Approved Conservation Advice
(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

Approved Conservation Advice for *Prostanthera stricta* (Mount Vincent Mintbush)

This Conservation Advice has been developed based on the best available information at the time this conservation advice was approved.

Description

Prostanthera stricta, Family Lamiaceae, also known as Mount Vincent Mintbush, is a bushy erect spreading shrub to 2 m, sometimes to 5 m high (Leigh et al., 1984) and to 3 m wide. Flowers are pale mauve to deep purple (Harden, 1992; Benson & McDougall, 1997) and flowering occurs from winter to spring (NSW NPWS, 2000). It has hairy aromatic branches and small, 7–14 mm by 4–6 mm, hairy, lance-shaped leaves (NSW NPWS, 2000).

Plants in the northern Wollemi area have been referred to as *P.* aff *stricta* (Harden, 1992) (i.e. they have affinities with *P. stricta* but may be a different species). These plants have broadly ovate to ovate leaves, leaf bases which are often broadly rounded, and leaves may appear triangular in periods of drought or on herbarium specimens (NSW NPWS, 2000). *Prostanthera* aff *stricta* is capable of clonal reproduction (NSW NPWS, 2000). Until these plants are described as a separate species, plants assigned to both *P. stricta* in the narrow sense (i.e. *sensu stricto*), referred to as *P. stricta* s. str., and plants assigned to *P.* aff *stricta*, are considered to be part of the population of the EPBC-listed species *Prostanthera stricta.*

Mount Vincent Mintbush is likely to be fire sensitive, with recruitment occurring from the soil seed bank. Reproductive maturity of the species is thought to be between 3–5 years (NSW NPWS, 2000).

Conservation Status

Mount Vincent Mintbush is listed as **vulnerable**. This species is eligible for listing as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, prior to the commencement of the EPBC Act, it was listed as vulnerable under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). The species is also listed as vulnerable under the *Threatened Species Conservation Act 1995* (NSW).

Distribution and Habitat

Mount Vincent Mintbush is known from the NSW Central Tablelands and Central Western Slopes. Select localities include Mt Vincent, Ilford, Capertee and Running Stream (Benson & McDougall, 1997). *Prostanthera stricta* s. str. is known from Mount Vincent and Genowlan Mountain and *P.* aff. *stricta* is known from Dingo Creek and the Widden and Baerami Valleys (NSW NPWS, 2000). Mount Vincent Mintbush (*P. stricta* s. str.) occurs within the Central West, Hawkesbury–Nepean, and Hunter–Central Rivers (NSW) Natural Resource Management Regions. Mount Vincent Mintbush (*P.* aff *stricta*) occurs within the Hunter–Central Rivers (NSW) Natural Resource Management Region.

Mount Vincent Mintbush (*P. stricta* s. str.) occurs primarily at the geological interface of fertile basalt caps and infertile sandstones at elevations of 800–1050 m (Leigh et al., 1984; Harden, 1992; Benson & McDougall, 1997). It is found in a range of environments, from steep rocky side-slopes and cliff lines to gentle slopes with exposed sandstone (NSW NPWS, 2000). It is often a locally dominant shrub in vegetation ranging from heath to open forest (NSW NPWS, 2000). Associated species include Blaxland's Stringybark (*Eucalyptus blaxlandii*), Red Stringybark (*E. cannonii*), Ribbon Gum (*E. viminalis*), Hickory Wattle (*Acacia implexa*), and

Hop Goodenia (*Goodenia ovata*) (Leigh et al., 1984; Harden, 1992; Benson & McDougall, 1997).

Mount Vincent Mintbush (*P.* aff *stricta*) occurs on sandstones and conglomerates along cliffs, steep side-slopes and fluvial depositional zones (NSW NPWS, 2000). Most known sites of Mount Vincent Mintbush (*P.* aff *stricta*) are within the riparian zone (DEC NSW, 2005a). It occurs in heath to open forest and associated species can include Rough-barked Apple (*Angophora floribunda*), Caley's Ironbark (*Eucalyptus caleyi*), Red Ironbark (*E. fibrosa*), Grey Gum (*E. punctata*), Mugga Ironbark (*E. sideroxylon*), and Forest Red Gum (*E. tereticornis*) (NSW NPWS, 2000).

The distribution of this species overlaps with the "White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland" EPBC Act-listed threatened ecological community.

Threats

The main identified threats to Mount Vincent Mintbush are clearance of habitat for agriculture, mining, residential development and road construction, and inappropriate fire regimes (NSW NPWS, 2000). A repeated fire interval of 3–5 years may lead to extinction of the species (DECC NSW, 2005b).

The main potential threats to Mount Vincent Mintbush include habitat degradation and pathogen introduction from an increase in the density of dwellings, and trampling and grazing (NSW NPWS, 2000).

Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Design and implement a monitoring program.
- More precisely assess population size, distribution, ecological requirements and the relative impacts of threatening processes.
- Undertake survey work (during the flowering period) in suitable habitat and potential habitat to locate any additional populations.
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.

Regional and Local Priority Actions

The following priority recovery and threat abatement actions can be done to support the recovery of Mount Vincent Mintbush.

Habitat Loss, Disturbance and Modification

- Identify populations of high conservation priority.
- Manage habitat to maintain continuity between individual plants within sub-populations and to avoid artificially creating new sub-populations (DECC NSW, 2005a).
- Manage threats to areas of vegetation that contain populations/occurrences of Mount Vincent Mintbush. A buffer should be placed around sub-populations to conserve soil-stored seed (DECC NSW, 2005a).
- Monitor known populations to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Ensure road widening and maintenance activities (or other infrastructure or development activities involving substrate and vegetation disturbance, including mining) in areas where Mount Vincent Mintbush occurs do not adversely impact on known populations.

- Manage any changes to hydrology that may result in changes to the water table levels, increased run-off, sedimentation or pollution.
- Manage any disruptions to water flows.
- Investigate formal conservation arrangements such as the use of covenants, conservation agreements or inclusion in reserve tenure.

Trampling, Browsing or Grazing

- Develop and implement a stock management plan for roadside verges and travelling stock routes.
- Use exclusion fencing to reduce the impacts of grazing and trampling by domestic and feral stock (NSW NPWS, 2000).

Fire

- Develop and implement a suitable fire management strategy for Mount Vincent Mintbush. Fire regimes should be managed to allow intervals of greater than eight years (NSW NPWS, 2000).
- Identify appropriate intensity and interval of fire to promote seed germination.
- Provide maps of known occurrences to local and state Rural Fire Services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.
- It may be important to maintain unburnt 'refuge' areas containing large numbers of Mount Vincent Mintbush for long periods of time to assist in assuring the survival of the yet unknown specific pollination vector (DECC NSW, 2005b).

Diseases, Fungi and Parasites

- Develop and implement suitable hygiene protocols to protect known sites from introduction of potential pathogens (NSW NPWS, 2000).
- Investigate sensitivity to *Phytophthora cinnamomi* (and other soil and water borne pathogens) and prepare and implement management protocols if necessary (DECC NSW, 2005c).

Conservation Information

- Raise awareness of Mount Vincent Mintbush within the local community, particularly landowners, mining bodies and developers.

Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed collection and storage.
- Investigate options for linking, enhancing or establishing additional populations.
- Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.

This list does not necessarily encompass all actions that may be of benefit to Mount Vincent Mintbush, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Existing Plans/Management Prescriptions that are Relevant to the Species

- Wollemi National Park Plan of Management (NSW NPWS, 2001),
- Fire Management Strategy for Wollemi National Park (DECC NSW, 2005b), and
- Threat Abatement Plan for Dieback Caused by the Root-Rot Fungus *Phytophthora Cinnamomii* (Environment Australia, 2001).

These prescriptions were current at the time of publishing; please refer to the relevant agency's website for any updated versions.

Information Sources:

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