

Conservation Action Plan

Phyllorhina richmondensis

This plan has been prepared in accordance with the requirements of s.78C of the National Parks and Wildlife Regulation 2019 (Reg.) in relation to an Asset of Intergenerational Significance (AIS) as declared under s.153G of the *National Parks and Wildlife Act 1974*.

Site details

AIS site	AIS-ES-173, AIS-ES-174, AIS-ES-175, AIS-ES-176
Site location	An area of 4547 hectares in Toonumbar National Park An area of 1258 hectares in Richmond Range National Park An area of 4224 hectares in Yabbra National Park
NPWS contact	Project Officer Threatened Species, North Coast Branch

Environmental values

This table sets out the environmental values for which the land was listed as an AIS (Reg. 78C(3)(a)).

Identified value(s)	Value description
Important habitat for <i>Phyllorhina richmondensis</i>	<i>Phyllorhina richmondensis</i> is an endangered frog and was identified following a taxonomic review of the <i>Phyllorhina</i> species of north east NSW. It has a robust, pear-shaped body to 28 millimetres long, varying in colour from yellow, red or maroon above or, occasionally, light tan or bronze. A facial stripe extends from the snout through the eye to the base of the forelimb. Most specimens have black patches on the lower back, which occasionally join at the midline to form an arrow-shape pointing to the head. The species requires continually high moisture levels and is most common in subtropical and temperate rainforests. It is found in shallow burrows in mud, moss or leaf-litter in the headwaters and along the edges of constantly flowing streams or around permanent soaks in highland forest. It also occurs in wet eucalypt forests where rock outcrops or cliff bases hold surface moisture.

Key risks to environmental values

This table sets out the key risks to the environmental values of the land (Reg. 78C(3)(b)).

Key risk(s)	Description
Inappropriate fire regimes	Fire may degrade the habitat of <i>Phyloria richmondensis</i> by removing understorey vegetation and groundcover, and through the reduction of moisture levels and water quality.
Weeds	Habitat degradation and competition through invasion, establishment and spread of weeds (e.g., mistflower) to the extent that area of suitable breeding habitat is reduced. This risk is exacerbated by the very small population size and the severely restricted and fragmented distribution of the species at the sites.
Feral pigs	Competition and habitat degradation of <i>Phyloria richmondensis</i> habitat by feral pigs through wallowing, grazing and trampling.
Pathogens, diseases and microorganisms	Infection by amphibian chytrid fungus causing the disease chytridiomycosis leading to the mortality of individuals. This risk is exacerbated by the very small population size and the severely restricted and fragmented distribution of the species at the sites.
Anthropogenic climate change	Changes to weather patterns and climatic conditions as a result of anthropogenic climate change that alters microclimate and breeding habitat may exceed the species adaptive capacity and reduce survivorship of <i>Phyloria richmondensis</i> at the sites. This risk is exacerbated by the very small population size and the severely restricted and fragmented distribution of the species at the sites.
Disturbance	Authorised infrastructure maintenance activities (e.g., road and trail construction or maintenance) that leads to degradation of habitat and damage to individuals by slashing and herbicide use, damage to substrate, and decreased moisture levels and water quality.

Conservation activities

This table sets out the conservation activities required to:

1. Control, abate or mitigate the key risks and
2. maintain, restore and remediate the environmental values of the land (Reg. 78C(3)(c)).

Key risk(s)	Impacted site(s)	Conservation activities
Inappropriate fire regimes	All sites	<ul style="list-style-type: none"> • Develop guidance on the appropriate fire management for the habitat of <i>Phyloria richmondensis</i> within 12 months of adoption of this plan and update as required. This guidance must provide for: <ul style="list-style-type: none"> - maintenance of an appropriate fire regime by developing and implementing a site-specific burn plan for the declared areas - implementation of any required fire protection and response measures in the declared areas - integration of site-specific requirements into NPWS and NSW Government bushfire planning, risk management and operational response arrangements. • Implement fire management consistent with the guidance.

Key risk(s)	Impacted site(s)	Conservation activities
Weeds	All sites	<ul style="list-style-type: none"> Remove weed species to the extent required to ensure weeds to not have a negative impact on <i>Phyloria richmondensis</i>, by targeted application of physical weed control or such other control method as is approved in writing for this species.
Feral herbivores and pigs	All sites	<ul style="list-style-type: none"> To the extent practicable, reduce feral pig densities to a level that is not having an ecologically significant impact on <i>Phyloria richmondensis</i> and maintain densities at or below those levels, by trapping and shooting.
Pathogens, diseases and microorganisms	All sites	<ul style="list-style-type: none"> Implement hygiene protocols as outlined in the DPE Hygiene Guidelines (as published April 2020) or as varied by any written advice from the Secretary for the purposes of this declared area. Develop a hygiene management plan, including emergency response procedures in the event of an outbreak or evidence of serious impact of chytrid within 12 months of the adoption of this plan and update as required. Implement the hygiene management plan.
Anthropogenic Climate Change	All sites	<ul style="list-style-type: none"> If a decline in species trajectory is attributed to impacts of anthropogenic climate change, investigate options for ex-situ management of <i>Phyloria richmondensis</i>.
Disturbance	All sites	<ul style="list-style-type: none"> Undertake periodic reviews to identify whether infrastructure maintenance is having an adverse impact on <i>Phyloria richmondensis</i>. If adverse impacts are observed implement actions to mitigate the impacts. This may include: <ul style="list-style-type: none"> upgrade/realignment of trails to avoid known habitat installation of signage or more discrete marking systems to delineate exclusion areas to prevent slashing or herbicide use near sites implementing sediment and erosion control measures for road and trails maintenance activities and establishing buffer zones around habitat during the breeding season. Implement guidance for staff, utility managers and contractors as required, about appropriate maintenance practices that minimise impacts to <i>Phyloria richmondensis</i> population and habitat.

Other land management activities

Within the declared land there are existing assets and infrastructure of NPWS and other external service providers, including public utilities.

Maintenance operations (including inspection, emergency works and routine and standard maintenance) that are exempt development in accordance with the *Environmental Planning and Assessment Act 1979*, and which are performed on and around existing assets and infrastructure, are authorised under this conservation action plan (CAP) provided such operations are undertaken in a manner that aims to minimise the risk to the declared environmental values of the land and with any other required consents or approvals.

All maintenance operations on the declared land are to be undertaken in accordance with this CAP.

Measuring and reporting

This table sets out the requirements for measuring and reporting on health and condition (Reg. 78C(3)(d)).

Attribute	Metric	Method
Health and condition of the <i>Phyloria richmondensis</i> population	Population estimate	Design, and implement every three years, monitoring to generate an estimate of the number of mature individuals in the population.
	Area of occupancy	Design, and implement an assessment every three years, to calculate the area of occupancy of <i>Phyloria richmondensis</i> at the sites.

A report on the health and condition of the value for which this AIS was declared will be prepared and published on the Department of Planning and Environment website: www.environment.nsw.gov.au. The report will summarise the baseline and current health and condition of the values of the declared land and its overall trajectory.

Evaluation of conservation action plans

This CAP will be amended or replaced as new information becomes available that helps improve our management of the identified assets (Reg. 78H).

The Secretary must appoint a scientist, or a panel of scientists, to conduct a review, as soon as possible after the period of five years from the first approval of a CAP, to examine whether CAPs have been effectively implemented (Reg. 78J(1)).

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Approved by	Atticus Fleming, Acting Coordinator General, Environment and Heritage
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