



Commonwealth of Australia

**Amendments to the list of threatened ecological communities under section 181 of the
Environment Protection and Biodiversity Conservation Act 1999 (EC127)**

I, GREG HUNT, Minister for the Environment, pursuant to paragraph 184(1)(a) of the *Environment Protection and Biodiversity Conservation Act 1999*, hereby amend the list referred to in section 181 of that Act by:

including in the list in the **endangered** category *Posidonia australis* seagrass meadows of the
Manning-Hawkesbury ecoregion

as described in the Schedule to this instrument.

Dated this.....30.....day of.....April.....2015

GREG HUNT

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Minister for the Environment

SCHEDULE

***Posidonia australis* seagrass meadows of the Manning-Hawkesbury ecoregion**

The ecological community is the assemblage of plants, animals and micro-organisms associated with seagrass meadows dominated by *Posidonia australis* occurring in the warm temperate Manning Shelf and Hawkesbury Shelf bioregions (Integrated Marine and Coastal Regionalisation of Australia v4.0) on the east coast of Australia.

The ecological community occurs mostly within the sheltered environments of permanently open estuaries along the New South Wales coastline, from Wallis Lake (32°S) to Port Hacking (34°S). *Posidonia australis* dominated seagrass meadows occurring around islands within the geographic range are also included within the ecological community. The ecological community is known to occur at the following locations: Wallis Lake; Port Stephens; Lake Macquarie; Brisbane Water; Hawkesbury River; Pittwater; Port Jackson (Sydney Harbour); Botany Bay; Port Hacking; and in the lee of Broughton Island and may occur elsewhere within the range of the ecological community.

The meadows of the ecological community occur as almost pure stands of *Posidonia australis* (monospecific meadows) or multispecies meadows dominated by *P. australis* (for example, with *Zostera capricorni*, *Halophila ovalis*). The spatial structure of the meadows is highly variable with meadows ranging from nearly continuous to being fragmented and arranged into a mosaic of discrete patches. Areas of bare sand or other seagrass species that occupy edges, blowouts and small areas of meadows are common in both continuous and patchy meadows of the ecological community. In some cases, sparse meadows of the ecological community may have an understorey of smaller seagrass species (e.g. *Halophila ovalis*).

The wide, strap-like leaves of *Posidonia australis* provide substrate for the establishment of a diverse assemblage of benthic flora, in the form of micro and macro epiphytes; a complex layer of periphyton; and a diverse assemblage of animals as epifauna. The *P. australis* rhizome mat provides a stable substratum for the establishment of animals as infauna. These flora and fauna support higher trophic level consumers directly as a food source or via detritus formation.

Polychaetes, crustaceans and molluscs dominate the infauna and motile epifauna of the ecological community. The most commonly sampled fish associated with the ecological community are from the families Syngnathidae (seahorses, pipefishes, seadragons, pipehorses), Clupeidae (herrings), Latridae (trumpeters), Monacanthidae (leatherjackets), Gobiidae (gobies), Kyphosidae (drummers, halfmoons, knifefishes, microcanthids, nibblers, sea chubs), Hemiramphidae (garfishes) and Mugilidae (mulletts).

The ecological community provides important foraging habitat for Manly's population of *Eudyptula minor* (little penguin) listed as endangered under the NSW *Threatened Species Conservation Act 1995*. The ecological community provides nursery habitat to the commercially important *Acanthopagrus australis* (yellowfin bream), *A. butcherii* (black bream), *Mugil cephalus* (sea mullet), *Girella tricuspidata* (luderick), *Monocanthus chinensis* (fanbelly leatherjacket), *Meuschenia freycineti* (six-spine leatherjacket) and *M. trachylepis* (yellowfin leatherjacket).