

15/03/95

The System 6 Study Team  
Department of Environmental Protection  
14 St Georges Terrace  
PERTH WA 6000

Amendment Proposal for System Six - CREERY WETLANDS MANDURAH

Lot 3 Leslie Street, Mandurah, (currently owned by Cedar Woods/ Esplanade Mandurah Pty Ltd) is virtually the last remnant bushland and Tuart Eucalypt woodland of any real consequence in proximity to the centre of the City of Mandurah.

In the Liberal Party Conservation and Environmental Statement prior to their election to Government it was stated that "there would be no net loss of Wetlands in West Australia," and were committed at that time "to save remnant bushland which has high conservation value".

The Australian Nature and Conservation Agency has stated previously that the whole of Area B should be preserved with a fifty metre strip of Area A set aside as a buffer to any development which may occur in the future on Area A.

The Environmental Protection Authority has stated that the whole of Lot 3 Leslie Street, Areas A, B, & C, have "high conservation value and should be preserved".

The Peel Inlet Management Authority has similar stated views to both the EPA and ANCA, regarding this Wetland area.

Since these Conservation Authorities made their Statements, changes in the Wetlands have occurred.

A recent Study by Murdoch University has focused on the Samphire and its important role in using the phosphates and reducing the incidence of Algal growth in the Estuarine System in Mandurah. Current plans for the Stage 2A Port Mandurah Canal development will destroy a large area of Samphire on the Western side of the Peel Inlet.

The Dawesville Channel has resulted in higher tides as predicted in the Peel Inlet and Harvey Estuary, with the consequence that the CREERY WETLANDS are inundated on a more regular basis, particularly in Areas B and C.

Area A is considered to be a pristine remnant bushland of Tuart and other diversified Flora and Fauna and should be preserved in its present condition.

In conclusion I am of the opinion that the whole of the land Areas A, B, and C should be included in the System Six Plan for conservation and preservation for all time.

The CREERY WETLANDS could be a "King's Park" in the future for the fast growing City of Mandurah, and a cornerstone for the Peel Regional Park.

*John Taylor*

9 LUXMOORE GREEN, ERSKINE, WA 6210

PHONE (09) 5358708

# SYSTEM 6 BUSHLAND SUBMISSION FORM FOR CONSIDERATION IN THE UPDATE PROGRAMME

If you wish to submit more than one area for consideration in the System 6 update, please use a separate form for each area.

Please fill in each section giving as much information as possible.

## LOCATION, OWNERSHIP AND ZONING OF THE AREA

### 1. Location

Please give as accurate and detailed a description as possible of the site location

Please include either a hand drawn or copied map showing the area of the area

- a) Bordering Roads: MANDURAH BYPASS ROAD & WANJEEP ROAD (COODANUP)
- b) Nearest Corner: LESLIE ST, MANDURAH BYPASS ROAD, MANDURAH
- c) Lot Number: 3 Street Number: 1
- d) Town/Suburb/Location: MANDURAH WA
- e) Local Council: CITY OF MANDURAH
- f) Site Name (if any): KNOWN LOCALLY AS THE CREEPY WETLANDS
- g) Approximate size of the area (ha): APPROX 19.7 HECTARES
  - area A = 96 ha
  - B = 63 ha
  - C = 38 ha
- h) Please locate the area on a map and give us map reference possible:
 

.....
- i) Map: ..... Streetsmart /UBD/Other: .....
- j) Map no.: .....
- k) Grid Ref: .....
- l) Please give any other information that may help us to find
 

.....

m) Are you aware of any development proposals that are likely to affect the area?  
THE PROPOSED HARBOUR CITY CANAL & RESIDENTIAL DEVELOPMENT  
HAS NOT RECEIVED APPROVAL TO PROCEED AS THE REZONING OF THE  
CREEPY WETLANDS HAS BEEN REJECTED BY MANDURAH COUNCIL 21/4/95

**NOTE: Areas that have already been given development approval should not be nominated**

Please fill out those questions that you can answer

2. Who owns the area? (If owned by the person/s making the nomination please indicate) ..... CEDARWOODS PT LTD (ESPLANADE MANDURAH PTY LTD)

3. If you own the area, and may be interested in participating in conservation on private land initiatives please indicate (and leave your name and address at the end of this submission form) .....

4. What is the area zoned? (please indicate whether zoning is Town Planning Scheme or Metropolitan Region Scheme) ..... RURAL

CAN YOU TELL US A LITTLE ABOUT THE PHYSICAL CHARACTERISTICS OF THE AREA

5. Why do you consider this area important? (Refer to Guiding Issues paper)

- (1) SHOULD BE LISTED FOR RAMSAR & HERITAGE LISTING
- (2) LAST REMNANT BUSHLAND NEAR THE MANDURAH CENTRAL BUSINESS DISTRICT
- (3) NO OTHER AREA LIKE IT AVAILABLE IN THE NEAR CENTRE OF MANDURAH.

6. What is/are the soil type/s and colours? .....

Type: Sand/Clay/Gravel/Loam/Silt

Colour: White/Grey/Brown/Orange/Yellow/Red/Black

7. Does the area have any special features such as unusual landforms / landscapes that still retain their natural vegetation? Yes/No

If yes, what are they? THE LAST REMAINING REMNANT TUART BUSHLAND IN NEAR PROXIMITY TO THE CBD OF THE CITY OF MANDURAH  
(OTHER SPECIES INCLUDE TARRAH, MARRI, CASUARINA, MELALEUCA ETC)

8. Is the area a wetland or does it include a wetland? ..... YES

If yes, what kind of a wetlands is it?

- a) lake
- b) river
- c) stream
- d) swamp
- e) estuary
- f) seasonally wet
- g) other TIDAL IN AREAS B + C.

9. What percentage of the wetland is open water in summer? .....

CAN YOU TELL US A LITTLE ABOUT THE VEGETATION /FAUNA ON THE NOMINATED AREA.

10. What percentage of the area is indigenous vegetation? ..... MOST OF IT

11. If the area includes regions cleared of native bushland please indicate reasons for the inclusion: ..... 4WD TRACKS ..... FIREBREAKS

12. Has any previous flora or fauna survey work been done on the area?  
..... YES

If yes, please give details of the work ..... MURDOCK UNIVERSITY 1993/94  
..... KIM BUCKLECK 1988/89

13. How would you rate the condition of the native bushland? (see attached table)

- a) pristine
- b) excellent
- c) very good
- d) good
- e) degraded (some, with dumped rubbish)
- f) completely degraded
- g) don't know

14. Please indicate the disturbances affecting the area and where appropriate the percentage of the area disturbed.

- a) Partial clearing
- b) fragmentation
- c) Selective removal of species: timber cutting, wildflower picking, mowing dieback and other plant diseases
- d) Fire regime, including intensity, season and frequency
- e) 'Enrichment plantings' that is plantings of species not found in that community
- f) Weed invasion
- g) Animal impact: horses, foxes, rabbits, cats, dogs, camels, goats etc
- h) Soil movement, both removal and dumping
- i) Changes in water regimes; flooding, drainage and watering due to opening of Dawesville channel
- j) Salinity
- k) Fertiliser drift and along waterways nutrient influx
- l) Mining, including that for road works

- m) Grazing: stock, overgrazing by feral or native mammals
- n) Proliferation of tracks, fire breaks and walk trails
- o) Off-road vehicle use
- p) Use as service corridors by the SEC, Main Roads, Water Authority.

(Source: B Keighery, Bushland Plant Survey, September 1994)

15. Does the area contain any plant species of special interest that you know of (eg. declared rare flora, priority taxa, outlier populations) ..... YES.....

Do you know what they are? TUART WETLAND.....

16. Do you know of any native animals that use the area? <sup>YES</sup> BANDICOOT, BARK-TAILED POSSUM AND PROBABLY MANY OTHERS, REPTILES ETC  
 Can you list those you know of? (birds, mammals, reptiles, amphibians etc)

AT LEAST 20 SPECIES OF BIRDS, ROOSTING AREAS FOR MANY, INCLUDING YELLOW-BILLED SPIN BILLS

17. Is the area used by any native animals of special interest? (eg. endangered species, large/important populations)..... (FOXES & DOGS UNFORTUNATELY.)

If yes, please name them and indicate source of information  
ROYAL AUSTRALASIAN ORNITHOLOGIST'S UNION.

**CAN YOU TELL US A LITTLE ABOUT THE SURROUNDING AREA**

18. Are there any bushland areas (including wetlands) near to this area?  
HOUSING & COMMERCIAL DEVELOPMENT ON THREE SIDES (BOUNDARIES)

If yes, how close are they? ON THREE BOUNDARIES

Are they already conservation reserves? AREA C ALREADY LISTED IN SYSTEM 6

What is their approximate size? .....

19. Does the submitted area link other bushland areas? DEVELOPMENTS WITH SOME TREES BUT HARDLY "BUSHLAND" AREAS

Please attach any additional information about the area which may be of use when assessing it.

CREERY WETLANDS SUPPORT GROUP

(111)

c/- Mr. J.R. Mc Lean  
102A Ormsby Terrace  
MANDURAH W.A. 6210

The System 6 Study Team  
Department of Environmental Protection  
141 St Georges Terrace  
PERTH W.A. 6000

SYSTEM 6 UPDATE PROGRAMME.

The attached System 6 Bushland Submission Form recommends that the whole of the area known as the Creery Wetlands be included in System 6 recommendations and not just the mainland foreshore part of it adjacent to Creery Island-Reserve 8185- referred to in System 6 Recommendation C50-Peel Inlet.

The submission takes into account assessments made by the EPA and which appeared in Bulletins Nos 656 of October 1992 and 695 of August 1993 as to the Authority's views regarding the conservation values of part of the subject area. It also reflects the wishes of Mandurah residents evidenced in the result of the referendum held in September 1994, when approximately 2/3rds voted against a proposed development on the Creery Wetlands.

Appendix 'A' attached hereto is taken from EPA Bulletin 656 and shows the three areas into which the EPA saw fit to divide the Creery Wetlands for the purpose of making its assessments.

Area 'A'	Approx 96 ha	-classified as 'Casuarina/Melaleuca woodland'
Area 'B'	" 63 ha	classified as 'Sapphire Flats & Pools'
Area 'C'	" 38 ha	classified as 'conservation-Foreshore Reserves'

Area 'C' approximates the mainland area adjacent to Creery Island which is already covered in Recommendation C50.

In Bulletin 656 EPA identified Area 'B' as shown in Appendix 'A' as "having high conservation values as part of the Peel Harvey Estuary, and has concluded that it would be environmentally preferable if those values could be protected."

In Bulletin 695 (P3) EPA reiterated its view "that it would be environmentally preferable if Area B was purchased and retained for conservation"

In view of the additional information on estuarine wetlands which has become available to the Department of Environmental protection since its recommendation C50 was created and in view of its expressed views as to the high conservation values of Area B there appears no point in further attempting to justify Area B being included in a system 6 update.

We would like to submit that in addition to Area B, Area A should also be included in the System 6 update for the following reasons:-

1. The broad classification of Area 'A' in Figure 1 of EPA Bulletin 656 (Appendix 'A' hereto) oversimplifies its description. Appendix 'B' hereto (Basic Vegetation Types on the Creery Wetlands) whilst not comprehensive gives a better understanding of its true nature. Reference to Appendix 'B' shows that of the total 96ha of Area 'A' about 20 ha is seasonally inundated samphire, about 46 ha is casuarina and melaleuca and about 30 ha is Banksia, Marri and Tuart woodlands.

The 30ha of Banksia, Marri and Tuart which effectively makes up the Eastern Boundary of the Creery Wetlands is in fact the only part of its total area of 197 ha which is above flood level. This was recognised by Mandurah Council in April 1990, when by resolution G1571 (see Appendix 'E' hereto) it decided that it would not consider rezoning the part of the wetlands which had conservation significance and that any development of the site would be restricted to 'dry land' subdivision on land which had an existing level acceptable for that type of subdivision in Mandurah. The dry land council had in mind, was the 30 ha of Banksia, Marri and Tuart referred

to above.

Since 1990 the public and its Council have become more conservation minded to the point where a proposal to develop the wetlands was overwhelmingly rejected in 1994 referendum and Council responded by unanimously deciding that it would not approve of any part of the area being rezoned for development.

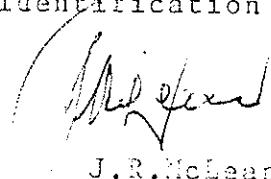
The referendum result and councils decision reflects the growing awareness of the need to protect the whole area because of:

- a. That the 20 ha (approx) of samphire in Area A could become more important with time because of likely effects of the Dawesville Cut on samphire in other areas which will now become inundated more frequently.
- b. The need to protect the wetlands—Areas B & C and the samphire in Area A with an adequate buffer. In this respect the 30 ha of Banksia, Marri and Tuart provides a natural buffer of a sustainable size. Its sustainability should not be compromised by any reduction in its size.
- c. The 30 ha of Banksia, Marri and Tuart is the last parcel of almost pristine local bushland close to central Mandurah and strong feeling exists in the community for it being procured and reserved for Mandurah in the same way as Kings Park is now reserved.

## 2. Aboriginal Sites.

Copies of a letter dated 9 May 94 to the Department of Aboriginal Sites and the Departments reply dated 18 May 94 are attached. (Appendix 'F' and Appendix 'G').

System 6 listing could ensure the area is given protection until identification of sites is achieved.



J.R. McLean

Coery Wetlands Support Group

## SYSTEM 6 BUSHLAND SUBMISSION FORM FOR CONSIDERATION IN THE UPDATE PROGRAMME

If you wish to submit more than one area for consideration in the System 6 update, please use a separate form for each area.

Please fill in each section giving as much information as possible.

### LOCATION, OWNERSHIP AND ZONING OF THE AREA

**1. Location**

Please give as accurate and detailed a description as possible of the site location

Please include either a hand drawn or copied map showing the area of the area

a) Bordering Roads: MANDURAH BY PASS ROAD - WANJEEP STREET

b) Nearest Corner: N/A

c) Lot Number: 3 Street Number: LESLIE STREET

d) Town/Suburb/Location: PART COOKBURN LOT 16

e) Local Council: MANDURAH CITY COUNCIL

f) Site Name (if any): 'CREEPY WETLANDS

g) Approximate size of the area (ha): 197 consisting of 

AREA 'A'	96ha
" B'	63ha
" C'	38ha - ALREADY COVERED BY SYSTEM 6 RECOMMENDATION C50. SEE FIG. 37 ON

h) Please locate the area on a map and give us map reference  
SEE FIGURE 1 OF EPA BULLETINS 656 (OCT 92) OR 695 (AUG 93) - SEE APPENDIX 'A' ATTACHED  
FILE: P49 OF REPORT 13 OCTOBER 1983

i) Map: ..... Streetsmart /UBD/Other: .....

j) Map no.: .....

k) Grid Ref: .....

l) Please give any other information that may help us to find

.....

m) Are you aware of any development proposals that are likely to affect the area?

IN 1994, SUBSEQUENT TO A REFERENDUM MANDURAH COUNCIL UNANIMOUSLY VOTED AGAINST ALLOWING THE AREA TO BE REZONED FROM ITS LONG STANDING 'RURAL' ZONING TO PERMIT DEVELOPMENT

**NOTE: Areas that have already been given development approval should not be nominated**

Please fill out those questions that you can answer

2. Who owns the area? (If owned by the person/s making the nomination please indicate) CEDAR WOODS LTD

3. If you own the area, and may be interested in participating in conservation on private land initiatives please indicate (and leave your name and address at the end of this submission form) N/A

4. What is the area zoned? (please indicate whether zoning is Town Planning Scheme or Metropolitan Region Scheme) RURAL (MANDURAH TPS)

CAN YOU TELL US A LITTLE ABOUT THE PHYSICAL CHARACTERISTICS OF THE AREA

5. Why do you consider this area important? (Refer to Guiding Issues paper)  
*(i) AREA 'A' - LAST REMAINING AREA OF LOCAL BUSHLAND CLOSE TO CITY - ALSO SEE COVERING LETTER*  
*(ii) AREA 'B' - HIGH CONSERVATION VALUES - SEE EPA BULLETINS 656 & 695*  
*(iii) AREA 'C' - ALREADY COVERED BY SYSTEM 6 RECOMMENDATION C50*  
 AREAS B & C - PARTS OF A AREA INTERNATIONALLY RECOGNISED AS IMPORTANT WATER BIRD (INCLUDING TRANSEQUATORIAL) HABITATS

6. What is/are the soil type/s and colours ?

Type: Sand/Clay/~~Gravel~~/Loam/Silt  
Colour: White/Grey/Brown/~~Orange~~/~~Yellow~~/~~Red~~/Black

7. Does the area have any special features such as unusual landforms / landscapes that still retain their natural vegetation? Yes/~~NO~~

If yes, what are they? SEE COVERING LETTER AND APPENDIX 'B' - BASIC VEGETATION TYPES ON THE GREAT WETLANDS

8. Is the area a wetland or does it include a wetland? YES

If yes, what kind of a wetlands is it?

- a) lake
- b) river
- c) stream
- d) swamp
- e) estuary
- f) seasonally wet

g) other - SINCE THE OPENING OF THE DAWESVILLE CUT, HIGHER TIDES HAVE RESULTED IN SOME AREAS WHICH WERE PREVIOUSLY ONLY SEASONALLY INUNDATED NOW BEING FREQUENTLY INUNDATED.

9. What percentage of the wetland is open water in summer? PRIOR TO THE OPENING OF THE DAVENVILLE CUT ONLY CABERTY LAGOON REMAINED OPEN WATER THROUGH SUMMER. SINCE THE CUT WAS OPENED HOWEVER THE RESULTING MORE FREQUENT INUNDATION HAS ALLOWED SOME WETLAND POOLS TO HOLD WATER ALL YEAR. THE PERCENTAGE IS NOT KNOWN

CAN YOU TELL US A LITTLE ABOUT THE VEGETATION /FAUNA ON THE NOMINATED AREA.

10. What percentage of the area is indigenous vegetation? SEE APPENDIX 'B' ATTACHED BASIC VEGETATION TYPES ON THE CABERTY WETLANDS

11. If the area includes regions cleared of native bushland please indicate reasons for the inclusion. SMALL AREA CLEARED FOR ORCHARD OR SMALL FARM MANY YEARS AGO NOW REGENERATING AND IN ANY CASE TOO SMALL TO WARRANT EXCISION

12. Has any previous flora or fauna survey work been done on the area?  
NOT KNOWN

If yes, please give details of the work .....

13. How would you rate the condition of the native bushland? (see attached table)

- a) pristine
  - b) excellent
  - c) very good
  - d) good
  - e) degraded
  - f) completely degraded
  - g) don't know
- AREA 'A' ALMOST PRISTINE BUSHLAND  
AREA 'B' DEGRADED BY VEHICLE TRACKS  
HOWEVER, THERE IS NO DOUBT BOTH AREAS WILL REGENERATE QUICKLY, IF LEFT ALONE

14. Please indicate the disturbances affecting the area and where appropriate the percentage of the area disturbed.

- a) Partial clearing SEE 11 ABOVE
- b) fragmentation N/A
- c) Selective removal of species: timber cutting, wildflower picking, mowing dieback and other plant diseases N/A
- d) Fire regime, including intensity, season and frequency BUSHLAND HAS PROVED ABILITY TO SURVIVE OCCASIONAL SUMMER FIRES
- e) 'Enrichment plantings' that is plantings of species not found in that community N/A
- f) Weed invasion N/A
- g) Animal impact: horses, foxes, rabbits, cats, dogs, camels, goats etc N/A
- h) Soil movement, both removal and dumping. SOME DUMPING NEAR BY PAST ROAD BY MAIN ROADS DEPARTMENT DURING BRIDGE CONSTRUCTION
- i) Changes in water regimes; flooding, drainage and watering ~~N/A~~ SEE OTHER COMMENTS RE EFFECTS OF DAVENVILLE CUT
- j) Salinity - MAY BE AFFECTED IN LONG TERM BY DAVENVILLE CUT.
- k) Fertiliser drift and along waterways nutrient influx N/A
- l) Mining, including that for road works N/A

m) Grazing: stock, overgrazing by feral or native mammals N/A

n) Proliferation of tracks, fire breaks and walk trails } DAMAGE EVIDENT BUT AREAS DAMAGED WILL REGENERATE QUICKLY IF LEFT ALONE

o) Off-road vehicle use

p) Use as service corridors by the SEC, Main Roads, Water Authority. N/A.

(Source: B Keighery. Bushland Plant Survey, September 1994)

15. Does the area contain any plant species of special interest that you know of? (eg. declared rare flora, priority taxa, outlier populations) YES. SAMPHIRE IS OF SPECIAL INTEREST. ACCORDING TO C.A.L.M SUBMISSION E.P.A. BULLETIN 656. CREEK WETLANDS CONTAIN APPROX 25% OF SAMPHIRE IN WHOLE PEEL ESTUARY SYSTEM  
Do you know what they are? SARCOCONIA QUINQUEFLORA -

16. Do you know of any native animals that use the area? CALM. SUBMISSION - BULLETIN 656 "AREA MAY BE INHABITED BY SOUTHERN BROWN BANDICOOT AND HONEY POSSUM"

Can you list those you know of? (birds, mammals, reptiles, amphibians etc)

AREA IS RECOGNISED IMPORTANT WATERBIRD HABITAT - FOR LIST SEE WATERBIRD SURVEY DATA - APPENDIX 'C' ATTACHED AND RADIO LETTER DATED 23 DECEMBER 1993 - APPENDIX 'D' ATTACHED.

17. Is the area used by any native animals of special interest? (eg. endangered species, large/important populations).....

If yes, please name them and indicate source of information

CAN YOU TELL US A LITTLE ABOUT THE SURROUNDING AREA

18. Are there any bushland areas (including wetlands) near to this area? NO

If yes, how close are they? N/A

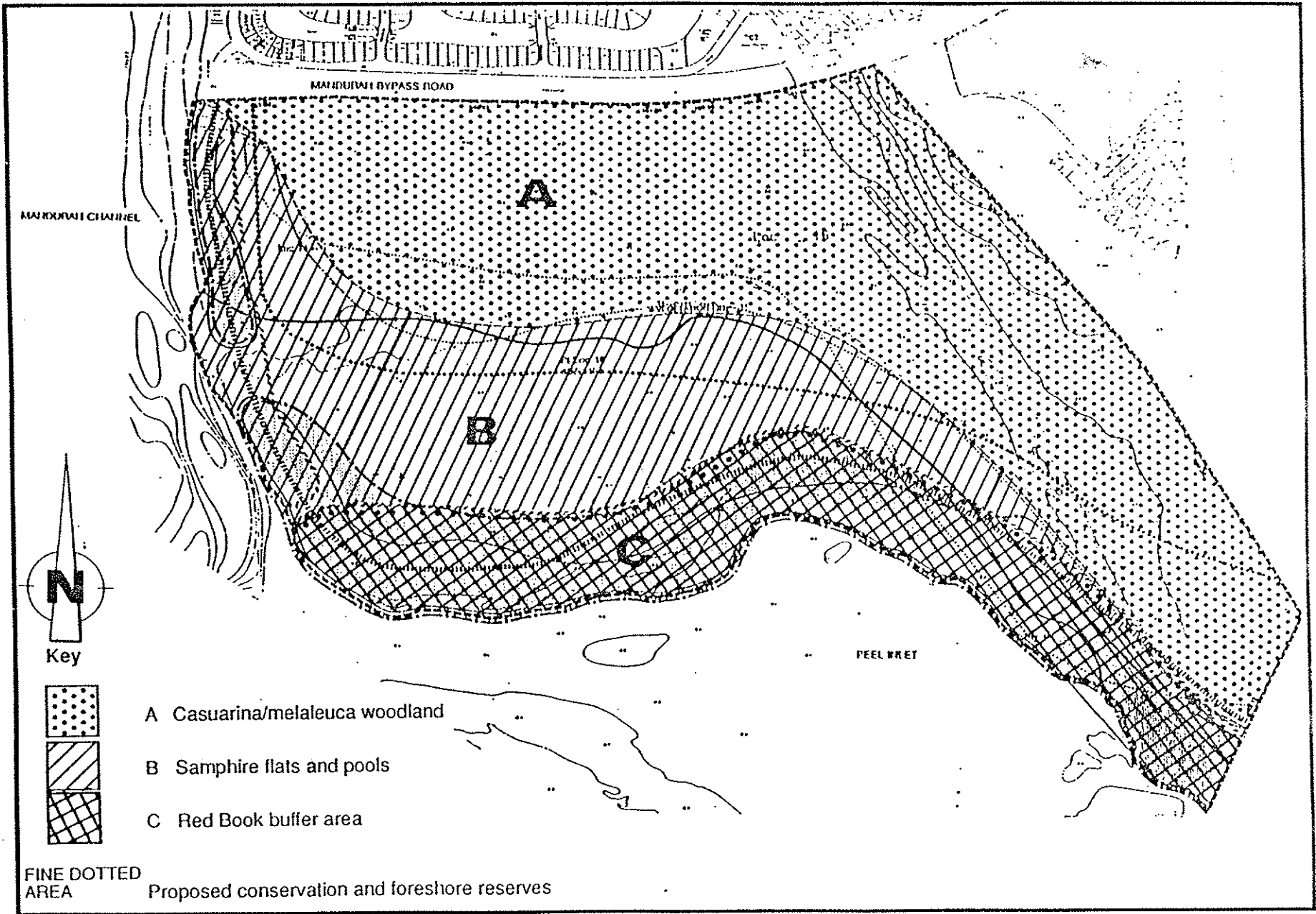
Are they already conservation reserves? N/A

What is their approximate size? N/A

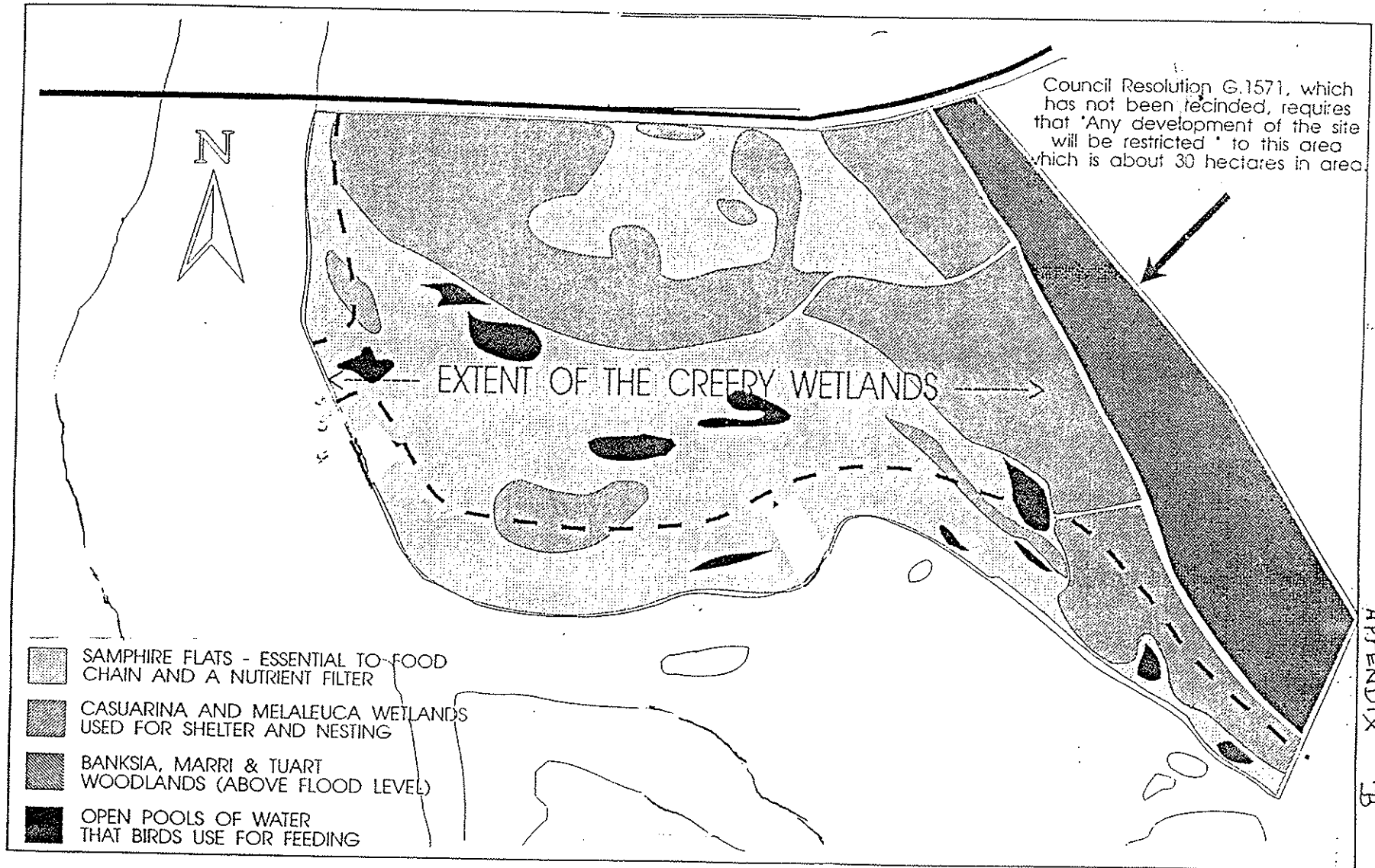
19. Does the submitted area link other bushland areas? No -

Please attach any additional information about the area which may be of use when assessing it.

Figure 1: Map of project area showing three major ecosystem areas



APPENDIX 'A'



BASIC VEGETATION TYPES ON THE CREERY WETLANDS

WATERBIRD SURVEY DATA  
(by AR & MJ Bamford Consulting Ecologists)

APPENDIX 'C'

Table 1. Waterbird records from RACU data, presenting the sum of maximum counts for all Peel Inlet sites (including Creery Marshes) and Creery Marshes separately, obtained in the period 1981-1988. The maximum counts on Creery Marshes are also expressed as the percentage of the maximum total count for Peel Inlet for each species (in parenthesis). Species subject to international conservation treaties are marked with an asterisk.

Species	Peel Inlet	Creery Marshes
Great Crested Grebe	40	-
Hoary-headed Grebe	975	-
Australasian Grebe	6	2 (33.3)
Australian Pelican	919	100 (10.9)
Darter	70	8 (11.4)
Great Cormorant	209	12 (5.7)
Pied Cormorant	1198	258 (21.5)
Little Black Cormorant	1422	100 (7.0)
Little Pied Cormorant	1647	405 (24.6)
Pacific Heron	1	-
White-faced Heron	258	52 (20.2)
Great Egret*	218	30 (13.8)
Cattle Egret*	1	-
Little Egret	33	21 (63.6)
Rufous Night Heron	1	-
Glossy Ibis	4	1 (25.0)
Australian White Ibis	51	17 (33.3)
Straw-necked Ibis	290	9 (3.1)
Royal Spoonbill	9	1 (11.1)
Yellow-billed Spoonbill	117	52 (44.4)
Black Swan	2559	120 (4.7)
Australian Shelduck	6767	500 (7.4)
Pacific Black Duck	3450	200 (5.8)
Gray Teal	10408	951 (9.1)
Chestnut Teal	4	-
Australasian Shoveler	1510	10 (0.7)
Pink-eared Duck	200	-
Hardhead	11	-
Maned Duck	4	-
Blue-billed Duck	1200	-
Musk Duck	150	-
Osprey	5	2 (40.0)
White-bellied Sea-Eagle	3	1 (33.3)
Marsh Harrier	3	1 (33.3)
Australasian Crake	1	1 (100.0)
Spotless Crake	2	-
Eurasian Coot	118	-
Pied Oystercatcher	65	60 (92.3)
Grey Plover*	657	600 (91.3)
Lesser Golden Plover*	85	85 (100.0)
Hooded Plover	1	-
Mongolian Plover*	4	4 (100.0)

Table 1 (cont.).

Species	Peel Inlet	Creery Marshes	
Large Sand Plover*	30	15	(50.0)
Red-capped Plover	1445	223	(15.4)
Black-fronted Plover	6	1	(16.7)
Black-winged Stilt	3693	340	(9.2)
Banded Stilt	20481	9000	(43.9)
Red-necked Avocet	3077	101	(3.2)
Ruddy Turnstone*	13	-	
Eastern Curlew*	25	11	(44.0)
Whimbrel*	12	7	(58.3)
Grey-tailed Tattler*	15	5	(33.3)
Common Sandpiper*	32	2	(6.2)
Greenshank*	528	200	(37.9)
Terek Sandpiper*	13	7	(53.8)
Marsh Sandpiper*	289	284	(98.3)
Redshank	1	1	(100.0)
Bar-tailed Godwit*	2078	500	(24.1)
Black-tailed Godwit*	1	1	(100.0)
Red Knot*	654	100	(15.3)
Great Knot*	986	850	(86.2)
Sharp-tailed Sandpiper*	4517	2381	(52.7)
Pectoral Sandpiper*	5	2	(40.0)
Red-necked Stint*	11371	3246	(28.5)
Long-toed Stint*	8	-	
Sanderling*	12	10	(83.3)
Curlew Sandpiper*	4808	2000	(41.6)
Broad-billed Sandpiper*	1	1	(100.0)
Ruff*	2	1	(50.0)
Silver Gull	5545	1000	(18.0)
Whiskered Tern	1107	200	(18.1)
White-winged Tern*	5	-	
Gull-billed Tern	14	6	(42.9)
Caspian Tern*	106	7	(6.6)
Common Tern*	9	-	
Roseate Tern	20	-	
Fairy Tern	94	15	(16.0)
Crested Tern	129	22	(17.1)
Little Grassbird	22	18	(81.8)
Clamorous Reed-Warbler	3	-	
Unidentified grebes	313	200	(63.9)
Unidentified ducks	17000	2000	(11.8)
Unidentified stilts	3000	-	
Unidentified terns	400	-	
Unidentified waders	3470	1000	(28.8)
TOTAL	120016	27360	(22.8)

Table 2. Waterbird records from Ninox data, presenting the sum of all counts for all Peel Inlet sites (including Creery Marshes) and Creery Marshes separately, obtained in the period November 1988 to December 1989. The counts on Creery Marshes are also expressed as the percentage of the total count for Peel Inlet for each species (in parenthesis). Species subject to international conservation treaties are marked with an asterisk.

Species	Peel Inlet	Creery Marshes
Great Crested Grebe	3	-
Hoary-headed Grebe	80	-
Australasian Grebe	142	-
Australian Pelican	718	88 (12.3)
Darter	171	1 (0.6)
Great Cormorant	133	5 (3.8)
Pied Cormorant	41	5 (12.2)
Little Black Cormorant	1686	13 (0.1)
Little Pied Cormorant	2098	371 (17.7)
White-faced Heron	722	115 (15.9)
Great Egret*	340	57 (16.8)
Little Egret	78	22 (28.2)
Rufous Night Heron	1	-
Australian White Ibis	119	23 (19.3)
Straw-necked Ibis	3	-
Royal Spoonbill	4	2 (50.0)
Yellow-billed Spoonbill	244	46 (18.9)
Black Swan	489	193 (39.5)
Australian Shelduck	3113	460 (14.8)
Pacific Black Duck	1920	253 (13.2)
Mallard (domestic duck)	8	-
Grey Teal	4238	1146 (27.0)
Chestnut Teal	2	-
Australasian Shoveler	21	-
Pink-eared Duck	112	-
Hardhead	43	-
Maned Duck	11	-
Blue-billed Duck	5	-
Musk Duck	215	3 (23.1)
Osprey	13	1 (12.5)
Marsh Harrier	8	-
Australasian Crake	1	-
Spotless Crake	4	-
Dusky Moorhen	1	-
Eurasian Coot	1536	5 (45.5)
Pied Oystercatcher	11	66 (80.5)
Grey Plover*	82	26 (8.8)
Red-capped Plover	297	-
Black-fronted Plover	20	-
Black-winged Stilt	1503	862 (57.4)
Banded Stilt	722	722 (100.0)

Table 2 (cont.).

Species	Peel Inlet	Creery Marshes
Red-necked Avocet	1400	11 (0.1)
Eastern Curlew*	6	6 (100.0)
Whimbrel*	6	-
Ruddy Turnstone*	1	1 (100.0)
Common Sandpiper*	16	-
Greenshank*	987	246 (24.9)
Marsh Sandpiper*	8	-
Terek Sandpiper*	3	-
Bar-tailed Godwit*	251	247 (98.4)
Great Knot*	35	-
Sharp-tailed Sandpiper*	257	41 (16.0)
Red-necked Stint*	261	58 (22.2)
Curlew Sandpiper*	165	6 (3.6)
Silver Gull	2304	464 (20.1)
Whiskered Tern	1	-
Caspian Tern*	101	-
Fairy Tern	9	9 (100.0)
Crested Tern	22	-
Little Grassbird	117	8 (6.8)
White-fronted Chat	74	38 (51.4)
Unidentified grebe	3	-
Unidentified duck	23	-
TOTAL	26729	5620 (21.0)

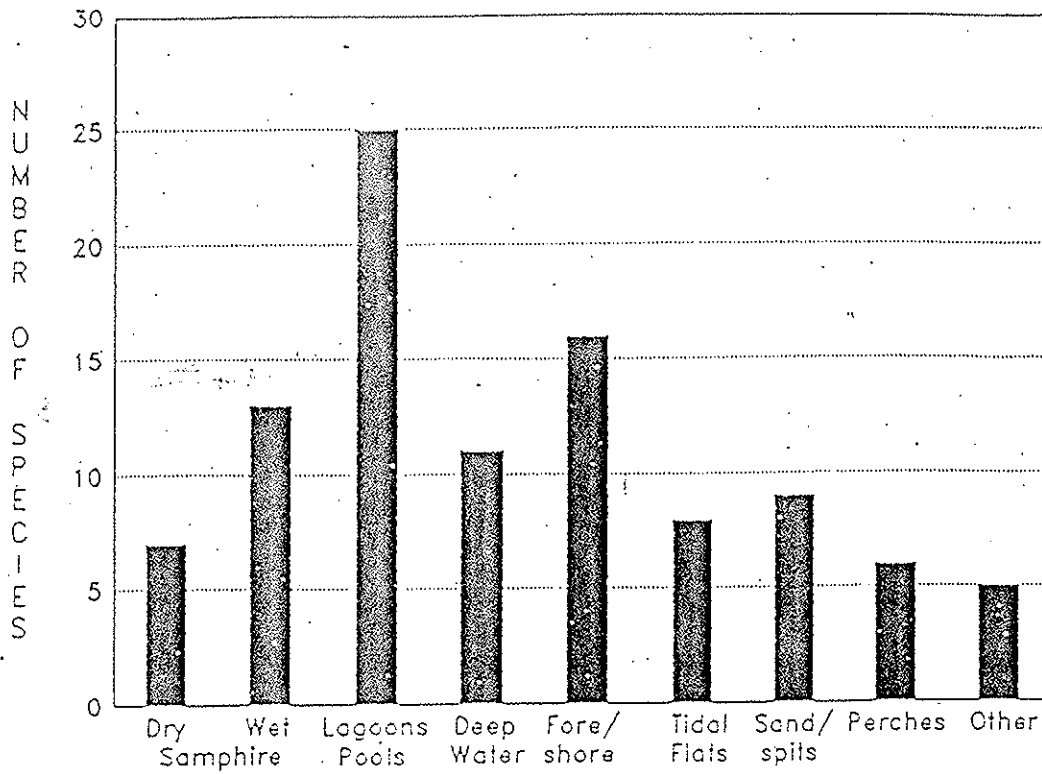


Figure 1a. Number of waterbird species recorded in each habitat type in the Creery Marshes (Ninox Wildlife Consulting unpub. data).

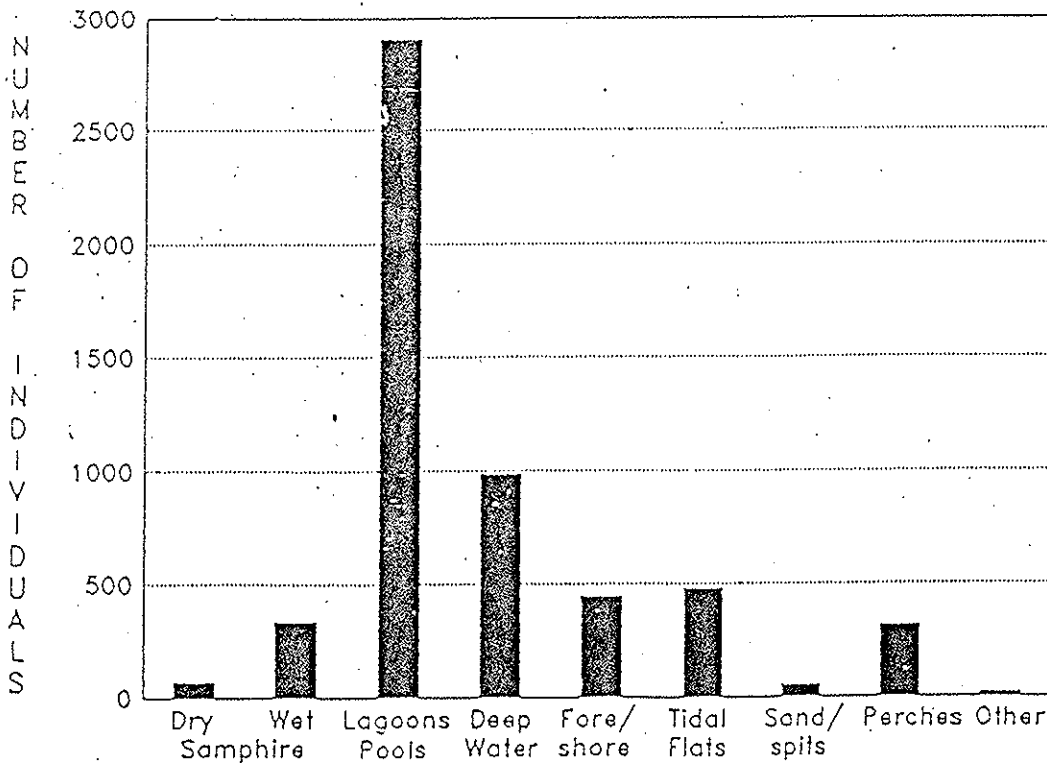


Figure 1b. Number of waterbirds recorded in each habitat type in the Creery Marshes (Ninox Wildlife Consulting unpub. data).

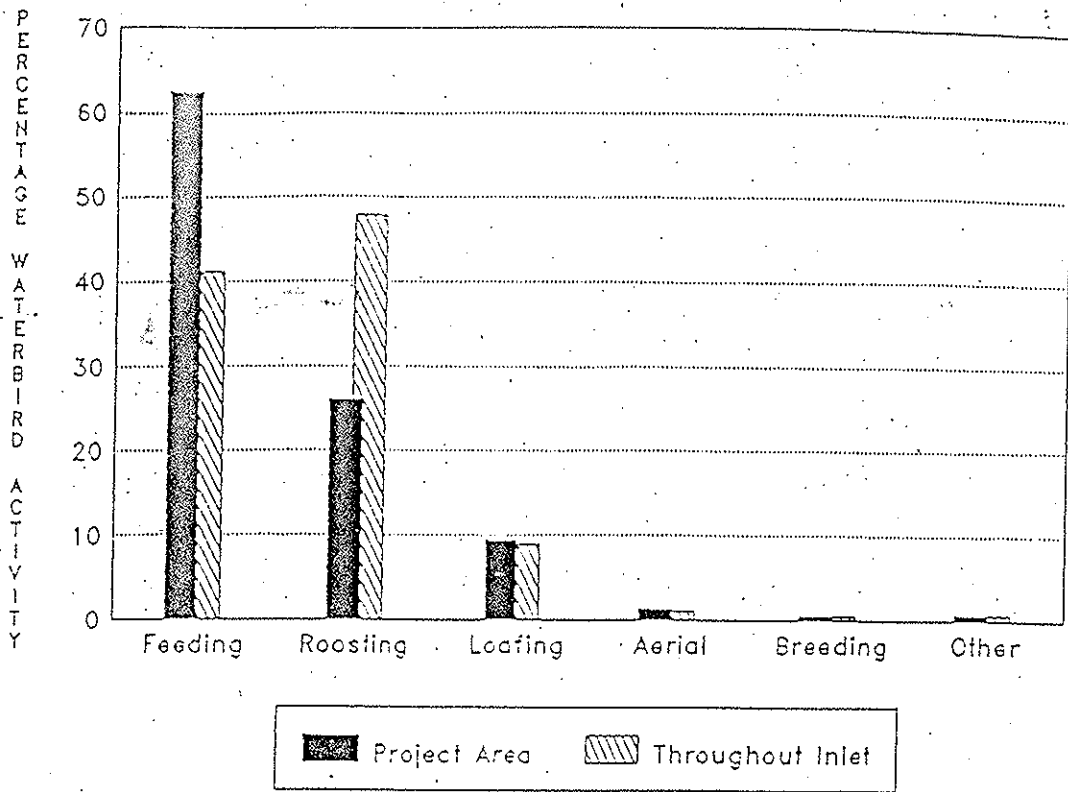


Figure 2. Waterbird activity patterns in Creery Marshes and throughout the northern Peel Inlet (Ninox Wildlife Consulting unpub. data).

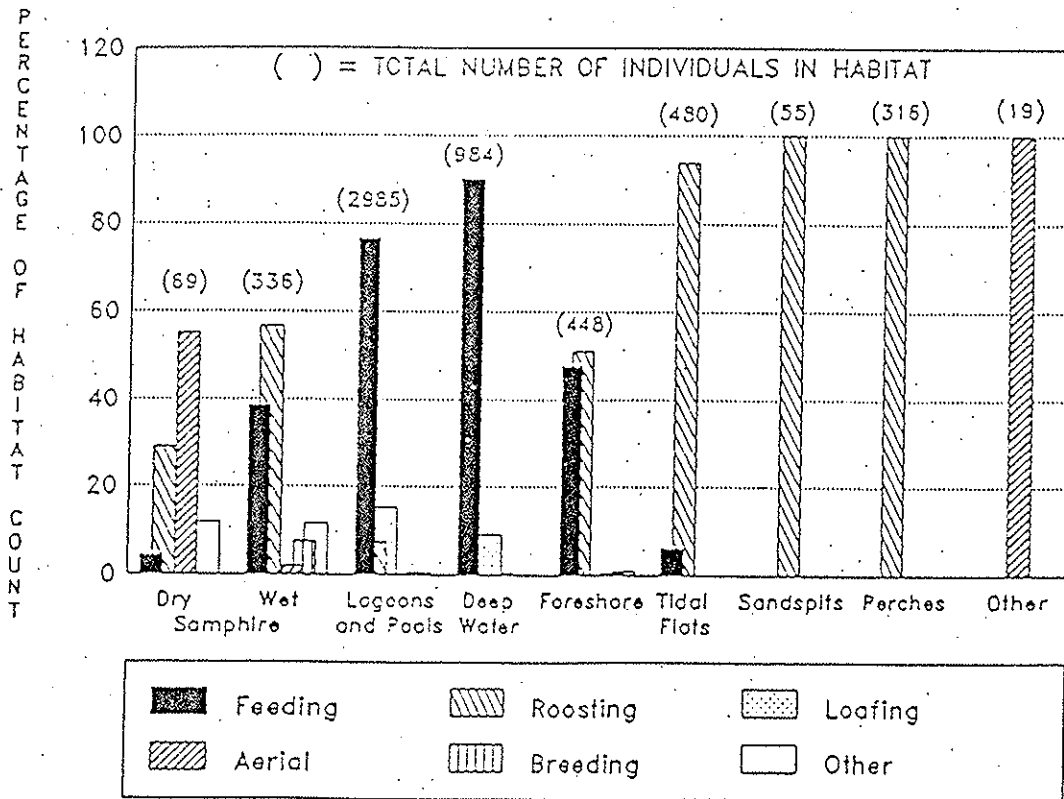


Figure 3. Waterbird activities in each habitat type in the Creery Marshes (Ninox Wildlife Consulting unpub. data).

SITE VISIT TO CREERY MARSHES 10/02/92  
(by AR & MJ Bamford Consulting Ecologists)

Although the assessment of the significance of the project areas for waterbirds was based on available data and the consultant was familiar with the site, a visit was made to the area on February 10. As a result of record rainfall several days before and a high tide, the samphire flat was completely inundated and was utilised by waterbirds to an extent not previously recorded (see Table A). Most of the birds were loafing ducks which were present at greater densities than on the adjacent Creery Lagoon. Waders subject to international conservation treaties occurred mainly on Creery Lagoon.

It was noted in Section 4.4 (above) that the samphire flat might be used by waterbirds whenever it became inundated and could be significant for waterbirds if regularly flooded in summer. Therefore, the large numbers of birds observed on this visit were not unexpected. What is not clear is the significance of this result. The data from Ninox Wildlife Consulting were collected on 9 visits spread over more than a year. It may be a matter of chance that large numbers of waterbirds were not observed on the samphire flat during these surveys. RAOU data were not sufficiently specific to determine if some of the very large counts (up to 17,000 waterbirds) included large numbers of birds on the samphire flat. Waterbirds move very quickly in response to changing conditions and water levels can change very quickly on low-lying sites such as the samphire flat of the project area.

If detailed tidal records are available, it might be possible to predict the frequency of inundation of the samphire flat and thereby determine the frequency of significant waterbird usage of it. For example, in the last three summers, heavy rains occurred in February 1990 and February 1992. If summer flooding of the site regularly occurs at this frequency the waterbird usage as observed on February 10, 1992 is normal during such events, then the value of the site for waterbirds may be greater than was suggested by previously existing data. Factors such as the duration of the flooding and associated waterbird usage are also important.

Table A Waterbird counts on Creery Lagoon and the samphire flat within the development area on February 10, 1992. Numbers were conservatively estimated only and it is unlikely that all species were recorded. Species subject to international conservation treaties are marked with an asterisk.

Species	Creery Lagoon	Samphire Flat
Little Egret	3	-
Australian White Ibis	-	50
Straw-necked Isis	-	1
Australian Shelduck	400	30
Pacific Black Duck	300	100
Grey Teal	1500	650
Spotless Crake	4	-
Grey Plover *	10	1
Red-capped Plover	200	-
Black-winged Stilt	200	100
Greenshank *	50	10
Sharp-tailed Sandpiper	500	50
Red-necked Stint *	800	-
Curlew Sandpiper *	100	50
Little Grassbird	10	-
White-fronted Chat	20	-
<b>TOTAL</b>	<b>4097</b>	<b>1042</b>



Royal Australasian  
Ornithologists Union

Established 1901  
ACN 004 076 475

Head office: 21 Gladstone Street,  
Moonee Ponds, Victoria, 3039  
Tel: (03) 370 1422 Fax: (03) 370 9194

APPENDIX 'D'

COPY

23 December, 1993

The Hon Ros Kelly MHR  
Minister for the Environment  
Parliament House  
Canberra ACT 2600

Our Ref: CC93.022.

CREERY WETLAND DEVELOPMENT (WA): IMPACT ON WETLAND BIRDS

Dear Mrs Kelly,

The Royal Australasian Ornithologists Union (RAOU) is Australia's senior national bird study organisation, and is committed to the conservation and effective management of Australia's birds and their habitats.

I am writing with two aims concerning the proposed Harbour City Canal Development of the Creery wetlands, at the northern end of Peel Inlet, Mandurah, south of Perth in Western Australia. The first reason for writing is to refute statements claiming the support of the RAOU for the proposed development. The second reason is to provide data concerning Peel Inlet and the Creery wetlands based on our shorebird and waterfowl surveys over the past decade.

Statements made by the proponents of the development in the local press, and in a briefing document prepared for the WA Minister for the Environment, appear to have quoted very selectively from a submission made by the WA Group of the RAOU on 22 May 1992 in order to give the impression that the RAOU supports the proposed development. A subsequent letter of clarification from the RAOU WA Group to the *Mandurah Mail*, dated 11 October 1992, emphasised that the gist of their original submission was not in favour of the development as planned. It also stated that, in the interests of conservation in the Creery wetlands, the development should not proceed.

Only the Director and the President have the authority to speak on behalf of the RAOU on such matters of national significance. Given the misunderstanding that has arisen, I thought it was necessary to write and assure you that the RAOU does not support the development of the Creery wetlands in Peel Inlet.

The entire Peel-Yalgorup system is listed under the Ramsar Convention on wetlands of international importance. Recent data have confirmed and reemphasised its significance. In the 1993 RAOU publication *'A National Plan for Shorebird Conservation in Australia'* Peel Inlet is listed as by far the most important site for shorebirds in south-western Australia, and of national or international importance for nine species, six of which are listed under the China Australia Migratory Birds Agreement (CAMBA) and the Japan Australia Migratory Birds Agreement (JAMBA).

18/12/93 J. O. W. 18/12/93

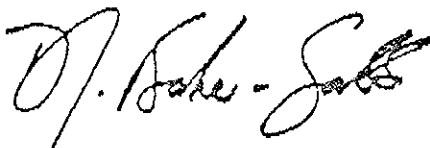
The Creery Marshes locality itself, including most of the development site, is in the top 1% of south-western Western Australian wetlands in terms of waterbird species diversity, and in the top 2% in terms of waterbird numbers. With regard to numbers of waterbirds (including shorebirds), the relative significance of the Creery Marshes out of over 600 south-west WA wetlands surveyed in RAOU data gathering projects is as follows:

Species	Ranking in south-west WA
Pied Cormorant	3
Little Pied Cormorant	4
Little Egret	1
Pied Oystercatcher	1
* Grey Plover	1
* Lesser Golden Plover	1
* Large Sand Plover	2
Banded Stilt	6
* Eastern Curlew	3
* Whimbrel	1
* Greenshank	Equal second
* Marsh Sandpiper	1
* Terek Sandpiper	1
* Bar-tailed Godwit	2
* Red Knot	Equal third
* Great Knot	1
* Sharp-tailed Sandpiper	1
* Red-necked Stint	3
* Curlew Sandpiper	Equal sixth
Whiskered Tern	2
Little Grassbird	5

The asterisk indicates migratory species listed on the JAMBA and CAMBA. Three of these, the Eastern Curlew, Great Knot and Red-necked Stint, are also listed as Special Interest Species under these Agreements.

We urge you to do your utmost to ensure that Australia's international obligations under these treaties are not compromised in any way.

Yours sincerely,



Dr David Baker-Gabb  
Director

cc: The Hon Kevin Minson, WA Minister for the Environment.  
Dr Peter Bridgewater, Chief Executive Officer, ANCA.  
Chairman, RAOU WA Group.

*Feel free to use  
the contents of this  
letter in your  
own efforts.  
K.M.*

G.1571 Creery Wetlands - owned by the John Holland Group

Councillor Tuckey declared an interest.

(Len Howard of the P.P.P.G. has approached Council recently regarding support for acquisition by either State or Federal Governments, of the wetlands immediately south of the New Traffic Bridge. This land is owned by the John Holland Group and is part of the balance of the canal development known as Waterside Mandurah.

MOTION: M.H.Colquhoun/P.J.Beamond

- a) That Council actively support the view of the P.P.P.G. that the area known as the Creery Wetlands should be preserved in its natural state.
- b) That Council approach both State and Federal Governments (and both oppositions) in an effort to obtain funding for resumption of the wetlands.
- c) That Council advise the landowner that it will not permit development of the wetlands and will not consider rezoning of that portion of the wetlands which has conservation significance. Any development of the site will be restricted to "dry land" subdivision on land which has an existing level acceptable for that type of subdivision in Mandurah.
- d) That Council accepts the most applicable use for wetlands would be Reserve for Conservation and an appropriate Management Plan should be prepared by the relevant Government Department before it is too late.

MOTION CARRIED:

In Favour - Councillors Cresswell, Lee, Leworthy, Carter, McClenahan, Beamond, Beacham, Colquhoun and Hornsby.

Councillor Tuckey did not vote.

9 May 1994

Mr. Peter Randolph,  
DEPARTMENT OF ABORIGINAL SITES,  
3rd Floor, 25 Havelock Street,  
WEST PERTH, W.A. 6005.

Dear Mr. Randolph,

Re : ABORIGINAL SITES, COODANUP (Mandurah)

You may be aware that there is a proposal to construct a canal development on the Creery Wetlands at Coodanup just outside Mandurah.

Creery Wetlands Support Group feel that these Wetlands and the associated woodlands are too valuable a natural resource to be destroyed and we have submitted our reasons to numerous planning authorities. A 60 day public commentary period (due to close 21 June) is now open, during which time Mandurah City Council has promised there will be a Referendum before final referral to Council for a decision on re-zoning from 'Rural' to 'Canal Zone/ Residential 1'.

We understand there are six (6) listed Aboriginal sites in the Coodanup area (W.A. Museum sites Nod. S1828, S2747, S2748, S2746, S2227, S0181). We believe at least four (4) of these may be on the proposed Harbour City Canal development area .

In order to ensure the protection of these sites, we ask that your Department requests a proper survey to prove conclusively the exact location of the sites.

Because our understanding is that the Coodanup/River mouth area is very significant for the Nyungah people, who have hopes that the sites can be marked and perhaps included in a cultural tourist trail, we urge you to do all in your power in the limited time available to ensure their protection.

With thanks.

Yours sincerely,  
for CREERY WETLANDS SUPPORT GROUP,

(Kathleen Malta)  
Secretary.

18 May 1994

APPENDIX 'G'



OUR REF:

77255v16f4

OUR REF:

malta18-5

Enq: Steve Corsini

Department of  
**Aboriginal Sites**

3rd Floor  
35 Havelock Street  
West Perth  
Western Australia 6005  
Telephone 09 322 7144  
Facsimile 09 321 4525

Creery Wetlands Support Group  
C/- Mrs K Malta  
Lot 9 Estuary Road  
DAWSVILLE 6210



Dear Mrs Malta,

**RE: ABORIGINAL HERITAGE - CREERY WETLANDS**

Thank you for your letter of 9 May in regard to the above.

This Department has been in contact with several Nyungah people about this issue for almost 12 months. In September 1993 another DAS Officer and I accompanied two elderly Aboriginal men on a brief reconnaissance of the area. During this limited survey we recorded a water-hole and ethnographic information about possible burial grounds. We also located a couple of isolated artefacts (simple quartz flakes).

It is our understanding that the developer has given a verbal undertaking (at a meeting with concerned Aboriginal people and Council staff) to engage the consultancy firm of McDonald Hales to carry out a complete ethnographic and archaeological survey. The developer is aware of our concerns for the area. However, as the proposal does not yet have Shire approval we consider it may be somewhat precipitous to insist a survey be conducted. We are however well aware of community concerns, which we share, particularly in regard to the reported burial ground.

We are currently investigating both documentary evidence and the possible use of ground probing radar (GPR) to locate the burials.

It should be emphasised however that at this point the only way to be absolutely sure of the sites location would be by excavation over a wide area. The information we have does not allow us to accurately locate the site.

**Regional Offices**

Northern Regional  
PO Box 458  
Derby  
Western Australia 6728  
Telephone 091 91 2066  
Facsimile 091 93 1466

Northern Sub Regional  
PO Box 560  
Port Hedland  
Western Australia 6721  
Telephone 091 73 1054  
Facsimile 091 73 1141

Southern Regional  
PO Box 1696  
Midland  
Western Australia 6056  
Telephone 09 274 4288  
Facsimile 09 274 1865

Aboriginal sites are defined in Section 5 of the WA *Aboriginal Heritage Act 1972*. Any places or objects which conform to the definitions are legally protected under the *Act*, regardless of whether or not they have been recorded by this Department. It is an offence under Section 17 of the *Act* to alter, disturb or damage an Aboriginal site unless written consent has been granted by the Minister for Aboriginal Affairs.

The foreshore at Coodinup is well documented as an Aboriginal camping ground and is recorded as site S2227. Site S2746 was recorded by Dr Patricia Baines (Anthropologist) in respect to the burial ground however, again the information does not allow a precisely accurate determination of the sites extent.

Please be assured that the Department is aware of the situation, both at Creery Wetlands and at other locations around Mandurah such as Lake Goegrup, in regard to Aboriginal heritage issues.

Thank you for your letter, please feel free to contact the Southern Regional Office (09) 274 4288 if you require any further advice or assistance.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Robert Reynolds', with a stylized flourish at the end.

Robert Reynolds  
Acting Regional Manager, South