

DEPT CONSERVATION AND LAND MANAGEMENT

**SEDGELANDS IN HOLOCENE DUNE
SWALES RECOVERY TEAM**

**ANNUAL REPORT
2003**

By Val English

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Summary

This report summarises work carried out during 2003 on behalf of the Sedgeland in Holocene Dune Swales Recovery Team.

Introduction

The Sedgeland in Holocene Dune Swales community was assessed as a critically endangered ecological community in 1996. The community is also listed as Endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

The community occurs in linear damplands and occasionally sumplands (wetlands) between Holocene dunes formed over the last 7 000 years. Typical native species in the community include the shrubs *Muehlenbeckia adpressa*, *Acacia saligna* and *Xanthorrhoea preissii*, and the herbs *Baumea juncea*, *Isolepis nodosa*, and *Poa porphyroclados*.

When conserved as a representative unit the range of different ages of the wetlands along the coastal evolutionary sequence, in association with their geomorphic history, provide important opportunities for research on wetland evolution.

The community is known from the following areas:

Table 1: Extent and location of occurrences

Area Number	Location	Estimated area
Occurrences located on the Rockingham Becher Plain		
1	Port Kennedy Scientific Park (PKSP)	~60 ha
2	Port Kennedy area, outside of PKSP (not including Lark Hill, but including area east of Bakewell Drive; and near the coast north of Port Kennedy Drive)	~10 ha
3	Lark Hill	~8 ha
4	Industrial Park 14 (IP 14)	~10 ha
5	Rail loop, boundary of Rockingham and Challenger	~1 ha
6	Secret Harbour, Golden Bay area (outside of the Port Kennedy Scientific Park)	~23 ha
7	Lakes Walyungup/Cooloongup	~2 ha
8	Lake Richmond	~11 ha
Occurrences located outside the Rockingham Becher Plain		
9	Yanchep National Park	<1 ha
10	Preston Beach	~5 ha

The most typical form occurs in the Becher Suite within the Port Kennedy Scientific Park, a Class A Nature Reserve (Rockingham – Becher plain).

The sedgeland community is threatened by clearing, disease introduction, changes to hydrological processes, erosion by wind and water, disturbance due to recreational use/maintenance activities, weed invasion, grazing by rabbits, and inappropriate fire regimes.

Since June 1996, the Sedgeland in Holocene Dune Swale Recovery Team coordinated the development and implementation of the Interim Recovery Plan. This report outlines the progress made in implementing the Interim Recovery Plan during January –December 2003, following the completion of the plan in May 2002.

Recovery Team

Members of the team include:

- Ms Valerie English (Chair) (WA Threatened Species and Communities Unit, CALM). (Replaces previous Chair - John Blyth, who resigned from the Team in February 2003).
- Dr Neil Gibson (Woodvale Research, CALM)
- Dr Jenny Davies (Murdoch University)
- Dr Phil Jennings (Murdoch University)
- Mr Ian Barker (City of Rockingham) (replaced John Tucker from City of Rockingham in 2003)
- Mr Tim Bowra (Regional Parks Co-ordinator, CALM)

The Recovery Team met in February and August 2003 to discuss a variety of issues including areas that contain the sedgeland community and are the subject of proposals for reservation or development.

Major issues discussed at the Recovery Team meeting on 18 February 2003.

- **Waikiki Station.** A representative from New MetroRail (Colin Stedman) provided a presentation about the proposed rail alignment from Perth to Mandurah. This alignment will result in impacts to an occurrence of the sedgeland community at Waikiki. The members of the Recovery Team made a series of recommendations about the management of possible impacts to this wetland, which were noted by the New MetroRail representative.
- **Port Kennedy Golf Course.** A representative from Bowman Bishaw Gorham (Dr Martin Bowman) provided information about the new proposal for development of the next stage of the Port Kennedy Golf Course. Members of the Recovery Team later attended workshops run by the developers to ascertain the current knowledge of, and issues affecting the site; knowledge gaps; and other issues.

Swan Coastal District Manager Paul Brown is now a member of the Port Kennedy Management Board, that was originally established to oversee the golf course development. The plans for the next stage of the golf course have altered considerably since the original concept plan was approved through Parliament. The new developers are now seeking to progress the new scaled-down plan for the site, which will also require Parliamentary approval.

- **Lot 17 Bakewell Drive.** Val English discussed recent progress with reserve boundary negotiations at IP14, and Lot 17 Bakewell Drive.
- **UXO issues.** Tim Bowra discussed the problems with the recent upgrading of risk from UXO at Regional Parks that contain the sedgeland community. Everyone has been excluded from entering the reserves, and this poses many problems for management.

Major issues discussed at the Recovery Team meeting on 21 August 2003, and subsequent actions.

- **Kennedy Park Estate Phase 2 comments.** The members of the Recovery team have continued to provide input and advice on minimising the impact of the next stage of the development on the sedgeland community. In particular, members provided advice on monitoring and possible management of impacts.

- **Lot 40, Forty Rd, Rockingham.** A small and somewhat degraded area of the community occurs on this proposed development site. DoE and WRC were seeking advice from the Recovery team on the buffer required to minimise the risk of hydrological impacts from adjacent development. This information was sought from the Wetlands Research Association (WRA). WRA responded in December 2003 with a recommendation for a 1:1000 gradient to alleviate any groundwater perturbations and nutrient enrichment from proposed upslope development. In this case, buffers of 200 to 500m wide were therefore recommended. This information was forwarded to DoE and WRC.
- **Lot 17 Bakewell Drive.** A meeting was held between DPI and CALM staff in July 2003 about the boundary of a possible reserve at Lot 17 Bakewell Drive. The site is a nominated additional Bush Forever site, but cannot be included in Bush Forever without landholder agreement. Landcorp – the landholders, were reasonably amenable to this proposal, but may request compensation.
- **Waikiki Station.** Further negotiations took place with regard the development proposal which will impact the sedgeland at this site. The EPA released their report on the proposal on 14 August 2003, and New MetroRail released their EMP in December 2003. Members of the Recovery Team provided comments on the latter.
- **Coastal Wetlands, Secret Harbour.** Areas that were included on CALM's TEC database as containing the sedgeland community were found to have been cleared without the knowledge of the Recovery Team, and possibly without appropriate approvals. Members of the Team provided advice to DoE about this in May 2003.
- **Lark Hill.** Staff from ATA Environmental (Dr Paul van der Moezel) requested information from members of the Recovery Team with regard the tolerance of the community to increased water levels. This information was sought from WRA, who provided advice in December 2003. WRA stated that perturbations of 20cm or more in the prevailing water level will alter the sedgeland community. This information was provided to DoE and WRC.

Recovery Actions

This section summarises progress on implementing actions in the Interim Recovery Plan during 2003.

3.4 *Minimise further clearing of the community*

Further clearing or destruction by other means especially of good examples of the older stages of the wetland will be minimised wherever possible by acquisition, negotiation and planning.

Members of the Recovery Team have provided advice and recommendations with regard the possible reservation of areas of the community in IP14, Lot 17 Bakewell Drive and other areas proposed for development. Negotiations are continuing.

3.6 *Maintain hydrology and water quality*

A strategy will be designed to ensure watertable height and water quality remain appropriate to the natural wetland community, through monitoring and ongoing management. This strategy will be incorporated into the full Recovery Plan if required.

Members of the Recovery Team have sought advice on buffers required to help maintain the hydrology of this community. This advice has been provided to decision making bodies such as DoE and WRC.

3.10 Minimise damage to the community from UXO searches

Liaison will be maintained to prevent damage to the threatened community from slashing and other activities during searches for UXO.

Members of the Recovery Team have provided advice during the development of the New MetroRail proposal to ensure that the community is not slashed.

3.11 Report on success of management strategies for wetlands

Annual reports will be prepared by the Recovery Team.

This report completes this action for 2003.

3.12 Ensure any tourist developments do not impact the swale community

The site of any tourist developments or displays will be designed to minimise impact on the swale community and will provide information on the significance of the wetland areas, the need to conserve them, and how this is being done. This will be done as part of the Rockingham Lakes Regional Park Management Plan.

An information shelter has been prepared and constructed. The panels include information about the significance of the dunes, sedgelands and fauna in Port Kennedy Scientific Park. The shelter was prepared by CALM staff in conjunction with the Calix Group. The Calix Group serves the unemployed and disadvantaged within the Western Australian community. The Eco Services division is responsible for completing a range of land care, conservation and land management projects. These are funded through beneficial funds, fundraising, donations and sponsorship. The projects are currently performed on land in the metropolitan and southwest areas.

The display panel will be erected at the southern entrance to the Park, near the Youth Camp. The site has been chosen to ensure there will be no impact to the sedgeland community or to the dune swales.

3.18 Ensure maintenance of strategic firebreaks

Firebreaks will be maintained or new strategic fire breaks constructed on surrounding lands to help prevent fire spreading to the community.

Existing tracks not required as firebreaks will be rehabilitated. No new fire breaks will be constructed on occurrences and preference will be given to closure of tracks that go through the sedgeland community. Limestone may be used to stabilise sections of sand firebreaks.

A strategic firebreak has been installed around the perimeter of the Port Kennedy Scientific Park, alongside the vermin proof fence.

3.26 *Negotiate for appropriate management of other occurrences in Port Kennedy, outside Port Kennedy Scientific Park*

The land tenure of the occurrences of the sedgeland community north of Port Kennedy Drive, and between Bakewell Drive and Ennis Avenue will be identified. Appropriate management actions to conserve the community will then be determined, including negotiations for declaration of areas as conservation reserve if necessary.

As mentioned, members of the Recovery Team have provided advice and recommendations with regard the possible reservation of areas of the community in IP14, and Lot 17 Bakewell Drive. Negotiations are continuing.

3.31 *Incorporate management strategies into planning for the Lark Hill Regional Sport and Recreation complex*

Planning for the Lark Hill Regional Sport and Recreation Complex needs to address reservation of wetland areas, and adequate buffers around each wetland site; controlling access through fencing; developing and implementing an appropriate fire regime; monitoring and responding to wetland condition, water levels and quality; and weed and rabbit control.

As mentioned members of the Recovery Team have sought and provided advice and recommendations with regard the buffers and maintaining water levels for wetlands at this site.

3.32 *Negotiate for appropriate management of the community at IP 14*

The land tenure of the sedgeland community at IP14, including the bushland area bounded by the Rockingham rail loop will be identified. Appropriate management actions to conserve the community will then be determined, including negotiations for declaration as conservation reserve if necessary.

As mentioned members of the Recovery Team have continued to negotiate with regard appropriate boundaries for a reserve at IP14.