

## Anmatyerr North

### Location and Description

The Anmatyerr North Site is approximately 200 km north of Alice Springs. It includes Stirling Swamp, which is a large wetland complex comprised of claypans, lignum swamp, semi-saline samphire and temporary open water, and the adjacent Hanson River. Stirling Swamp is ephemeral and the surrounding vegetation includes coolabah woodland with grassland understorey, eucalyptus woodland and/or acacia shrubland with spinifex grassland understorey. The Site extends to low rocky ranges about 20 km south of Stirling Swamp to encompass the known extent of the threatened giant sweet potato (*Ipomoea polpha* subsp. *latzii*).

### Tenure and Land Use

The Site is predominantly pastoral leasehold land, encompassing two pastoral leases (Stirling and Anningie Stations). The southern portion of the Site is Aboriginal freehold land (Ahakeye Aboriginal Land Trust). Land use within the Site is primarily pastoral operations. Wilora Community (population of 119) is located within the Site and the Stuart highway passes through the northern part of it.

### Significance Rating

National Significance

### Ecological Values

Stirling Swamp supports diverse wetland habitats and a population of the threatened dwarf desert spike-rush, which is found only in the Northern Territory. The low rocky ranges in the south of the Site are the only known location for the threatened giant sweet potato. The Site also supports other plants endemic to the Northern Territory. Threatened vertebrates reported from the Site are Australian Bustard and Bilby.

### Management Issues

Grazing by cattle may be reducing regeneration of some significant plant species and weeds and invasive plants, especially *Parkinsonia aculeata*, buffel grass and couch grass, are known to occur within the Site. Water extraction and fire management also potentially affect the conservation values of the Site.

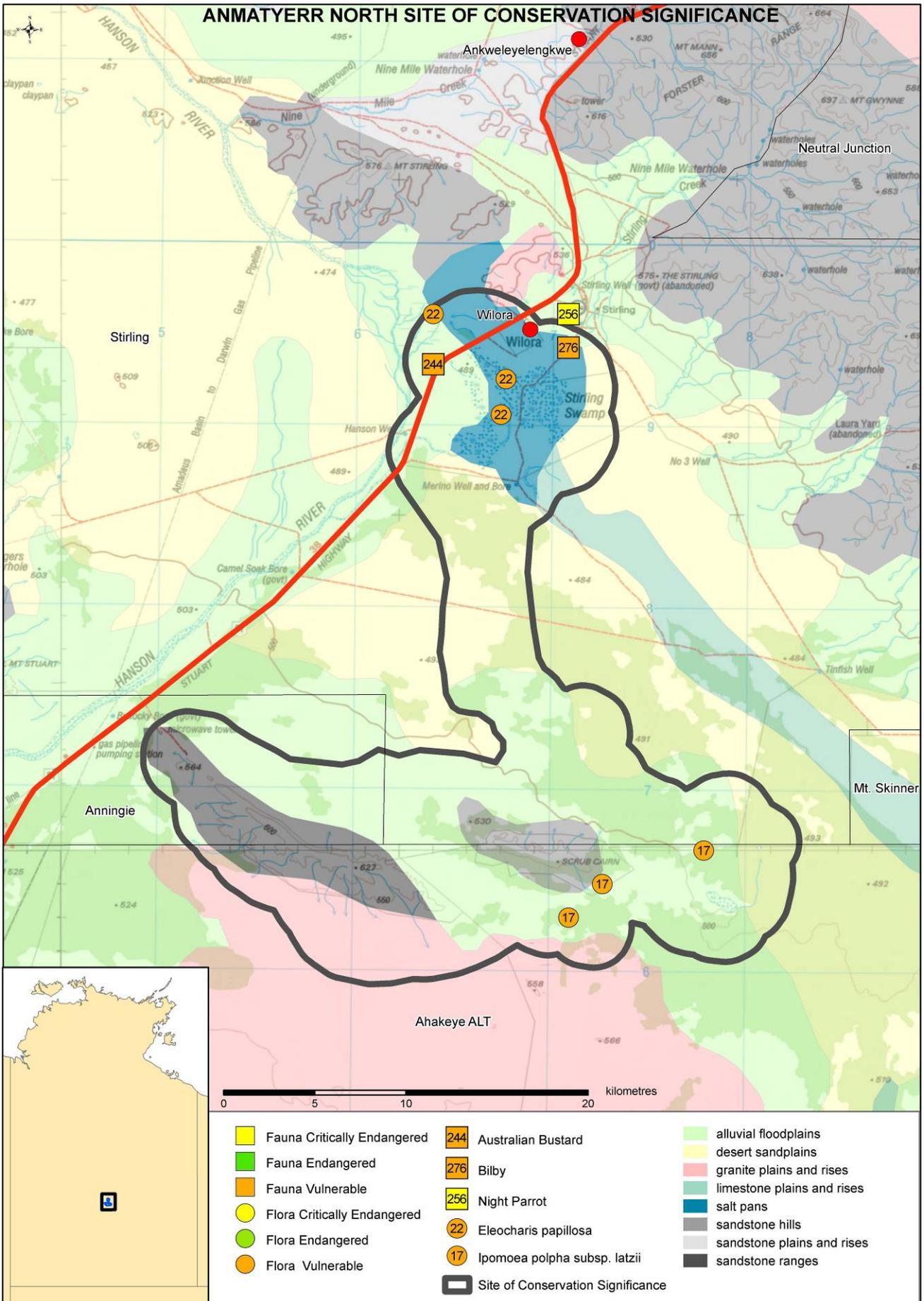
### Condition

Some vegetation communities within the Site are degraded from the impacts of weeds, fire and over-grazing.



### Current Conservation Initiatives

The Site is within the Ti-Tree Water Control District where water resources are managed to avoid stress on groundwater reserves, river flows and wetlands.



ANMATYERR NORTH - SITE OF CONSERVATION SIGNIFICANCE

LOCATION	<b>SOCS Number</b>	46 (NT Parks and Conservation Masterplan Map Number 71)
	<b>Latitude/Longitude</b>	21° 56' South, 133° 43' East (at centre)
	<b>Bioregion</b>	Burt Plains
	<b>Description</b>	<p>This site includes Stirling Swamp and some low rocky ranges about 20 km south of the Swamp, which encompass the entire known extent of the threatened giant sweet potato <i>Ipomoea polpha</i> subsp. <i>latzii</i>. The boundary of the site is delineated based on wetland mapping in Duguid <i>et al.</i> (2005) and the bush potato Site of Botanical Significance as defined by White <i>et al.</i> (2000). The two separate areas have been joined and a 2 km buffer added to the one area. The site encompasses an area of 518 km<sup>2</sup>.</p> <p>Stirling Swamp is dominated by claypans, lignum and samphire with low and open smooth-barked coolabah <i>Eucalyptus victrix</i> woodlands around the margin of the Swamp.</p> <p>The bush potato site is characterized by mulga <i>Acacia aneura</i> groves on red earth soils in low sandstone ranges (White <i>et al.</i> 2000).</p> <p>Mud Hut Swamp, 50 km to the north-west of this site, and Wood Duck Swamp, 35 km to the south-east, are also identified as sites of high conservation significance in the NT.</p>
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)	<p>Four threatened species are reported from this site.</p> <p><b>Plants</b></p> <ul style="list-style-type: none"> <li>▪ Giant sweet potato <i>Ipomoea polpha</i> subsp. <i>latzii</i> (VU/VU)</li> <li>▪ Dwarf desert spike-rush <i>Eleocharis papillosa</i> (VU/VU)</li> </ul> <p><b>Vertebrates</b></p> <ul style="list-style-type: none"> <li>▪ Australian Bustard <i>Ardeotis australis</i> (-/VU)</li> <li>▪ Bilby <i>Macrotis lagotis</i> (VU/VU)</li> </ul> <p>Three threatened species recorded at the site believed to now be locally extinct (Golden Bandicoot <i>Isodon auratus</i>, Mala Lagorchestes <i>hirsutus</i> and Western Quoll <i>Dasyurus geoffroyi</i>), and Bilby may also no longer persist here.</p> <p>Two species listed as Near Threatened in the NT are also known to occur in the site (Spectacled Hare-wallaby <i>Lagorchestes conspicillatus</i> and Woma Python <i>Aspidites ramsayi</i>).</p>
ENDEMIC SPECIES	<b>Significance Rating</b>	<b>Regional Significance</b>
	<b>Notes</b>	<p><b>Endemic to the site:</b> All known locations for one threatened plant species giant sweet potato <i>Ipomoea polpha</i> subsp. <i>latzii</i> are from this site.</p> <p><b>Endemic to the bioregion:</b> The plant species <i>Ipomoea polpha</i> subsp. <i>latzii</i> is endemic to the Burt Plain bioregion.</p> <p><b>Endemic to the NT:</b> Four plant species recorded from the site are NT endemics (<i>Eleocharis papillosa</i>, <i>Goodenia halophila</i>, <i>Ipomoea polpha</i> subsp. <i>latzii</i>, <i>Sclerolaena</i> sp. Saline soils).</p>
WILDLIFE AGGREGATIONS	<b>Significance Rating</b>	<b>Not Significant</b>
	<b>Marine turtles</b>	Not applicable
	<b>Seabirds</b>	None known
	<b>Waterbirds</b>	The site does not support regular or significant aggregations of waterbirds, however it is considered an important site for waterbirds in the arid southern NT (Duguid <i>et al.</i> 2005) and 18 waterbird species are known from the site.
	<b>Shorebirds</b>	None known
	<b>Other aggregations</b>	None known
WETLANDS	<b>Significance Rating</b>	<b>National significance</b>
	<b>Ramsar criteria met</b>	Stirling Swamp is not listed as a Ramsar site, however Duguid <i>et al.</i> (2005) assessed the Swamp against criteria for listing as a wetland of international importance under the Ramsar convention, and concluded that it meets Criterion 1 and possibly Criterion 2.
	<b>DIWA criteria met</b>	Stirling Swamp is not listed in the Directory of Important Wetlands in Australia (DIWA), however Duguid <i>et al.</i> (2005) assessed the Swamp against the criteria for listing and concluded that it meets Criteria 1, 2, 3, 4 and 5.
	<b>Notes</b>	<p>Stirling Swamp has been nominated as a national High Conservation Value Aquatic Ecosystem (the finalised list of HCVAE will replace the DIWA list).</p> <p>Stirling Swamp is associated with the Hanson River and several creeks, including Stirling Creek. The Swamp comprises large areas of claypans, lignum and samphire with low smooth-barked coolabah <i>Eucalyptus victrix</i> woodlands around the outer margins. The Swamp was substantially inundated in April 2000 and again in early 2004, and can retain water for up to several months (Duguid 2005).</p>
	<b>Rivers</b>	The Hanson River is the second largest river in the Burt Plain Bioregion, it rises in the Reynolds and Anmatjira Ranges and feeds into Stirling Swamp.
FLORA	<b>Significance Rating</b>	<b>Not Significant</b>
	<b>Notes</b>	No restricted range or relictual species are recorded from this site.

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OTHER ENVIRONMENTAL VALUES		<p>The Stirling Swamp area has been identified by Duguid <i>et al.</i> (2005) as being a wetland of national significance for biodiversity conservation.</p> <p>Stirling Swamp and the Bush Potato site are both identified as Sites of Botanical Significance in White <i>et al.</i> (2000).</p> <p>Giant sweet potato grows in mature mulga <i>Acacia aneura</i> groves, and needs a deep layer of leaf litter for germination and growth (White <i>et al.</i> 2000).</p> <p>There are two migratory species recorded for this site that are listed under international conventions or bilateral agreements protecting migratory animals.</p>
MANAGEMENT ISSUES		<p><b>Fire:</b> No parts of the site were burnt more than twice in the period 1997-2005, but large-scale fires can occur. The giant sweet potato <i>Ipomoea polpha</i> subsp. <i>latzii</i> is threatened by hot fires which destroy the deep layers of leaf litter required for germination and growth (White <i>et al.</i> 2000).</p> <p><b>Feral animals:</b> No information located</p> <p><b>Weeds and invasive exotic plants:</b> Parkinsonia <i>Parkinsonia aculeata</i> (Weed of National Significance) is recorded from the site. Buffel grass <i>Cenchrus ciliaris</i> is abundant throughout the Stirling Creek floodout area and along the highway near the main swamp area (Duguid 2005). Couch grass <i>Cynodon dactylon</i> appears to be spreading in Stirling Swamp and may affect the Vulnerable plant species <i>Eleocharis papillosa</i>.</p> <p><b>Other:</b> Construction of a road near the site has resulted in severe soil erosion which is impacting upon the population of bush potato <i>Ipomoea polpha</i> subsp. <i>latzii</i> (White <i>et al.</i>, 2000). Water extraction, cattle grazing and soil erosion may also affect the conservation values of the site (NRETA 2005).</p>
MANAGEMENT INFORMATION	<b>NRM groups</b>	Central Land Council, Anmatyerr mer Rangers, Traditional Owners.
	<b>Protected areas</b>	The site is not within the formal network of protected areas within the NT.
	<b>Current management plans</b>	<p><b>Site-specific plans:</b> Water resources in the Ti-Tree Water Control District are managed to avoid stress on groundwater reserves, river flows or wetlands under the Ti-tree region Water Resource Strategy 2002 (DIPE 2002).</p> <p><b>National recovery plans for threatened species:</b> Greater Bilby (Pavey 2006).</p> <p><b>Other management plans:</b> Australian Weeds Strategy (NRMMC 2007); Preliminary resource assessment of the Burt Plain Bioregion (Neave <i>et al.</i> 2006).</p>
	<b>Monitoring programs and research projects</b>	<p>There are two Tier 1 rangeland monitoring points within this site (Karfs and Bastin 2001).</p> <p>Across the NT, fire 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>An assessment of the impacts of couch grass <i>Cynodon dactylon</i> on the threatened dwarf desert spike-rush <i>Eleocharis papillosa</i> is urgently needed at Stirling Swamp (D. Albrecht, NRETAS, pers. comm.).</p> <p>Undertake a survey program to assess conservation and cultural values and develop appropriate conservation management programs as part of the Natural resource Assessment Survey. Follow up results of joint survey to establish status and then manage populations of <i>Ipomoea polpha</i> subsp. <i>latzii</i> (NRETA 2005).</p>
KEY REFERENCES	<b>Papers and reports</b>	<p>Duguid, A., Barnetson, J., Clifford, B., Pavey, C., Albrecht, D., Risler, J. and McNellie, M. (2005). <i>Wetlands in the arid Northern Territory. A report to the Australian Government Department of the Environment and Heritage on the inventory and significance of wetlands in the arid NT.</i> NT Government Department of Natural Resources, Environment and the Arts. Alice Springs.</p> <p>White, M., Albrecht, D., Duguid, A., Latz, P. and Hamilton, M. (2000). <i>Plant species and sites of botanical significance in the southern bioregions of the Northern Territory; volume 2: significant sites.</i> A report to the Australian Heritage Commission from the Arid Lands Environment Centre. Alice Springs, NT.</p>
	<b>Contributors</b>	