

HEINONLINE

Citation: 10 Otago L. Rev. 537 2001-2004



Content downloaded/printed from
HeinOnline (<http://heinonline.org>)
Fri Oct 11 12:43:35 2013

- Your use of this HeinOnline PDF indicates your acceptance of HeinOnline's Terms and Conditions of the license agreement available at <http://heinonline.org/HOL/License>
- The search text of this PDF is generated from uncorrected OCR text.
- To obtain permission to use this article beyond the scope of your HeinOnline license, please use:

[https://www.copyright.com/cc/basicSearch.do?
&operation=go&searchType=0
&lastSearch=simple&all=on&titleOrStdNo=0078-6918](https://www.copyright.com/cc/basicSearch.do?&operation=go&searchType=0&lastSearch=simple&all=on&titleOrStdNo=0078-6918)

“Naturally Quiet”: Towards a New Legislative Strategy for Regulating Air Space Above National Parks in New Zealand

Alon Tal*

A little lonesome space, where nature has her own way, where it is quiet enough to hear the patter of small paws on leaves and the murmuring of birds, can still be afforded. The gift of tranquility, wherever found, is beyond price... I believe that whenever we destroy beauty, or whenever we substitute something man-made and artificial for a natural feature of the earth, we have retarded some part of man's spiritual growth.

Rachel Carson¹

I. Introduction

New Zealand is blessed with a strikingly lovely landscape and a unique ecology.² For example, of the 2,500 native species of conifers, flowering plants and ferns, over 80% occur nowhere else in the world.³ To wander among the forests of New Zealand evokes a special sense of wonder. For reasons that are poorly understood,⁴ the meteor that 65 million years ago laid waste to 70 percent of the earth's life, separating the Cretaceous period from our modern Tertiary one, left the islands' flora essentially untouched. A meeting with kauri forests in New Zealand reveals landscapes and plants that supported dinosaurs. It spurs the imagination in ways that no exhibit or curators' recreation can.

After the initial transformation of over 80% of its lands and decimation of its wildlife by Maori and Europeans, the new nation of New Zealand changed its orientation and made a substantial societal commitment to preserving its marvelous natural heritage. Under the National Parks Act, some 30% of the country's lands have been set aside as national parks to be managed by the Department of Conservation⁵ (hereinafter: DOC).

* Director of research, Arava Institute for Environmental Studies, Visiting Professor, the University of Otago Faculty of Law. The author expresses his gratitude to Ian Williams and Nicola Wheen from the University of Otago Law Faculty, Dick Hingson chairman subcommittee on Noise/Aviation, American Sierra Club, Dr. Royden Somerville Q.C., Barrister, along with Gordon Cessford, Social Scientist and Clare Lenihan, Conservancy Solicitor (Southland) from the New Zealand Department of Conservation for their extremely helpful comments on an earlier draft of this article.

¹ Rachel Carson, "The Real World Around Us," (Speech to the Sorority of Women Journalists, 1954) reprinted in *Lost Woods, the Discovered Writing of Rachel Carson*, Linda Lear, Ed., (Boston, Beacon Press, 1998) at 160, 162.

² Besides being home to the majority of the world's flightless bird species, ecologically unique aspects of local fauna include three frog species that do not have a free-swimming tadpole stage, native lizards that do not lay eggs, giant carnivorous snails and of course the Tuatara — that taxonomical anomaly that is probably the closest remaining remnant of the dinosaurs. See: John Dawson, Rob Lucas, *Nature Guide to the New Zealand Forest*, (Auckland, Godick, 2000) at 10.

³ *Ibid.* at 10.

⁴ The most plausible explanation has to do with the islands' physical separation from the Gondwana "mega-continent" that was so devastated.

⁵ Gordon Cessford "Noise Impact Issues on the Great Walks of New Zealand,"

These preservation efforts have been successful enough to make New Zealand a highly attractive destination for tourists worldwide that primarily seek inspiration in the picturesque parks and countryside. By law, the Department of Conservation does not charge entry fees⁶ and without "gate keepers" there are no precise figures of visitation rates. But estimates by park officials suggest many millions of visitors annually. Not only is nature in New Zealand sensationally scenic, it is safe. As one nature handbook rhetorically asks: "Where else can you sit on a mossy bank or log, confident that you won't be attacked by soldier ants, venomous scorpions and spiders, snakes, leeches or hornets?"⁷

And yet, to an increasing number of visitors, a plague of far more insidious pests has invaded the borders of New Zealand's scenic parks. Planes and helicopters carrying tourists have raised the decibel level and lowered the existential serenity that National parks and wilderness areas offer.

New Zealand's parks were primarily designed to be accessible to hikers. With over 10,000 kilometres of trails managed by the Department of Conservation, and hundreds of campsites and huts, residents and foreign visitors were given access to remote wilderness areas, which offer a source of recreational enjoyment and spiritual inspiration. But, not all visitors are inclined or able to walk meaningful distances, and many appealing areas are not easily accessible by foot. Tourism has become a big business and is a diverse sector. An increasing number of people choose to view or reach the landscapes via the air, on helicopters and light aircraft. Providing such services has become an attractive commercial venture.

The noise and disturbance associated with these "overflights"⁸ constitute a nuisance to many who visit New Zealand's parks. Upon reaching remote locations and vistas, their contemplative solitude and sense of seclusion is spoiled by the roar of engines and the whirl of propellers. Attempts to find some respite from the trappings of mechanized civilization are sabotaged by the seemingly ubiquitous air traffic. Studies suggest that some of the creatures that make New Zealand's parks their home may also find motorized transport a source of stress. And fishermen resent the decimation of stock in remote streams by casual visitors who fly in for a quick and easy catch.

At the same time, a growing cohort of primarily international tourists enjoy the aesthetic experience, efficiency and sheer excitement of aerial access to the scenic wilderness vistas of New Zealand. It is not at all self-evident to them that the national park experience should be a tranquil or silent one. Indeed, these contrasting perceptions are not unique to New Zealand and have been characterized in other national park systems as a clash between "Preservationists and Recreationists".⁹

Wilderness Visitors, Experiences and Visitor Management vol. 4 in *Wilderness Science in a time of Change Conference*, (RMRS-P-15) (2000) 69-76.

⁶ National Parks Act 1980, s 4.

⁷ Dawson and Lucas, *supra* n. 2 at 10.

⁸ Overflights has been the general term in the aviation literature for this subject of regulation for at least thirty years.

⁹ Nathan L. Scheg, "Preservationists versus Recreationists in our National Parks," 5 *Hastings West-Northwest Journal of Environmental Law and Policy* 47, (1998).

The conflict of interests goes to the heart of what a strategy for “sustainable” tourism should look like. In theory, any country’s national parks should strive to meet the broadest possible menu of individual needs. As national climbing icon, Sir Edmund Hillary writes: “Our national parks provide opportunities for all people to enjoy the pleasures of the outdoors. From a gentle afternoon stroll to a week long tramp through rugged bush and mountains.”¹⁰ Given the tourist industry’s growing contribution to the national economy and the mounting acrimony surrounding aircraft noise, defining the limitations of air access to parks and scenic regions should be a critical policy objective for New Zealand. Yet, an operational definition for “sustainable tourism” remains elusive and the somewhat muddled and inadequate legislative position on the issue of overflights has done little to help resolve the associated controversies.

This article attempts to explore the legal, technical and philosophical aspects of overflights and air access to New Zealand’s protected natural areas and recommends some small, but fundamental changes in the related legislative framework. It begins with a review of the environmental impacts and concerns about overflights in New Zealand and characterizes the scope of the present conflict. The article then describes the existing statutory and regulatory system that controls air transportation and national parks and wilderness in New Zealand. This requires a detailed deciphering of two laws: the Civil Aviation Act 1990 and the National Parks Act 1980 along with the many rules that have been promulgated and the modest litigation that has been pursued pursuant to them. The article then briefly evaluates the experience of the U.S. and Australia and their regulatory strategies for addressing the overflight controversy. The philosophical issues manifested in the policy debate are then considered. Finally, recommendations for changing the present New Zealand statutory framework for managing overflights are offered. These would alter the present “balance of power” between the government agencies involved and proscribe activities that have heretofore been allowed in the hope of offering a more sustainable and equitable response to the rise in the popularity of commercial flights into nature.

II. The Elusive Ideal of “Natural Quiet” in New Zealand’s National Parks

When visiting parks and wilderness areas, people not only seek to change the scenery but their acoustic reality. Nature not only offers an inspiring visual alternative but also a refreshing auditory experience. Starting in the United States in the 1970s,¹¹ the notion of “natural quiet” emerged as a salient objective for government conservation policy at national parks and wilderness areas around the world. While no “statutory definition” exists yet in New Zealand for the concept, a Department of Conservation official “Visitor Strategy” promulgated in 2000 offers an intelligible, non-legal definition that is free of excessive professional jargon:

¹⁰ Edmund Hillary, “Foreword” in Robbie Barton and Maggie Atkinson, *A Trampers’ Guide to New Zealand’s National Parks*, (Auckland, Reed Press, 2002) at 6.

¹¹ See: Public Law 93-620 (January, 1975).

An important value of department-managed areas is natural quiet. This can be defined as the natural ambient conditions or the sound of nature. Natural quiet can range from silence to a thunderstorm and includes the sounds made by animals and plants. Natural quiet is an important component of visitors' appreciation of department-managed areas along with other qualities such as solitude, space, scenery and clear skies.¹²

Recently, a very practical U.S. National Park Service's definition of "natural quiet" was upheld by a federal court.¹³ The definition of quiet simply requires: "no aircraft audible".

Regardless of how it is defined, in today's mechanized world, natural quiet has become an increasingly scarce commodity. Given present technology, motorized flights are noisy and noise can travel great distances in open spaces. U.S. studies suggest that helicopters can be heard in the Grand Canyon natural environments at distances of over twenty-five kilometers.¹⁴ Residents living near the major airport at Denver Colorado report background ambient noise levels of 20 decibels. When aircraft as far as 50 miles away pass by, the level may jump as high as 77 decibels.¹⁵ Decibel measurements are based on a logarithmic system, with small increments representing a doubling in intensity. Hence, such acoustic shifts involve increases of many orders of magnitude.¹⁶

¹² New Zealand Department of Conservation, *Visitor Strategy*, (1996) "Natural Quiet," www.doc.govt.nz/About-DOC/Policies-Plans-and-Reports/Visitor-Strategy/001-Introduction.asp at 20. Among the many meanings for "natural quiet" that have been proposed, the U.S. National Park Services has defined "natural quiet" as "the sound levels associated with a given acoustic environment, absent any mechanical or manmade noise sources" or "the quiet at the lower end of the ambient sound level range that occurs regularly between wind gusts, animal sounds, etc., not just the average sound level". At times, however, it has preferred more lyrical descriptions such as the Service's 1995 *Report to Congress*: "Lulls in the wind or interludes between animal sounds create intervals where the quiet of a sylvan setting is quite striking. In considering natural quiet as a resource, the ability to hear clearly the delicate and quieter intermittent sounds of nature, the ability to experience interludes of extreme quiet for their own sake, and the opportunity to do so for extended periods of time [are] what natural quiet is all about." U.S. National Park Service, *Report To Congress On Effects Of Aircraft Overflights On The National Park System*, (September 12, 1994), s 3.2.1 "Qualitative Assessment of Natural Quiet." The Sierra Club, a leading American advocacy group suggests: "Natural quiet is the extended opportunity to experience only natural sounds amid periods of deepest silence." www.sierraclub.org/policy/conservation/airtours.asp.

¹³ The issue was first raised in *Grand Canyon Air Coalition versus the Federation Aviation Authority* 154 F 3d 455 at 459. (D.C. Circuit, 1998) where the U.S. National Park Service's definition of natural quiet was upheld. More recently, the Federal 3rd Circuit court supported this view. *United States Air Tour Association v. the Federal Aviation Administration* 298 F. 3d. 997 (D.C. Circuit, 2002).

¹⁴ "Aircraft have been noted as audible ... as far as 10 to 15 miles from the corridors." U.S. National Park Service, *Aircraft Noise Model Validation Study (Grand Canyon National Park)* HMMH Report No. 295860.9 (January, 2003) at s 2.3.2. "Region of 25% Aircraft Audibility."

¹⁵ Kristin L. Falzone "Airport Noise Pollution: Is There a Solution in Sight?" 26 *Boston College Environmental Law Review* 769-807 (1999).

¹⁶ For a non-technical review of the technical vagaries involved in measuring noise see: Alon Tal (Rosenthal) "Measuring Noise: Towards an Optimal Judicial Policy,"

Precisely how noisy aircraft and helicopters are in natural areas depends on the given topography, weather and of course the type of plane or helicopter itself. As decibel readings measure pressure, overflights, like many sources of short, punctuated noises, are extremely loud and disruptive yet may not last long enough to violate maximum decibel standards.¹⁷ Over the past decade these disturbances have proliferated in New Zealand's national parks. The increase can largely be associated with the 85% growth in tourism during the 1990s.¹⁸

Over two million tourists visit New Zealand annually, and this number has been steadily growing.¹⁹ The Ministry of Tourism reports that nearly one in ten New Zealand jobs is either directly or indirectly linked to tourism.²⁰ To better demonstrate the contribution of tourism to the country's balance of trade, one government analysis likened the contribution of a single international visitor to New Zealand to the worth of 1000 kg. of beef, 880 kg. of butter or 1.5 hectares of plantation forest timber.²¹ If present trends continue, government estimates project an overall increase of 48% in international visitors or 972,000 arrivals over the next 7 years. And part of the modern Kiwi tourist package is scenic flights in helicopters and airplanes. To date, some 158 operators have received licenses to run an "air operation".²² Not all of these are commercial tourist operators, of course, and there are a few corporate and other small transport operators.

According to the Ministry of Tourism's recent survey of visitor activities, some 2% of visitors report taking "Scenic Planes" and 2% take "Scenic Heli Rides".²³ In other words, some 20,000 international visitors engage in each of these activities. While there is probably overlap between these two cohorts, the extent is unclear. Although no formal statistics are available,²⁴ most helicopter operators

²⁰ *Israel Law Review* 74 (1985). See also: Sidney A. Shapiro, "Lessons From A Public Policy Failure: EPA and Noise Abatement," 19 *Ecology Law Quarterly* 1 (1992).

¹⁷ Examples of these impulse noise events include: back-up alarms, whistles, bells, horns, sirens, fireworks, riveting, hammering, sonic booms and dogs barking. See Rebecca A. Niedzielski, Minnesota Pollution Control Agency, Environmental Impulse Noise Study 2 (May 1991) as reported in: Falzone, *supra* at n. 15, note 101 at 780.

¹⁸ Gordon Cessford and Andy Thompson, "Managing Tourism in the New Zealand Protected Area System," 12 *Parks* 26 (2002) at 26.

¹⁹ New Zealand Ministry of Tourism web site, www.trcnz.govt.nz/Topics/Forecasts+and+Trends/Forecast+International+Visitor+Arrivals/

²⁰ New Zealand Ministry of Tourism, "The Tourism Industry," www.tourism.govt.nz/quicklinks/ql-tourismindustry.html

²¹ Gordon Cessford and Andy Thompson, *supra* n. 18 at 26. In more conventional terms, tourism provides 16% of export earnings to New Zealand.

²² The list of certified operators and their addresses are listed on the Civil Aviation Authority website: www.caa.govt.nz/ and is considered the most up-to-date listing. See under: Part 119 "Air Operator Holders".

²³ Broken down by group category, "Package Travelers" and "Tour Groups" are much more avid consumers of this type of recreation than independent travelers, with four percent reporting participation. New Zealand Tourism and Research Council. See: "Activities and Attractions — Ranked by Tour Groups," *International Visitor Survey*, www.trcnz.govt.nz/Topics/Behaviour+and+Characteristics/Travel+Styles+-+Group/Activities-and-Attractions.htm

²⁴ Many factors complicate a proper "census" of air users. For instance, commercial

confirm that the vast majority of their visitors (greater than 80%) are international tourists, although this varies to some extent with location. In summation, the number of individuals who annually partake of this tourist service in New Zealand is probably between 50,000 and 100,000 individuals nation wide.

These aerial forays into natural settings are not inexpensive. An informal telephone survey suggests that the costs for helicopter and scenic air flights vary, primarily according to flight duration. The least expensive flight options are roughly 150 dollars for a half-hour flight (per person) with lengthier options costing many hundreds of dollars.

The absence of a reliable census and basic statistics for overflights in New Zealand, not to mention comprehensive empirical acoustic analysis on the subject, is a reflection of the lack of serious government attention paid to the issue. All stakeholders in the present debate agree, however, that the numbers of air bound visitors in the parks and available flight opportunities are increasing. So have the resulting environmental impacts.

Because of the high decibel level of noise emitted from aircraft, a growing literature has begun to document the effect of overflights on animals and humans. The zoological research is fairly conclusive. In Antarctica, for example, a series of researchers observed panic among penguins at distances greater than 1,000 metres from aircraft.²⁵ These changes were also measured by indicators of physiological stress, such as increased heart beat.²⁶ Three days of helicopter operations caused 8% of penguin nests to become abandoned. When air bases suspended operations, penguin populations, whose size had dropped by 50%, rebounded, with much of the improvement attributed to the absence of helicopter flights over the colony.²⁷ The magnitude of tourism's effect in general on penguin populations was hotly debated by competing research teams in an exchange of letters that appeared in the prestigious journal *Nature*. Nonetheless, all researchers agreed that: "penguin breeding numbers in colonies fluctuate due to air craft operations".²⁸

surface water activities e.g. charter boats, in the Coastal waters off of Fiordland may operate according to a resource consent. Yet they utilize aircraft to transfer passengers to and from the ship. As no consent is required for this air transfer the specific number of flights and passengers remains unknown to DOC officials. Clare Lenihan, DOC Conservancy Solicitor, (November, 3, 2003) personal communication.

²⁵ A popular ornithological "myth" is that penguins, transfixed by airplanes, topple over as airplanes change directions and the birds try, unsuccessfully, to keep them in their sights. Dr. Richard Stone of the British Antarctic Survey reported, after five weeks of aerial observations, that while penguins may not fall down due to overflights, they suffer stress: "The worst possible effect is that there would be a reduction in their breeding performance. If they were incubating eggs this could be quite devastating for them." See "Scientists Ask, Do Penguins Fall Over?" *Reuters* November 3, 2000, www.cnn.com/2000/WORLD/europe/11/03/fringe.penguins.reut/

²⁶ B. Culik and R. Wilson, "Penguins Crowded Out?" 351 *Nature* 340, (May 30, 1991).

²⁷ *Ibid.*

²⁸ A. Nimon, R. Schroter and B. Stonehouse, "Heart Rate of Disturbed Penguins," 374 *Nature* 415, (March 23, 1995) See also: W.R. Fraser et. al., 11 *Polar Biology*, 525-531 (1991).

Some bird species adapt readily to the noise of human activities and it is hard to imagine the unflappable *kea* population of New Zealand traumatized by helicopters. Some wildlife management experts believe that birds that live in colonies are most likely to be affected by overflights in New Zealand.²⁹ Given the paucity of verifiable local data about overflights' influence on indigenous avian populations, extrapolation may be the best zoologists can presently do to assess local impacts. Hence, it is instructive to note that North American birds, comparable to local indigenous species such as eagles,³⁰ Canadian geese³¹ or owls,³² have been documented as suffering a variety of negative impacts from exposure to helicopters and aircraft. These disruptions include decreased prey delivery, insufficient parental care and disrupted mating displays. It is highly likely, therefore, that many New Zealand bird populations in the parks and wilderness areas of New Zealand sustain similar damage from the increased exposure to the mechanized noise of aircraft and other tourist activities.

While most mammal species present in New Zealand's protected areas are exotic, and therefore undesirable, some are native, such as seals, dolphins, whales and bats. It is therefore still worth noting that exposure to helicopters has been thought to jeopardize the reproductive success of a variety of wildlife. Researchers observed escape response among ring seals.³³ And when Dall's sheep were exposed to helicopter and fixed-wing aircraft noise, they exhibited fleeing response and rest was disrupted.³⁴ The psychological impact of these noises can only be imagined.

Humans also suffer from noise. Researchers make a distinction between the simple physical responses to hearing a noise, often characterized in decibels as an environmental impact, and the more complex associative meanings attached to hearing a noise, usually manifested in the social impacts. While the ambient levels caused by aircraft in nature are both too short in duration and too weak in intensity to cause physiological damage,³⁵ for many individuals they are a source of stress. Dutch researchers, for example, found that of the different modes of transport that produce noise (*e.g.*, cars, railway, planes and helicopters) humans find noise from aircraft to be the most annoying.³⁶

²⁹ Ian Jamison, University of Otago Department of Zoology, personal communication, (October 8, 2003).

³⁰ R.J. Steidl, and R.G. Anthony, "Experimental Effects of Human Activity on Breeding Bald Eagles," 10 *Ecological Applications* 258-268 (2000).

³¹ D.H. Ward, et. al., "Response of fall-staging Brant and Canada Geese to Aircraft Overflights in Southwestern Alaska," 63 *Journal of Wildlife Management* 373-381 (1999).

³² D.K. Delaney, et. al., "Effects of Helicopter Noise on Mexican Spotted Owls," 63 *Journal of Wildlife Management* 60-76 (1999).

³³ E.W. Born, et. al. "Escape Responses of Hauled Out Ringed Seals, *Phoca hispida* to Aircraft Disturbance" 21 *Polar Biology* 171-178. (1999).

³⁴ A. Frid, "Dall's Sheep Responses To Overflights By Helicopter And Fixed-Wing Aircraft," 110 *Biological Conservation* 387 (2003).

³⁵ Generally sustained exposures of decibel levels of 85 decibels are associated with permanent hearing loss. For an extremely thorough review of the literature regarding physiology and noise see: World Health Organization, *Community Noise*, Ed. B. Berglund and T. Lidvall, (Geneva, WHO, 1995).

³⁶ See: Health Council of the Netherlands: Committee on the Health Impact of Large

In a comprehensive 2000 review of social impacts on the "Great Walks of New Zealand," with specific reference to noise impact issues, Department of Conservation social scientist Gordon Cessford summarized eleven separate surveys with a cumulative sample size of almost 5,000 visitors.³⁷ Respondents completed questionnaires near the end of popular multi-day walking trails as well as sea-kayaking and river canoeing trips.³⁸ Many of them were unhappy. The Milford Track, promoted by government agencies, with some justification, as the most beautiful walk in the world, offers a particularly extreme example. Some 91% of hikers there noticed the effect of aircraft and 69% were bothered by the noise.³⁹ These rates far exceeded the levels of awareness and annoyance in great American parks such as Yosemite and the Grand Canyon in which overflight noise has been characterized as problematic.⁴⁰ It is not clear whether the dissatisfaction is due to the higher sensitivity of visitors in New Zealand parks or the actual amplitude of the noise. Yet, in either case, the severity of the phenomenon remains unchanged.

Of course there is enormous variation among individuals regarding sensitivity to noise. Within national parks and wilderness areas, a series of studies indicate that "mountaineers" or hikers on more rugged routes in New Zealand find "technological noises" more negative than do other visitors. At the same time the noises coming from nature were more thoroughly enjoyed. Thus in one study, sightseers visiting the glacier floor were less annoyed by aircraft noise than those who had made the effort to reach the higher valley-wall viewpoints.⁴¹ As Cessford concludes: "The sound of a snow mobile, jet, ski, motorbike or helicopter can sometimes be interpreted as a strong indicator of differences in the motivations, goals, environmental values and behaviors of different recreation participants."⁴² For humans, it would seem that the problem is less the actual amount of noise to which they are exposed, and more the context in which they experience it.

Studies suggest that as the percentage of overall awareness of overflights increases, so does the likelihood that the noise will be perceived to be a nuisance.⁴³

Airports. Public Health Impact Of Large Airports. The Hague: Health Council of the Netherlands, Publication nr 1999/14E, (1999).

³⁷ Gordon Cessford, *supra* n. 5.

³⁸ The guidelines to these surveys can be found in: K.L. Booth, N.C. Jones and P.J. Devlin, *Measuring the Effects of Aircraft Overflights on Recreationists in Natural Settings*, Department of Conservation Technical Services, Number 18, (Wellington, Department of Conservation, 1999).

³⁹ *Ibid.* at 73.

⁴⁰ James Gramann, "The Effect of Mechanical Noise and Natural Sound on Visitor Experiences in Units of the National Park System," *1 National Park Service Social Science Research Review* 1 (Winter 1999) at 5. U.S. responses rarely exceeded 10% annoyance levels and are generally far below this.

⁴¹ S.T Sutton, "Visitor Perceptions of Aircraft Activity and Crowding at Franz Josef and Fox Glaciers," *Science for Conservation*, Department of Conservation, (1998) at 94.

⁴² Cessford *supra* n. 5 at 72.

⁴³ "For example, when 30% of visitors were noticing noise, 20% of the entire sample were also bothered by it. But when 80% were noticing noise, around 40% were bothered. These patterns suggest that the tolerance for noise effects decrease as they become more commonly noticed." *Ibid.* at 72-73.

For several years DOC has explored the idea of creating a 25% threshold level as an indicator for visitor annoyance from noise.⁴⁴ Using this criterion, of the eleven sites sampled, intervention to reduce noise is presently needed on the Milford Track on the Abel Tasman Coast, the Whanganui River, the Routeburn Track and the Abel Tasman Track.⁴⁵ This blunt tool would presumably give park managers some diagnostic tools for evaluating their situation, but offers little in the way of actually influencing the “air traffic” itself. As will be described, the flight routes and altitude of aircraft in the national parks remain largely outside the purview of DOC authority.

III. The Legal Framework for Regulation of Overflights in New Zealand General Regulation of Aviation

On September 1, 1990, the New Zealand Parliament passed the Civil Aviation Act.⁴⁶ The formal objectives of the new law involved safety and compliance with international standards for air traffic.⁴⁷ From a broader policy perspective, the reason why the government issued a comprehensive new statute and administrative system was the “deregulation” of what was considered to be a highly bureaucratic system. The new law was designed to focus government intervention on to issues of safety, while ensuring that its regulatory activities remained cost-effective.⁴⁸

The Act itself is copious and runs to 120 pages, addressing issues from smoking on flights to airport security. Beyond the statute, the actual particulars of New Zealand’s air transport policy for passengers are written up in a series of Civil Aviation Rules, (hereinafter: CARs). Most of the regulations were released in

⁴⁴ S.T. Sutton, “Aircraft Noise Impacts in the Glacier Region of the West Coast of New Zealand,” 47 *Noise Control Engineering Journal* 87 (1999). It is important to distinguish between a “25% -time audible” standard and a “25% subjective disturbance” rate as was recommended in the present case.

⁴⁵ Cessford, *supra* n. 5 at 74. On being made aware of such results, DOC officials report that some flight operators responded voluntarily to change aircraft operating conditions to reduce negative effects. Interestingly, visitors on the Kepler Track did not appear to be affected by aircraft, but reported considerable annoyance at the other people staying in the huts.

⁴⁶ The Civil Aviation Act, 1990 (hereinafter: CAA) An excellent and comprehensive review of aviation law in New Zealand was prepared by Chief Legal Counsel of the Civil Aviation Authority, Peter O’Brien and can be found at: “Aviation” *The Laws of New Zealand*, vol. 3, (R. Cook Ed.) (Wellington, Butterworths, Wellington, 2000).

⁴⁷ The Act opens by stating the statutory objectives as:

- (a) To establish rules of operation and divisions of responsibility within the New Zealand civil aviation system in order to promote aviation safety; and
- (b) To ensure that New Zealand’s obligations under international aviation agreements are implemented; and
- (c) To consolidate and amend the law relating to civil aviation in New Zealand.

⁴⁸ Section 14(1) of the CAA “The Functions of Minister” states that “the principal functions of the Minister under this Act shall be to promote safety in civil aviation at a reasonable cost,” with sub-section 14(3) defining reasonable cost laconically as when: “the value of the cost to the nation is exceeded by the value of the resulting benefit to the nation.”

1992 but they are frequently amended by the Minister of Transport. These rules divide aircraft into three categories – according to size. CAR 125 and 121 address large aircraft, and provide criteria for the licensing of commercial airlines such as Air New Zealand, Freedom Air, or Qantas. However, Rule 135, “Certification Process Guide”, stipulates the conditions for operating small aircraft — which are defined as 9 seaters or those weighing 1700 kilograms or less. The commercial operations that offer tours to New Zealand’s parks receive their certification pursuant to these somewhat labyrinthal rules.

Although an answer is provided to applicants within 90 days, receiving an “aviation document” to operate a plane is by no means a trivial process.⁴⁹ Section 9 of the Act sets out the general expectations. From a procedural perspective, detailed paper work requires specifying the identity and qualifications of key personnel, including pilots, health and safety officers and senior management so that the Authority can assess whether they are “fit and proper persons.”⁵⁰ Frequently, the Civil Aviation Authority will require interviews with these individuals to ascertain their competency.⁵¹ Applicants must submit an operating manual of how they intend to run their business, and it is often returned for supplementary information if its “level of resolution” needs to be enhanced. After an initial audit and site visit, new operators are typically granted an interim certificate, for a period of 6 to 12 months, during which time the CAA authorities can monitor the actual implementation of the plan.⁵² Substantively, the review by the CAA is designed to ensure the safety of the aircraft.⁵³ For example, there is little room for flexibility on matters regarding the maintenance schedules of aircraft that at the very least have to meet manufacturers specifications.

Restricted Areas Under the Civil Aviation Act 1990

Once a “135 certificate” has been granted, from the perspective of New Zealand Civil Aviation officials, operators are largely allowed to take passengers wherever they please. Among the changes that the Act was intended to introduce was a

⁴⁹ Civil Aviation Rules, (hereinafter: CAR) Part 135 sets forth a six stage application process that is detailed in sections 3-8. These include:

- (a) Pre-application.
- (b) Formal Application.
- (c) Document Compliance.
- (d) Demonstration and Inspection.
- (e) Initial Certification.
- (f) Final certification.

A fee of that ranges from three to ten thousand dollars is required of applicants, depending on the level of complexity of the requested operation.

⁵⁰ CAA, Sec. 9(1)(b)(ii).

⁵¹ Interview with John Fogden, Manager Rotary Wing & Agricultural Operations, Civil Aviation Authority of New Zealand, (October 8, 2003). This process is a swift one. CAA itself requires that the application be granted “as soon as practicable”. Section 9(1).

⁵² Fogden, *supra*, n. 51.

⁵³ *Ibid.* While the CAR rules set basic requirements, the authority encourages applicants to consider these as “baseline minimum” levels, which should be exceeded. Annual testing of pilots, for example, may be sufficient, but examinations every six months are preferable.

more “laissez affair” approach to air routing. Under the 1964 Act, and the previous aviation system, operators were often restricted to geographical regions and times in their flight routes.⁵⁴

This is not to suggest that there are no restrictions whatever on aircraft operators. The “pilot-in-command” of commercial flights utilizes “visual flight rules” which require that a flight plan be submitted to an air traffic service unit.⁵⁵ These need to conform to a list of “restricted areas” for flights.

Accordingly, the Minister of Transport is empowered under Section 29A of the CAA “Rules Relating to Airspace” to limit flight paths for reasons other than security. Specifically the law holds:

Without limiting the power conferred by section 28 of this Act,
 (a) In the interests of safety or security within the civil aviation system; or
 (b) In the interests of national security; or
 (c) *For any other reason in the public interest,—*
 the Minister may make ordinary rules providing for the classification, designation, special use, prohibition, and the restriction of airspace and things affecting navigable airspace, including airspace used by aircraft used by the New Zealand Defence Force or a visiting force.⁵⁶

It is interesting to note that the previous Civil Aviation law did not include “the public interest” as a valid reason for limiting air space.⁵⁷ Thus, in the present context, a threshold question that arises is whether the new “public interest” justification for regulating air space was intended to include ecological or amenity considerations. A 1997 inquiry by the Parliamentary Commissioner for the Environment report about the environmental impact of tourism in New Zealand considered the matter and was definitive in this regard:

...the public interest criterion... was included in the Bill at the select committee stage specifically to address general public interest matters such as noise. It was intended that the purpose of the Civil Aviation Act 1990, namely to promote safety, would not restrict those public interest matters for which rules could be made.⁵⁸

The report went on to state that sec. 29A was specifically intended to allow the Director of Civil Aviation to protect wildlife reserves and national parks from “excessive aircraft intrusion”.⁵⁹ A subsequent report in 2000 by the Commissioner, focusing solely on noise from overflights, confirmed that the CAA gave the Minister of Transport full authority to intervene to further conservation objectives.⁶⁰

⁵⁴ *Ibid.* 51.

⁵⁵ CAR Part 91, rule 91.307.

⁵⁶ CAA sec. 29A.

⁵⁷ The Civil Aviation Act 1964. (RS Vol 16, at 41.) CAA legal staff are keenly aware of the additional “public interest clause.” Leslie MacIntosh, Chief Legal Counsel, CAA, personal communication, (October, 13, 2003).

⁵⁸ Parliamentary Commissioner for the Environment, *Management of the Environmental Effects Associated with the Tourism Sector*, (1997).

⁵⁹ See position of Maurice Williamson, July 31, 1996 NZPD, 557, 14052.

⁶⁰ Parliamentary Commissioner for the Environment, *Management of Noise from*

The CAR regulations transfer these authorities to the Director for Civil Aviation, including the prerogative to restrict air space in the public interest.⁶¹ The air space designation should contain specific vertical levels and altitudes for flight levels.⁶² In a reflection of the "laissez faire" philosophy of the Act, the size of restricted areas is supposed to be "as small as possible".⁶³ In theory, any person may petition the Director of Civil Aviation for a designation to restrict airspace in the public interest. To the extent that such a process exists, it still has no formal basis in regulations.⁶⁴

In practice, the process for designating restricted areas for air traffic proceeds as follows: When new areas are established, or there is a change to an existing area, a new and complete description of the area is prepared, specifying the date at which it becomes effective.⁶⁵ The new or amended area is then formally promulgated, with the signature of the Director of Civil Aviation and published in the *New Zealand Air Navigation Register*. Extensive efforts are made to disseminate the information to the aviation community and pilots in particular.⁶⁶

Aircraft Overflying Sensitive Environments, December, 2000.

⁶¹ CAR Part 73.51(a), *Designation of Air Space* amended August 18, 2002. See also, CAR Part 73 *Special Use Air Space*, first effective, January 1, 1998.

⁶² CAR Part 73, Rule 73.9.

⁶³ CAR Part 73, Rule 73.51

- (a) The Director (of Civil Aviation) may designate airspace under this Subpart only where the Director considers it necessary in the interests of aviation safety or security or in the public interest.
- (b) The Director shall ensure that each area of designated airspace is as small as practicable, consistent with the activities for which the area is required.

The rules continue:

73.53 Restricted areas

- (a) The Director may-
 - (1) designate an area of airspace as a restricted area within the territorial limits of New Zealand, to restrict the activities of aircraft within that area; and
 - (2) impose conditions under which-
 - (i) aircraft may be permitted to fly within the area; and
 - (ii) the controlling authority shall operate.
- (b) The Director shall, for each restricted area-
 - (1) specify the type of activity for which it is designated; and
 - (2) specify the controlling authority applicable to it; and
 - (3) identify it by the letters NZR followed by a number, except that on maps and charts the letter R followed by the number may be used.
- (c) The controlling authority specified under paragraph (b)(2) shall-
 - (1) control the entry and operation within the area; ...

⁶⁴ While CAR Rule 11 Subpart C has a formal title: "Ordinary Rules for Airspace Assignment and Use," and for many years has been the subject of deliberation, the actual rule has yet to be promulgated.

⁶⁵ Mark Hingston, Manager Aeronautical Services, Civil Aviation Authority of New Zealand, personal communication, (October 15, 2003). For areas that are changing, the effective date of the old description is amended to "effective until".

⁶⁶ A copy of the restricted area specifications are placed on the CAA web site, and a Gazette Notice is published to complete the "formal" part of the process. Details are then forwarded to Aviation Publishing (part of Airways Corporation of NZ Ltd) who publish the NZ Aeronautical Information Publication on behalf of the CA. If promulgation is required before a regular publication cycle, the NOTAM

A review of the present list of restricted areas reveals a surprisingly small number of sites – twelve in total.⁶⁷ Two are prohibited due to the presence of an oil refinery below. One was listed to avoid conflict with jet activity and one to reduce the risk of avalanche. The remaining proscriptions are intended to protect fauna or birds. These include the Gannet Colony in Hawkes Bay, Farewell Spit in Nelson Bays, the Royal Spoonbill Colony in Moeraki and the Albatross Colony at Taiaeroa Head. Two of the fauna restrictions (in Okarito and Punakaiki on the West Coast) are seasonal. It is important to emphasize that the restrictions are not flight bans at all, but rather involve height restrictions, typically allowing activity aircraft over the 2,000-foot level. Every five years the list is reviewed.⁶⁸

Other than these restricted areas, special low-flight zones,⁶⁹ or cases of military exigencies, the Civil Aviation's default policy allows planes in non-congested (*i.e.*, uninhabited) areas to fly as low as 500 feet from the ground. In urban areas, the minimum height is set at 1000 feet.⁷⁰ According to the Act, compliance with the rules grants aircraft operators immunity from legal actions for nuisance, trespass or other noise-related disturbances.⁷¹ Damage caused as a result of objects falling from a flight is, however, actionable. The CAA rules also stipulate standards for noise from civil aircraft.⁷² General noise standards exist for helicopter landing areas as well; they establish a maximum decibel level for surrounding areas.⁷³

Office that coordinates international commercial air carriers will distribute it electronically to the aviation community. The Civil Aviation Authority has responsibility for these functions under Section 75 of the Civil Aviation Act. The Authority has a contract with Airways for this, and they are also certificated under CA Rule Part 175, Aeronautical Information Service Organisations — Certification to provide these services. *Ibid.*

⁶⁷ NZ Air Navigation Register, "Restricted Areas," (Updated June 11 2003) www.caa.govt.nz/fulltext/airnavreg/Restricted%20Areas.pdf

The listings contain a coded list of specifications under "Effective from/until":

- The First two digits are the year;
- The Second pair are the month;
- The Third pair are the day;
- The Fourth pair are the hour (in 24 hour clock); and
- The Last two are the minute.

⁶⁸ Mark Hingston, *supra*, n. 64.

⁶⁹ CAR Part 73, Rule 73.61 Low Flying Areas.

⁷⁰ CAR, Part 91, Rule 91.311.

⁷¹ CAA, Sec. 97 Nuisance, trespass, and responsibility for damage

- (1) No action for nuisance may be brought in respect of the noise or vibration caused by aircraft or aircraft engines on an aerodrome, if the noise or vibration is of a kind specified in any rules made under section 28 or section 29 or section 30 of this Act, so long as the provisions of the rules are duly complied with.
- (2) No action shall lie in respect of trespass, or in respect of nuisance, by reason only of the flight of aircraft over any property at a height above the ground which having regard to wind, weather, and all the circumstances of the case is reasonable, so long as the provisions of this Act and of any rules made under this Act are duly complied with.

⁷² CAR Part 91, Rule 91.801.

⁷³ New Zealand Standard NZS:6807, 1994 Noise Management and Land Use Planning for Helicopter Landing Areas.

As to enforcement, technically CAR Part 91.129 provides the salient proscription for pilots, prohibiting them from operating aircraft within restricted areas without the approval of the controlling authority designated for the area. The Civil Aviation (Offences) Regulations set a \$5,000 individual fine and \$30,000 corporate penalty for violation of the rule. Yet the Civil Aviation Authority does not actively monitor compliance with aircraft designation, preferring to respond to complaints from aggrieved parties such as the Department of Conservation.⁷⁴

The Role of New Zealand's Department of Conservation and Conservation Laws

New Zealand's Department of Conservation (DOC) was established under the 1987 Conservation Act.⁷⁵ The Department was given responsibility for lands intended primarily for conservation purposes, as opposed to other state-owned lands with commercial potential.⁷⁶ The country's national park system, of course, predated the new Department.

National parks are almost as old as European settlement in New Zealand itself. The first park was declared at Tongariro in 1887 making it only the fourth national park in the world. Beginning in 1952, a more systematic framework was established for managing national parks.⁷⁷ The present 1980 National Parks Act sets as its ambitious objective: "preserving in perpetuity as national parks, for their intrinsic worth and for the benefit, use, and enjoyment of the public, areas of New Zealand that contain scenery of such distinctive quality, ecological systems, or natural features so beautiful, unique, or scientifically important that their preservation is in the national interest."⁷⁸ Some 7 million hectares, or one third of New Zealand's lands, are presently designated as National Parks and managed by the Department of Conservation.⁷⁹

It is important to emphasize that the overall "management" philosophy mandated by the Act is highly preservationist in its approach. National parks are to be protected as far as possible in their natural state.⁸⁰ Native plants and animals in the parks are to be preserved to the extent possible and exotic species "exterminated".⁸¹ Humans are welcome in the parks, but only after the fundamental objectives of the Act are met. This "mission statement" for DOC management of New Zealand's National Parks appears in section 4 of the National Parks Act:

⁷⁴ Parliamentary Commissioner for the Environment, (2000) *supra* n. 59 at 3.

⁷⁵ Conservation Act 1987, s 7.

⁷⁶ DOC's authority extends *inter alia* to historic places, national parks, Crown reserves and public walkways. *Ibid.* s 6 and 7.

⁷⁷ National Parks Act, 1952, s 15.

⁷⁸ National Parks Act, 1987, s 4(1).

⁷⁹ Department of Conservation, "The Department of Conservation's Role in Resource Management", in *Policies, Plans and Reports*, www.doc.govt.nz/ (updated, October, 2003).

⁸⁰ *Ibid.* s 4(2)(a).

⁸¹ *Ibid.* s 4(2)(b).

Subject to the provisions of this Act and to the imposition of such conditions and restrictions as may be necessary for the preservation of the native plants and animals or for the welfare in general of the parks, the public shall have freedom of entry and access to the parks, so that they may receive in full measure inspiration, enjoyment, recreation, and other benefits that may be derived from mountains, forests, sounds, seacoasts, lakes, rivers, and other natural features.

The law also authorizes ecologically sensitive “specially protected areas” in parks, where entry is prohibited without a permit from the Minister of Conservation,⁸² as well as much larger wilderness areas.⁸³ These authorities are parallel to powers given the Minister of Conservation under the Reserves and Conservation Act to establish wilderness areas.⁸⁴ The indigenous natural resources are to be especially preserved in wilderness areas, with no buildings, animals, roads or vehicles of any description allowed unless deemed necessary for scientific study or preservation activities.⁸⁵ Important to the present study are the provisions of section 14(2)(d) of the National Parks Act that specify: “No animals, vehicles, or motorised vessels (including hovercraft and jet boats) shall be allowed to be taken into or used in the area and no helicopter or other motorised aircraft shall land or take off or hover for the purpose of embarking or disembarking passengers or goods in a wilderness area.”

In a country with as diverse a landscape as New Zealand, national parks have vastly different characters and characteristics and the National Parks Act stipulates that actual operations be driven by park-specific “management plans”.⁸⁶ These are prepared by the DOC staff, and approved by the Conservation Authority⁸⁷ after public notice and comment and subsequent to considering the

⁸² *Ibid.* s 12 and 13.

⁸³ *Ibid.* s 14.

⁸⁴ Reserves Act 1977, s 47(1). Wilderness, theoretically, can be established under the Reserves Act, and Conservation Act, s20. In addition, s 13 of the Reserves Act creates National Nature Reserves, such as the Southern Antarctic Islands that are typically more secluded and access is limited, with entry only allowed by permit. Clare Lenihan, Conservancy Solicitor, personal interview, (October 20, 2003).

⁸⁵ *Ibid.* s.14(2) Subject to this section, while any area is set apart as a wilderness area,—

(a) Its indigenous natural resources shall be preserved:

(b) No building or machinery shall be erected on the area:

(c) No building, machinery, or apparatus shall be constructed or maintained on the area:

(d) No animals, vehicles, or motorised vessels (including hovercraft and jet boats) shall be allowed to be taken into or used in the area and no helicopter or other motorised aircraft shall land or take off or hover for the purpose of embarking or disembarking passengers or goods in a wilderness area:

(e) No roads, tracks, or trails shall be constructed in the area.

⁸⁶ *Ibid.* 45. Of no less importance in practice may be the Conservation Management Strategies that are prepared by park managers.

⁸⁷ In 1990, an amendment to the Conservation Act created the New Zealand Conservation Authority and granted it the powers to approve conservation management strategies and plans under the National Parks Act. The thirteen member Authority is appointed by the Minister of Conservation, with four members selected from public nominations and nine after consultation with statutorily selected organizations. See Section s 6A-6C of the Conservation Act 1987 and s 2 of the National Parks Act 1980.

recommendations of the Park Conservation Board and the Minister of Conservation.⁸⁸ Management Plans must be reviewed every ten years.⁸⁹

Notwithstanding DOC's generally protective mandate, New Zealand's National Parks are not devoid of commercial activities. The National Parks Act allows for the establishment of "recreational and public amenities and related services appropriate for the public use and enjoyment of the park" and the Conservation Act also has an extensive section dedicated to concessions, which offers direction about application procedures and expectations from concessionaires.⁹⁰ In general, leases, licenses, permits or easements within the parks can be granted by the Minister for a "reasonable charge" as long as the contracting activities do not permanently affect the rights of the public in respect of the park and are not inconsistent with the overall mission statement of the Act as stated in section 4.⁹¹ In considering concessions the Minister must, *inter alia*, consider a variety of factors including "environmental impacts"⁹² and can decline applications if "there are no adequate methods or no reasonable methods for avoiding, remedying or mitigating the adverse effects of the activity, structure, or facility".⁹³

These concessions allow the National Parks of New Zealand to enjoy a degree of financial independence for a government agency. Section 57 of the National Parks Act directs all revenues generated as rents, penalties, fees, fines, royalties or donations to be retained by the Minister to run, improve and develop the national park system.⁹⁴

It is important, therefore, to mention that concessions to establish aerodromes and land aircraft inside national park boundaries do generate profits for DOC and flight concessions are specifically mentioned in section 17ZF of the Conservation Act.⁹⁵ The potential "conflict of interest" that park concessions create is the subject of some discussion in the wildlife management literature.⁹⁶ While the total amount of revenues from landings is growing, flight concessions are probably not as "lucrative" as some conservation advocates imagine. In 2000, \$227,000 dollars were collected, in 2001 — \$241,000, in 2002 — \$749,000 and in 2003 — \$610,000.⁹⁷ It is important to remember that while funds produced

⁸⁸ *Ibid.* 30. Such amenities, of course, must comply with the Park management plans.

⁸⁹ *Ibid.* s 46(3).

⁹⁰ *Ibid.* 14(2).

⁹¹ *Ibid.* 49 (2) (a) and (b).

⁹² Conservation Act 1987, s 17U(1)(e).

⁹³ *Ibid.* 17U(2)(b).

⁹⁴ *Ibid.* 57.

⁹⁵ Specific mention is made of aircraft in the Act in section 17ZF of the Conservation Act. This section stipulates that in the absence of an emergency situation or for military uses, no aircraft shall take off or land inside conservation areas outside of certified aerodromes.

⁹⁶ "If modern visitors become the dominant user group in state parks, they will begin to dictate the amount of development, since fee payment creates a vested interest." J. Mark Morgan, "Resources, Recreationists and Revenues: A Policy Dilemma for Today's State Park System," 18 *Environmental Ethics* 279 (1997) at 286. See also: Dwight McCurdy, *Park Management*, Carbondale Ill. Southern Illinois University Press, (1985) at 34.

⁹⁷ Harry Maher, National Revenue Manager, Department of Conservation, (October