



THREATENED SPECIES AND/OR COMMUNITIES RECOVERY TEAM

PROGRAM INFORMATION

Recovery Team name 'Sedgeland in Holocene dune swales Recovery Team'

Reporting Period (Calendar Year) **Calendar year 2009**

Current membership

Member		Representing
1. Chair	Ms Val English	DEC
2. EXEC OFFICER	-	
3.	Dr Neil Gibson	DEC Science Division
4	Professor Phillip Jennings	Wetlands Conservation Society
5.	Ms Renee Evans	DEC Regional Parks Branch
6.	Ms Kate Brown	DEC Urban Nature
7	Mr Ken Sullivan (for Mr James Henson)	City of Rockingham
8.	Mr Tim Fisher	DEC Regional Parks Branch

Dates meetings were held 8 September 2009

One to two paragraph summary of achievements suitable for WATSNU

Summary

Members of the Recovery Team for the 'sedgeland in Holocene dune swales' dealt with a series of issues in 2009 including negotiations and advice about areas that contain the sedgeland community and are the subject of proposals for reservation or development.

Under the direction of DEC's Regional Parks Branch work was continued on controlling the weeds *Juncus acutus* (sharp rush), *Gomphocarpus fruticosus* (cotton bush), and *Cortaderia selloana* (pampas grass) at Lake Cooloongup and Lake Walyungup. Weed control focusing on *Euphorbia terracina* (Geraldton carnation weed) and *Trachyandra divaricata* (dune onion weed) continued at Port Kennedy Scientific Park within occurrences of the sedgeland, in conjunction with Urban Nature and Greening Australia. Urban Nature also produced a report on managing *Euphorbia terracina* in the sedgeland community at the Park.

	Maintenance of fencing was continued at Port Kennedy Scientific Park to help control illegal four wheel drive access, and pedestrian access has been improved at the major park entrance on Port Kennedy Drive. Significant works involving the placement of limestone boulders interspersed with vegetation have been undertaken to help control vehicle access into the Park and new heavy duty boom gates have been manufactured and installed at management access points into the park. With funding assistance from the Commonwealth's Natural Heritage Trust, Swan Coastal District mapped weed infestations, mapped condition, determined priority areas for weed control, and undertook manual control of <i>Euphorbia terracina</i> at the Lake Richmond occurrence. Liaison continued between DEC staff and Landcorp. Landcorp maintained fences, replaced gates, installed new gates and removed rubbish at the Bakewell Drive Port Kennedy occurrences of the sedgeland following advice from DEC. Species and Communities Branch investigated possible additional occurrences of the community in Yalgorup National Park.
List of actions undertaken by Recovery Team (from actions in Recovery Plan)	
KEY ACTIONS	
Action 1	3.2 Identify all occurrences of the community Possible additional occurrences of the community in Yalgorup National Park were investigated by DEC's Species and Communities Branch. The plant communities located were found to be more similar to a closely related community that is not listed as threatened (<i>Melaleuca raphiophylla</i> – <i>Gahnia trifida</i> seasonal wetlands).
Action 2	3.3 Liaise with relevant groups to implement this IRP In 2009, the Recovery Team continued to liaise with numerous groups including local government, industry and the local community to implement the recommendations in the Recovery Plan. In particular, members of the team were involved in negotiations to minimise impacts with regard to development of land, or in seeking to improve management of land at Lake Cooloongup , Golden Bay, Bakewell Drive Port Kennedy, Port Kennedy Scientific Park, and IP14. Liaison continued between Species and Communities Branch, Regional Parks Branch and Landcorp with regard to management of the sedgeland community at Bakewell Drive Port Kennedy. Landcorp continued to fix fences, replace gates, install new gates and remove rubbish at the Bakewell Drive site. This ongoing work helps prevent further rubbish dumping, illegal fires and general disturbance to vegetation.

Action 3	3.4 Minimise further clearing of the community Members of the Recovery Team provided advice and recommendations with regard to impact of development on the sedgeland at IP14, and other areas including Golden Bay, Lake Cooloongup Regional Park, and Port Kennedy Golf Course Stage 2.
Action 4	3.5 Minimise recreational disturbance to the community The Regional Parks Branch continued to work with Mirvac Pty Ltd, the City of Rockingham and the Western Australian Police with regard to managing vehicle access at Port Kennedy Scientific Park. Maintenance of fencing was continued at Port Kennedy Scientific Park to help control illegal four wheel drive access, and pedestrian access has been improved at the major park entrance on Port Kennedy Drive. Significant works involving the placement of limestone boulders interspersed with vegetation have been undertaken to help control vehicle access into the Park and new heavy duty boom gates have been manufactured and installed at management access points into the park. Liaison continued between Species and Communities Branch, Community and Regional Parks Branch, and Landcorp about the management of the sedgeland community at Bakewell Drive Port Kennedy. Landcorp has continued to fix fences, replace gates, install new gates as appropriate and remove rubbish at the Bakewell Drive site. This will help prevent further rubbish dumping, illegal fires and general disturbance to vegetation.
Action 5	3.8 Apply fire response plans Fire response plans are updated bi-annually and circulated to the Fire and Emergency Services Authority (FESA), local Bush Fire Brigades and the City of Rockingham by the Regional Parks Branch. Port Kennedy Scientific Park falls within unexploded ordnance (UXO) zones 1 – 4. Ground and air assets are available to use in this area, including areas outside of defined tracks.
Action 6	3.9 Design and implement a weed control strategy for the community Consistent with the Weed Control and Rehabilitation Plan for Rockingham Lakes Regional Park, The Regional Parks Branch directed work on controlling the weeds <i>Euphorbia terracina</i> and <i>Trachyandra divaricata</i> at Port Kennedy Scientific Park and controlled <i>Juncus acutus</i> (sharp rush), <i>Gomphocarpus fruticosus</i> (cotton bush), and <i>Cortaderia selloana</i> (pampas grass) at Lakes Cooloongup and Walyungup,

	Urban Nature continued weed control work in Port Kennedy Scientific Park including control of <i>Euphorbia terracina</i> (Geraldton carnation weed). Cover had been reduced from 20% to 0.5%, and had remained at the lower level of cover after fire. Sedges and rushes, and native grasses had increased after fire. Urban Nature in conjunction with Greening Australia produced a report on managing <i>Euphorbia terracina</i> in the community at Port Kennedy Scientific Park (Attachment 1). Dune onion weed control was undertaken in 2008-09 but many resprouted. Follow up control was undertaken in 2009-10. With funding assistance from the Commonwealth's Natural Heritage Trust, Swan Coastal District mapped weed infestations, mapped condition, determined priority areas for weed control, and undertook manual control of <i>Euphorbia terracina</i> at the Lake Richmond occurrence.
Action 7	3.11 Report on success of management strategies for wetlands This report completes this action for 2009.
Action 8	3.26 Negotiate for appropriate management of other occurrences in Port Kennedy, outside Port Kennedy Scientific Park Members of the Recovery Team provided advice and recommendations with regard to possible reservation of areas of the community in IP14 and Bakewell Drive. Members of the team also provided comment on issues relating to minimising hydrological and other impacts at the IP14.
Criteria for success or failure as described in Recovery Plans or Interim Recovery Plans	ASSESSMENT OF PROGRESS TOWARDS MEETING CRITERIA FOR SUCCESS AS DESCRIBED IN RECOVERY PLAN Criteria for success in Interim Recovery Plan: <i>An increase in the area, number of occurrences, and completeness of a geomorphic age sequence of this community under conservation management.</i> Ongoing - see above: members of the Recovery Team are involved with ongoing negotiations and provision of advice about areas that contain the sedgeland community and are the subject of proposals for reservation. Liaison with Landcorp, Mirvac and other relevant land managers was undertaken in 2009 to specifically seek to improve on-ground management of occurrences. <i>Maintenance in terms of diversity and basic composition of native species (as described in Gibson et al. 1994).</i>

Ongoing - see above: baseline data on condition have been collected for the sedgeland community in Port Kennedy Regional Park, and permanent monitoring plots have been established in occurrences at Bakewell Drive Port Kennedy, Lake Cooloongup, IP14, Golden Bay, Port Kennedy Scientific Park and Anstey Swamp. The data will also be added to and compared with the original dataset held in the Gibson *et al.* (1994) report 'A floristic survey of the southern Swan Coastal Plain'.

Control of the weeds and associated monitoring was continued within occurrences of the sedgeland community at Port Kennedy Regional Park and at Lake Richmond.

Work on infrastructure and activities to control impacts of illegal access at Port Kennedy Scientific Park was continued in 2009.

- *Maintenance of water levels and quality in the wetlands that contain the community.*

Hydrological data are continually being collected for areas that contain occurrences of the community. Detailed data are being collected for areas adjacent to development areas including Waikiki Station, Lark Hill, Port Kennedy Golf Course Stage 2, Anstey Q wetland, and other specific sites within Rockingham Lakes Regional Park. Long terms trends are yet to be determined.

RPS provided a presentation to the Recovery Team in 2009 with regard to hydrological monitoring data that indicated minimal impacts of the Port Kennedy Golf Course on Port Kennedy Scientific Park. Detailed findings were as follows:

The golf course was constructed in 1997-98, with no major changes detected in levels since groundwater abstraction began. Water level trends are stable, with normal annual fluctuations of 0.5 to 1.0m.

Groundwater quality was also generally stable but with a spike in Phosphate November 2008, which may have been a lab error, or possibly due to fire. pH is consistent, N is stable with small spikes.

External influences on groundwater quality have been identified in the south end of the Park, but groundwater flows indicate that this is from residential areas.

There has been no change in the level of the saline interface since the golf course development.

- *Maintenance or improvement in the condition and extent of the community including reduction of exotic species*

Ongoing - see above: Weed control was continued in 2009 in Port Kennedy Regional Park, and Lake Richmond and weed level continued to be monitored.

Consultants RPS also monitor vegetation in the two long swales in Port Kennedy Regional Park. An increase in weed levels was noted post-fire, with condition changing from Very Good to

	Excellent in 2006-07, to Good Condition in 2008. The main weeds were from the families Papilionaceae (peas), Euphorbiaceae and Asteraceae (daisies).
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