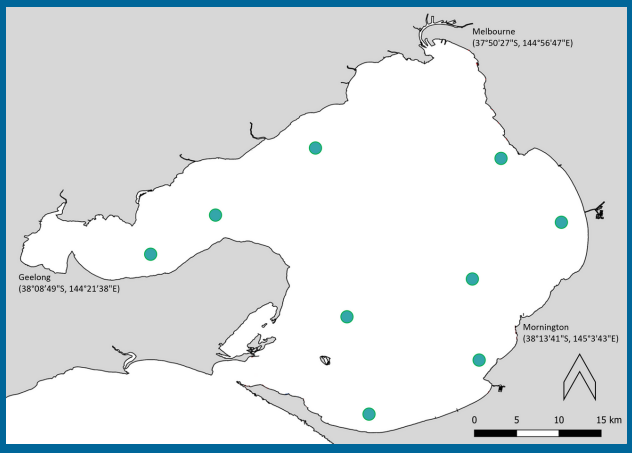
Marine Mammal Foundation

The Marine Mammal Foundation (MMF) uses many different tools to assess the Burrunan dolphin (*Tursiops australis*) population of Port Phillip Bay. This now includes MMF's most recently adopted research technique, passive acoustic monitoring (PAM), coordinated by PhD student Amber Crittenden, supervised by MMF's Director and Head of Research Dr. Kate Robb and Curtin University Professor Christine Erbe.

PAM is an effective, low-cost, low-maintenance technique that efficiently collects long term data. Underwater microphones periodically record the collection of ambient noise in the area they are stationed, also referred to as the 'soundscape', to capture information about the species of animals that can be found in the area (biophony), the abiotic sound sources present (geophony), and any anthropogenic noise pollution impacting the environment (anthropophony).

Our recorders, OceanInstruments SoundTraps, are deployed in an MMF-designed cradle attached to a mooring that rests on the seafloor. They record 5 minutes in every 20 minutes, 24-hours a day for 6-10 weeks before having to be collected and serviced. The vast datasets of raw audio files collected with this technique are then processed through a semi-autonomous detection software and manually visually and aurally inspected for the presence of Burrunan dolphin vocalisations.

The deployment and collection of these devices is minimally disruptive to the benthos and surrounding marine environment of the deploy location, making this method an ideal non-invasive monitoring technique. As these devices record during all hours of the day, and in all weather conditions, greater insight into the activities of the animals captured in our recordings can be gathered than ever before, as traditional monitoring techniques are conducted during daylight hours and fair-weather conditions only.



The SoundTraps are deployed in an array throughout Port Phillp and Corio Bays to maximise our understanding of how the dolphins move around the Bay. Each SoundTrap in the array is positioned such that there is no overlap in recording range, meaning that any simultaneous recoding of dolphins on SoundTraps in different locations indicate multiple active pods.

Learn More about MMF

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