NIMPKISH ISLAND

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NIMPKISH ISLAND

THE ISSUE

The proposal to create an ecological reserve for Canada's tallest Douglas firs in the Nimpkish Valley has been in the public domain since 1973. It centers on a 15-hectare island formed by channels of the Nimpkish River which is under Timber Licence status in the name of Canadian Forest Products Ltd.

Establishment of the reserve has been delayed, mainly due to prolonged negotiations between the company and provincial government ministries on the exact timber values involved and, generally, due to the high cost of buying back the timber from the company. It was not until mid-1984 that the parties agreed to a $909,350 compensation value, based on independent timber cruises and appraisals.

Through articles in magazines and discussions in the other media, preservation of the Nimpkish Island trees has assumed a high public profile in the intervening years.

The issue is whether or not these tallest Douglas firs in Canada should be preserved and if so, in what form and/or amount Canadian Forest Products should be compensated.

BACKGROUND

In 1973, ecologists at the University of British Columbia identified in the Nimpkish River valley a 292-ha area which supported possibly the tallest and most productive Douglas fir trees in Canada (Fig. 1). This area was submitted in late 1973 as the Nimpkish River Ecological Reserve Proposal #164. However, the proposed reserve was located in Tree Farm License No. 37 held by Canadian Forest Products Ltd. (CANFOR). After meetings in 1974 between Dr. Krajina (Co-Chairman of the Ecological Reserve Committee) and the logging company, a reduced 15-ha proposal including only one island in the Nimpkish River was agreed upon, subject to CANFOR receiving adequate compensation for the foregone timber.

During the next ten years (1974-1984), two major debates took place regarding the subject of "adequate compensation". Firstly, discussions were held among government agencies, and between CANFOR and government regarding the form that compensation, if any, should take. No such compensation had ever been established since ecological reserves were created on Crown Land. Exchanges of timber areas were considered but for a number of reasons, including the unavailability of suitable replacement timber, a timber exchange was ruled out by the Ministry of Forests. Cash settlement was also an option.

In 1981, CANFOR applied for a permit to cut trees on the proposed Nimpkish reserve. This request was denied and in early 1982, the Ministry of Forests removed the Nimpkish Island trees from the allowable cut. This amounted to a restriction of the company's rights and requires compensation under Section 53 of the Forest Act.

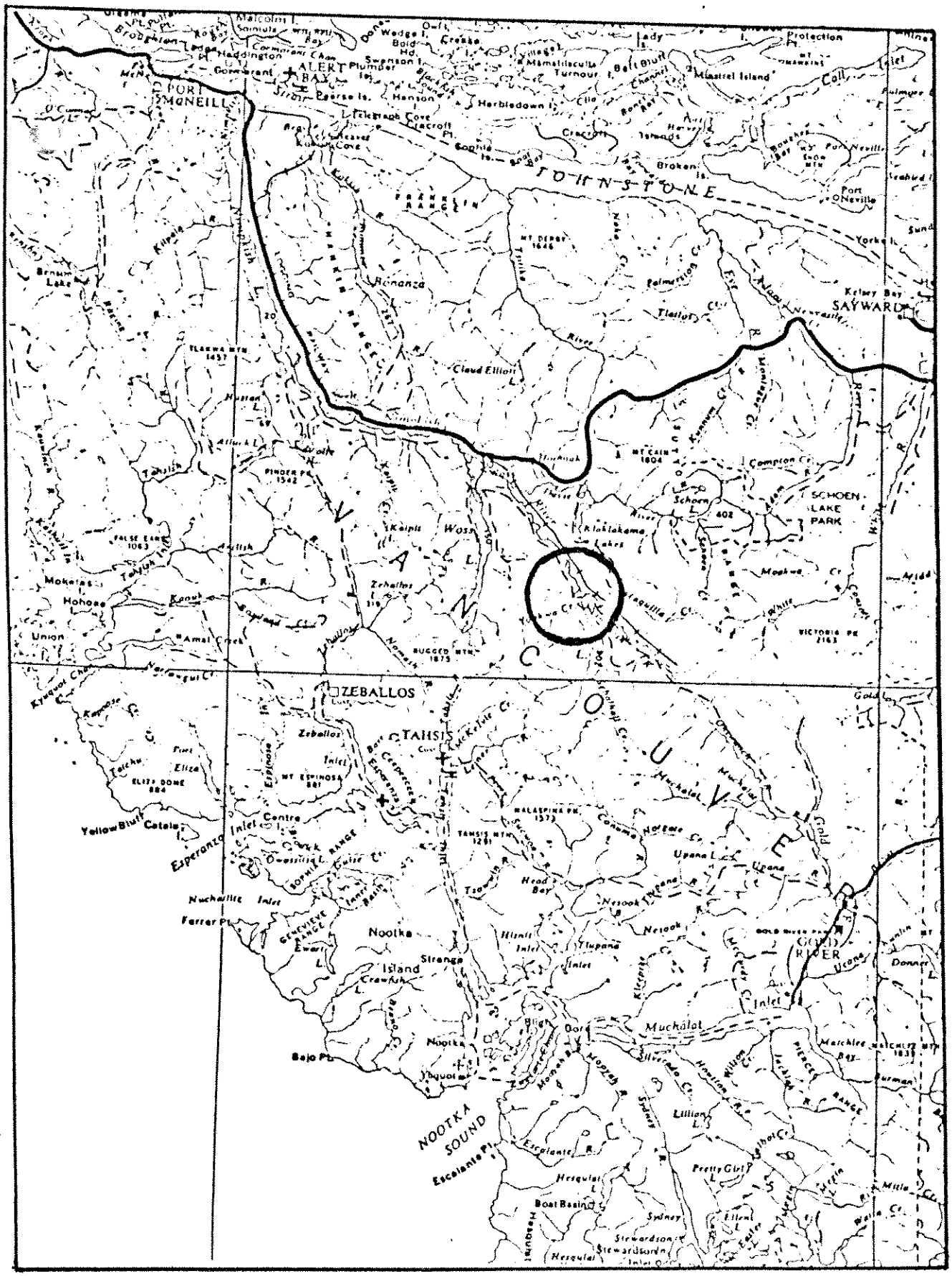

Figure 1. NIMPKISH RIVER ISLAND KEY PLAN

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Concurrently with the discussion regarding the form of compensation, a number of actions were taken place to determine the value of the Nimpkish trees. Numerous timber cruises and appraisals were completed between 1976 and 1983 by CANFOR and the Ministry of Forests (acting on behalf of the Ministry of Lands, Parks and Housing), but no agreement could be reached as to the value of the trees. In 1983, both parties agreed that an independent appraisal was needed.

A consultant report submitted in September 1984 established the compensation value of the Nimpkish Island timber (1), and both CANFOR and the Ministries of Forests and Lands, Parks and Housing agreed with the reports.

The Nimpkish Island Ecological Reserve Proposal has received much publicity during the last few years. Since 1981, numerous articles have been published in the Victoria Times Colonist and Monday Magazine, the Vancouver Sun, and the magazines Equinox and Canadian Geographic. Numerous letters of support and cash donations were collected from the public as well as from organized groups such as the Friends of Ecological Reserves, U.B.C. professors, Sierra Club, Rotary Clubs, and the Second Century Fund (now Nature Trust) by Dr. Vladimir Krajina, the prominent supporter of this proposed reserve (3,4). Parks Canada proposed in 1984 to include the Nimpkish River reserve in the Canadian Landmarks Program.

Referrals of the proposed Nimpkish Ecological Reserve from the Ministry of Lands Parks and Housing resulted in agreement by the Ministry of Forests, the Ministry of Energy, Mines and Petroleum Resources, the Ministry of Environment and the Regional District.

PHYSICAL CHARACTERISTICS

The proposed Nimpkish Island Ecological Reserve is located just downstream from Vernon Lake, at the junction of the Nimpkish River, Sebalhall Creek (which drains Vernon Lake) and Kiyu Creek (Fig. 2). At this location, the Nimpkish River makes a large loop which encloses a flat, low alluvial terrace at roughly 290 m elevation. It is inside this bend that the Nimpkish Island and two small islets (also part of the proposed reserve) are located. An overflow channel delineates the eastern boundary of the island by cutting across the top portion of the U-bend. The ground on Nimpkish Island is broken by an occasional flood channel and is subject to periodic but infrequent flooding as shown by the low sedimentation observed on the island. As a result, soils are very rich providing optimal condition for the growth of alluvial vegetation. The area is also characterized by high precipitation (over 241 cm/year).

An examination of aerial photos by hydraulic engineers indicates that the Nimpkish River Channel is not stable in its present location near Nimpkish Island (2). Dead trees and other materials brought down to the Nimpkish River by Sebalhall and Kiyu Creeks tend to block the Nimpkish Channel along the island. In the long run, the present river channel could become blocked, diverting the Nimpkish waters to another channel. Should the water be diverted to the present overflow channel, the island could be slowly eroded away. Log jams forming in the present Nimpkish Channel could already contribute to the island erosion by deflecting the current against the island. Given major changes in hydrologic patterns or extensive erosion, log removal and rock riprap bank protection would be required to

arrest the erosion of Nimpkish Island. The probability of such an occurrence is not known. A few of the trees on the island are 600 to 700 years old, but they may pre-date the channel which created the present island. It is also likely that the widespread logging in the Nimpkish drainage has created more favourable conditions for increased peak flows. The erosion and an accumulation of debris resulting from logging on Sebalhall and Kiyu Creeks would have to be well controlled.

When the Nimpkish River Ecological Reserve was first proposed in 1973, little of the surrounding stands had been logged. No longer is this the case; only small forest patches remain within 0.5 km of the Nimpkish River. As a result, trees on the Nimpkish Island are also increasingly subject to wind blowdown.

RESOURCE VALUES

By far the greatest resource value on Nimpkish Island is in its trees. Nimpkish Island is Crown Land but its timber is part of an Old Temporary Tenure now designated as Timber Licence TO-103-Block 1. Cutting rights are held by Canadian Forest Products which manage this land as an integral part of Tree Farm Licence No. 37. The total volume on the island was determined in 1984 as 26,533 m^3 of merchantable mature and over-mature Douglas fir and red cedar. The agreed-upon compensation for this timber would be $909,350 (1).

The heritage and scientific values of the Nimpkish trees are of national and possibly international significance. The 15-ha proposed reserve contains but a very small sample of the once extensive bottomland

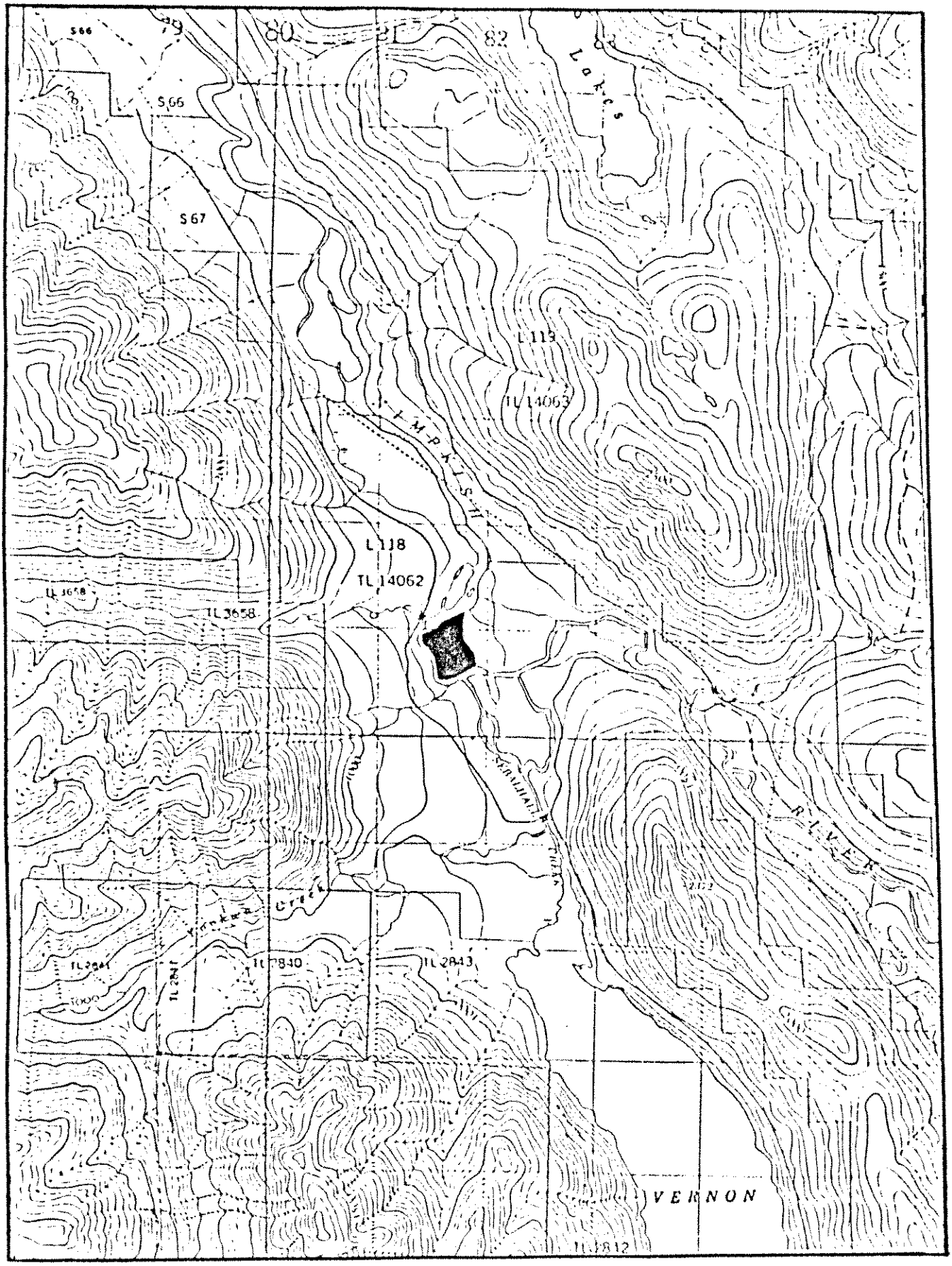

Figure 2. PROPOSED NIMPKISH RIVER ECOLOGICAL RESERVE

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forests where Douglas firs reached 100 m or more in height. The Nimpkish valley, is the only area in Canada where entire stands of such tall trees still exist.

Eighty percent of the Nimpkish Island forest is composed of healthy Douglas firs of which one has been measured to be over 90 and several others to be over 80 meters tall. The average height of the Douglas firs was determined to be 71.4 meters (1). These Douglas firs are of two different generations. The majority are about 360 years and a few specimens are about 650 years of age.

The only area under permanent protection in Canada where Douglas firs reach comparable dimensions is Cathedral Grove in MacMillan Provincial Park. While the trees there reach impressive diameters, they are not quite as tall and considerably older (700-800 years). Many of the Cathedral Grove trees are diseased and the grove is considered to be near the end of its life span. In contrast, most of the Nimpkish Island trees are still growing and have good prospects of reaching record sizes in the vicinity of 100 meters. Western red cedars, hemlock and a few Sitka spruces growing among the Douglas firs on the island are also very tall, while staying relatively slender.

This exceptional forest offers unparalled research opportunities. The determination in an undisturbed site of the ecological parameters contributing to such outstanding forest growth, would serve to improve management and silvicultural practices in logged areas. The Nimpkish reserve would offer an unaltered control area to which results in managed forests could be compared. The preservation of the superior gene pool of this stand would contribute to the improvement of present stock as well as

serve as a gene bank for future forestry needs. Finally this forest would co ·ibute to the elaboration of the ecological classification of the province's forest ecosystems.

Other resource values of Nimpkish Island, with the exception of recreation values, are insignificant compared to timber and conservation values.

The island is too small to greatly influence wildlife and fisheries values. No mineral values have been identified to conflict with ecological reserve use.

Heritage and aesthetic recreation values are dependent on the conservation of the tall trees and could be considerable, as shown by the example of Cathedral Grove and by the fact that the area is being considered as a Canadian Landmark. It should be kept in mind, however, that, again due to the small size of the island, high recreational use there would not be compatible with ecological reserve status if research values were to be maintained in perpetuity.

DISCUSSION

Old-growth Douglas fir stands with trees of comparable dimensions have not yet completely disappeared from the Nimpkish Valley and its vicinity. However, it is virtually certain that of the few remaining sites none would be under a land status and ownership which would make them easier to obtain and none would be equally suited for an ecological reserve. In particular, it would be impossible to find a stand of such tall trees on an equally small area which would still have the naturally grown boundaries found in this island situation. If a reserve was carved out of a continuous stand, its size would have to be considerably larger to buffer against blowdown of the core due to its newly exposed margins.

As no comparable stands are at present protected in ecological reserves, it must then be concluded that alternatives site for this reserve do not exist.

The logging value, worth $909,000 to the forest company at present, accrues mainly from the circumstance that this relatively tiny land base bears an immense volume of giant, mature trees. The same circumstance determines foregone royalties for the Crown and the magnitude of employment and spin-offs. Even though of high per-hectare productive capacity, the island will, after logging, contribute only relatively small values to the economy due to its small size. In this sense, the monetary benefit derived from retaining the island for forest exploitation is a one-time effect and in practical terms the renewable part of the resource is much smaller.

This stands against long-term, but unquantifiable research and heritage values. Heritage, educational and much of the research values are for the

same reasons non replaceable.

Creating the Nimpkish Island Ecological Reserve carries with it a certain degree of risk. It has been mentioned above that changes in the river channels could damage the reserve and, in the worst case, could even destroy it. Another danger is that of blowdown which has increased in recent years due to the removal of surrounding tall stands. Predictions in both cases are difficult at best. If either of these threats should materialize, salvage of the reserve's timber could hopefully re-coup most of the monetary losses.

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