



Conservation Advice for *Grevillea banyabba* (Banyabba Grevillea)

In effect under the *Environment Protection and Biodiversity Conservation Act 1999* from 23 November 2021.

This document provides a foundation for conservation action and further planning.



Photo of *Grevillea banyabba* (Banyabba Grevillea) © Copyright, [Adrian Gale \(2020\)](#)

Conservation status

Grevillea banyabba (Banyabba Grevillea) is listed in the Vulnerable category of the threatened species list under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwth) (EPBC Act) effective from 16 July 2000. The species is eligible for listing because prior to the EPBC Act, it was listed as Vulnerable under the *Endangered Species Protection Act 1992* (Cwth).

The main factors that make the species eligible for listing in the Vulnerable category are small population size, limited distribution and population declines due to inappropriate fire regimes.

Species can also be listed as threatened under state and territory legislation. For information on the current listing status of this species under relevant state or territory legislation, see the [Species Profile and Threat Database](#).

Species information

Taxonomy

Conventionally accepted as *Grevillea banyabba* Olde & Marriott (1994).

Description

The Banyabba Grevillea is an open, few-branched shrub, which grows to 0.8 – 1.5 m tall. Branchlets are covered with long fine hairs. Leaves are 2.5 – 3.8 cm long and 0.5 – 1 cm wide, with slightly curved back edges, finely pointed tips and sparse silky hairs on the lower surface. Flowers are red with a yellow-green base and fine silver hairs on most surfaces. Flowers usually occur in loose clusters of three to thirteen flowers. Flower buds have pointed tips. Fruits are oval capsules with sparse hairs. They split down one side to release flat rectangular seeds with a wing on one side. This description is drawn from Olde & Marriott (1994), Makinson (2000) and Harden (2002).

The Banyabba Grevillea can be distinguished from *Grevillea quadricauda* (Four-tailed Grevillea) by longer leaves and an erect style on the fruit (Makinson 2000). It can be distinguished from *Grevillea masonii* (Mason's Grevillea) by longer leaves, smaller flowers and less oblique fruit (Makinson 2000).

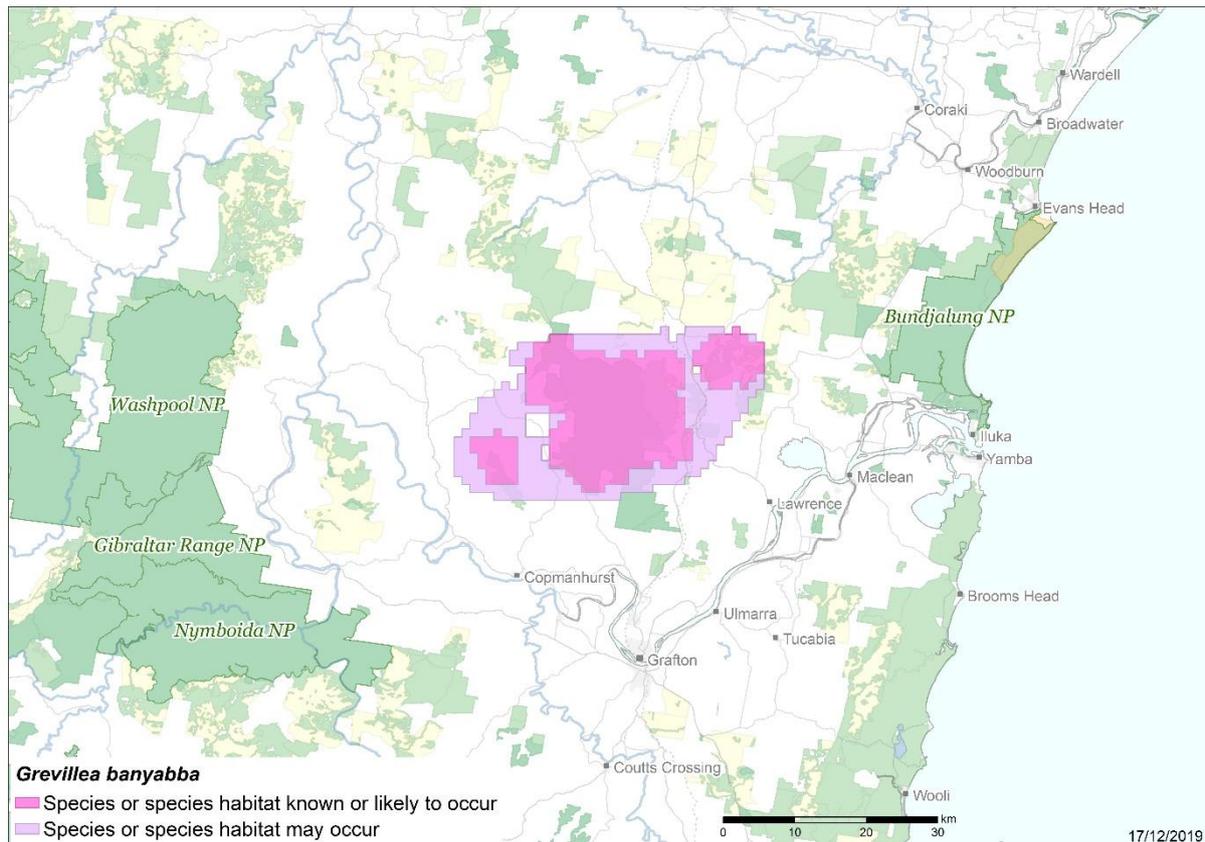
Distribution

The Banyabba Grevillea has very restricted distribution. It only occurs in north-eastern New South Wales (NSW) from Fortis Creek to Coaldale between Grafton and Whiporie (Olde & Marriott 1994; Sheringham & Westaway 1995; Makinson 2000; OEH 2020a), in the Clarence Lowlands and Sandstones IBRA7 sub-regions, within the South Eastern Queensland IBRA7 Bioregion (OEH 2020b). Most plants occur in one subpopulation within Banyabba Nature Reserve or within 10 km of the Reserve (OEH 2020b). The Banyabba Grevillea is also recorded in Banyabba Nature Reserve, Banyabba State Conservation Area, Gibberagee State Forest, Wombat Creek State Conservation Area and Fortis Creek National Park (OEH 2016). In 2020, the range of the Banyabba Grevillea is estimated as 500–600 km² (DAWE 2020). The historic range of the Banyabba Grevillea is likely similar to the current range (NPWS 1999). However, land adjoining the Banyabba Grevillea's known locations has been cleared for agriculture, likely reducing the number of individuals and opportunities for recolonisation (NPWS 1999).

In 1999, 38 subpopulations of the Banyabba Grevillea were known (NPWS 1999).

Approximately 14 000 individuals were known in the wild, of which approximately 90 percent occurred in one subpopulation (NPWS 1999). In 2021, the number of mature individuals is not clear and further survey work is required to determine the population size of this species. In 2019, Makinson and Olde (2020) inferred that the total population included 800–2000 mature individuals from limited field observations, and presumed population size to be stable. However, in contrast, Bailey (2019) estimates a population of approximately 5000 individuals. Further, DPIE (unpublished data) suggests that in 2019–2021, the population size at Banyabba Nature Reserve was approximately 650 individuals, while that at Fortis Creek National Park was approximately 640 individuals.

Map 1 Modelled distribution of the Banyabba Grevillea



Source: Species distribution data [Species of National Environmental Significance](#) database, Base map Geoscience Australia.

Caveat: The information presented in this map has been provided by a range of groups and agencies. While every effort has been made to ensure accuracy and completeness, no guarantee is given, nor responsibility taken by the Commonwealth for errors or omissions, and the Commonwealth does not accept responsibility in respect of any information or advice given in relation to, or as a consequence of, anything containing herein.

Species distribution mapping: The species distribution mapping categories are indicative only and aim to capture (a) the specific habitat type or geographic feature that represents to recent observed locations of the species (known to occur) or preferred habitat occurring in close proximity to these locations (likely to occur); and (b) the broad environmental envelope or geographic region that encompasses all areas that could provide habitat for the species (may occur). These presence categories are created using an extensive database of species observations records, national and regional-scale environmental data, environmental modelling techniques and documented scientific research.

Cultural and community significance

Grevilleas are a culturally significant plant for Indigenous peoples across Australia (Royal Botanic Gardens Victoria 2014). Grevillea flowers are bush tucker and can be sucked or soaked in water to produce a sweet drink (Flood 1980; Australian National Botanic Gardens 2007).

Additionally, most Banyabba Grevillea plants occur in Banyabba Nature Reserve (OEH 2020b). This reserve is part of a landscape of cultural importance to the Bundjalung People. Native title rights of the Bundjalung People over Banyabba Nature Reserve have been legally recognised by the Federal Court of Australia (2013). These lands will continue to be places of ceremony, learning and inspiration for generations to come. The National Parks and Wildlife Service (NPWS) is working with the Bundjalung People to help promote culture and reconciliation within the Banyabba Nature Reserve (NPWS 2020). An Indigenous Land Use Agreement (ILUA) is being negotiated by the NSW Department of Trade and Investment on behalf of the NSW Government.

Relevant biology and ecology

The biology and ecology of the Banyabba Grevillea is not well understood. Further studies are required to understand its ecological requirements, soil seedbank dynamics, reproductive strategies, pollinator biology and requirements. However, information about Banyabba Grevillea's habitat and reproductive ecology, and Grevillea species more broadly, is available and presented here.

Habitat ecology

The Banyabba Grevillea grows in dry sclerophyll forests on low ridges in well-drained, sandy soils, and on rocky cliffs or major rocky outcrops (Makinson 2000; OEH 2020b). It often grows in association with *Eucalyptus planchoniana* (Needlebark Stringybark), *Eucalyptus psammitica* (Bastard White Mahogany), *Angophora robur* (Sandstone Rough-barked Apple) and *Corymbia gummifera* (Red Bloodwood) and *Corymbia intermedia* (Pink Bloodwood) (NPWS 2002; OEH 2020a; DPIE 2021).

Reproductive ecology

The Banyabba Grevillea flowers from August to October (Makinson 2000). The time to maturity is not known for the Banyabba Grevillea; however, it may be similar to that of Mason's Grevillea, a closely-related, sympatric species, which is usually two to three years (Makinson 2000). The pollinators of the Banyabba Grevillea are not known. However, its pollinators may be similar to those of sympatric *Grevillea* species, such as Mason's Grevillea and *Grevillea beadleana* (Beadle's Grevillea), which are pollinated by nectar-feeding birds and bees (Olde & Marriott 1995; Smith & Gross 2002). Similarly, seed dispersal methods are unknown for the Banyabba Grevillea, however, Mason's Grevillea is likely dispersed via wind or ants (Olde & Marriott 1995).

In many Proteaceae species, including Grevilleas, germination of dormant seeds is triggered by fire-related cues, including heat, smoke and scarification (Edwards & Whelan 1995; Bradstock et al. 1996; Morris 2000). As the mature plants of such species are usually killed by fire, there must be sufficient intervals between fires, for new seedlings to reach maturity and replenish the seedbank (Edwards & Whelan 1995; Auld et al. 2007). Many Banyabba Grevillea plants carry old, open fruits, suggesting successful fruit production and seed release (NPWS 1999). The Banyabba Grevillea is predominately an obligate seeding species and seedlings have been recorded following fire events (Makinson 2000; DPIE 2021). However, the species has also been observed to resprout at one site following the 2019-20 bushfires (DPIE 2021). The Recovery Plan for Beadle's Grevillea (2004) suggested a fire frequency with mean intervals of 15 years, allows populations to mature following fires and avoid dominance of senescent age classes. Similar fire frequency may be suitable for persistence of Banyabba Grevillea populations, depending on seed bank accumulation and predation rates, and seed bank longevity.

Habitat critical to the survival

At this point in time, there is insufficient information available to describe, with spatial information, areas of habitat that are critical to the survival of the species. Further research is needed to do this (see conservation actions). Until such information is available, all habitat for this species should be considered important for the species' long-term survival.

No Critical Habitat as defined under section 207A of the EPBC Act has been identified or included in the Register of Critical Habitat.

Important populations

In this section, the word population is used to refer to subpopulation, in keeping with the terminology used in the EPBC Act and state/territory environmental legislation.

At this point in time there is insufficient information available to be able to describe, with spatial information, important populations of this species. Further research is needed to do this, if practicable to do so (see conservation actions). Until such information is available, all populations of this species should be considered important.

Threats

The Banyabba Grevillea is threatened by climate change, invasive species, disease, and habitat loss, disturbance and modifications. The species is threatened by several fire-related threats, including high frequency fire, fire-drought interactions, fire-disease interactions, and fire promoted weed invasion. Illegal collection of rare flora by visitors and amateur plant enthusiasts is a known threat in the South East Queensland Bioregion (QCRA/RFA 1998) but the Banyabba Grevillea is not suspected to be a target for such collections (Makinson & Olde 2020). Accordingly, this threat has not been considered in Table 1.

Table 1 Threats impacting the Banyabba Grevillea

Threat	Status and severity ^a	Evidence
Climate change		
Inappropriate fire regimes	<ul style="list-style-type: none"> • Timing: current • Confidence: known • Consequence: major • Trend: increasing • Extent: across the entire range 	<p>A high-frequency fire regime (<15 years) is likely to reduce the population size and vigour of the Banyabba Grevillea, following the destruction of adult plants, depletion of soil-stored seed banks and invasion of introduced grasses (Sheringham & Westaway 1995; DECCW 2010; OEH 2020a). This could be exacerbated by interval squeeze, earlier fire season and fire-granivore interactions (Gallagher et al. 2021). Additionally, small population sizes and inbreeding may reduce genetic variation and increase the likelihood of population extinction following stochastic events, such as disease or fire (NPWS 1999; OEH 2020a).</p> <p>In 2019-20, following years of drought (DPI 2020b), catastrophic bushfire conditions resulted in extensive bushfires covering an unusually large area of eastern Australia. Initial estimates suggest these bushfires overlapped with approximately 74 percent of the Banyabba Grevillea's distribution (Gallagher 2020). Fire intensity and severity varied across the bushfire extent, with many patches burning at extreme intensity and severity while others remained unburnt (DPIE 2020). This type of event is increasingly likely to reoccur as a result of climate change. The Banyabba Grevillea has been identified as a high priority species, requiring urgent management intervention, following the 2019-20 bushfires (Gallagher 2020). The life-history traits of the Banyabba Grevillea predispose it to high risk of population decline or extinction, resulting from short fire intervals, fire-disease interactions, high fire severity and cumulative exposure to high risks (Gallagher 2020). Interactions between fire and seed predators may also elevate risks of decline, especially under small or patchy fires (Regan et al. 2003).</p>

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Threat	Status and severity ^a	Evidence
Increased temperatures and change to precipitation patterns	<ul style="list-style-type: none"> • Status: future • Confidence: inferred • Consequence: moderate • Trend: increasing • Extent: across the entire range 	<p>From 2017-19, severe drought impacted much of eastern Australia including north-eastern NSW (DPI 2020b). Indeed, dieback of leaves and branches in mature individuals has been attributed to this drought event (DPIE 2021). Such events are increasingly likely to happen due to climate change.</p> <p>Such changes in climate may cause widespread plant mortality in forest ecosystems, as many plants are vulnerable to drought stress and hydraulic failure (Allen et al. 2010; Choat et al. 2012). Indeed, many plants in the Proteaceae family, which includes Grevilleas, are expected to decline in range and population size, primarily due to the effect of declining rainfall on seed production and seedling survival (Midgley et al. 2006; Fitzpatrick et al. 2008; Shimizu-Kimura et al. 2017).</p> <p>Furthermore, fire-drought interactions are particularly an issue for obligate seeders, as they rely on fire for recruitment, yet seedlings have rudimentary root systems vulnerable to desiccation if post- fire drought occurs (Burgman and Lamont 1992).</p> <p>Given the Banyabba Grevillea already has very restricted distribution and small population size, it may be at risk of extinction following intense or frequent droughts (OEH 2020a).</p>
Invasive species		
Invasion of grasses, particularly following fire	<ul style="list-style-type: none"> • Timing: current • Confidence: suspected • Consequence: moderate • Trend: increasing • Extent: across the entire range 	<p>Many introduced grasses are characterised by vigorous growth, prolific seed production and effective seed dispersal (NSW Scientific Committee 2003). Accordingly, they can invade and establish in native vegetation, particularly following disturbance. Once established, introduced grasses can alter community structure, fuel load and fire regimes (D'Antonio & Vitousek 1992; NSW Scientific Committee 2003; Rossiter et al. 2003; Flory et al. 2015). These altered fire regimes can create conditions that are detrimental to the maintenance of native species and favourable to the establishment and spread of introduced grasses (D'Antonio & Vitousek 1992; Grigulis et al. 2005).</p> <p>The invasion of native plant communities by exotic perennial grasses is listed as a key threatening process (KTP) under the Threatened Species Conservation Act in NSW (NSW Scientific Committee 2003). Introduced grasses have potential to invade native vegetation in the Northern Rivers region and may threaten the Banyabba Grevillea (DECCW 2010; OEH 2020a). However, there is a low density of grasses in the Banyabba Grevillea's habitat and grass invasion has not been observed following the 2019-20 bushfires (DPIE 2021).</p>

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Threat	Status and severity ^a	Evidence
Invasion of pines	<ul style="list-style-type: none"> • Timing: future • Confidence: suspected • Consequence: moderate • Trend: unknown • Extent: across the entire range 	<p>Australia is a major cultivator of pine plantations with almost one million hectares growing across the country. Pines have become naturalised in a wide range of habitats across Australia (Lazarides et al. 1997; Richardson & Rundel 1998; Blood 2001). In particular, the Slash Pine (<i>Pinus elliottii</i>) and the Loblolly Pine (<i>Pinus taeda</i>) are becoming naturalised around plantations in north-eastern NSW (AVH 2020a, b), including the Banyabba State Forest, adjacent to the Banyabba Grevillea's range (OEH 2020a). Such pines may threaten the Banyabba Grevillea by shading out understorey and changing soil chemistry (OEH 2020a).</p> <p>Additionally, the Athel Pine (<i>Tamarix aphylla</i>) is another weed that could threaten the Banyabba Grevillea. The Athel Pine is a tall, spreading, invasive tree, which can change soil chemistry, river flow patterns and cause overland flooding and bank erosion (DPI 2018). The Athel Pine is recognised as a Weed of National Significance and a priority weed for the NSW North Coast (Thorp & Lynch 2000; DPI 2018) and has been recorded near Ballina in north-eastern NSW (DPI 2020a).</p>
Disease		
Dieback caused by <i>Phytophthora cinnamomi</i>	<ul style="list-style-type: none"> • Timing: future • Confidence: suspected • Consequence: major • Trend: unknown • Extent: across the entire range 	<p><i>Phytophthora cinnamomi</i> is an introduced soil-borne pathogen, which infects a large range of plant species and may contribute to plant death, particularly when other stresses are present, such as waterlogging, drought and bushfire (DOEE 2018). <i>Phytophthora cinnamomi</i> can disperse in water flowing from roots of infected plants to roots of healthy plants and mud clinging to vehicles, animals and walkers (DOEE 2018).</p> <p>Dieback caused by <i>P. cinnamomi</i> is listed as a KTP under the EPBC Act (DOEE 2018). The disease has been detected in the nearby North Coast Wet Sclerophyll and Northern Escarpment Dry Sclerophyll Forests (OEH 2020c), but not yet in North Coast Dry Sclerophyll Forest or the Banyabba Nature Reserve (OEH 2016, 2020c). The nearest occurrence record of <i>P. cinnamomi</i> is near Booyong, NSW, approximately 80 kilometres from the border of Banyabba Nature Reserve (ALA 2020). Soil samples tested for <i>Olax angulata</i> (Square-stemmed Olax), which co-occurs with the Banyabba Grevillea in Banyabba Nature Reserve, were negative for <i>P. cinnamomi</i> (DPIE 2021).</p> <p>Proteaceae are one of the plant families most susceptible to <i>P. cinnamomi</i> (DSE 2009). So the Banyabba Grevillea will likely be severely impacted if <i>P. cinnamomi</i> spreads to the Banyabba Nature Reserve. Small population sizes and inbreeding may reduce genetic variation and increase the likelihood of population extinction in the Banyabba Grevillea, following stochastic events, such as disease or bushfire (NPWS 1999; OEH 2020a).</p>

Threat	Status and severity ^a	Evidence
Habitat loss, disturbance and modifications		
Damage associated with timber harvesting	<ul style="list-style-type: none"> • Timing: current • Confidence: suspected • Consequence: minor • Trend: static • Extent: across part of its range 	The Banyabba Grevillea may be destroyed accidentally during timber harvesting from the Banyabba State Forest (DECCW 2010; OEH 2020a). The Private Native Forestry Code of Practice for Northern NSW (2016) dictates a 20-metre exclusion zone is required around 90 percent of individuals within areas with active forestry operations. Additionally, illegal timber harvesting has been reported within Southern Richmond Range Parks and may impact the Banyabba Grevillea (OEH 2016).
Damage associated with road maintenance	<ul style="list-style-type: none"> • Timing: current • Confidence: suspected • Consequence: minor • Trend: static • Extent: across part of its range 	The Banyabba Grevillea may be damaged accidentally during construction of drainage channels, grading and other road maintenance activities (OEH 2020a). Such activities may also promote weed invasion (Sindel et al. 2009).
Land clearing	<ul style="list-style-type: none"> • Timing: historical/current • Confidence: inferred • Consequence: major • Trend: unknown • Extent: across part of its range 	Most individuals occur in Banyabba Nature Reserve and Fortis Creek National Park (OEH 2020b). Both areas are declared wilderness and protected under the Wilderness Act (NPWS 2001), so land clearing is prohibited. However, much of the land adjoining the Banyabba Grevillea's known locations has been cleared for agriculture or is used for forestry activities, likely reducing the number of individuals and opportunities for recolonization in these areas (NPWS 1999).

Timing—identify the temporal nature of the threat;

Confidence—identify the extent to which we have confidence about the impact of the threat on the species;

Consequence—identify the severity of the threat;

Trend—identify the extent to which it will continue to operate on the species;

Extent—identify its spatial content in terms of the range of the species.

Each threat has been described in Table 1 in terms of the extent that it is operating on the species. The risk matrix (

Table 2) provides a visual depiction of the level of risk being imposed by a threat and supports the prioritisation of subsequent management and conservation actions. In preparing a risk matrix, several factors have been taken into consideration, they are: the life stage they affect; the duration of the impact; and the efficacy of current management regimes, assuming that management will continue to be applied appropriately. The risk matrix and ranking of threats has been developed in consultation with experts and using available literature.

Table 2 Banyabba Grevillea risk matrix

Likelihood	Consequences				
	Not significant	Minor	Moderate	Major	Catastrophic
Almost certain	Low risk	Moderate risk Damage associated with road maintenance	Very high risk Increased temperatures and change to precipitation patterns	Very high risk Inappropriate fire regimes	Very high risk
Likely	Low risk	Moderate risk	High risk	Very high risk	Very high risk
Possible	Low risk	Moderate risk Damage associated with timber harvesting	High risk Invasion of grasses, particularly following fire Invasion of pines	Very high risk Dieback caused by <i>P. cinnamomi</i> Land clearing	Very high risk
Unlikely	Low risk Illegal collection	Low risk	Moderate risk	High risk	Very high risk
Unknown	Low risk	Low risk	Moderate risk	High risk	Very high risk

Priority actions have been developed to manage the threat particularly where the risk was deemed to be ‘very high’ or ‘high’.

Conservation and recovery actions

Primary conservation objective

By 2030, the population of the Banyabba Grevillea will have increased in abundance and viable populations are sustained in habitats that are managed for ongoing threats.

Conservation and management priorities

Fire

- Survey known populations to monitor ongoing responses to fires.
- Ensure that planned burns do not occur within Banyabba Grevillea populations before an accumulation of a seedbank large enough to replace the number of fire-killed standing plants. Noting that replacement should incorporate expected post-fire rates of seedling survival (see Regan et al. 2003).
- Provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigation measures in bushfire risk management plan/s, risk register and/or operation maps.

Habitat loss disturbance and modifications

- Ensure land managers are aware of the Banyabba Grevillea's occurrence and provide protection measures against known and potential threats.
- Encourage managers of public and private timber plantations to implement best practice management, retain native vegetation (habitat and recruitment trees), and manage these areas for biodiversity outcomes.
- Develop appropriate criteria and indicators to review the effectiveness of threatened species protection measures currently employed in public and private native forestry activities. Strengthen threatened species protection measures where they are shown to be inadequate.
- Ensure local governments, relevant state agencies and utility service providers have access to adequate information regarding the location of the Banyabba Grevillea and use best practice methods for roadside and utility corridor maintenance to protect the Banyabba Grevillea and its habitat.
- Where feasible, close and revegetate roads and tracks to reduce ingress of pest animals, weeds and vehicles.

Invasive species (including threats from grazing, trampling, predation)

- Implement weed management actions in consultation with land managers and community groups, using hand weeding or localised application of herbicide during the appropriate season to minimise the effect of herbicide on the Banyabba Grevillea and the surrounding native vegetation.
- Develop and implement an evidence-based fire management strategy that optimises the survival of the Banyabba Grevillea during planned burns and bushfires.

Disease

- Determine susceptibility of the Banyabba Grevillea to *P. cinnamomi*.
- Implement a *P. cinnamomi* management plan to ensure it is not introduced into known locations of the Banyabba Grevillea and the spread in areas outside of, but adjacent to Banyabba Grevillea populations is mitigated (DOEE 2018).
- Where feasible, close and revegetate roads and tracks to reduce ingress of disease.
- Ensure that appropriate hygiene protocols are adhered to when entering or exiting the known locations of the Banyabba Grevillea, such as those outlined in Podger et al. (2001).

Seed collection, propagation and other ex situ recovery action

- To manage the risk of losing genetic diversity, undertake appropriate seed and storage in long term custodial collections until no longer needed and determine viability of stored seeds. Best practice seed storage guidelines and procedures should be adhered to, to maximise seed viability and germinability. Seeds from all-natural populations to be collected and stored.
- Propagate sufficient individuals to augment extant populations and undertake translocations, according to Commander et al. (2018).

Climate Change

- Using distribution modelling and climate change projections to map existing habitat patches and identify potential future habitat.
- Understand and ameliorate the effects of climate change on the species by mitigating interactions with other threats such as fire, disease and habitat degradation.

Stakeholder engagement/community engagement

- Engage and involve Traditional Owners in conservation actions, including the implementation of Indigenous fire management and other survey, monitoring and management actions.
- Liaise with the local community and government agencies to ensure that up-to-date population data and scientific knowledge inform the implementation of conservation actions for this species.
- Contribute to impact assessment and planning processes on measures to protect the Banyabba Grevillea and its habitat.

Survey and monitoring priorities

- Undertake annual monitoring of habitat condition/degradation (including impacts from weed invasion, salinity and diseases, such as *P. cinnamomi*), population stability (expansion or decline), pollination activity, seed production, recruitment and longevity.
- Monitor the size, structure and reproductive status of populations at different stages in the fire cycle, taking opportunities to monitor after planned and unplanned fires (where they occur) and improve understanding of the fire response of the species.
- Identify populations in timber harvesting areas and alongside roads. Protect these populations from disturbance.

Information and research priorities

- Investigate options for linking, enhancing or establishing additional populations.
- Survey suitable habitat and potential habitat to locate any additional populations/occurrences/remnants to assess population size and distribution more precisely.
- Investigate the ecological requirements of the Banyabba Grevillea, that are relevant to persistence:
 - population genetic structure, levels of genetic diversity and minimum viable population size
 - soil seed bank dynamics and the role of seed predators and various disturbances (including fire), competition, rainfall and grazing in germination and recruitment
 - reproductive strategies, phenology and seasonal growth
 - pollinator biology and requirements
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.
- Avoid any use of managed fire research and other activities that impact upon the persistence of the population unless there is evidence to show the impact would be a positive and enduring effect on the Banyabba Grevillea's persistence.

Links to relevant implementation documents

[Northern Rivers Regional Biodiversity Management Plan, National Recovery Plan for the Northern Rivers Region \(2010\)](#)

[Threat abatement plan for disease in natural ecosystems caused by *Phytophthora cinnamomi* \(2018\)](#)

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