



Decision

Amended under section 67A on 14 May 2020

Date	24 January 2020
Application number	APP202811
Application type	To import for release or release from containment any new organism with controls under section 38A of the Hazardous Substances and New Organisms Act 1996
Applicant	Auckland Botanic Garden
Date Application received	16 December 2019
Considered by	The General Manager of the Hazardous Substances and New Organisms Group of the Environmental Protection Authority ¹
Purpose of the application	To import germplasm (seed) of all new organism species of the plant genus <i>Agathis</i> , for release on the grounds of Auckland Botanic Garden only
The new organism approved	<i>Agathis</i> spp. (taxonomic family Araucariaceae) that are new organisms.

1 Summary of the decision

- 1.1 The application to release with controls *Agathis* species that are new organisms was lodged under section 38A of the Hazardous Substances and New Organisms (HSNO) Act 1996 (the Act).
- 1.2 The application was considered as a rapid assessment under section 38BA of the Act, in accordance with the relevant provisions of the Act and of the HSNO (Methodology) Order 1998 (the Methodology).

¹ The Acting General Manager, Hazardous Substances and New Organisms has made the decision on this application under delegated authority in accordance with the sub-delegation dated 14 March 2018 from the Chief Executive to the General Manager, Hazardous Substances and New Organisms, under delegated authority dated 6 May 2016 from the EPA to the Chief Executive pursuant to section 19 of the Act.

- 1.3 I approved the application to release *Agathis* species that are new organisms, subject to the controls set out in paragraph 4.2 of this decision, in accordance with section 38BA(2) of the Act.

2 Application and consideration process

Application receipt

- 2.1 Application APP202811 was formally received by the Environmental Protection Authority (EPA) for consideration on 16 December 2019.

Purpose of the application

- 2.2 The applicant, Auckland Botanic Garden, applied to the EPA to import for release, or release with controls, all species of *Agathis* that are new organisms. The applicant intends to release the *Agathis* species only on the grounds of Auckland Botanic Garden for the purposes of conservation, research, and public education.

The organisms

- 2.3 I am advised that *Agathis* (kauri) is a genus of long-lived, slow growing coniferous tree species in the taxonomic family Araucariaceae. Currently, there are 17 known species of *Agathis* that are recognised by relevant taxonomic authorities. I further note that kauri generally do not reproduce until they are approximately 25-30 years of age, so they do not spread rapidly, even in their native habitats.
- 2.4 There is one native species of *Agathis*, *A. australis*, the New Zealand kauri. In addition to *A. australis*, I am further advised that there are seven species of *Agathis* that are not considered to be new organisms, specifically:
- *Agathis dammara* (Lamb.) Rich. & A.Rich.
 - *Agathis lanceolata* Warb.
 - *Agathis macrophylla* (Lindl.) Mast.
 - *Agathis montana* de Laub.
 - *Agathis moorei* (Lindl.) Mast.
 - *Agathis ovata* (C.Moore ex Vieill.) Warb.
 - *Agathis robusta* (C.Moore ex F.Muell.) F.M.Bailey
- 2.5 I understand that under the consensus of currently accepted taxonomy, there are nine species of *Agathis* that are considered to be new organisms in New Zealand, specifically:
- *Agathis atropurpurea* Hyland
 - *Agathis borneensis* Warb.
 - *Agathis flavescens* Ridl.
 - *Agathis kinabaluensis* de Laub.
 - *Agathis labillardierei* Warb.
 - *Agathis lenticula* de Laub.
 - *Agathis microstachya* J.F.Bailey & C.T.White
 - *Agathis orbicula* de Laub.
 - *Agathis silbae* de Laub.

- 2.6 I note that there are four species names listed in the application that are considered to be synonyms of other *Agathis* species. A key to the new organism status of all accepted species of *Agathis* (family Araucariaceae), as well as synonymy with other species named in the application can be found in Table 2.

Unwanted organism status

- 2.7 I note that no *Agathis* species is an unwanted organism as defined in the Biosecurity Act 1993.

Decision pathway assessment

- 2.8 Section 38BA of the HSNO Act provides for a rapid assessment of applications received under section 38A, if the application seeks the release with controls of an organism that is not a genetically modified organism.
- 2.9 According to the decision pathway assessment advice, *Agathis* species that are new organisms meet the requirements for rapid assessment because:
- (1) the organisms are not genetically modified organisms and;
 - (2) the organisms are not unwanted organisms as defined in the Biosecurity Act 1993, and after the controls are imposed, the organisms will comply with section 35(2)(b) of the Act, specifically that it is highly improbable that the organisms, after release—
 - (i) could form self-sustaining populations anywhere in New Zealand, taking into account the ease of eradication; or
 - (ii) could displace or reduce a valued species; or
 - (iii) could cause deterioration of natural habitats; or
 - (iv) will be disease-causing or be a parasite, or be a vector or reservoir for human, plant, or animal disease; or
 - (v) will have any adverse effects on human health and safety or the environment.
- 2.10 Therefore, the Manager, New Organisms, decided that the most appropriate and effective means of assessing *Agathis* species that are new organisms was by the pathway directed by section 38BA of the Act.

Comments from DOC and MPI

- 2.11 In accordance with section 58(1)(a) of the Act, the Department of Conservation (DOC), and the Ministry for Primary Industries (MPI) were provided with the application and given the opportunity to comment.
- 2.12 DOC expressed concern that importation of exotic *Agathis* species into New Zealand is a potential route for importing *Phytophthora agathidicida*, the causative agent for kauri dieback disease, and that previous importations of exotic *Agathis* species may be the way that the pathogen was introduced into New Zealand.
- 2.13 DOC acknowledged that since *P. agathidicida* is not an inseparable organism from any exotic *Agathis* species, any potential co-importation of the pathogen is a biosecurity risk issue which is not covered by the HSNO Act.

2.14 Finally, DOC stated that they seek further information regarding whether the phytosanitary control measures described by the applicant are adequate to identify pathogens that may be found with imported seed.

2.15 MPI had no comment on the application.

Information available for the consideration

2.16 The information available for my consideration comprised:

- the application and references provided therein;
- the EPA Staff Assessment Report;
- comments received from DOC.

2.17 I had sufficient information to assess the application. To the extent that the application may not meet any legislative information requirements, I waive those requirements.

Legislative matters considered

2.18 The application was lodged under section 38A of the Act, for the release of *Agathis* species that are new organisms, with controls. I assessed the application in accordance with section 38BA of the Act², taking into account the relevant matters in Part 2 of the Act, and the Methodology.

2.19 In accordance with section 53(1)(ab) of the Act, the application was not publicly notified.

3 Assessment of *Agathis* species that are new organisms against legislative criteria

3.1 I have made a rapid assessment of the adverse effects of releasing *Agathis* species that are new organisms under section 38BA of the Act. Specifically, and in accordance with section 38BA(2), I am satisfied that no member of the genus *Agathis* is an unwanted organism as defined in the Biosecurity Act 1993, and that after controls are imposed, the organisms will comply with section 35(2)(b) of the Act, specifically that it is highly improbable that the organisms, after release—

- (i) could form self-sustaining populations anywhere in New Zealand, taking into account the ease of eradication; or
- (ii) could displace or reduce a valued species; or
- (iii) could cause deterioration of natural habitats; or
- (iv) will be disease-causing or be a parasite, or be a vector or reservoir for human, plant, or animal disease; or
- (v) will have any adverse effects on human health and safety or the environment.

² As detailed in section 3 of this document.

Potential for adverse effects

Potential to form self-sustaining populations

- 3.2 I note that *Agathis* species are slow-growing and long-lived, and do not generally reproduce until they are at least 25-30 years of age. Furthermore, *Agathis* seeds do not maintain viability for long, and thus spread very slowly, if at all. Moreover, the organisms may only be released onto the grounds of Auckland Botanic Garden (**Control 2**), and must be identifiable as new organisms (**Controls 1 and 3**). It is **highly improbable** that new *Agathis* species could form self-sustaining populations in New Zealand, since any plants that spread beyond the bounds of Auckland Botanic Garden can be easily identified and destroyed before they reach reproductive age.

Potential to displace or reduce native species

- 3.3 I am advised that because of the slow growth and reproductive habit of *Agathis* species in general, combined with the limited area of release of the organisms, it is **highly improbable** that the organisms could displace any native species. Furthermore, I am advised that *Agathis* species do not hybridise with one another, so *Agathis australis* (New Zealand kauri) cannot be displaced by hybridisation with exotic *Agathis* species. **Controls 2, 4 and 6** will further ensure against these possibilities.

Potential to cause deterioration of natural habitats

- 3.4 I understand that, due to the slow-growing nature of all *Agathis* species and the high improbability that the organisms can either establish self-sustaining populations, or displace native species, combined with the imposition of **Controls 2-6**, it is **highly improbable** that the organisms could cause deterioration of natural habitats.

Potential to cause or vector disease or be a parasite

- 3.5 I note that *Agathis* species are free-living organisms that neither cause disease, nor parasitise other organisms. I further note that no organisms have been identified that are inseparable from any *Agathis* species. I understand and agree with the concerns of DOC regarding the potential co-importation of disease-causing organisms such as *Phytophthora agathidicida*, the causative agent of kauri dieback disease.
- 3.6 However, I am advised that seven species of *Agathis* may be imported under an Import Health Standard under the Biosecurity Act 1993, and no incursion of disease resulting from the importation of any exotic *Agathis* under the Biosecurity Act has ever been observed. I am further informed that since no *Agathis* pathogen is known to be an inseparable organism, that the potential co-importation of any disease-causing organisms associated with the organisms subject to this decision must be addressed under the relevant provisions of the Biosecurity Act 1993.
- 3.7 I consider that, based on advice that I have received regarding the common characteristics of the species in the *Agathis* genus, that the organisms in this decision do not merit any greater biosecurity concern than the *Agathis* species that are approved for importation under the Biosecurity Act. Therefore, it is **highly improbable** that the released *Agathis* will be disease-causing or parasitic, or be vectors or reservoirs for human, plant, or animal disease.

Potential to adverse effects on human health and safety or the environment

3.8 As noted above, the *Agathis* species subject to this approval are all slow-growing, slow-reproducing tree species that will only be released on the grounds of Auckland Botanic Garden. The controls imposed under this decision further decrease any possibility of these effects eventuating. I note that no further mechanism for the organisms subject to this decision to cause adverse effects was identified. Therefore, it is **highly improbable** that they will have any adverse effects on human health and safety, or the environment. If any adverse effects are identified, the organisms can be readily identified and eradicated.

Conclusion on the potential to cause adverse effects under section 35(2) of the Act.

3.9 After assessing all the information available to me, I am satisfied that, it is **highly improbable** that the released *Agathis* species will cause any of the adverse effects described in section 35(2) of the Act.

Achieving the purpose of the Act

3.10 The purpose of the Act is to protect the environment, and the health and safety of people and communities, by preventing or managing the adverse effects of hazardous substances and new organisms (section 4 of the Act).

3.11 In order to achieve the purpose of the Act, when considering the application I recognised and provided (to the extent necessary) for the following principles (section 5) of the Act:

- the safeguarding of the life-supporting capacity of air, water, soil and ecosystems; and
- the maintenance and enhancement of the capacity of people and communities to provide for their own economic, social and cultural well-being and for the reasonably foreseeable needs of future generations.

3.12 I took into account the following matters when considering the application in order to achieve the purpose of the Act (sections 6, 7 and 8 of the Act):

1. the sustainability of all native and valued introduced flora and fauna;
2. the intrinsic value of ecosystems;
3. public health;
4. the economic and related benefits and costs of using a particular new organism;
5. the need for caution in managing adverse effects where there is scientific and technical uncertainty about those effects;
6. New Zealand's international obligations;
7. the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, valued flora and fauna, and other taonga; and
8. the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).

3.13 I consider that matters 1-5 have been taken into account as matters for consideration under section 38BA of the Act.

3.14 No international obligations to New Zealand resulting from this decision were identified.

Potential effects on Māori culture and traditions

- 3.15 I took into account the possible effects on the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, valued flora and fauna, and other taonga, and the principles of the Treaty of Waitangi (Te Tiriti o Waitangi), as advised by:
- a letter of endorsement of the application from Ngāti Tamaoho Trust, whose mana whenua (jurisdiction) includes the grounds of Auckland Botanic Garden, and;
 - a Māori Perspectives Report from the EPA's Māori advisory unit, Kaupapa Kura Taiao within the staff advice.
- 3.16 Ngāti Tamaoho endorsed the application on the basis of assurances from Auckland Botanic Garden that the release is for the purposes of education, conservation and research, and that the imported *Agathis* species will not cross-pollinate with native kauri.
- 3.17 I note that the Māori Perspectives Report considered that *Agathis* species that are new organisms released on the grounds of Auckland Botanic Garden are not anticipated to have adverse effects on Māori cultural receptors, specifically:
- *Ngā otaota* (plants)
 - *Ngā manu, mengā ngārara* (birds and reptiles)
 - *Te aitanga pepeke* (arthropods)
 - *Ngā wai koiora* (aquatic habitats)
 - *Taha hauora* (human health and wellbeing)
 - *Kaitiakitanga* and *manaakitanga* (resource guardianship and due care), through ongoing engagement with mana whenua hapū.
- 3.18 I note that the Māori Perspectives Report suggested that benefit to Māori will result from alignment with Māori values of kaitiakitanga and manaakitanga, including:
- Proactive conservation and protection of taonga *Agathis* species
 - Maintenance of the role of Māori as kaitiaki over taonga *Agathis* species, through ongoing engagement with Auckland Botanic Garden
 - Maintenance of manaakitanga regarding the whakapapa of taonga *Agathis* species, both domestically and internationally.

Potential effects on the principles of Te Tiriti o Waitangi

- 3.19 The Māori Perspectives report noted that there were no concerns regarding adverse effects relative to Te Tiriti o Waitangi because:
- Māori interests are actively protected in this application/approval
 - I am making a decision informed by a Māori perspective
 - the EPA considers it is acting in good faith regarding this decision, and that Mātauranga Māori and tikanga Māori are being respected.
- 3.20 After assessing all the information, I did not identify any adverse effects on the relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, valued flora and fauna, and other taonga, and I consider that benefit will accrue to Māori as the result of this approval.

Conclusion on achieving the purpose of the Act

- 3.21 I am satisfied that this decision is consistent with and achieves the purpose of the Act and the above principles and matters.

4 Decision

- 4.1 After reviewing all of the information contained in the application, the EPA Staff Assessment Report, and comments received from DOC, I am satisfied that the application meets the requirements of section 38(BA) of the Act.
- 4.2 I **approve** the release or importation for release of *Agathis* species that are new organisms **with the following controls** under section 38BA of the Act:
- Control 1* – All species imported for release under this approval must be identifiable by their Latin binomial (eg, *Agathis kinabaluensis*).
- Control 2* – The organisms may only be released on the grounds of Auckland Botanic Garden.
- Control 3* – The approved organisms must be identifiable as new organisms and be able to be linked to this HSNO Act approval.
- Control 4* – No biological material may be collected from any of the approved species by any person, other than authorised staff of Auckland Botanic Garden.
- Control 5* – Notification must be given to MPI of any movement of the approved organisms outside of the grounds of Auckland Botanic Garden.
- Control 6* – Visitors to Auckland Botanic Garden must be instructed, by posted signs, not to remove any biological material from the approved organisms from the grounds of Auckland Botanic Garden.
- 4.3 I note, and Auckland Botanic Garden recognises, that regardless of an approval for the conditional release of a new organism under section 38BA of the HSNO Act, any importation of seeds of *Agathis* species that are new organisms remains subject to the relevant provisions of the Biosecurity Act 1993.
- 4.4 Because, as noted in paragraph 2.2, the purpose of this application is in part for the conservation of the approved organisms, I do not impose an expiry date on this approval.



24 January 2020

<p>Gayle Holmes Acting General Manager, Hazardous Substances and New Organisms Environmental Protection Authority</p>	
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Section 67A amendment May 2020

The decision was amended to state that the approval does not expire.



Dr Clark Ehlers

**Acting General Manager, Hazardous
Substances and New Organisms**

Environmental Protection Authority

14 May 2020

Table 1: APP202811 approved organisms

Organism	Approval code
<i>Agathis atropurpurea</i> Hyland	NOR100173
<i>Agathis borneensis</i> Warb.	NOR100174
<i>Agathis flavescens</i> Ridl.	NOR100175
<i>Agathis kinabaluensis</i> de Laub.	NOR100176
<i>Agathis labillardierei</i> Warb.	NOR100177
<i>Agathis lenticula</i> de Laub.	NOR100178
<i>Agathis microstachya</i> J.F.Bailey & C.T.White	NOR100179
<i>Agathis orbicula</i> de Laub.	NOR100180
<i>Agathis silbae</i> de Laub.	NOR100181

Table 2: Comparison of *Agathis* species recognised by GBIF³ with those named in APP202811 and their new organism status under the HSNO Act.

No.	GBIF	APP202811	New organism status
X	<i>Agathis alba</i> (Lam.) Foxw. All forms listed as a synonym of <i>A. dammara</i>	x	See <i>A. dammara</i>
1	<i>Agathis atropurpurea</i> Hyland	✓	New organism
2	<i>Agathis australis</i> (D.Don) Lindl.	✓	Not new
3	<i>Agathis borneensis</i> Warb.	✓	New organism
X	Synonym of <i>A. moorei</i>	<i>A. corbassonii</i>	See <i>A. moorei</i>
4	<i>Agathis dammara</i> (Lamb.) Rich. & A.Rich.	✓	Not new
X	Synonym of <i>A. borneensis</i>	<i>A. endertii</i>	See <i>A. borneensis</i>
5	<i>Agathis flavescens</i> Ridl.	✓	New organism
6	<i>Agathis kinabaluensis</i> de Laub.	✓	New organism
7	<i>Agathis labillardierei</i> Warb.	✓	New organism
8	<i>Agathis lanceolata</i> Warb.	✓	Not new
9	<i>Agathis lenticula</i> de Laub.	✓	New organism
10	<i>Agathis macrophylla</i> (Lindl.) Mast.	✓	Not new
11	<i>Agathis microstachya</i> J.F.Bailey & C.T.White	✓	New organism
12	<i>Agathis montana</i> de Laub.	✓	Not new
13	<i>Agathis moorei</i> (Lindl.) Mast.	✓	Not new
14	<i>Agathis orbicula</i> de Laub.	✓	New organism
15	<i>Agathis ovata</i> (C.Moore ex Vieill.) Warb.	✓	Not new
16	<i>Agathis robusta</i> (C.Moore ex F.Muell.) F.M.Bailey	✓	Not new
17	<i>Agathis silbae</i> de Laub. (also as <i>A. silbaili</i>)	✓	New organism
X	Synonym of <i>A. robusta</i> subsp. <i>nesophila</i>	<i>A. spathulata</i>	See <i>A. robusta</i>

³Global Biodiversity Information Facility.

(https://www.gbif.org/species/search?q=Agathis&rank=SPECIES&highertaxon_key=640&status=ACCEPTED)