

## Elcho Island group

### Location and Description

Elcho Island and the neighbouring Graham, Drysdale, Burgunngura and Stevens Islands are located off north-east Arnhem Land about 550 km north-east of Darwin. These islands have low topography, but parts of their shorelines support sand dunes and ironstone cliffs. Elcho Island is the largest island in this group (280 km<sup>2</sup>) and is dominated by eucalypt woodland, interspersed with pockets of monsoon forest along drainage lines, grading into mangroves in tidal areas.

### Tenure and Land Use

Elcho and the neighbouring islands are Aboriginal freehold land and are part of the Arnhem Land Aboriginal Land Trust lands. The land mainly supports Indigenous uses, but the surrounding waters are also used for commercial fishing. The islands are part of the proposed Marthakal Indigenous Protected Area, which includes neighbouring island groups and the adjoining mainland areas of north east Arnhem Land. The largest community within the Site and broader region is Galiwin'ku (population 1700), located near the southern tip of Elcho Island. Numerous seasonally-used outstations also occur on the islands.

### Significance Rating

International Significance

### Ecological Values

Elcho Island, particularly the extensive mudflats facing Cadell Strait on the southern coastline of the island, periodically supports internationally significant numbers of migratory shorebirds. Numerous shorebird species are from the Site, which is especially significant for high counts of Bar-tailed Godwits. The island beaches are important to nesting marine turtles, particularly Olive Ridley and Flatback Turtles. The islands also support significant breeding populations of seabirds and extensive areas of dry rainforest.

### Management Issues

A range of weed species is present around settlements on Elcho Island, and pigs are damaging sensitive rainforest and wetland habitats. If left unchecked, weeds and feral animals have the potential to significantly degrade environments on Elcho, as does the removal of Aboriginal fire management from the islands. The Cane Toad is present on Elcho Island, but it is a priority to keep the remote islands free of toads.

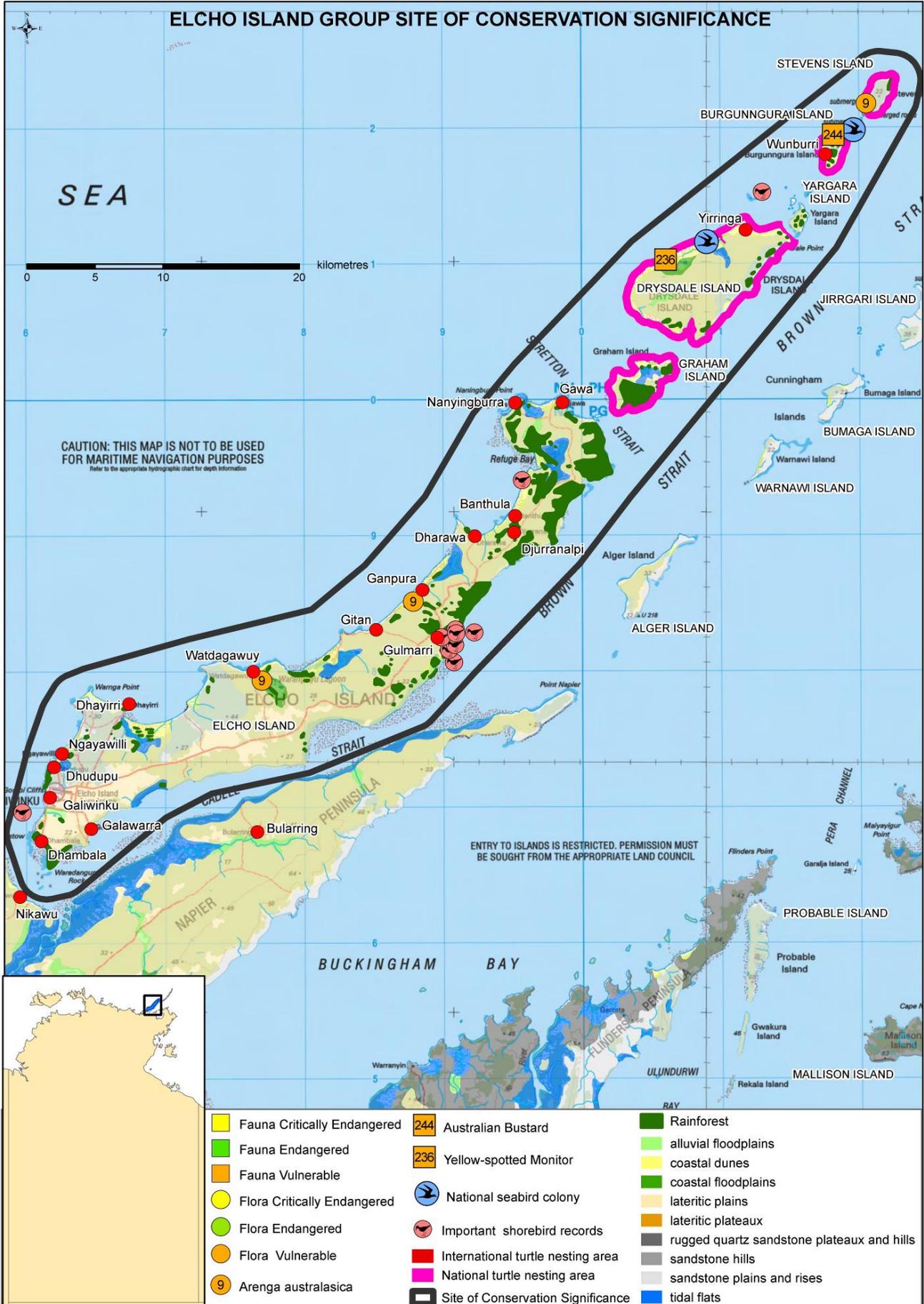


### Condition

About 9% of the known flora in this Site is composed of introduced species, but the majority of these are likely to be restricted to around the Galiwin'ku and other settlements. Much of Elcho Island and the neighbouring islands are in near-pristine condition.

### Current Conservation Initiatives

A draft sea and land management plan was developed for the Elcho-Drysdale, Wessel and Sir English Company Island groups, and the adjoining mainland areas of north-east Arnhem Land in 2003. The plan identified natural resource management issues and priorities. Indigenous rangers based at Galiwin'ku are active trying to maintain the Cane-Toad-free status of the islands, participate in surveys and collection of marine debris, and are managing mission grass and gamba grass around settlements. The islands are part of the proposed Marthakal Indigenous Protected Area.



ELCHO ISLAND GROUP - SITE OF CONSERVATION SIGNIFICANCE

LOCATION	<b>SOCS Number</b>	22 (Not listed in the NT Parks and Conservation Masterplan)
	<b>Latitude/Longitude</b>	11° 50' South, 135° 51' East (at centre)
	<b>Bioregion</b>	Arnhem Coast
	<b>Description</b>	This site includes Elcho, Graham, Drysdale, Burgunngura and Stevens islands and encompasses a terrestrial area of 347 km <sup>2</sup> . The chain of islands is oriented south-west to north-east, and is located immediately west of the Wessel Islands group and only 1.5 km from the mainland. The islands are bounded by the Arafura Sea on the western side and the Cadell and Brown Straits on the east. The Wessel and English Company Island groups to the east of this site are also recognised as a site of high conservation significance in the NT.
THREATENED SPECIES	<b>Significance Rating</b>	<b>National Significance</b>
	<b>Threatened plants and animals</b> (Listings at National/NT level <b>CR</b> - Critically Endangered, <b>EN</b> - Endangered, <b>VU</b> - Vulnerable, <b>NT</b> - Near Threatened, <b>LC</b> - Least Concern, <b>DD</b> - Data Deficient)	Seven threatened species are reported from this site. <b>Plants</b> <ul style="list-style-type: none"> <li>▪ Australian arenga palm <i>Arenga australasica</i> (VU/DD)</li> </ul> <b>Vertebrates</b> <ul style="list-style-type: none"> <li>▪ Australian Bustard <i>Ardeotis australis</i> (-/VU)</li> <li>▪ Yellow-spotted Monitor <i>Varanus panoptes</i> (-/VU)</li> <li>▪ Olive Ridley Turtle <i>Lepidochelys olivacea</i> (EN/DD)</li> <li>▪ Green Turtle <i>Chelonia mydas</i> (VU/LC)</li> <li>▪ Hawksbill Turtle <i>Eretmochelys imbricata</i> (VU/DD)</li> <li>▪ Flatback Turtle <i>Natator depressus</i> (VU/DD)</li> </ul>
ENDEMIC SPECIES	<b>Significance Rating</b>	<b>Not Significant</b>
	<b>Notes</b>	<b>Endemic to the bioregion:</b> Two vertebrate species ( <i>Brachyuropis morrissi</i> and Groote Dwarf Blind Snake <i>Ramphotyphlops minimus</i> ) and one plant species ( <i>Spermacoce stigmatosa</i> ) recorded from this site are endemic to the NT and only found in the Arnhem Coast bioregion. <b>Endemic to the NT:</b> 20 plant and two vertebrate species recorded in this site are only found in the NT. <b>Other:</b> One vertebrate and seven plant species are only recorded in the Arnhem Coast bioregion in the NT but are also found in other states.
WILDLIFE AGGREGATIONS	<b>Significance Rating</b>	<b>International Significance</b>
	<b>Marine turtles</b>	Only low numbers of marine turtles are confirmed nesting on Elcho Island itself, but Graham, Drysdale, Stevens and Burgunngura Islands are highly significant for nesting Olive Ridley and Flatback Turtles (Chatto and Baker 2008). Small numbers of nesting Green and Hawksbill Turtles are also likely. Here we consider the site of National significance to marine turtles.
	<b>Seabirds</b>	Chatto (2001) reports three seabird breeding colonies in this site. Two colonies (S125, S132) support nesting Roseate, Black-naped and Little Terns, and are considered to be of national significance (Chatto 2001).
	<b>Waterbirds</b>	Elcho and the associated islands comprise only limited waterbird habitat and support low numbers of waterbirds (Chatto 2006).
	<b>Shorebirds</b>	The southern coastline of Elcho Island supports large aggregations of shorebirds with over 20 000 recorded in 1992 and 15 000+ present in 1999 (Chatto 2003). Counts of 5000 Bar-tailed Godwits roosting in the site are internationally significant (> 1% East Asian-Australasian Flyway population; Bamford <i>et al.</i> 2008). Chatto (2003; R. Chatto, NRETAS, unpubl.) notes 13 important shorebird records for this site, including the significant count identified above and high counts of other species that are regionally important.
	<b>Other aggregations</b>	Ghost Bats ( <i>Macroderma gigas</i> ) occur in colonies at several coastal locations on Elcho Island and is reported to breed there (I. Morris, Naturalist, pers. comm.). Zodiac Moth ( <i>Alcides</i> sp.) is reported from Elcho Island but further research is needed to determine if this is a new species with a local breeding population in NE Arnhem Land or if they are migrating across the Gulf of Carpentaria from the Wet Tropics (M. Braby, NRETAS, pers. comm.).
WETLANDS	<b>Significance Rating</b>	<b>Not Significant</b>
	<b>Ramsar criteria met</b>	Not assessed
	<b>DIWA criteria met</b>	Not assessed
	<b>Notes</b>	This site does not include extensive wetland areas but spring-fed paperbark swamps provide surface water during the dry season.
	<b>Rivers</b>	There is a lack of well-defined water courses and no permanent freshwater streams on Elcho Island due to the low topography and limited catchment area (Dunlop <i>et al.</i> 1975). Five tidal creek systems with well developed mangrove forests occur on the western side of the island and these provide the local population with a wide range of resources.
FLORA	<b>Significance Rating</b>	<b>Regional Significance</b>
	<b>Notes</b>	<b>Rainforest:</b> There are almost 4300 ha of, mostly, dry rainforest (or 1.5% of the NT rainforest estate) on islands within this site. Most of the rainforest occurs as small patches (<10 ha), but eight patches are >100 ha (Russell-Smith 1991). Rainforest patches on Elcho Island are floristically rich and occupy a variety of habitats (Dunlop <i>et al.</i> 1975).

ELCHO ISLAND GROUP - SITE OF CONSERVATION SIGNIFICANCE

OTHER ENVIRONMENTAL VALUES		<p>The northern portion of Elcho Island is identified as an internationally important site for migratory shorebirds in the East Asian-Australasian Flyway (Bamford <i>et al.</i> 2008).</p> <p>Thirty four species recorded from this site are listed under international conventions or bilateral agreements protecting migratory animals.</p> <p>The outer islands continue to support populations of some reptile species (such as the Yellow-spotted Monitor <i>Varanus panoptes</i>) that have largely disappeared from the adjacent mainland since the arrival of the Cane Toad (I. Morris, Naturalist, pers. comm.).</p> <p>The site will be incorporated into the proposed Marthakal Indigenous Protected Area.</p> <p>Extensive seagrass (<i>Zostra</i> sp.) beds in Cadell Strait support a population of Dugong, and Australian Snubfin Dolphins <i>Orcaella heinsohni</i> also inhabit the waters.</p> <p>The marine areas within this site are likely to encompass other significant biodiversity values and these are currently being explored and collated in a project by the Marine Biodiversity Group of NRETAS (K. Edyvane, NRETAS, pers. comm.).</p>
MANAGEMENT ISSUES		<p><b>Fire:</b> Traditional burning techniques have been continued on Elcho Island until recent times and healthy stands of the fire-sensitive Northern Cypress Pine <i>Callitris intratropica</i> still persist in the woodlands. In the period 1993-2004, 100% of the site was burnt in fewer than three years. Intimate knowledge of traditional fire management on Elcho Island is likely to be being lost.</p> <p><b>Feral animals:</b> Feral pigs are damaging rainforests and swamps on Elcho Island and isolated records of Cane Toads have been reported but it is not known if they are breeding there (Northern Land Council 2004).</p> <p><b>Weeds:</b> Nine declared Category B weeds and seven other undeclared but problematic environmental weeds (high priority weeds: Smith 2001) are recorded from this site. Weed infestations, particularly mission grass <i>Pennisetum polystachion</i>, and gamba grass <i>Andropogon gayanus</i>, are currently mostly limited to the immediate vicinity of Galiwin'ku community and have not yet spread into surrounding woodland (Northern Land Council 2004).</p> <p><b>Other:</b> Marine debris, including ghost nets, are threatening marine turtle populations in north-east Arnhem Land (Carpentaria Ghost Net Program).</p> <p>Illegal professional netting and crabbing occurs around the islands and is likely to be affecting local fisheries (I. Morris, Naturalist, pers. comm.).</p> <p>All coastal areas in northern Australia are at risk of degradation from sea-level rise resulting from climate change (Hyder Consulting 2007).</p>
MANAGEMENT INFORMATION	<b>NRM groups</b>	Gumurr Marthakal Rangers, Galiwin'ku (Elcho Island) (Northern Land Council 2006).
	<b>Protected areas</b>	The site is within the proposed Marthakal Indigenous Protected Area.
	<b>Current management plans</b>	<p><b>Site-specific plans:</b> Draft Land and Sea Management Plan - Marthakal Region (Mahney 2003).</p> <p><b>National recovery plans for threatened species:</b> marine turtles (Environment Australia 2003).</p> <p><b>Other management plans:</b> Australian Weeds Strategy (NRMMC 2007); Threat Abatement Plan for Predation, habitat degradation, competition and disease transmission by feral pigs (DEH 2005); FIREPLAN: Fire management for the savanna community (Russell-Smith <i>et al.</i> in prep.).</p>
	<b>Monitoring programs and research projects</b>	<p>Annual surveys of marine debris on selected sandy beaches by Indigenous rangers as part of the NT Marine Debris Monitoring program (NRETA 2007), plus irregular surveys and collection of fishing nets by Indigenous rangers under the Carpentaria Ghost Net Program <a href="http://www.ghostnets.com.au/index.html">http://www.ghostnets.com.au/index.html</a></p> <p>A botanical survey of Elcho Island was conducted in the mid 1970's (Dunlop <i>et al.</i> 1975), followed by a survey of orchids on the island in 1978 (Clements 1978).</p> <p>Fire in the tropical savannas is mapped continuously under the North Australia Fire Information Project <a href="http://www.firenorth.org.au/nafi/app/init.jsp">http://www.firenorth.org.au/nafi/app/init.jsp</a></p>
	<b>Management recommendations</b>	<p>Continue to support and build capacity of Gumurr Marthakal Rangers to manage threatening processes, monitor threatened species, and document natural resource values (NRETA 2005).</p> <p>In conjunction with Northern Land Council, NT Department of Primary Industry, Fisheries and Mines, traditional owners and other stakeholders, explore the options for conservation of biodiversity around these Island groups including options for joint management (NRETA 2005).</p> <p>Continue to build awareness in local communities about Cane Toads and other invasive species through the Island Ark project (NRETA 2005).</p> <p>Build modern conservation ethics (replacing traditional instruction) into school curricula to equip young Elcho Islanders to manage their land in the future (I. Morris, Naturalist, pers. comm.).</p>
KEY REFERENCES	<b>Papers and reports</b>	<p>Clements, M.A. (1978). <i>Orchid collection trip in NT for Australian National Botanic Gardens</i>. Unpublished report. Canberra, ACT.</p> <p>Dunlop, C.R., Latz, P.K., Maconochie, J.R. (1975). <i>A Botanical Survey of Elcho Island</i>. Herbaria of the Northern Territory, Alice Springs and Darwin, N.T., Australia.</p> <p>Mahney, T. (2003). <i>Draft Land and Sea Management Plan - Marthakal Region</i>. Prepared by Northern Land Council in consultation with Marthakal Homelands Resource Centre.</p>
	<b>Contributors</b>	Ian Morris, Naturalist, Noonamah