

“Where will our knowledge take you?”

# Ecological Character Descriptions

Australia was one of the first Contracting Parties to the Ramsar Convention, an international treaty that aims to promote the conservation and wise use of wetlands.

Contracting Parties are expected to describe and maintain the ecological character of their Ramsar sites. An Ecological Character Description (ECD) provides information about the key values of a Ramsar site and the critical processes and components that support them. In particular, It identifies indicators and measures to protect or maintain those values and monitor the ecological character of the wetland over time.

There are currently 65 Australian wetlands that are listed as Wetlands of International Importance under the Ramsar Convention. ECDs have been prepared and finalised for approximately one third of these sites, with other ECD documents in preparation.

Having successfully prepared a number of ECDs, BMT WBM is at the forefront of Ramsar and wetland assessment within Australia.

## Skills and Expertise

A key strength of BMT WBM is the ability to provide a multi-disciplinary study team composed of experts from specialist fields, including environmental scientists, hydrologists, environmental planners, GIS technicians and ecologists. These individuals are highly experienced in the process of ECD preparation, involving the following skills:

- Review of relevant information, data and plans;
- Engagement with panels of experts and researchers;
- Identification of critical wetland processes, components and ecosystems;
- Demonstration of wetland interactions by means of conceptual models;
- Quantification of limits of acceptable change to wetland elements;
- Assessment of ecological character changes over time; and
- Identification of strategic information gaps, monitoring needs and threats to the Ramsar site.

BMT WBM has prepared ECDs across a range of Australian Ramsar sites from tropical Northern Territory to temperate wetlands on the south coast of Victoria. An overview of our ECDs undertaken to date include:

### Currawinya Lakes (2007-2008)

The Currawinya Lakes Ramsar site is located in the semi-arid zone of southwest Queensland. Permanent and semi-permanent freshwater lakes and waterholes are sustained by local rainfall and flood overflows from the Paroo River, providing important refuge and feeding habitat for birds, fish and turtles. Additionally, a large salt lake provides breeding and roosting habitat for migratory and other important waterbirds in the tens of thousands. A key output of this ECD was the development of conceptual models that graphically described the interaction of critical services, component and processes of the wetlands and the importance and drivers of this unique assemblage of inland wetland types.

### Moreton Bay (2008)

Situated in southeast Queensland, the Moreton Bay Ramsar site is one of the nation's largest and most dynamic Ramsar sites. A diversity of wetland types comprise the Ramsar site, ranging from seagrass beds, mangrove forests and coral reefs, to freshwater lakes and peat swamps on the Bay's sand island. The BMT WBM study team prepared an ECD that clearly articulated the natural values of this Ramsar site in the context of the urban, commercial and recreational use of Morton Bay's resources and worked closely with a range of stakeholders including the Healthy Waterways Partnership Scientific Expert Panel.



### Shoalwater and Corio Bays (2009)

Located in coastal central Queensland, the Shoalwater and Corio Bays Ramsar site is widely recognised for its outstanding coastal wetlands and wilderness values. As a large proportion of this Ramsar site is within one of Australia's prime military training areas, the BMT WBM study team worked closely with the Australian Department of Defence in order to develop an ECD that identifies and seeks to maintain the relatively undisturbed landscape of this Ramsar site while simultaneously accommodating military training needs.

### Gippsland Lakes (2009)

The Gippsland Lakes Ramsar site is an iconic assemblage of estuarine lagoons and freshwater marshes in south-eastern Victoria. The BMT WBM study team reviewed data that demonstrated a possible change in ecological character had been experienced in terms of key components such as waterbird usage, fish populations and vegetation communities since listing of the site in 1982. Attributing these changes to a combination of natural and anthropogenic factors, the BMT WBM study team identified monitoring needs to define and detect future changes to the ecological character of the Gippsland Lakes.

### Corner Inlet (2009)

Corner Inlet is a large tide-dominated embayment located adjacent to the southernmost tip of the Australian mainland. Due to its large area and the diversity of habitats present, Corner Inlet supports internationally significant populations of a number of aquatic and semi-aquatic species. As a notable output to the study, the BMT WBM study team developed a range of limits of acceptable change for the marine components of this Ramsar site with specific attention on seagrass and other marine habitat values.

### Kakadu (2009 – ongoing)

In recognition of outstanding natural and cultural values, Kakadu was listed as one of the first Australian Ramsar sites. Kakadu is renowned world-wide for its iconic landscape, including vast tracts of freshwater floodplains that are seasonally inundated. Aboriginal communities have a close relationship with the ecosystems of Kakadu, with an ongoing 'living culture' maintained to the present day. As such, a key component of this ECD study has been consultation with Traditional Owners and the Kakadu Board of Management in order to ensure that the ECD successfully captured the cultural values of the site.

