differently from indigenous forest remnants. However, these provisions are limited in scope, their meaning is unclear and their relationship with other parts of the Proposed NPS is ambiguous.
- 11 For example, Policy 3.10 provides that plantation forest identified as containing Significant Natural Areas (**SNA**) are deemed to be "plantation forest biodiversity areas" (**PFBA**). However, as currently drafted Policy 3.8 of the Proposed NPS would require all SNA within plantation forest to be identified and mapped in district plans.
- 12 The excessive breadth of the criteria for identifying SNA at Appendix 1 of the Proposed NPS means that large areas of plantation forest would be identified as SNA. The surveys required to complete this task would come at enormous cost and achieve little benefit in terms of maintaining indigenous biodiversity
- 13 Policy 3.10 applies to PFBA and requires that adverse effects of plantation forestry activities on (a) threatened or at-risk flora must be managed, and (b) significant habitat for threatened or at-risk indigenous fauna must be managed, to maintain long-term populations of such fauna.
- 14 Timberlands Limited is very concerned about what this means in practice. For example, it could be interpreted that the whole of Kaingaroa forest is PFBA as it provides excellent falcon habitat. Other species that thrive in Kaingaroa, including NZ robin, whiteheads and numerous invertebrates could also have the same effect. These all do well because the forest is large with a mosaic of age classes, we undertake pest control and are otherwise careful with our management. Kaingaroa is well into its third rotation, and there is no hint that biodiversity is worsening and we believe it has improved, for example falcons have now been sighted and are breeding in areas they had not previously been recorded.
- 15 With respect to other indigenous biodiversity within PFBA, policy 3.13 and policy 3.15 require local councils to maintain indigenous biodiversity (including highly mobile fauna) by amending their plans to manage adverse effects of land use on such indigenous biodiversity. These policies could lead to new and stringent regulation of harvesting activities. Again, Timberlands Limited is very concerned about what this means in practice with a similar potential outcome as in our point above.
- 16 When a resource consent application is triggered by indigenous biodiversity controls, policy 3.19 contains onerous requirements for assessment of potential

adverse effects which would be very expensive to complete in the context of large scale land use such as plantation forest harvesting activities.

- 17 Overall, it is reasonable to anticipate that the Proposed NPS in its current form will be relied upon to impose significant new restrictions on plantation forestry. Such measures would impose considerable additional costs on Timberlands Limited's operations and likely limit our activities, with potential reductions in volume and consequent job losses.
- 18 Timberlands Limited is also concerned that the Proposed NPS will establish further inequities in the rural environment, where land owners with biodiversity (many of whom have been actively promoting it) are penalised and regulated, and those currently without will have no incentive to make a positive contribution.
- 19 Similarly, we are also concerned for our iwi landlords, whom face another impediment to benefiting from their hard earned lands.
- 20 Timberlands Limited considers that the Proposed NPS should be substantially modified to address the above concerns and should place much more emphasis on non-regulatory measures and incentives to support positive outcomes for indigenous biodiversity within plantation forest.
- 21 Timberlands Limited supports the broader and more detailed submission filed by the Forest Owners Association and the proposals for amendment to the Proposed NPS detailed in that document.

Potential implications for biodiversity

- 22 Numerous studies in plantation forests confirm that plantation forests are beneficial for the maintenance and restoration of indigenous biodiversity. Production forest is planted to be harvested. During the growing phase the plantation forest provides habitat for a range of indigenous species that would otherwise not exist. Harvesting operations can sometimes disturb indigenous biodiversity values. However, these values typically make a full recovery over time after the forest is replanted. Furthermore, studies have confirmed that the disturbance of harvesting creates habitat, in particular for species such as the NZ Falcon that nest and feed in cutover areas, and long-tailed bats that preferentially feed along forest edges with cutover. For larger forests such as Kaingaroa harvesting and replanting creates a constant mosaic of habitat types. Consequently, Timberlands Limited considers well managed harvesting activities present little threat to biodiversity values, and already contribute significant to NZ's biodiversity reservoir.
- 23 In addition, many forest owners take active steps to maintain and enhance indigenous biodiversity values in plantation forests through monitoring biodiversity, pest and predator control, and partnerships with other stakeholders.
- 24 Timberlands Limited is concerned that forest and land owners may be deterred from pursuing these voluntary initiatives if they perceive that improving biodiversity outcomes within plantation forest will lead to more onerous regulatory control over harvesting activities. This is not a good outcome for biodiversity, but one which is at real risk of occurring if the Proposed NPS is introduced in its current form.

Overall costs, benefits and alternatives

- 25 Timberlands Limited considers that the intended public benefits to biodiversity will not eventuate and that the Proposed NPS in its current form will not be effective at achieving its objective on plantation forest land.
- 26 In contrast, Timberlands Limited considers that the risks and costs of the Proposed NPS are much more significant and much more certain. These costs have been discussed above.

Conclusion

- 27 Timberlands Limited **opposes** the Proposed NPS in its current form on the basis that it will not be effective or efficient at achieving its objective of protecting biodiversity on plantation forest land.
- 28 It will potentially generate an adverse reaction from forest and land owners that threatens the very values that the Proposed NPS seeks to protect and will create significant and disproportionate costs for responsible landowners such as Timberlands Limited that are already taking steps to actively manage biodiversity in their forests.
- 29 Timberlands Limited strongly supports the continued and increased use of non-regulatory methods and incentives as the most effective way to achieve the desired biodiversity objectives. Such measures can encourage and support positive actions from forest owners and ensure that the costs of such measures are equitably distributed amongst all those who benefit from the shared biodiversity values.
- 30 Timberlands Limited seeks that the Proposed NPS be substantially modified to address the concerns raised above or otherwise that it be withdrawn.

Thank you for the opportunity to submit on the Proposed NPS.

Dated 11 March 2020

Colin Maunder

Sustainability Manager
Timberlands Limited

Attachment 1: Principle 6 from the Revised National Standard for Plantation Management in NZ:

PRINCIPLE 6: ENVIRONMENTAL VALUES AND IMPACTS

The Organization* shall* maintain, conserve* and/or restore* ecosystem services* and environmental values* of the Management Unit*, and shall* avoid, repair or mitigate negative environmental impacts.

5.1 *The Organization* shall* assess environmental values* in the Management Unit* and those values outside the Management Unit* potentially affected by management activities. This assessment shall* be undertaken with a level of detail, scale* and frequency that is proportionate to the scale, intensity and risk* of management activities, and is sufficient for the purpose of deciding the necessary conservation* measures, and for detecting and monitoring* possible negative impacts of those activities.*

5.1.1 Using *best available information** assessments of *environmental values** are conducted with a level of detail and frequency that is proportionate to the *scale, intensity and risk** of management activities.

Small – For *Criterion** 6.1.1., *The Organisation** should use the assessment sheet in Annex 5 “Identifying Biodiversity Responsibilities for Small Plantations” or a similar alternative.

5.1.2 A *coarse** assessment of existing data *shall** be compiled to enable prioritising areas within the *Management Unit** for *protection** and management. The *coarse** assessment incorporates existing information to identify the:

- 1) broad vegetation types and fauna present within *conservation zones and protection areas**
- 2) distribution (range and abundance) and movement patterns of rare, threatened, or endangered species

- 3) relative rarity of *ecosystem** types using Department of Conservation and IUCN threat classifications
- 4) Water and *ecosystem** quality.

Guidance

Acutely or chronically *Threatened environments** can be identified using the Land Environment NZ (LENZ) system. Information is available through Nature Heritage Publications on the proportion and percentage for many regions. Protected Natural Areas (PNA) and Significant Natural Areas (SNA) databases will assist in identifying important areas. Regional Council and Territorial Authority Plans may highlight these areas. DOC is also a good source of information.

This assessment will help inform the identification of HCV 1, 2, 4 and 4.

- 5.1.3 Large – Fine level evaluation*** of conservation zones and protection areas* shall* be progressively undertaken appropriate to *scale** to determine viability and establish specific management requirements of poorly represented areas.

Guidance

This should be timed to allow the appropriate decisions to be made around harvesting and re-planting.

- 5.1.4** All assessments of ecological value and actions are recorded and identified on maps and used to inform future implementation at harvest time, where applicable.

5.2 Prior to the start of site-disturbing activities, The Organization* shall* identify and assess the *scale, intensity and risk of potential impacts of management activities on the identified *environmental values**.**

Guidance

Small – To assist in the requirements of *Criterion* 6.2, The Organisation** should use the assessment sheet in Annex 5 "Identifying Biodiversity Responsibilities for Small Plantations" or a similar alternative.

- 5.2.1** A documented *environmental impact assessment** identifies potential present and future impacts of management activities on *environmental values**, from the stand level to the *landscape** level.

- 5.2.2** This assessment process shall* occur before the start of site-disturbing activities taking into account the interaction with adjoining land, nearby *habitats** and downstream impacts.

Guidance

Reference to the New Zealand Environmental Code of Practice for Plantation Forestry will assist this assessment process. The assessment should include consideration of the potential for the following:

- 1) Soil erosion
- 2) Water quality and hydrological impact
- 3) Compaction and changes to soil productivity
- 4) Changes to invasive exotic flora or fauna abundance
- 5) Potential impacts on any areas identified as having *High Conservation Value**
- 6) Impacts to poorly represented, threatened or endangered species
- 7) *Pesticide** or fertiliser impacts (by runoff, spray drift or spillage)
- 8) Visual changes to significant *landscapes** identified in Regional or District Plans, or very prominent *landscapes**
- 9) Community and recreation impacts
- 10) Damage to riparian/stream buffer strips.

5.3 *The Organization* shall* identify and implement effective actions to prevent negative impacts of management activities on the environmental values*, and to mitigate and repair those that occur, proportionate to the scale, intensity and risk* of these impacts.*

Guidance

Small – To assist in the requirements of *Criterion* 6.3, The Organisation** should use the assessment sheet in Annex 5 “Identifying Biodiversity Responsibilities for Small Plantations” or a similar alternative.

5.3.1 Measures seeking to prevent negative impacts are planned, documented, and implemented to *protect* environmental values** prior to the commencement of works.

5.3.2 *The Organisation* shall* have written guidelines to:*

- 1) Control accelerated erosion that may occur because of the removal of vegetation
- 2) Avoid or minimise riparian area damage during harvesting, road construction, or other mechanical disturbances
- 3) Enable *protection** of water resources within and downstream of the *Management Unit** including specifying *wetlands**, *water body** and streamside *protection zones** in which harvesting and other disturbance are prohibited or minimised.

5.3.3 **Large** – *The Organisation* shall* operate and document a Decision Support System* to manage operations in high-risk* areas.*

5.3.4 Road and track construction *shall** be prohibited in *conservation zones* and protection areas**, except where:

- 1) It can be demonstrated that this is the best environmental solution to an access issue
- 2) They are part of a *habitat* restoration** plan designed to meet the *objectives** of the *protection zone**
- 3) A track is part of a recreation or nature interpretation activity and does not adversely affect the *objectives** of the *protection zone**.

Verifier

Roads and tracks within *conservation zones and protection areas** are documented in *management plans** with their purpose and justification and associated mitigation activities.

5.3.5 A record is kept of any adverse impacts that occur to identified *environmental values**.

5.3.6 Where negative impacts to *environmental values** occur, measures are adopted that seek to prevent further damage, and negative impacts are mitigated and/or repaired.

Guidance

Measures undertaken are relevant and of a *scale** to the potential adverse impact, e.g. if accelerated erosion occurs, then appropriate mitigation may be the establishment of constructed *wetlands** to absorb sediment run-off.

5.3.7 A record *shall** be kept identifying corrective actions where non-compliance with prescriptions occurs and *shall** record:

- 1) Change in future activities that will prevent similar impacts occurring; and
- 2) Actions were taken to mitigate the negative impact.

5.4 *The Organization* shall* protect* rare species* and threatened species* and their habitats* in the Management Unit* through conservation zones*, protection areas*, connectivity* and/or (where necessary) other direct measures for their survival and viability. These measures shall* be proportionate to the scale, intensity and risk* of management activities and to the conservation* status and ecological requirements of the rare and threatened species*. The Organization* shall* take into account the geographic range and ecological requirements of rare and threatened species* beyond the boundary of the Management Unit*, when determining the measures to be taken inside the Management Unit*.*

Guidance

Small – To assist in the requirements of *Criterion* 6.4, The Organisation** should use the assessment sheet in Annex 5 “Identifying Biodiversity Responsibilities for Small Plantations” or a similar alternative.

5.4.1 Generic policy and *management plans** for the maintenance of populations of rare or *threatened species** within the *Management Unit** shall* be prepared and progressively updated in *consultation** with competent experts.

Guidance

Guidance for the management of rare and *threatened species** can be obtained from:

- 1) The NZFOA Guidance for managing *rare species** in pine forests guidelines on rare and *threatened species** in the *Management Unit**
- 2) DOC
- 3) Territorial authorities.

5.4.2 Indigenous *habitat** within, adjacent to and/or downstream of the *Management Unit** that supports or is likely to support rare or *threatened species** and may be affected by *The Organisation's** activities shall* be identified in management planning. Refer to 6.1.1.

5.4.3 Potential impacts of management activities on rare and *threatened species** and their *habitats** are identified, and management activities are modified to avoid negative impacts on the viability of the populations. Refer to 6.2.1.

5.4.4 *Rare and threatened species** and their *habitats** within the *Management Unit** are protected, including through the provision of *habitat** maintenance, *conservation zones**, *protection areas**, *connectivity**, and other direct means for their survival and viability, such as species' recovery programs.

5.4.5 The need for wildlife corridors for rare and *threatened species** shall* be assessed within the ecological *landscape** and managed.

Verifiers

Wildlife corridors for rare and *threatened species** are:

- 1) identified on management maps
- 2) Wildlife corridors identified within production areas are detailed in harvest plans with appropriate management actions considered, including:
 - a. Planning of size and spacing of harvest areas to assist movement of rare and *threatened species** species; and
 - b. *Protection** of species when discovered.

5.4.6 In *rare and threatened species** reserve areas protected in 6.4.4, *management plans** to ensure maintenance shall* be developed and implemented.

5.5 *The Organization** shall* identify and *protect** *Representative Sample Areas** of *native ecosystems** and/or *restore** them to more *natural conditions**. Where *Representative Sample Areas** do not exist or are insufficient, *The Organization** shall* *restore** a proportion of the

Management Unit* to more natural conditions*. The size of the areas and the measures taken for their *protection* or restoration**, including within *plantations**, shall* be proportionate to the *conservation* status and value of the ecosystems** at the *landscape* level*, and the *scale, intensity and risk** of management activities.

5.5.1 *Best available information** is used to identify *native ecosystems** that exist or would exist under *natural conditions** within the *Management Unit**.

Guidance

Generalised information can be found on the LENZ and Land Cover Database (LCDB) databases. Overlaid with the protection database, *threatened environments** can then be mapped to highlight *critical** existing *ecosystems** and opportunities for *restoration** where they have been lost or severely degraded. However, the LENZ system does not always identify *dunelands** and *wetlands** well.

5.5.2 *Representative Sample Areas** of *native ecosystems** are protected, where they exist.

Guidance

Small - A worksheet "Identifying Biodiversity Responsibilities for Small Plantations" is available on the FSC New Zealand website, www.nzfsc.org which can assist in identifying and protecting representative samples.

5.5.3 Large/medium – Where *Representative Sample Areas** do not exist, or where existing sample areas inadequately represent *native ecosystems**, or are otherwise insufficient, a proportion of the *Management Unit** is *restored** progressively to more *natural conditions**.

5.5.4 Large/medium – The size of the *Representative Sample Areas** and/or *restoration** areas are proportionate to the *conservation* status and value of the ecosystems** at the *landscape* level*, the size of the *Management Unit**, and the viability of the representative sample area*.

Guidance

- 1) Undertake following the *principles* of protecting and expanding natural areas**
- 2) Modified threatened environments 1 or 2, *wetlands* or duneland* ecosystems** that occur within the *Management Unit** are a priority for *restoration** due to their high value
- 3) *Restoration** will often be concentrated around riparian margins e.g. threatened floodplain *forest** and coastal setbacks where the width is key to determining the viability of the reserve. If the coastal environment is stable, a width of 50m may be suitable depending on wind conditions, however, if it is *duneland**, factor in the decade erosion cycles
- 4) International standards for the practices of ecological *restoration** are available on the Society for Ecological Restoration's website - <http://www.ser.org/?page=SERStandards>.

- 5.5.5 Where modified threatened environments 1 or 2, wetland or *duneland** areas occur within the *Management Unit** they are documented together with efforts to restore* them progressively.
- 5.5.6 Within two years of this standard becoming effective, an area equivalent or exceeding 10% of the area of *Working Forest Area** managed by The Organisation*, shall* be identified, mapped and managed as *Conservation Areas Network**.

Guidance

The *Conservation Areas Network** can be within any part of the *Management Unit** or third-party areas managed by *The Organisation**.

- 5.5.7 At least 10% of the area of the *working forest area** of the *Management Unit** in each *Ecological District**, and if not possible the *Ecological Region**, shall* be identified, mapped and managed as a *Conservation Areas Network**, or alternatively meet the requirements of 6.5.9.

Guidance

If the *Conservation Areas Network** of the *Management Unit**'s *working forest area** is below 10% in any *Ecological Region**, the shortfall shall* be made up through *equivalent ecological effort**. Annex 4: Calculating *Conservation Area Network** further explains the commitments related to scale.

- 5.5.8 Within two years of the first certification, *The Organisation** shall* have implemented a programme to achieve a *Conservation Areas Network** and any *equivalent ecological effort**.
- 5.5.9 Where *equivalent ecological effort** is required to meet the 10% set-aside requirement, *The Organisation** has documented the process used, demonstrating consideration was given to all practical options of *equivalent ecological effort**, and in the stated order of priority.

Guidance

Refer to Annex 4: Calculating *Conservation Area Network**.

- 5.5.10 **Large** – Where it has been necessary to use an area outside of *The Organisation*'s* land to meet the minimum 10% *Conservation Areas Network** requirement, *The Organisation** has a *management plan** in place for the area, and a formal agreement with the landowner to effectively include the area as *Conservation Areas Network** within the *Management Unit**.

5.6 *The Organization shall* effectively maintain the continued existence of naturally occurring native species* and genotypes*, and prevent losses of biological diversity*, especially through habitat* management in the**

***Management Unit**. *The Organization* shall** demonstrate that effective measures are in place to manage and control hunting, fishing, trapping and collecting.**

- 5.6.1** Management activities designed for *maintenance** of plant and animal communities and *habitats** found within *native ecosystems** within the *Management Unit** are detailed in planning documents.
- 5.6.2** *Active restoration** or activities in excess of *maintenance** are detailed on planning documents.
- 5.6.3** Based on assessed priorities, *maintenance** actions and *active restoration** shall progressively be undertaken to the assessed level to support the *maintenance** and enhancement of ecological functions including *ecosystem** regeneration and species diversity.

Guidance

When considering ecological projects, the following may be used to assist *The Organisation** in prioritising any ecological effort:

- 1) Guidance on priorities provided in the document 'Protecting Our Places, Information About the Statement of National Priorities for Protecting Rare and Threatened Biodiversity on Private Land', MfE, April 2007 (or updated equivalent)
- 2) Security of *tenure** and the ability to achieve *long-term** ecological management outcomes
- 3) The level of community or *tangata whenua** interest in an area or project
- 4) DOC priorities for species management
- 5) The anticipated ecological benefits and relative costs of the effort compared to alternative projects within the *Management Unit**.

The level and detail of assessment of options will be in proportion to the size of shortfall and the *equivalent ecological effort** required.

- 5.6.4** Before harvest, adjacent areas of existing *habitat** for rare and *threatened species** or representative sample *ecosystems** shall be assessed for, and where appropriate, *active restoration** and/or expansion undertaken following harvest.

Guidance

The main reasons for the *active restoration** are to:

- 1) Significantly increase the survival of the *threatened species** for which the *habitat** has been protected; and/or
- 2) Increase the viability of the representative sample *ecosystem**; and/or
- 3) Assist in compliance with the requirements of 6.5.7.

The evaluation shall be guided by the *principles* of protecting and expanding natural areas**. Also, *active restoration** qualifies as *equivalent ecological effort** as per the *Indicators** under 6.5.

- 5.6.5** *The Organisation** records *Conservation Areas Network ** management actions for individual or ecologically related reserves.
- 5.6.6** Where other activities including recreation and hunting are likely to occur in the *Conservation Areas Network ** and *riparian zones** (identified in 6.4.1, 6.5.2 and 6.7.1), they *shall** only be permitted if the primary *management objective** is not compromised.
- 5.6.7** Hunting, fishing, trapping and collection of rare or *threatened species** is prevented, except where this is for, *legally** permitted research or customary use, or species *protection** purposes.

Guidance

Identify potentially *threatened species** within the *Management Unit** boundary that could be targeted by hunters and develop actions to prevent such hunting, e.g. long-finned eel fishing, and kereru shooting. *Dactylanthus* (NZ's only parasitic flowering plant), and gecko collection are prohibited.

5.7 *The Organization* shall* protect* or restore* natural water courses*, water bodies*, riparian zones* and their connectivity*. The Organization* shall* avoid negative impacts on water quality and quantity and mitigate and remedy those that occur.*

- 5.7.1** *Riparian zones* shall** be identified and documented on all *water bodies** that have permanent water when forested and are a minimum of 10m each side of the watercourse.

Guidance

While 10m is the minimum, slope, soil stability and future harvest disturbance should be considered when defining the width of the riparian zone.

- 5.7.2** No commercial afforestation shall* be undertaken in riparian zones*.
- 5.7.3** At replanting the Organisation shall assess whether any additional setback is possible beyond the existing stump-line without creating an area or areas of deforestation under the Climate Change Response Act and Climate Change Regulations.

Guidance

The Climate Change Response Act and Climate Change Regulations have different requirements depending on whether the forest is pre-1990 or post-1989 forest. Where

removal of plantation species to improve riparian protection may result in carbon liabilities, the Organisation may choose to leave >30% of plantation trees unharvested within riparian zones to avoid liabilities and meet indicator 6.7.4. This decision will be dependent on local variabilities, such as exposure to windthrow and safety.

5.7.4 Where it is possible to setback without creating deforestation under 6.7.3, no commercial replanting shall* be undertaken in riparian zones* except under the following conditions:

The Organisation* has one of either two options, at a catchment level, to manage planting setbacks:

- 1) a Riparian Decision Support System* specified within the Management Plan* that:
 - a. addresses in-stream environmental conditions to maintain long term* aquatic values and;
 - b. planting within the riparian zone of any 3rd order stream catchment where it reaches more than 100m into the MU, does not exceed 20% of the length of streams in that catchment, **or**
- 2) Has a minimum 25m continuous setback on any 3rd order stream (where it reaches more than 100m into the MU) to the top of its sub-catchment that includes at least one significant headwater, and all other tributaries on that stream must have a minimum 5m setback and be replanted no closer than the previous planted stump line, or

Small – Species suitable for indigenous habitat* and *protection** of riparian values may be planted and *harvested* in a *riparian zone** where a continuous cover regime is used in the *riparian zone** and adjoining *forest** providing in-stream values are not compromised.

Verifier

- 1) All 3rd order stream catchments are mapped.
- 2) Before harvesting begins in a catchment, a decision is made as to which riparian management approach is to be followed and the corresponding planting setbacks mapped for that catchment. This will help ensure subsequent harvesting within the catchment follows the same riparian management approach.

Guidance

- 1) It is accepted that riparian setback establishment under 5.1.3 will be a progressive process as different reaches of a catchment are harvested. There is no requirement to fell existing crop trees located in the riparian until they are normally scheduled for harvesting. A fully implemented 5.1.3 will take one rotation from the date of this standard to complete.
- 2) Different catchments can use either of the two methods for establishing riparian setbacks, or all catchments could use the same method.
- 3) A number of options are suitable to determine 3rd order streams, this includes, but is not limited to, the Stahler system, the NIWA River Environment Classification (REC), the DOC National Subcatchment Ranking or the Organisations own knowledge and GIS system (whichever is the more accurate for the locality).

4) The national stream priority mapping developed by West et al (2019) may be useful when determining which stream reaches will particularly benefit from comprehensive riparian protection.

5.7.5 Where *plantation** planting has been undertaken within a riparian zone evidence of the assessments carried out in the *riparian decision support system** are recorded along with resulting effects on aquatic values.

5.7.6 Any vegetation felled within the riparian zone* shall* be felled away from the water body*, except where safety practices require it.

5.7.7 All practicable steps shall* be taken to avoid dragging logs or trees through the bed of a flowing river, lake or wetland* or the sea. Where this is planned to occur documentation of the decision-making process is recorded.

Guidance

The decision-making process should include examination of alternative harvesting methods away from the waterway or use of haul corridors to minimise the stream reach affected.

5.7.8 Where vegetation is cleared within a designated riparian zone*, regeneration of suitable riparian vegetation shall* be encouraged.

Guidance

This can be planting and/or extra pest* control, where necessary.

5.7.9 Where riparian clearance has been as a result of harvest activities then a re-planting plan shall* detail actions that seek to avoid riparian clearance or minimise damage in the next harvest cycle.

Guidance

This could entail larger riparian margins, restricting the number of stream haul-through points and harvest corridors, or plan re-planting to limit future riparian damage.

5.7.10 No earthworks shall* be undertaken within *riparian zones**, except:

- 1) In association with designated stream crossings;
- 2) Where it is maintenance of an existing road;
- 3) Where a topographical constraint leaves no alternative for the formation of a road;

- 4) In emergencies such as firefighting.

5.7.11 Steps *shall** be taken to ensure disturbed vegetation, soil or debris *shall** be deposited or contained to prevent, with the exception of major storm events, the:

- 1) Diversion, damming or blockage of any river or stream;
- 2) Passage of fish being impeded;
- 3) Destruction of any *habitat** in a *water body** or coastal water;
- 4) Flooding or erosion;
- 5) Downstream property damage.

Guidance

Where a major storm event in excess of 5% AEP (NES-PF threshold) occurs, prevention may not be possible, but planning should consider the risk of higher *intensity** events and should seek to ensure compliance with 6.7.10.

5.7.12 *The Organisation*shall** comply with any resource consents and relevant codes of practice including conditions required by permitted activities under the NES – PF*.

Guidance

Relevant codes of practice includes the “NZ Environmental Code of Practice for Plantation Forestry” and The Forest Practice Guides and any subsequent updates to these documents.

5.7.13 Where continued degradation exists to *water bodies**, and water quality caused solely or partially by forestry activities, measures are implemented that prevent or mitigate this degradation.

Guidance

Measures undertaken are relevant and of a *scale** to the adverse impact. For example, if accelerated erosion occurs then appropriate mitigation may be the establishment of constructed *wetlands** to absorb sediment run-off and the retirement of erosion prone areas from clear-felling.

5.7.14 In pre-harvest* planning a risk assessment of erosion susceptibility and potential effected values is undertaken to determine where potential erosion risk is very high.

Guidance

Principally this is by the use of *erosion susceptibility mapping**. However, due to the *methodology and scale* of *erosion susceptibility mapping** some land may be more appropriately mapped in a higher or lower category. In carrying out an assessment of erosion susceptibility, local *landscapes** containing historic erosion will

elevate likelihood of risk and the presence of sensitive downstream environments increases the potential consequences. A summary of the process to update the ESC mapping is provided by Te Uru Rākau at <https://www.mpi.govt.nz/dmsdocument/28542/send> which also provides a list of approved providers that can field assess and make changes where needed. Also, a background report by Landcare Research is available at <https://www.mpi.govt.nz/dmsdocument/7998/direct>.

5.7.15 In areas identified as very high risk in 6.7.13 a *pre-harvest** evaluation is undertaken to establish the most appropriate method to transition to forestry practices that support soil stability on this land. This evaluation *shall** be documented and include consideration of:

- 1) Post-harvest retirement to suitable permanent vegetation;
- 2) Transition to a continuous cover *forest**;
- 3) Alternative species, silvicultural practices and regimes; and
- 4) Retirement without harvest and encouragement of suitable long-term soil stability vegetation.

6.7.16 Medium/Large – If areas identified in 6.7.13 are clear-felled then:

- 1) For replanting of plantation* species that require clear fell harvesting a programme of erosion monitoring is undertaken covering the full rotation of the crop to determine effects.
- 2) Areas left to revert to an indigenous vegetation cover are monitored to ensure natural regeneration is occurring.

Verifier

Documented erosion monitoring has been undertaken following rainfall events (including 10% AEP or more intense storm events) over the course of the rotation, recording management practices and their relationship to erosion, particularly during the first six years following harvest.

Guidance

This *indicator** is included in light of a lack of research identifying effective and efficient methods to transition to suitable soil stabilising land uses. It is anticipated that this *indicator** will become redundant when this information is available nationally.

Monitoring techniques may include but are not limited to LiDAR, aerial photography and field inspections that link management practices to the erosion events and quantify sediment movement. Further monitoring guidance is available at https://www.gdc.govt.nz/assets/Files/Documents/LandcareReport_GDC_Storm_initiated-debris-flows-and-plantation-forestry_protocol_final.pdf.

Monitoring should also identify where sediment has reached *water bodies**.

6.7.17 Small - If *plantation** species that require clear-fell harvesting are replanted areas identified in 6.7.12a and 6.7.13 then a photographic record or similar form of monitoring is undertaken

to determine soil erosion effects; or if the area is clearfelled and left to revert to indigenous vegetation it is monitored to ensure natural regeneration is occurring.

Verifier

Documented erosion monitoring has been undertaken following high rainfall events, and regularly during the first six years following harvest. Documentation *shall** include erosion sites (eg slips, stream bank erosion), water quality and related weather event and forestry activity data.

Guidance

This *indicator** is included in light of a lack of research identifying effective and efficient methods to transition to suitable soil stabilising land uses. It is anticipated that this *indicator** will become redundant when this information is available nationally.

6.7.18 Afforestation in *very high-risk Erosion** areas *shall** not be in species that requires clear felling.

Guidance

Due to the *erosion susceptibility mapping** scale some land may be more appropriately mapped in a higher or lower category. In carrying out an assessment of erosion risk, local *landscapes** containing historic erosion will elevate likelihood of risk and the presence of sensitive downstream environments increases the potential consequences.

6.7.19 No storage or mixing of fuels, oils, chemicals or similar substances *shall** be undertaken in areas where a deliberate or inadvertent discharge could enter any *water body**.

6.8 *The Organization* shall* manage the landscape* in the Management Unit* to maintain and/or restore* a varying mosaic of species, sizes, ages, spatial scales* and regeneration cycles appropriate for the landscape values* in that region, and for enhancing environmental and economic resilience*.*

6.8.1 **Large** - A varying mosaic of species, sizes, ages, spatial *scales**, and regeneration cycles is maintained appropriately to the *landscape**.

Verifiers

Economic and environmental *resilience** can be achieved by undertaking one or more of the following:

- 1) Environmental *resilience**:

- a) Maintaining a mix of production and reserve areas within the *Management Unit**;
 - b) Maintaining the ecological health of *natural ecosystems** within and downstream of the *Management Unit**.
- 2) *Economic resilience**:
- a) Choosing a species mix which:
 - I. Caters well to *local** conditions; or
 - II. Enables *The Organisation** to respond rapidly to changing market requirements; or
 - III. Can supply a diversity of markets.
 - b) Using a diversity of *genotypes**;
 - c) Having a mix of age classes and/or rotation lengths;
 - d) Using a variety of silvicultural regimes;
 - e) Establish species that meet a diverse range of markets and product requirements;
 - f) Demonstrating an understanding of future market trends;
 - g) Taking into account *local** markets/processors;
- 3) Where *The Organisation** have only radiata pine and/or Douglas fir they examine the social, environmental, and economic values of alternative species and establish plantings if appropriate based on these studies;
- 4) *The Organisation** have access to information demonstrating that the environmental, social and economic performance of *exotic species** is greater than indigenous species; or
- 5) Appropriate to size and *scale**, operational trials or research of *exotic species** other than radiata and Douglas fir have or are being carried out. This may be met by participating in a collaborative trial.

6.9 *The Organization shall* not convert natural forest* to plantations*, nor natural forests* or plantations* on sites directly converted from natural forest* to non-forest* land use, except when the conversion:**

- a) Affects a *very limited portion** of the area of the *Management Unit**, and**
- b) Will produce clear, substantial, additional, secure *long-term** conservation* benefits in the *Management Unit**, and**
- c) Does not damage or threaten *High Conservation Values**, nor any sites or resources necessary to maintain or enhance those *High Conservation Values**.**

6.9.1 There is no conversion of *natural forest** to *plantations**, nor conversion of *natural forests** to non-forest* land use, nor conversion of *plantations** on sites directly converted from *natural forest** to non-forest* land use, except when the conversion:

- 1) Affects a *very limited portion** of the *Management Unit**; and
- 2) The conversion will produce clear, substantial, additional, secure, *long-term** conservation* benefits in the *Management Unit**; and
- 3) Does not damage or threaten *High Conservation Values**, nor any sites or resources necessary to maintain or enhance those *High Conservation Values**.

Guidance

Where conversion has taken place, this *shall** be documented along with the justifications.

5.9.2 Conversion of the areas of naturally occurring indigenous vegetation with the following characteristics to *plantation** forestry *shall** not be permitted:

- 1) Any area of 5 hectares or greater which has an actual or emerging predominance of naturally occurring indigenous tree species of any height. For this clause an indigenous tree species is defined as any woody plant which ultimately forms part of the canopy of a naturally occurring *forest** or any indigenous tree species that attains a diameter at breast height of 30cm or greater;
- 2) Any natural indigenous *forest** vegetation, including riparian of between 1 and 5 hectares in area with an average canopy height of at least 6 m which is practical to *protect**. This recognises that in some instances some small pockets of native vegetation within a *plantation** *forest** management area cannot practically be protected from disturbance. However, viable stands will be excluded from clearance and *reasonable** effort made to ensure such areas are not damaged in subsequent forestry operations;
- 3) Any vegetation recommended for *protection** in a survey report in the Protected Natural Areas Programme or classified as a Site of Special Wildlife Interest (SSWI) in a published report of the former Wildlife Service;
- 4) Significant Natural Areas (Areas recognised as significant indigenous vegetation or significant *habitats** of indigenous fauna) as defined in an operative District and Regional Plan under the Resource Management Act 1991;
- 5) Indigenous *habitat** of rare, threatened or endangered species;
- 6) *Geopreservation** Sites as listed in the *Geopreservation** inventory;
- 7) Wetlands as defined in the Resource Management Act 1991;
- 8) *Dunelands** where the primary vegetation is indigenous;
- 9) Geothermal areas where there are indigenous plant communities adapted to geothermal conditions.

6.9.3 The following lands *shall** not be considered for conversion to *plantation** *forest** unless *consultation** is undertaken with *affected** and *interested stakeholders**:

- 1) High-country tussock scrublands or herb fields as defined in MfE's *LENZ** publication;
- 2) Coastal scrub and coastal herb fields with an indigenous plant content of greater than 30 per cent within the area being considered;
- 3) Any indigenous vegetation that is mapped as *LENZ* Threatened Environment 1–3*;
- 4) Areas of indigenous vegetation within Outstanding Natural Features and *Landscapes** identified in Regional and District Plans.

Verifier

*Consultation** *shall** include *tangata whenua** and members of the SDG. Where resource consent is required under the Resource Management Act *consultation** with the SDG can be undertaken by that process.

6.10 *Management Units containing *plantations** that were established on areas converted from *natural forest** after November 1994 *shall** not qualify for certification, except where:**

- a) Clear and sufficient evidence is provided that *The Organization** was not directly or indirectly responsible for the conversion, or**

b) the conversion affected a *very limited portion of the area of the *Management Unit** and is producing clear, substantial, additional, secure *long-term* conservation** benefits in the *Management Unit**.**

6.10.1 Based on *best available information**, accurate data is compiled on all conversions since 1994.

6.10.2 Areas converted from *natural forest** to *plantation** since November 1994 are not certified, except where:

- 1) *The Organisation** provides clear and sufficient evidence that it was not directly or indirectly responsible for the conversion; or
- 2) The conversion is producing clear, substantial, additional, secure, *long-term* conservation** benefits in the *Management Unit**; and
- 3) The total area of *plantation** on sites converted from *natural forest** since November 1994 is less than 5% of the total area of the *Management Unit**.