

## MARY CARROLL PARK AND ADJACENT BUSHLAND, GOSNELLS

**Boundary Definition:** bushland (part taken to cadastre)/conservation wetland boundary

### SECTION 1: LOCATION INFORMATION

**Bush Forever Site no.** 124

**Area (ha):** bushland 6.5 (Site also includes open water.)

**Map no.** 55

**Map sheet series ref. no.** 2033-I NE, 2133-IV NW

**Other Names:** Location 51 (Keighery, BJ, and Trudgen 1992); Gosnells remnant bushland area 28 (Trudgen and Keighery 1995)

**Local Authorities (Suburb):** City of Gosnells (Gosnells)

**System 6 (1983):** M76 Part System area bushland, only bushland described

### SECTION 2: REGIONAL INFORMATION

#### LANDFORMS AND SOILS

##### Bassendean Dunes

Bassendean Sands (Qpb: S8)

##### Wetlands (within the Bassendean Dunes)

Holocene Swamp Deposits (Qrw: Sp2)

#### VEGETATION AND FLORA

##### Vegetation Complexes

###### Foothills

Forrestfield Complex (Ridge Hill Shelf, Darling Plateau)

**Floristic Community Types:** \*not sampled, type inferred

##### Supergroup 2: Seasonal Wetlands

\*12 *Melaleuca teretifolia* and/or *Astartea* aff. *fascicularis* shrublands

#### WETLANDS

**Wetland Types:** lake

##### Natural Wetland Groups

Bassendean—Pinjarra transition OR Bassendean with fluvial features

Mungala (B/P.2)

Bennet Brook (B/P.4)

**Wetland Management Objectives:** Conservation (13.5ha), Resource Enhancement

**Swan Coastal Plain Lakes EPP:** none identified

#### THREATENED ECOLOGICAL COMMUNITIES

Not assessed

### SECTION 3: SPECIFIC SITE DETAIL

**Landscape Features:** open water, vegetated wetlands, vegetated uplands

**Vegetation and Flora:** limited survey (DEP 1999, EPA and WAWA 1990, Keighery, BJ, and Trudgen 1992, Trudgen and Keighery 1995)

**Structural Units:** mapping (EPA and WAWA 1990)

Uplands: *Banksia menziesii* and *B. attenuata* Low Open Woodland

Wetlands: *Eucalyptus rudis* Open Forest to Woodland; *Melaleuca raphiophylla* Low Closed Forest to

Woodland; *Eucalyptus calophylla* and *Melaleuca preissiana* Woodland; *M. teretifolia* Closed Scrub to High Open Shrubland; *Baumea articulata* Sedgeland

**Vegetation Condition:** Very Good to Degraded, with areas of severe localised disturbance

**Total Flora:** not known

**Significant Flora:** none recorded

**Fauna:** limited survey for birds (46 species) (RAOU 1996 D). Important feeding area for large assemblage of waterbirds including Blue-billed, Musk and Hardhead Ducks. Significant bird species: category 3 (5) and category 4 (2)

**Linkage:** no adjacent bushland

**Other Special Attributes:** 'Wetland of special note' (Payne 1993b); Category One Area Middle Canning Catchment Study (Evangelisti & Associates *et al.* 1995); contains plant communities representative of the eastern side of the Swan Coastal Plain

### SECTION 4: INTERNATIONAL AND NATIONAL SIGNIFICANCE

Not listed

***SECTION 5: SELECTION CRITERIA AND RECOMMENDATIONS***

**Criteria:** Representation of ecological communities, General criteria for the protection of wetland, streamline and estuarine fringing vegetation and coastal vegetation, Criteria not relevant to determination of regional significance, but which may be applied when evaluating areas having similar values

**Recommendation:** Proposed Parks and Recreation Reservation (see Table 3, Volume 1).

MARY CARROLL PARK AND ADJACENT BUSHLAND, GOSNELLS

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SECTION 1: CADASTRAL INFORMATION

(Lots, locations and derived information to be updated in the public submission period)

Bushplan Site no. 124 Map no. 69, 70 Map sheet series ref. no. 2033-I NE, 2133-IV NW System 6 (1983): M76 Part System area bushland, only bushland described

Other Names Location 51 (Keighery, BJ, and Trudgen 1992); Gosnells remnant bushland area 28 (Trudgen and Keighery 1995) Area (ha): total 21.4 (includes open water); bushland 6.5

Local Authorities (Suburb) City of Gosnells (Gosnells) Zoning MRS: Urban TPS: Landscape, Residential A, Residential B, Parks and Recreation, Public Purposes

Ownership Categories Local Government, Private (commercial organisation) Lot/Location/Reserve numbers (Purpose), Street name 91 Barcombe Wy; 108, 2460 Eudoria St; 2499, 3933 May St; 3188 Verna St; 2096 Clara St; 3, 2899, 3934 Percy St; 23 Coulston Way; 418 street not identified Crown Reserve

SECTION 2: REGIONAL INFORMATION

LANDFORMS AND SOILS

Bassendean Dunes Bassendean Sands (Qpb: S8) Wetlands (within the Bassendean Dunes) Holocene Swamp Deposits (Qrw: Sp2)

VEGETATION AND FLORA

Vegetation Complexes Foothills Forrestfield Complex (Ridge Hill Shelf, Darling Plateau) Floristic Community Types: \*not sampled, types inferred Supergroup 2: Seasonal Wetlands \*12 Melaleuca teretifolia and/or Astartea aff. fascicularis shrublands

WETLANDS

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**Fauna:** surveyed by RAOU (1996 D), 2 visits, and others for birds (46). Important feeding area for large assemblage of waterbirds including Blue-billed, Musk and Hardhead Ducks. Significant bird species: category 3 (5) and category 4 (2)

**Linkage:** no adjacent bushland

**Other Special Attributes:** 'Wetland of special note' (Payne 1993b), Category One Area Middle Canning Catchment Study (Evangelisti & Associates *et al.* 1995); contains plant communities representative of the eastern side of the Swan Coastal Plain

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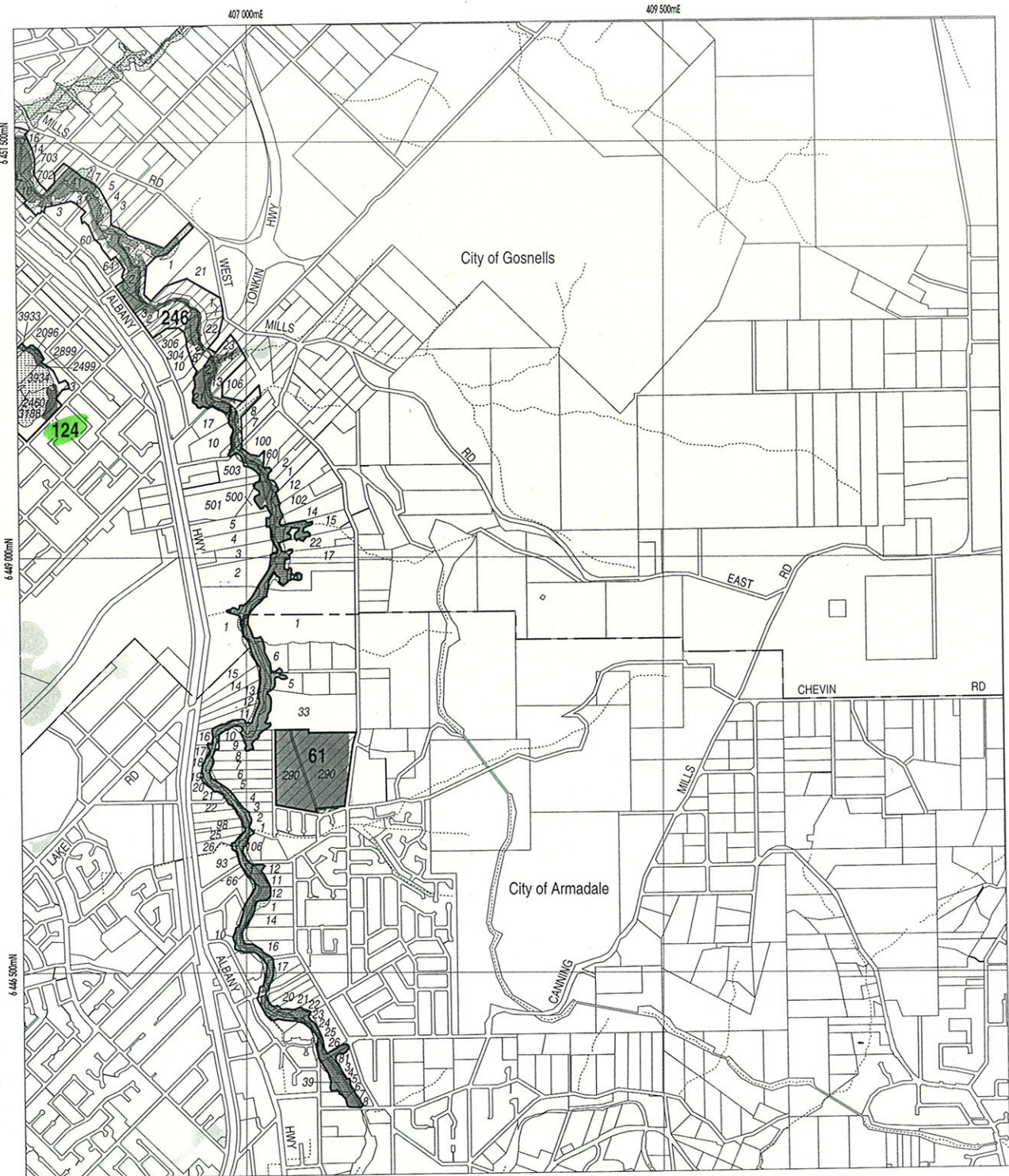
**Opportunities and/or Constraints**

**Opportunities:** Bushplan Site/part Bushplan Site subject to Swan and Canning Rivers EPP; location of conservation category wetlands; under TPS Parks and Recreation Zoning and Landscape Zoning, Crown Reserve

**Constraints:** private land; under MRS Urban Zoning

**Recommendation:** The existing care, control and management intent of the reserve is endorsed. Long-term security and support for conservation management of the Bushplan Site to be enhanced by: amending the purpose of the reserve to include conservation; and applying appropriate mechanisms in consultation with the reserve management body.





**LEGEND**

- 472 Bushplan Sites With Regionally Significant Bushland
- Other Native Vegetation
- Conservation Category Wetlands
- Bushplan Sites With Some Existing Protection
- 696 Lot Number, Location Number
- ..... Channel Wetlands
- Local Government Boundary

**2133 - IV NW**

|             |    |
|-------------|----|
| NW          | NE |
| 70          | I  |
| SW          | SE |
| <b>2133</b> |    |
| ///         |    |

1 : 25 000 AMG Reference Grid showing Perth's Bushplan Map Sheet Breakdown

**PERTH'S BUSHPLAN MAP INDEX**

|     |     |     |     |     |    |    |
|-----|-----|-----|-----|-----|----|----|
| 1   | 2   |     |     |     |    |    |
| 3   | 4   | 5   |     |     |    |    |
| 6   | 7   | 8   | 9   | 10  | 11 |    |
| 12  | 13  | 14  | 15  | 16  |    |    |
| 17  | 18  | 19  | 20  | 21  | 22 | 23 |
| 24  | 25  | 26  | 27  | 28  | 29 | 30 |
| 31  | 32  | 33  | 34  | 35  | 36 |    |
| 37  | 38  | 39  | 40  | 41  | 42 |    |
| 43  | 44  | 45  | 46  | 47  | 48 |    |
| 49  | 50  | 51  | 52  | 53  | 54 |    |
| 55  | 56  | 57  | 58  | 59  |    |    |
| 60  | 61  | 62  | 63  | 64  |    |    |
| 65  | 66  | 67  | 68  | 69  | 70 |    |
| 71  | 72  | 73  | 74  | 75  | 76 | 77 |
| 78  | 79  | 80  | 81  | 82  | 83 | 84 |
| 85  | 86  | 87  | 88  | 89  | 90 | 91 |
| 92  | 93  | 94  | 95  | 96  | 97 |    |
| 98  | 99  | 100 | 101 | 102 |    |    |
| 103 | 104 | 105 | 106 |     |    |    |

**N**

**SCALE**

0 500 1000

Metres

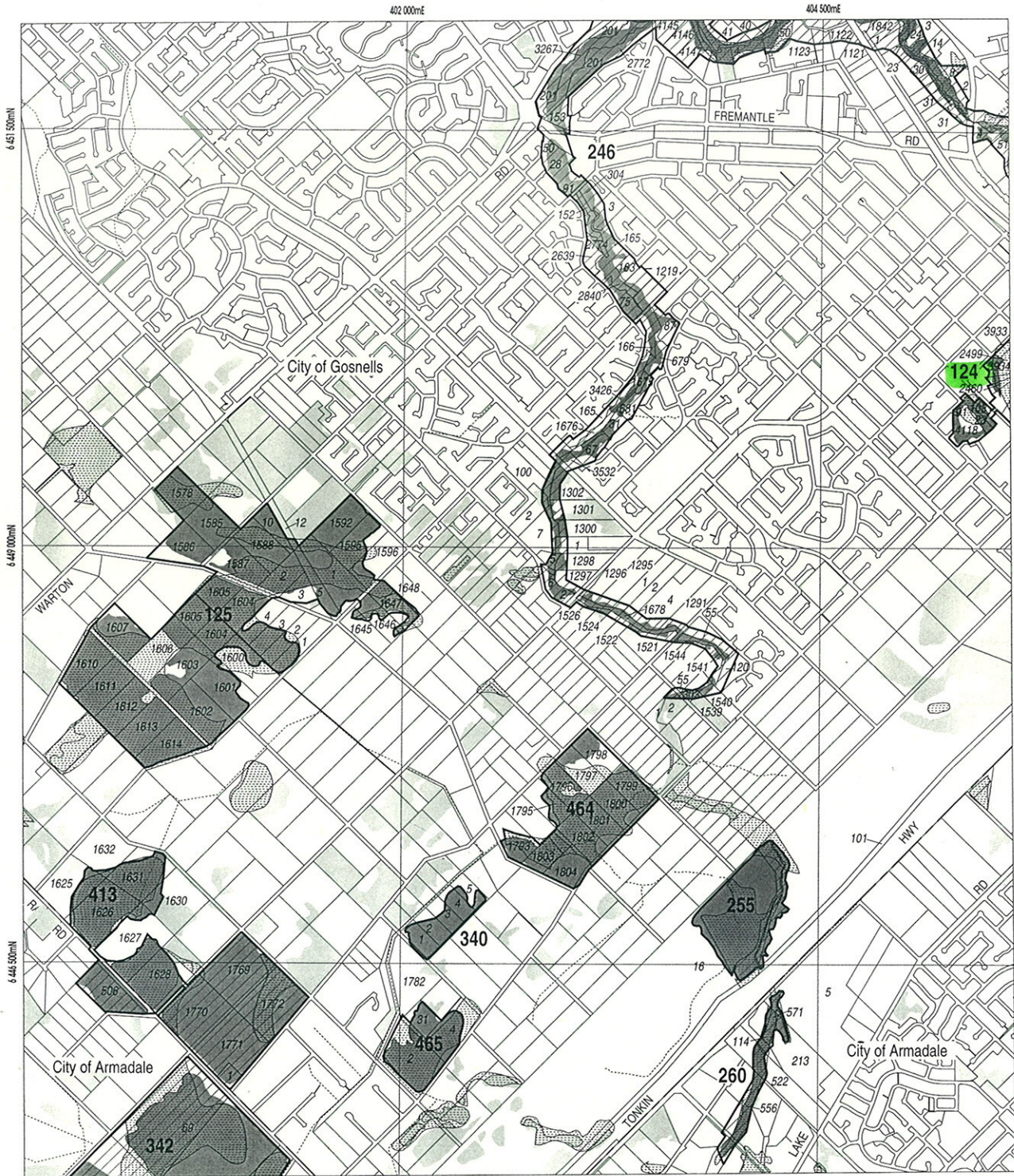
Produced by Project Mapping Section  
Land Information Branch, Ministry for  
Planning, Perth W.A. November 1998

ntw-map18/enviro/bushplan/bushv2\_70.dgn








Cadastral Data supplied by Department  
of Land Administration, W.A.

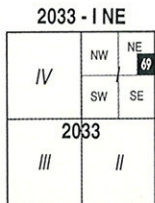
Wetlands Data supplied by  
Water and Rivers Commission

Native Vegetation Extent for Study Area  
supplied by Agriculture Western Australia



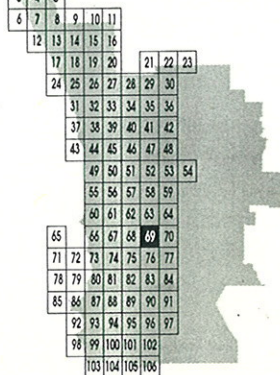
**LEGEND**

-  Bushplan Sites With Regionally Significant Bushland
-  Other Native Vegetation
-  Conservation Category Wetlands
-  Bushplan Sites With Some Existing Protection
-  Lot Number, Location Number
-  Channel Wetlands
-  Local Government Boundary

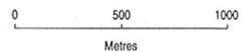


1 : 25 000 AMG Reference Grid showing Perth's Bushplan Map Sheet Breakdown

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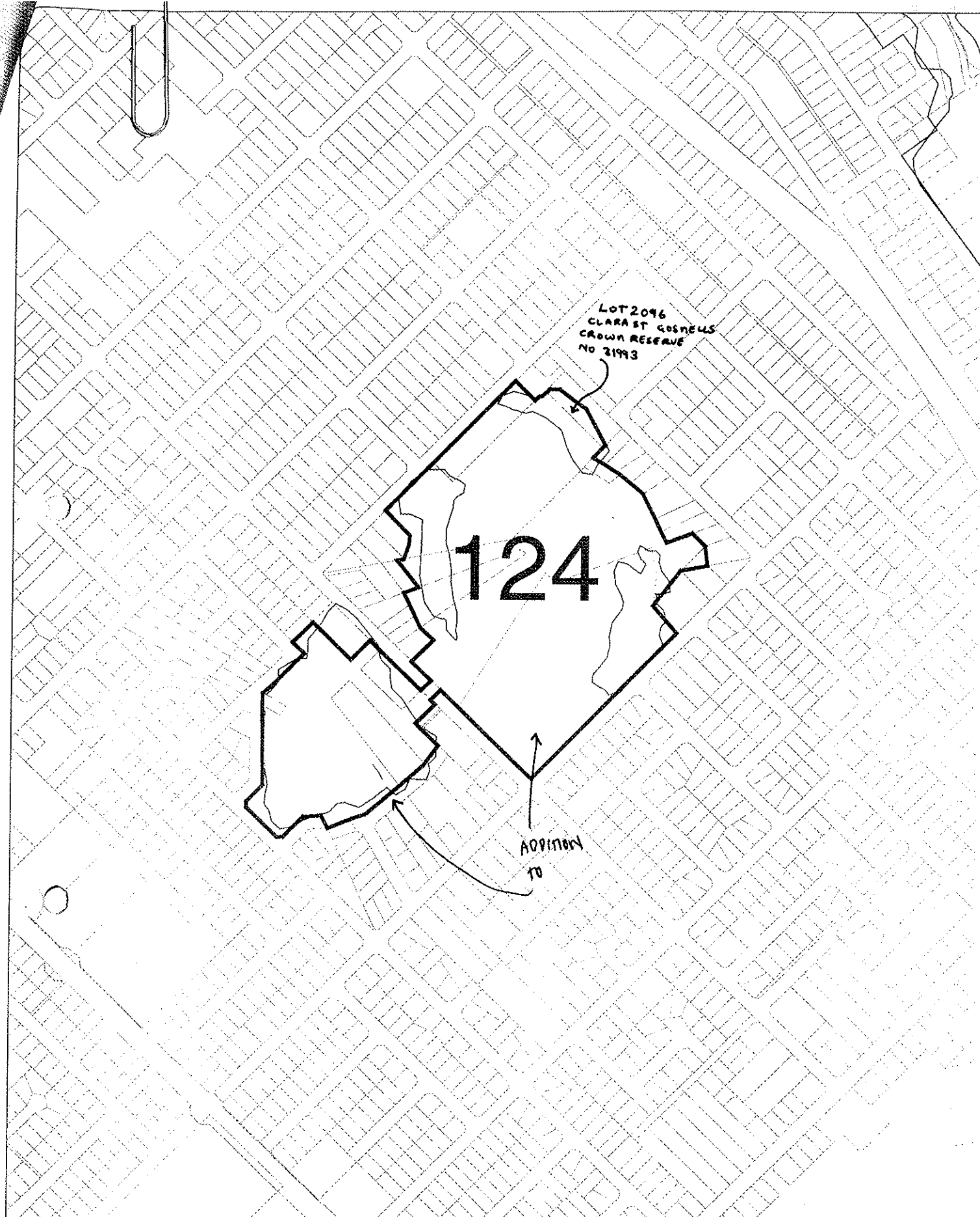


**SCALE**



Produced by Project Mapping Section  
Land Information Branch, Ministry for  
Planning, Perth W.A. November 1998  
ntw-map18/environ/bushplan/bushv2\_69.dgn  
Cadastral Data supplied by Department  
of Land Administration, W.A.  
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Native Vegetation Extent for Study Area  
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**BUSHPLAN SITES CORRECTED**



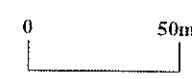
WESTERN  
AUSTRALIAN  
PLANNING  
COMMISSION



B Bx/16 22/10/98



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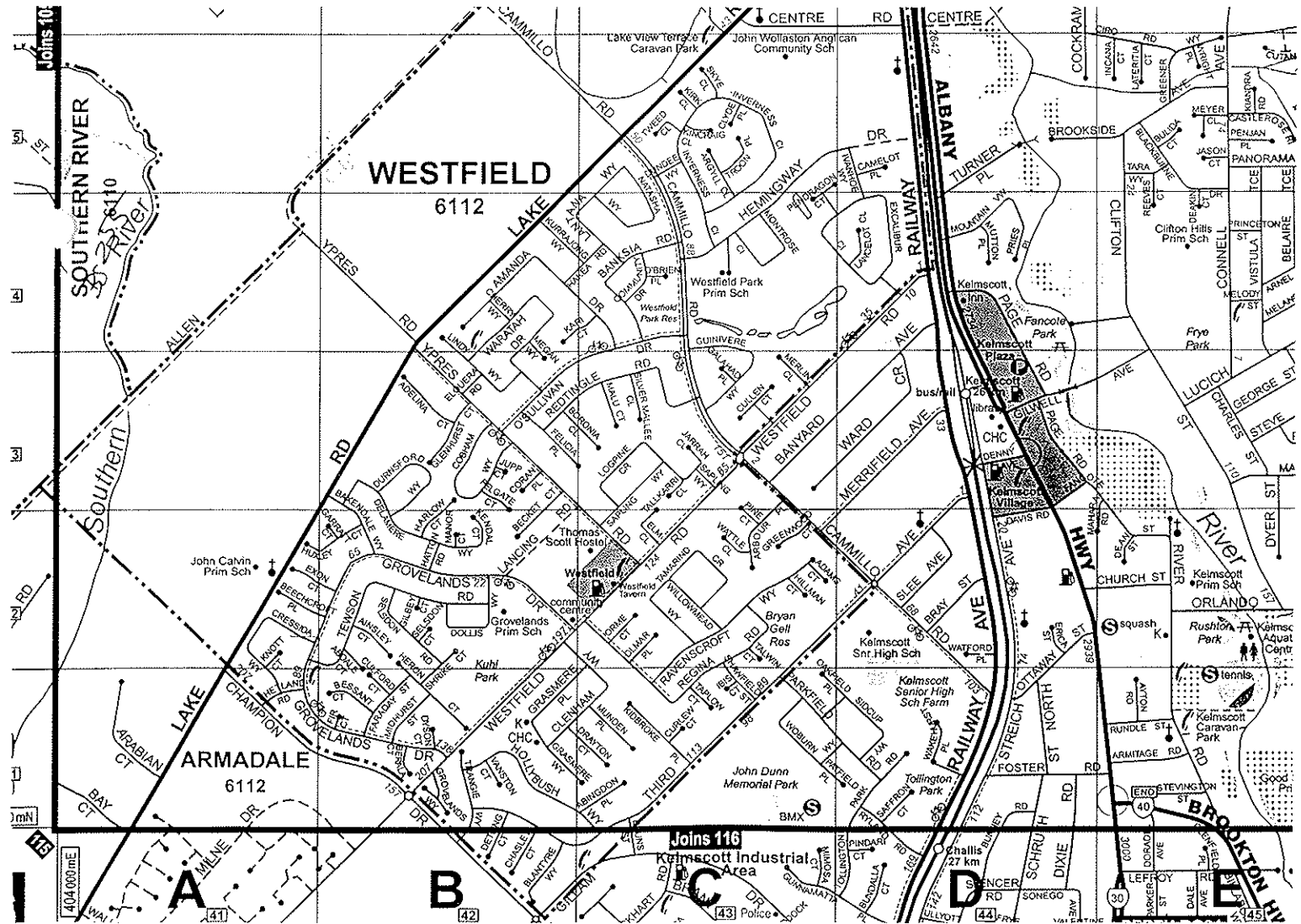


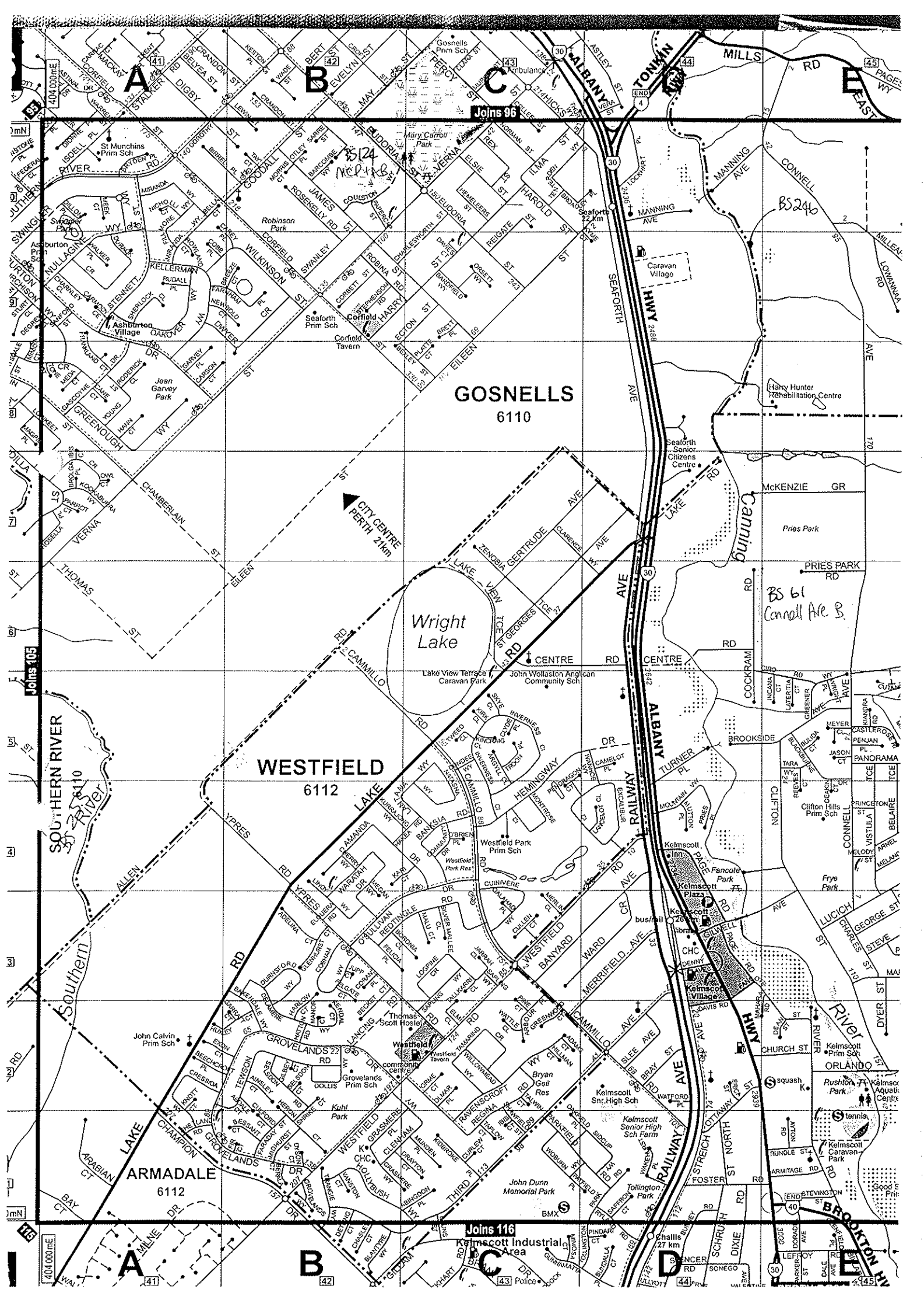
Metres

BJK 3/7

BS 124

- Need to add adjacent TPS reserve, see Street directory map attached.
- We probably should make a note in the description regarding the vegetation on the unreserved lot





A

B

C

E

Joins 96

GOSNELLS  
6110

Wright Lake

WESTFIELD  
6112

Southern River

ARMADALE  
6112

Joins 116  
Kelmescott Industrial Area

A

B

C

E

404 000 mE

41

42

43

44

45

CITY CENTRE  
PERTH 21km

BS 61  
Connell Ave B

BS 240

Lake View Terraces  
Caravan Park

John Wollaston Anglican  
Community Sch

Westfield Park  
Prim Sch

Grovelands  
Prim Sch

Kelmescott  
Senior High Sch

Kelmescott  
Prim Sch

Rushon  
Kelmescott Aquatic Centre

Kelmescott  
Caravan Park

John Dunn Memorial Park

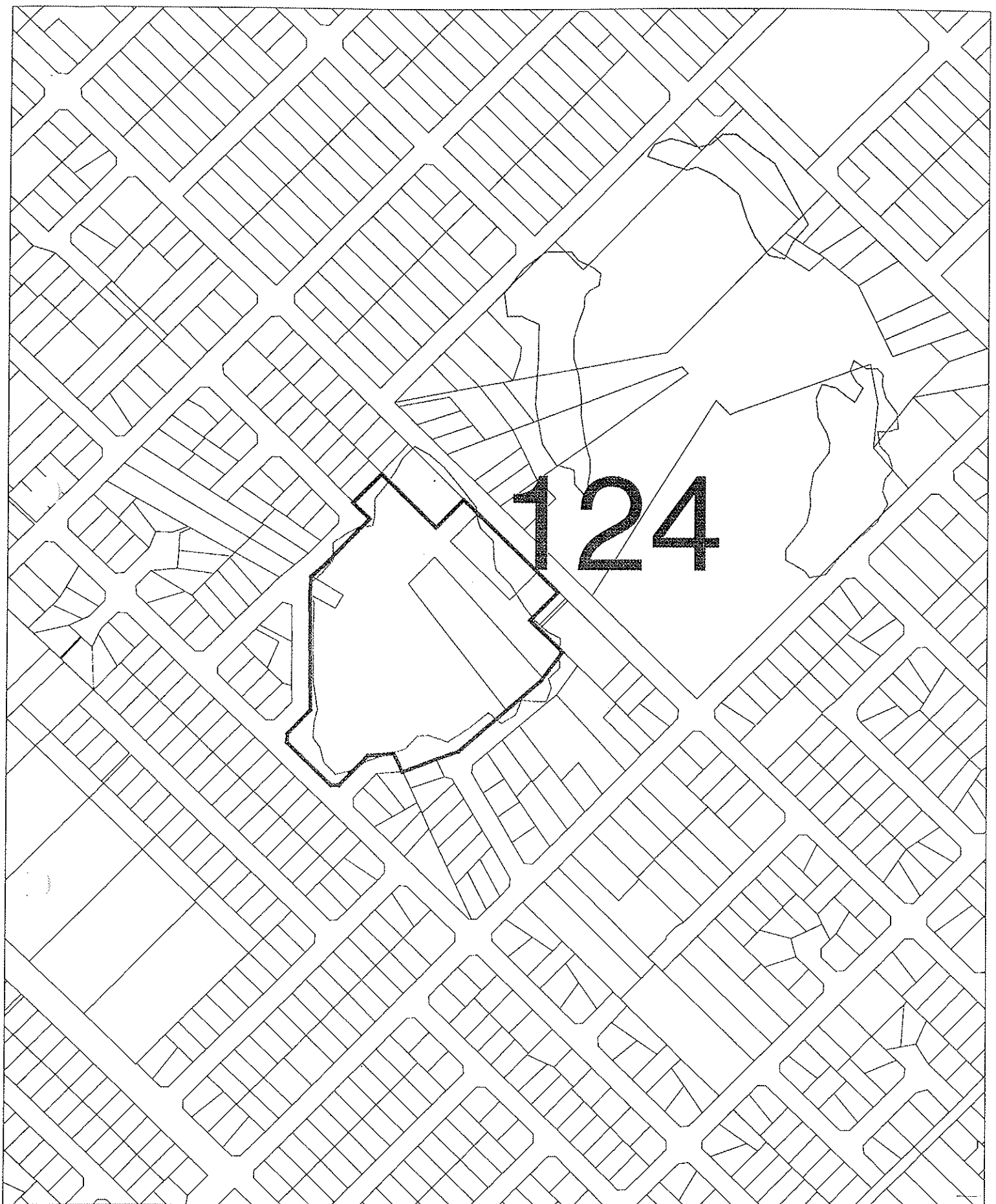
Challis  
27 km

Stirling  
27 km

Stirling  
27 km

Stirling  
27 km

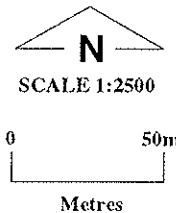
Stirling  
27 km



**BUSHPLAN SITES CORRECTED**



**WESTERN  
AUSTRALIAN  
PLANNING  
COMMISSION**





**bp site 124**

MATCHED TO TPS BOUNDARY

Plot with TPS boundaries

- AG VEG 1998 BOUNDARY THEME
- Bushplan sites refno 1-500 SCP BOUNDARY THEME
- Cadastre

NE AREA LOCAL SIGNIFICANT PURPOSE OF PRESERVATION.  
 - FINE STRUCTURE  
 - BEST LOCALITY

1-1  
 0-3  
 1-2  
 2-6

MFP INTERNAL USE ONLY

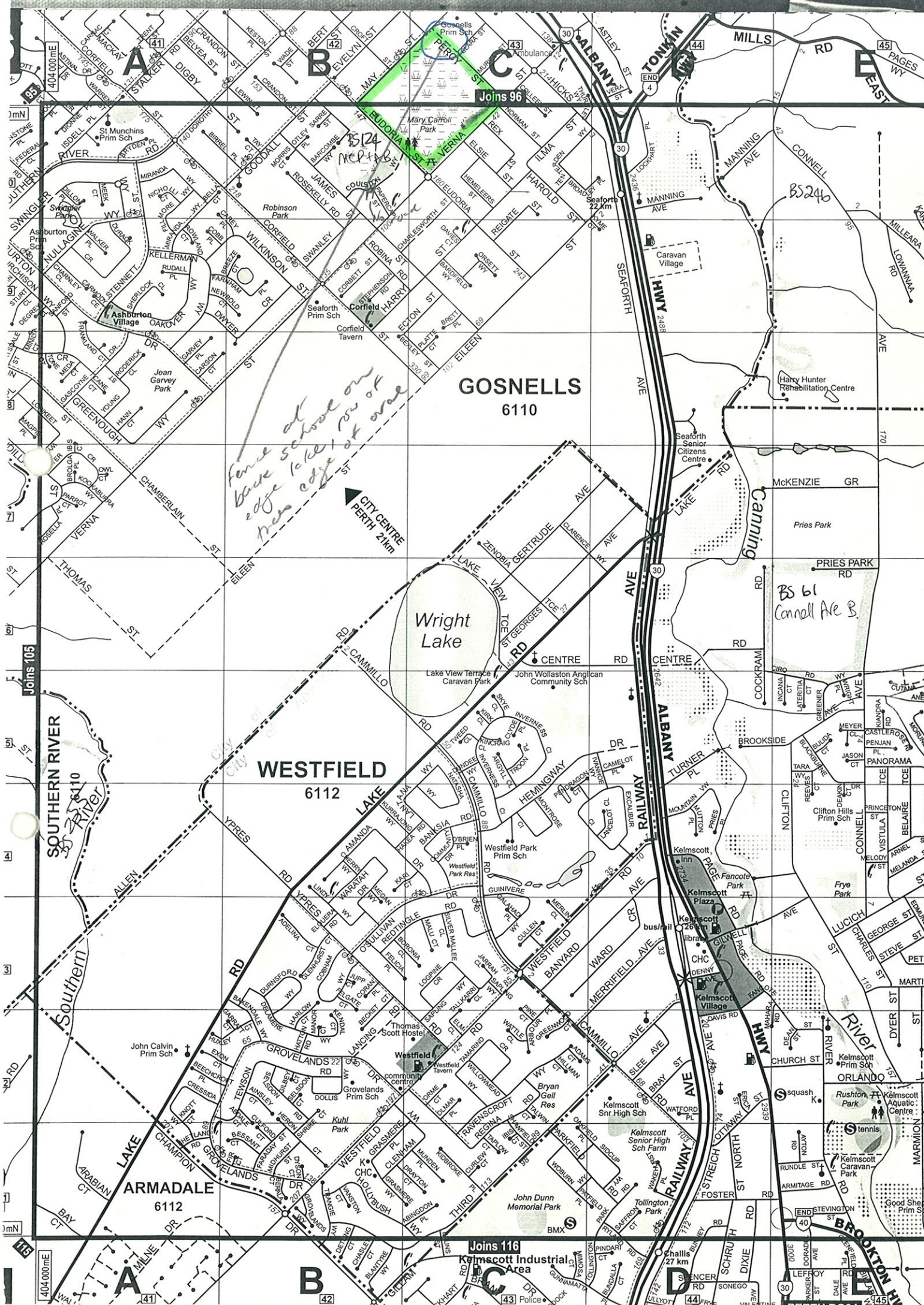
Prepared By: Andrea Zappacosta

Prepared For:

Map Ident: plot980515\_1

Date: 15 May 98

Scale 1:1809



Joins 96

*Home of school on edge of lake near edge of area*

CITY CENTRE PERTH 21km

**GOSNELLS**  
6110

**WESTFIELD**  
6112

**ARMADALE**  
6112

Joins 116

**Kelmscott Industrial Area**  
27 km

*BS 61 Connell Ave B.*

*BS 240*

Wright Lake

Southern River

ALBANY RAILWAY

Canning LAKE

River

BROOKTON HWY

404 000 mE

41

42

43

44

45

3 hour back yard  
look over Lake.



X 130%

1997 Parairama

Not  
bush  
Trees over  
kept. lawn.

Each plot's forest  
one Mal strip L&F  
grass  
pro patches forest, 1 oak  
between 'bush', 1 oak  
lawn



BUSHLAND AREA MARY CAROL PK

SITES YES/NO

DATE 21/7/98

RECORDERS BJK

Observations

edge transects

Geographic Location Latitude S Longitude E  
Reference Map

Photograph Photographer's Name Photo No

Transect of landscape units (draw in transect incorporating features listed and any other relevant unit)

|               |   |
|---------------|---|
| dunes         | Two samplands with road through middle, filling on edge and for walkway in largest lake |
| dry/wet flats |   |
| sumplands     |   |
| uplands       |   |
| type          |   |

Soil - surface sub -soil  
Exposed rock type % area

U = Upland F = Fringe W = Wet

FLORA/VEGETATION (list dominant and significant plants below, see over for vege association descriptions)

|  |  |                           |                        |  |  |
|--|--|---------------------------|------------------------|--|--|
| Eucalypts                              | <input checked="" type="checkbox"/> <i>E. calophylla</i> | <i>E. wandoo</i>          | <i>E. marginata</i>    | <i>E. tottianna</i>                        | <i>F. E. rudis</i>                     |
|  | <i>E. decipiens</i>                                      | <i>E. drummondii</i>      | <i>E. haematoxylon</i> | <i>E. lanepolei</i>                        | <i>E. gomphocephala</i>                |
|  | <i>E. accedens</i>                                       | <i>E. patens</i>          | <i>E. laeliae</i>      | <i>E. megacarpa</i>                        |  |
| Sheoaks                                | <i>Allocasuarina fraserana</i>                           |                           | <i>Casuarina obesa</i> |  |  |
| Banksia                                | <i>B. attenuata</i>                                      | <i>B. menziesii</i>       | <i>B. prionotes</i>    | <i>B. illicifolia</i>                      | <i>B. grandis</i> <i>B. littoralis</i> |
| Melaleuca                              | <i>M. preissii</i>                                       | <i>W. M. raphiophylla</i> | <i>M. lanceolata</i>   | <i>M. cuticularis</i> <i>M. lanceolata</i> |  |
| Others                                 | <i>Callitris preissii.</i>                               |                           |                        |  |  |
| Mallees                                | Eucalypts  | <i>E. argutifolia</i>     | <i>E. petrensis</i>    | <i>E. decurva</i>                          | <i>E. foecunda</i> <i>E. latens</i>    |
| SIGNIFICANT SPECIES / DOMINANT SPECIES |  |                           |                        |  |  |
|  |  |                           |                        |  |  |
|  |  |                           |                        |  |  |
|  |  |                           |                        |  |  |
|  |  |                           |                        |  |  |
| (see over for vegetaion descriptions)  |  |                           |                        |  |  |

Vegetation Condition - Keighery 1994 (Trudgen 1993) (show range and indicate predominant class)

|                            |                             |
|----------------------------|-----------------------------|
| 1 = 'Pristine' (Excellent) | } Substantial weed invasion |
| 2 = Excellent (Very Good)  |                             |
| 3 = Very Good (Good)       |                             |
| 4 = Good (Poor)            |                             |
| 5 = Degraded (Very Poor)   |                             |
| 6 = Completely Degraded    |                             |

Specific aspects of disturbance

|                               |   |
|-------------------------------|---|
| partial clearing              |   |
| weeds (list):                 | <i>Schinus arb</i> , <i>Ac long</i> , <i>Bamboo</i> , <i>Pampas</i> , <i>Kikuyu</i> , <i>Olvas</i> , <i>Jacc Cape</i> , <i>Lilac</i> , <i>Typha orientalis</i> , <i>peperca</i> |
| selective removal of species: | timber cutting <u>mowing</u> fire grazing dieback %area   |
| fire frequency:               |   |
| 'enrichment plantings' (list) | <i>Euc grandis</i> , <i>Euc calmald.</i>  |
| animal impact:                | horse foxes rabbits cats dogs goats pigs overgrazing by native mammals  |
| soil movement:                | mining dumping rubbish dumping <u>roadworks</u>   |
| changes in water regimes:     | <u>flooding</u> <u>drainage</u> watering <u>nutrient influx</u>   |
| Tracks:                       | fire breaks walk trails off road vehicle use animal tracks  |
| Service corridors:            | SEC Main Roads Water Authority. Telecom   |
| Other                         |   |

VEGETATION (describe each unit of vegetation using dominants and life form/height class and canopy cover according to the Muir/<sup>Revised</sup> codes above)

Fauna comments

Adjacent bushland (refer to aerial photograph)

#### OTHER COMMENTS

##### Boundaries

- o Coulston Way presently a Cul de Sac at 2 points, off Coulston Way + Paper Cap but cleared area along road reserve as shown in Rd Directory - appears to be sewerage line
- o School fenced at back oval, line planted trees back oval
- o Block in local gov ownership





# LAKE

M76 Mary Carrol Park, Gosnells  
City of Gosnells Management Plan

Friends Advocate Management

Other Names:

Specific Study/studies Miscellaneous studies

?

Flora

Vegetation Map 1 2 3

Flora list 1 2 3 4

Significant Taxa done / suitable / doubtful

?

Fauna

Mammals 1 2

Birds 1 2

Reptiles and Amphibia 1 2

Invertebrates 1 2

RAOU

Vegetation Condition Map Sites Comment

Disturbance Factors Comment Management

Swan Coastal Plain Floristic Survey

AHC: National Estate- Listed / Interim / Nominated / Notified NT (WA): Heritage Classification

|       |
|-------|
| Notes |
|       |
|       |
|       |
|       |

|   |                            |  |
|---|----------------------------|--|
| <b>M76 Mary Carrol Park, Gosnells</b><br>City of Gosnells Management Plan   |                            |  |
| M76.1 Purpose and vesting of Reserves C31993 and C28361 is endorsed.  | Implemented                | Endorsement. Local Authority has prepared a management plan for the wetland area.  |
| M76.2 Southern portion of Reserve C24998 be excised and its area added to Reserve C31993.                             | Implemented                | Vested in the local authority for Bird Sanctuary and Park.   |
| M76.3 Reserve C29919 be cancelled and its area added to Reserve C28361  | Implemented                | Vested in the local authority for Public Recreation.   |
| M76.4 Gosnells City Concept plan is endorsed.   | Implemented                | Endorsement.   |
| M76.5 Ways and means of protecting the conservation value of the freehold land be sought through planning procedwres. | Implementation Progressing | <p>Agreement has been reached to amalgamate freehold land and reserves into one reserve for the northern lake. Private property fringing the lake will not be included.</p> <p>Friends of Mary Carrol Park and Waterbird Conservation Group have an interest in this area.</p> |



Sundry Document F816185

NO DUPLICATE ISSUED

REGISTER  
VOL.

BOOK  
FOL.

Corr. 2361 / 1966

3057

186

Vol. Fol.  
3056 431  
3057 153

WESTERN



AUSTRALIA



# Crown Land Record

The undermentioned land shown on the sketch in the First Schedule hereto is land of the Crown subject to the interests, easements, encumbrances and notices shown in the Second Schedule hereto.

*Alan Skenna*



Dated 27th February, 1995

CHIEF EXECUTIVE OFFICER

### LAND REFERRED TO

Canning Locations 2096, 2460, 2899, 3085, 3933, 3934, 2499 and 3188 on Office of Titles Diagrams 58542, 60078, 60078, 60079, 51643, 54964, 57102, 52888 & 52712 and Land Administration Diagram 84377 and Plan 14859

### FIRST SCHEDULE

PERSONS ARE CAUTIONED AGAINST ALTERING OR ADDING TO THIS RECORD OR ANY NOTIFICATION HEREON





186  
FOL.

3057  
VOL.

Page 1 (of 2 pages)

SECOND SCHEDULE

NOTE: ENTRIES MAY BE AFFECTED BY SUBSEQUENT ENDORSEMENTS

| PARTICULARS   | INSTRUMENT |         | REGISTERED | TIME  | SEAL  | CERT. OFFICER   |
|---|------------|---------|------------|-------|---|---|
|   | NATURE     | NUMBER  |            |       |   |   |
| Reserve No 31993 for the purpose of "Bird Sanctuary and Park" | Sundry     | F816185 |            |       |  |  |
| Vested in City of Gosnells in G.G. 24.02.95                   | Sundry     | F816185 |            | 15.30 |  |  |

DOIA COPY OF ORIGINAL NOT TO SCALE 21 MAY 1998 15:05:14 JOB 288052

92503374

Run on DEPARTMENT OF PLANNING AND URBAN DEVELOPMENT  
APPLICATION DETAILS REPORT

FILE NUMBER 97210

*Proposed 124 current SUBSIE 107092.*

*(1084m) Area 1008 = 122sq. metres*

Status : REFUSED  
Type : SUBDIVISION  
Application Date : 09-MAR-95  
Receipt Date : 23-MAR-95  
Planning Officer : L Arnold  
Local Authority : City Of Gosnells

Applicant(s) : Stedman Surveys P.O. Box 477 SUBIACO WA 6008

Owner(s) : M S & V A Dominish 165 Eudoria Street GOSNELLS  
WA 6110

Sketch Date : 23-MAR-95 Grid : P106 42/20 CCD : 71006  
Subject : SUBDIVISION OF AN EXISTING LOT TO CREATE TWO LOTS  
OF 759M2 AND ONE LOT OF 2047M2  
Location : EUDORIA STREET, GOSNELLS *LOT*  
Purpose : RESIDENTIAL  
LA Recommendation : REFUSAL  
LA Zone Text : RESIDENTIAL A - R17.5  
LA Zone Code :  
MRS Zone Text : URBAN  
MRS Zone Code :

Land Description : Lots : 100 loc No : Canning 16 Diagram :  
Diagram: 52580 C/T : 1502/962

Related Files :  
Decision : REFUSED  
Allocate To Agenda : 2695  
Map Reference : PERTH 21.10 & 22.10  
Carto Office Date :

CONSULTANTS

HEALTH DEPT OF W A Area : STATE Ref : -  
Date Sent : 20-JUN-95 Date Reply : 12-JUL-95

WESTERN POWER Area : STATE Ref : -  
Date Sent : 30-MAR-95 Date Reply : 07-APR-95

TELSTRA Area : STATE  
Date Sent : 30-MAR-95 Date Reply :

WATER CORPORATION Area : STATE Ref : C83828  
Date Sent : 30-MAR-95 Date Reply : 15-MAY-95

RELATED L.A.

MARY CAROL TACK  
Inbox

Received: 21 MAY , 1998 14:48 Sent: 21 MAY , 1998 14:46  
From: LLOYDC.PLANNING <LLOYDC.PLANNING>  
To: tranterm  
Subject: Enquiry

Michael,

could you please find out what the purpose of Crown Reserve 31993 is?

Thanks,  
Cliff  
X7575

----- End of Message -----

PUB PLAN 18.05.1973 / YERECOIN (02) 04.19  
ST ADDRESS 18.05.1973 / BINDI BINDI-TOODYAY RD

DETAILS GAZETTE DATE/PAGE HISTORY INFORMATION  
FORMERLY 18.05.1973 / 1266 FORMERLY PTN MELBOURNE 936, PTN LOT M1170, P:4474

\*\*\*\*\*

RESERVE : 31993 (DATE OF LAST CHANGE )  
(TO REGISTER 08.03.1995)  
ORIGINAL GAZETTE : DATE 18.05.1973 PAGE 1266  
CLASS C : DATE 18.05.1973 PAGE METRIC AREA : 16.1967

L.G.A : CITY OF GOSNELLS  
(CODE : 104 )

| DETAILS    | GAZETTE DATE/PAGE | CURRENT INFORMATION  |
|------------|-------------------|--|
| AREA       | 24.02.1995 / 649  | 16.1967  |
| NAME       | 18.07.1975 / 2528 | MARY CARROLL PARK  |
| PURPOSE    | 18.05.1973 /      | BIRD SANCTUARY & PARK  |
| VESTING    | 24.02.1995 / 644  | VEST: CITY OF GOSNELLS   |
| FILE NOS   | 18.05.1973 /      | 2361/66  |
| LOCATION   | 24.02.1995 / 649  | 1 CANNING LOC 2460, 2499, 3188, 2096, 3085, 2899, 3933,<br>2 3934. |
| PUB PLAN   | 18.05.1973 /      | PERTH (02) 21.10, 21.11, 22.10 AND 22.11                           |
| ST ADDRESS | 18.05.1973 /      | EUDORIA ST   |
| SURVEY     | 26.02.1988 / 606  | OP:14859 AND DIA:84377   |

| DETAILS | GAZETTE DATE/PAGE | HISTORY INFORMATION |
|---------|-------------------|---------------------|
|---------|-------------------|---------------------|

\*\*\*\*\* CONTINUED \*\*\*\*\*

I 01

PRODATA Micrographics Pty Ltd

REP233 DEPARTMENT OF LAND ADMINISTRATION 1/05/98 PAGE NO 15634

RESERVE : 31993 CONTINUED:

| DETAILS    | GAZETTE DATE/PAGE | HISTORY INFORMATION  |
|------------|-------------------|--|
| VEST REVOK | 24.02.1989 / 643  | REVOKED (ORDER DATED 26/02/1988)   |
| FORMERLY   | 27.02.1988 / 606  | 1 RE LOC 2899: (FMLY PTN OF CANNING LOC 16 AND BEING<br>2 LOT 11 ON DIA:51643) |
| FORMERLY   | 26.02.1988 / 606  | 1 RE LOC 3085: (FMLY PTN OF CANNING LOC 16 AND BEING<br>2 LOT 19 ON DIA:54964) |
| HIST AREA  | 26.02.1988 / 606  | 10.5394  |
| HIST VEST  | 26.02.1988 / 602  | VESTED SHIRE OF GOSNELLS   |
| PREV LOTS  | 26.02.1988 /      | CANNING LOC 2164, 2401 AND 2496  |
| VEST REVOK | 26.02.1988 / 601  | REVOKED (ORDER DATED 02/05/1973)   |
| HIST AREA  | 07.11.1980 / 3752 | 9.8469   |
| HIST VEST  | 18.05.1973 / 1255 | VEST CITY OF GOSNELLS  |
| ORIG AREA  | 18.05.1973 /      | 8.6488   |

\*\*\*\*\*

RESERVE : 31994 CANCELLED BY CG IN TRUST (DATE OF LAST CHANGE )  
(TO REGISTER 12.12.1990)  
ORIGINAL GAZETTE : DATE 18.05.1973 PAGE 1266  
CLASS : C : DATE 18.05.1973 PAGE METRIC AREA : 0.0989

L.G.A : SHIRE OF MORAWA  
(CODE : 511 )

| DETAILS    | GAZETTE DATE/PAGE | CURRENT INFORMATION                               |
|------------|-------------------|---|
| AREA       | 18.05.1973 /      | 0.0989  |
| PURPOSE    | 20.07.1973 / 2711 | CHURCH SITE CHURCHES OF CHRIST                    |
| VESTING    | 20.07.1973 / 2686 | C.G IN TRUST TO "CHURCHES OF CHRIST IN W.A. INC." |
| FILE NOS   | 18.05.1973 /      | 2938/67   |
| LOT DETAIL | 18.05.1973 /      | MORAWA, 54  |
| PUB PLAN   | 18.05.1973 /      | MORAWA TOWNSITE                                   |
| ST ADDRESS | 18.05.1973 /      | DREGHORN ST                                       |
| SURVEY     | 18.05.1973 /      | O P: 4494   |

| DETAILS   | GAZETTE DATE/PAGE | HISTORY INFORMATION          |
|-----------|-------------------|------------------------------|
| HIST PURP |                   | CHURCH OF CHRIST CHURCH SITE |

\*\*\*\*\*

J 01

PRODATA Micrographics Pty Ltd

REP233 DEPARTMENT OF LAND ADMINISTRATION 1/05/98 PAGE NO 15635

RESERVE : 31995 (DATE OF LAST CHANGE )  
(TO REGISTER 17.05.1988)  
ORIGINAL GAZETTE : DATE 04.05.1973 PAGE 1120  
CLASS : C : DATE 04.05.1973 PAGE METRIC AREA : 0.1861

## BOARD NOTES

### INTRODUCTION

1. The proposal is to subdivide an existing lot to create two lots of 759m<sup>2</sup> and one lot of 2047m<sup>2</sup> (refer to Plan 1). The subject land is located in Eudoria Street, Gosnells (refer to Plan 2).

### CONSULTATIONS

2. The Local Authority does not support the application for the following reasons:

i. Council wishes to negotiate the acquisition of a portion of the subject land for recreation reserve purposes.

iii. The site has been filled with deleterious materials unsuitable for residential development.

iii. Reticulated sewerage is not available.

3. The Health Department advises that the proposal does not meet any criteria to warrant consideration for exemption from the mandatory sewer requirements of the Government Sewerage Policy.

4. The Water Authority advises that considerable works are required to ensure connection to reticulated sewerage and that septic tanks would not have an indefinite life due to the nature of the ground in the district.

5. Western Power recommends standard conditions.

### COMMENTS

6. The proposal includes the creation of two lots less than the minimum size required for unsewered residential lots in the metropolitan region. Similar subdivisions have previously been refused in the locality based on Health Department opposition and lack of reticulated sewerage. Based on the above approval of the subdivision is not supported.

## RECOMMENDATIONS

The Commission has considered the application relating to the above described land and has resolved that the application be refused for the reasons set out below.

It is advised that should the applicant be aggrieved by this decision there is a right of appeal pursuant to the provisions of Section 26 of the Town Planning and Development Act 1928 (as amended). Such an appeal must be submitted in accordance with Part V of the Act within 60 days of the date of this decision. When an application is approved subject to a condition(s), the applicant should liaise with a nominated authority(s) responsible for advising the Commission on the clearance of the condition as soon as possible to establish any detailed requirements of the condition and in order to retain a right of appeal in the event the applicant considers the requirements are onerous.

CONDITIONS

1. The land is unsuitable for closer development until such time as it is served by a comprehensive drainage or deep sewerage system.
2. Reticulated sewerage is not available in this area and the proposed lot(s) is (are) below the minimum size considered necessary by the Commission for the satisfactory operation of on-site effluent disposal systems.

NOTES

26/95H - Letter printed August 16, 1995

| Lot Size | Zone | Lots Produced |
|----------|------|---------------|
| -----    |      |               |
| *****    |      |               |
| -----    |      |               |
| sum      |      |               |

FINAL APPROVAL STATISTICS

=== E N D O F R E P O R T ===

## R. A. O. U. TRACKING DATABASE

23/06/96

PARK SIGHTINGS REPORT

Page No. 1

Mary Carrol Park (M76)

| ORDER: | REF: | BIRD NAME                 |   | NO. SIGHTINGS |
|--------|------|---------------------------|---|---------------|
| 0018   | 0216 | Blue-billed Duck          | 3 | 1             |
| 0019   | 0217 | Musk Duck                 |   | 2             |
| 0022   | 0203 | Black Swan                | 3 | 2             |
| 0025   | 0207 | Australian Shelduck       |   | 1             |
| 0028   | 0202 | Australian Wood Duck      |   | 2             |
| 0031   | 0948 | Mallard                   |   | 2             |
| 0032   | 0208 | Pacific Black Duck        |   | 2             |
| 0035   | 0211 | Grey Teal                 |   | 2             |
| 0040   | 0215 | Hardhead                  | 3 | 2             |
| 0041   | 0061 | Australasian Grebe        |   | 2             |
| 0042   | 0062 | Hoary-headed Grebe        |   | 2             |
| 0129   | 0100 | Little Pied Cormorant     |   | 2             |
| 0135   | 0106 | Australian Pelican        |   | 1             |
| 0139   | 0188 | White-faced Heron         |   | 2             |
| 0145   | 0187 | Great Egret               |   | 1             |
| 0150   | 0192 | Nankeen Night Heron       |   | 2             |
| 0157   | 0179 | Australian White Ibis     |   | 1             |
| 0204   | 0058 | Purple Swamphen           |   | 2             |
| 0205   | 0056 | Dusky Moorhen             | 3 | 2             |
| 0208   | 0059 | Eurasian Coot             |   | 2             |
| 0324   | 0957 | Rock Dove                 |   | 2             |
| 0326   | 0988 | Laughing Turtle-Dove      |   | 2             |
| 0327   | 0989 | Spotted Turtle-Dove       |   | 1             |
| 0359   | 0273 | Galah                     |   | 1             |
| 0366   | 0294 | Australian Ringneck       |   | 2             |
| 0387   | 0290 | Red-capped Parrot         |   | 1             |
| 0411   | 0344 | Shining Bronze-Cuckoo     |   | 1             |
| 0451   | 0326 | Sacred Kingfisher         |   | 1             |
| 0517   | 0463 | Western Gerygone          |   | 2             |
| 0531   | 0486 | Yellow-rumped Thornbill   | 3 | 1             |
| 0537   | 0638 | Red Wattlebird            |   | 1             |
| 0539   | 0637 | Little Wattlebird         | 4 | 2             |
| 0561   | 0608 | Singing Honeyeater        |   | 2             |
| 0583   | 0597 | Brown Honeyeater          |   | 2             |
| 0587   | 0631 | New Holland Honeyeater    | 4 | 2             |
| 0653   | 0401 | Rufous Whistler           |   | 1             |
| 0671   | 0415 | Magpie-Lark               |   | 2             |
| 0673   | 0361 | Grey Fantail              |   | 1             |
| 0676   | 0364 | Willie Wagtail            |   | 2             |
| 0678   | 0424 | Black-faced Cuckoo-shrike |   | 1             |
| 0698   | 0705 | Australian Magpie         |   | 2             |
| 0706   | 0930 | Australian Raven          |   | 2             |
| 0763   | 0357 | Welcome Swallow           |   | 1             |

(3) 5  
(4) 2

|      |      |                        | Page No. |   |
|------|------|------------------------|----------|---|
| 0765 | 0359 | Tree Martin            | 1        | 2 |
| 0768 | 0324 | Clamorous Reed-Warbler | 1        |   |
| 0781 | 0374 | Silvereye              | 2        |   |

\*\*\* END OF REPORT \*\*\*

SUMMARY REPORT

|                       |   |    |
|-----------------------|---|----|
| TOTAL BIRDS SIGHTED   | # | 46 |
| TOTAL NUMBER OF CARDS | # | 2  |

\*\*\* END OF SUMMARY \*\*\*

# **MARY CARROLL PARK WETLANDS:**

## **Sediment removal/wetland remediation project**

### **1. Introduction**

The Mary Carroll Park Wetlands, Parks and Recreation Reserve 31993, comprise two waterbodies bisected by Eudoria Street in the suburb of Gosnells. The larger northern waterbody, the subject of this proposed project, is loosely framed by Verna, May and Percy Streets. The wetlands are managed by the City of Gosnells for conservation and passive recreation purposes.

The wetlands' fringing vegetation has been recognised as regionally significant in *Bush Forever* (EPA *et al*, 2001), identified as Site .... Formerly System Six Area M87, the wetlands are not on the register of the Environmental Protection (Swan Coastal Plain Lakes) Policy 199x.

The wetlands are recognised as a regionally significant waterbird resource and, more specifically, as hosting the largest roosting population of White Ibis in the Perth Metropolitan area (Bekle, 1999).

Numerous studies commissioned by the City of Gosnells have identified and examined the eutrophic state of the wetlands. Recommendations to address and monitor the inflow of nutrients to the wetlands have mostly been implemented. These include programmed sweeping of streets within the wetlands' catchment, completion of the infill sewerage reticulation programme, cessation of fertiliser application in peripheral parkland, periodic water quality monitoring, tree planting and awareness raising.

A major source of nutrient still remains bound to sediments in the wetland benthos. Still, very hot conditions in summer frequently give rise to the stratification of the wetland's water column, with high Biological Oxygen Demand in the lower stratum (hypolimnion) leading to the creation of anoxic conditions. Nutrients, particularly phosphorous, are released under these conditions from the sediment.

This sudden elevation of nutrient levels in the water column gives rise to rapidly developing algal blooms that, when they "crash", deplete Dissolved Oxygen as they decompose. This circumstance contributes to the general ill-health of the wetland and its inhabitants, and provides an ideal environment for the initiation and spread of avian botulism.

Despite the actions to date of the City of Gosnells and the State Government, algal blooms and botulism outbreaks remain the rule rather than the exception in the northern wetland. A four-week period in January/February 2000 saw 900 waterbirds die from botulism.

The City of Gosnells now proposes to remove nutrient-contaminated sediment from the northern, and larger, of the two Mary Carroll Park Wetlands to improve long-term water quality and thereby the ecological health of the wetlands.

A detailed analysis of sediment depth and nutrient contamination by IT Environmental (1999) in this wetland determined an optimum average depth of 400mm to be removed. This average depth of sediment comprises materials delivered to the wetland post-urbanisation, that is, via the stormwater outlets from the surrounding catchment. The removal of 400mm of sediment will effectively expose the pre-urbanisation benthos of the wetland, and will not penetrate the impervious organic benthos.

It is proposed to undertake the first stage of sediment removal when the wetland dries out in Autumn 2001. Council has allocated \$30,000 to the first stage of this project in the 2000/2001 budget year.

Sediment is proposed to be removed by "swamp dozer", a balloon-tyred front end loader. Sediment will be transported immediately by truck to the City's former Kelvin Road Waste Disposal Site to be incorporated into composting green waste at that site.

Site and works environmental management procedures have been developed to address potential environmental impacts from the works.

It is proposed to undertake the removal of sediment in a staged manner. Stage 1 will see contaminated sediment removed from approximately 25-30% of the wetland's benthos. It is understood that the removal of such a significant depth of sediment will take with it most, if not all, aquatic flora and fauna propagules.

It is proposed, at this time, to initiate Stage 2 within 2 to 4 years, subject to Council's budget considerations, and subsequent Stage 3 (and possible 4) in a similar sequence. The actual time frame for each Stage will be dependent entirely upon the successful recolonisation, of the disturbed area by aquatic and benthic flora and fauna from adjacent undisturbed areas.

A Monitoring Programme to assess recolonisation and water quality impacts of the project has been developed and will be in place for the life of the project.

## **2. Extent of Works**

The proposed works will comprise the removal, in three or four Stages over an extended period of possibly 6 to 12 years, of an identified 400mm layer of nutrient-contaminated sediment from the northern, and larger, of the two Mary Carroll Park Wetlands. It is proposed to undertake Stage 1 of sediment removal when the wetland dries out in Autumn 2001.

The sediment removed during this project will be delivered immediately to the City's former Kelvin Road Waste Disposal Site to be incorporated into composting green waste at that site. There will be no storage of sediment at the works site.

## **3. Area Affected by Works**

Stage 1 is proposed to focus on that side of the wetland closest to May Street.

## **4. Monitoring Programme**

### **Objectives:**

1. To confirm and/or locally refine baseline benthic and aquatic flora and fauna data after Lund *et al* (1998);
2. To assess the recolonisation, by benthic and aquatic flora and fauna, of the area(s) disturbed through removal of sediment;
3. To determine the appropriate timing, successive to Stage 1, of Stages 2 and 3 (and possible 4) of the sediment removal project, based on the success of benthic and aquatic flora and fauna recolonisation of disturbed area(s);
4. To determine the interim and overall success of the project – i.e. that the removal of nutrient-contaminated sediment significantly reduces the amount of nutrient release to the water column under stratified conditions.

### **Methodology**

1. Random sampling of benthic and aquatic flora and fauna pre-works will be undertaken within the proposed works area (Stage 1) and the area immediately adjoining but not subject to works disturbance in Stage 1.

Sampling data will add value to baseline data obtained by Lund *et al* (1998) and possibly locally refine these data.

This procedure will apply equally to Stages 2 and 3 (and possibly 4).

2. Using Lund *et al* (1998) and previous data obtained under this monitoring protocol as a baseline reference, random summertime sampling of benthic and aquatic flora and fauna will be undertaken within the area affected by sediment removal works.

The success of recolonisation will be defined as the subsequent presence in previously disturbed areas of the full complement of benthic and aquatic flora and fauna.

This procedure will apply equally to Stages 1, 2 and 3 (and possibly 4).

3. Dependent upon the results of the above monitoring programme, and only when successful recolonisation of benthic and aquatic flora and fauna has been determined to have occurred in a previously disturbed site(s), the next proposed stage of the sediment removal project will be cleared for implementation.

This procedure will apply equally to Stages 2 and 3 (and possibly 4).

4. During the life of the project, quarterly water quality analysis will be undertaken at selected sites and the data obtained cross-referenced to previous water quality data.

It is anticipated that the physical removal of sediment may contribute nutrients to the water column in the short term. Water quality monitoring will detect any such trend and expected temporal variations.

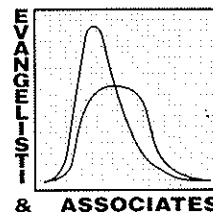
Importantly, though, the nutrient contribution of the sediment to the water column under stratified and anoxic conditions provides the *raison d'être* for

this project. In the knowledge that stratification, anoxic conditions and nutrient release are relatively spontaneous events, opportunistic sampling will be undertaken as soon as practicable when such conditions occur.

It is expected that the long-term goal of the project, to remove the source of these nutrients, will be confirmed by ongoing regular water quality analysis and opportunistic sampling, in addition to observational records that would be expected to observe a trend towards declining incidence of algal blooms in the wetland.

1. Extent of Works
2. Area affected by Works
3. Time Frame for Works
4. Environmental Aspects
5. Environmental Management Plan
6. Consultation

- Develop works programme, EMP
  - Consideration of works programme, EMP by Mary Carroll Park Working Group
  - Endorsement of works programme and EMP by DEP
1. Develop monitoring programme: pre-, post-; ongoing
  2. Define extent of works
  3. Define area affected by works
  4. Define time frame for works
  5. Define environmental aspects of works
  6. Develop Environmental Management Plan
  7. Consultation with nearby residents



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# **WATER RESOURCES MANAGEMENT PLAN**

## **MIDDLE CANNING CATCHMENT**

(STAGE 1 - VOLUME 1)

Prepared for the

**Water Authority of Western Australia**

By

**Evangelisti & Associates**  
Consulting Engineers and Project Managers

in association with

**Landvision**  
Consultants in Urban and Environmental Planning

and

**The V & C Semeniuk Research Group**  
Environmental Scientists

October 1995

**Table 2: Vegetation Condition Scale**

Modified from Trudgen 1991 by B. J. Keighery for the Swan Coastal Plain Survey 1993.

**1 = 'Pristine'**

Pristine or nearly so, no obvious signs disturbance.

**2 = Excellent**

Vegetation structure intact, disturbance affecting individual species and weeds are non-aggressive species

For example damage to trees caused by fire, the presence of non-aggressive weeds and occasional vehicle tracks.

**3 = Very Good**

Vegetation structure altered, obvious signs of disturbance.

For example disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and grazing.

**4 = Good**

Vegetation structure significantly altered by very obvious signs of multiple disturbance. Retains basic vegetation structure or ability to regenerate to it.

For example disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and grazing.

**5 = Degraded**

Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management.

For example disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and grazing.

**6 = Completely Degraded**

The structure of the vegetation is no longer intact and the area is completely or almost completely without native species.

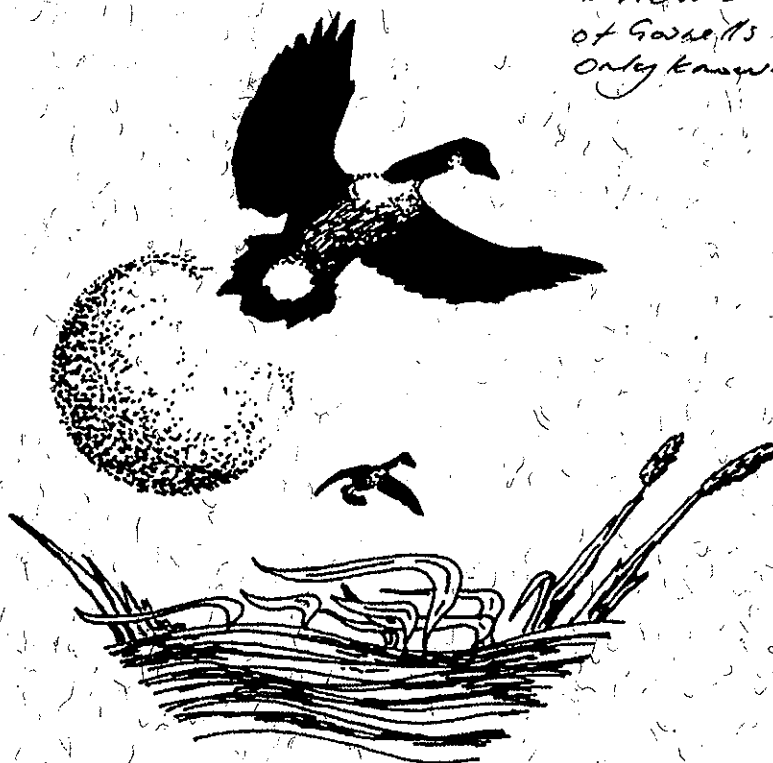
These areas are often described as 'parkland cleared' with the flora composing weed or crop species with isolated native trees or shrubs.

Source: B Keighery. Bushland Plant Survey, September 1994

# A MANAGEMENT PLAN FOR THE MARY CARROLL PARK WETLANDS

A report produced for the City of Gosnells

*NOTE: This was  
borrowed from City  
of Gosnells Library  
only known copy.*



Mary Carroll

# PARK

by

Barbara Pedersen and Arthur Conacher

Department of Geography

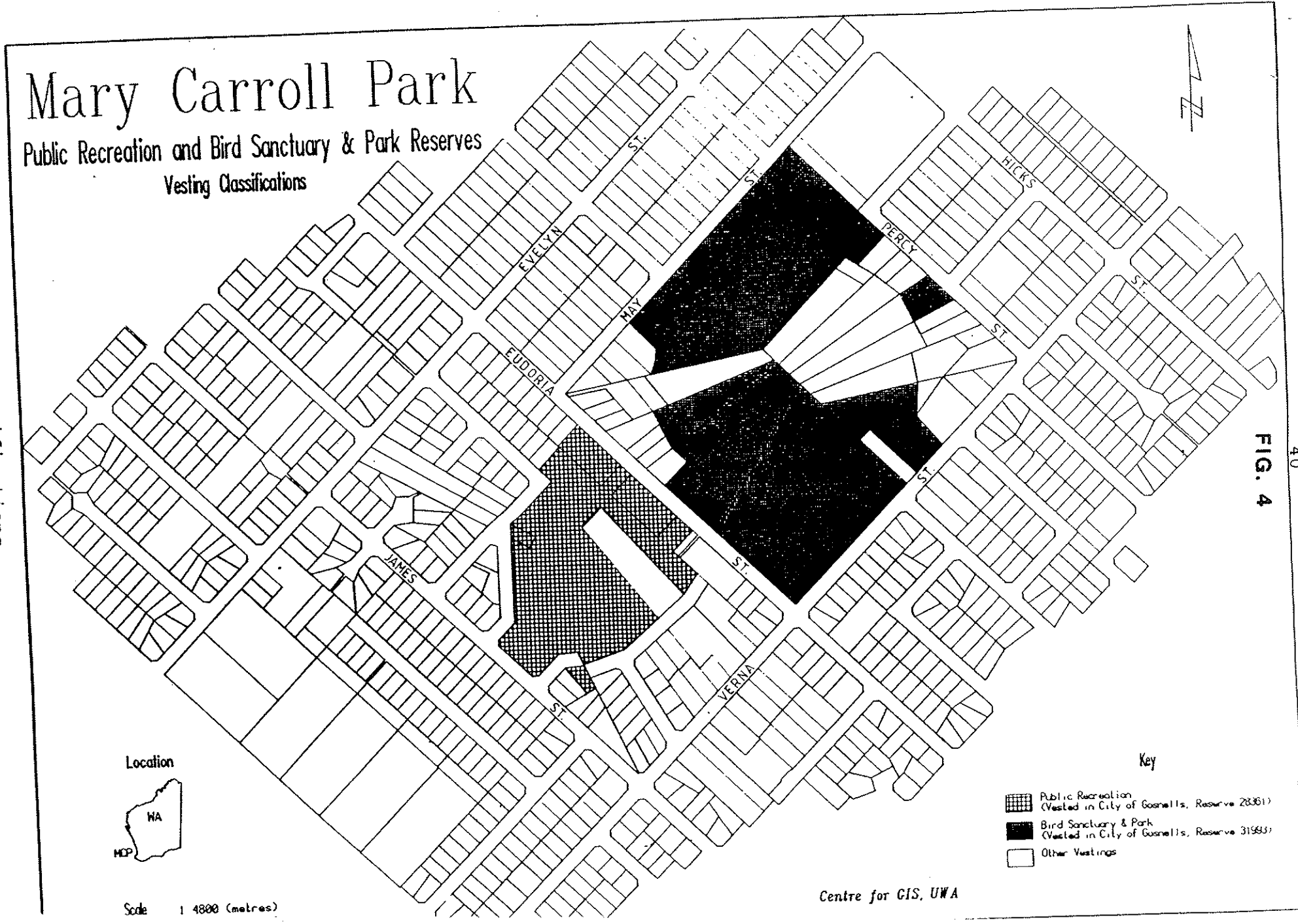
University of Western Australia

April 1991



AL10400305499B

FIGURE 4. Vestings and Classifications.



## 5: RECOMMENDATIONS AND COSTINGS

This section provides recommendations with the headings under which they appear in the previous section and costings provided by the responsible Department of the City of Gosnells.

### Appointment of an Environmental officer

- R.1** *Appoint an Environmental Officer to develop, advise on and oversee appropriate management practices for use by the GCC in both MCP and other areas within the Council's jurisdiction.*

Cost: estimated at \$50,000 per year if the position is shared with the City of Armadale. (Planning)

### Identification of eutrophication problems and management goals

- R.2** *That the GCC identify the quantities of nutrients entering the wetlands from all sources, that is, from all drains, and from the regional groundwater flow.*

Cost: ? network of monitoring bores = \$5,000 each. (Engineering)

### Options for management of eutrophication

- R.3** *Install a wet detention basin in the James Street and Coulston Way drain area. Connect both drains to this area.*

Cost: Approximately \$50,000 (Engineering)

- R.4** *Actively, and as a matter of high priority, seek the connection of the catchment of Mary Carroll Park to deep sewerage.*

- R.5** *Sweep the streets in the catchment of the Park frequently before the first flushing rains.*

Cost: no additional cost to the cost of the existing programme. (Engineering)

- R.6** *Install trash racks on all drains before the first flushing rains of winter.*

- R.7** *Close the existing public septic toilets at the Park and replace with approved bio-loos or sealed system.*

**R.8 Skim the lake sediments to the depth at which nutrient levels are minimal.**

Cost: Skimming: around \$50,000 per year over a 5 year period. (Engineering)  
Clean up of rubbish: \$500 (Parks and Reserves)

**R.9 Plant appropriate species (of emergent vegetation) within the body of the lake to take up stored nutrients and harvest the biomass.**

Preservation and restoration of natural ecology

**R.10 Plan and initiate a native vegetation planting programme for the parkland and shoreline (see Appendix 8.6. for details).**

**R.11 Develop shelving banks (with a slope of no steeper than 10° along the causeway (using clean sand) and revegetate with emergent rushes and sedges. Cut culverts through causeway following skimming operations.**

Cost: 2 x 600 mm diameter culvert, \$600 each (Engineering)

**R.12 Construct 2 long, narrow islands with shelving banks in the area of water abutting the current waterbird sanctuary.**

Cost: \$1,000 - planting by community groups assumed (Parks and Reserves)

**R.13 Implement a staged programme of removal of exotics from within the Park as new plants become established.**

Cost: \$1,000 (Parks and Reserves)

**R.14 Reduce the grassed area around the barbecue area and extend the fenced off area of the bird sanctuary. Replant with shade trees along street verges of Eudoria Street (along fenced off area of smaller wetland and opposite along old car park) and around the corner of Verna and Eudoria Streets.**

**R.15 Continue co-operation with the Waterbird Conservation Group and others involved in treating sick and injured wildlife and removal of dead birds. Publish annually data on the summer programme of bird rescues and carcass removals.**

R.16 Limit public access to the smaller wetland by constructing and maintaining a suitable fence along Eudoria Street and around the wet detention basin.

Cost: \$1,200 (Eudoria Street) plus ? basin area (Parks and Reserves)

R.17 Construct (with public assistance) displays which can be altered as required by the local schools, conservation groups and Council. Provide covered bins.

Cost: Covered bins \$400 (Parks and Reserves)

R.18 Request SECWA to raise, lower or make highly visible the Eudoria Street power lines.

R.19 Discourage artificial feeding of wildlife.

R.20 Construct a cattle grid (or other methods of ensuring safe crossing) for tortoises across Eudoria Street at the traditional crossing point between the two wetlands. Put appropriate warning signs on either side of the crossing.

R.21 Remove exotic birds and other introduced species which could threaten the indigenous wildlife.

R.22 Monitor the invertebrate fauna in both wetlands on a regular basis. Provide the local schools with the appropriate identification keys (see McRoberts 1989). Restore missing invertebrates to the wetlands and ensure good water quality.

Public Involvement (education, community participation)

R.23 Actions by the GCC and its officers must at all times conform with the spirit and purpose of the collective Recommendations presented in this Report.

R.24 Promote the reduction of inputs of household nutrients and pollutants into waste water, stormwater and groundwater. The long term goal of connecting the area to deep sewerage should be vigorously pursued (see R.4).

R.24a Continue the current community education programmes.

Cost: approximately \$350 per programme (Recreation Officer)

- R.24b Maintain and add to the resource kit built up by local schools and GCC.
- R.24c Involve the local high schools in research, survey and hands-on experience in Park management. Keep schools informed of community workshops, and other activities and opportunities for public participation.
- R.24d Involve students in Park projects with the Council and management committee.
- R.25 Provide local interest groups which assist the conservation and protection of MCP, with access to Council facilities as appropriate and in consultation with Council staff (for example advertising, venues, photocopying or pamphlet production facilities).
- R.26 Harvest the bulrushes, sedges and rushes from the wet detention basin and drain inflows. Promote their use by the GCC recreation programmes, local schools and TAFE adult education programmes.
- R.27 Involve the community in the management of the Park.
- R.28 Define and provide access to the people areas of the Park (see figure 5).
- R.28a Provide wheelchair access via a pathway from the relocated car park to the Park. (R.30)
- R.28b Construct a walkway from the car park around the lake to May Street. (See Bikewest's Dual Use Path design guidelines.)
- Cost: \$15,000 for concrete dual use path.  
(Engineering)
- R.28c Plan the design and route of a dual use path around the smaller wetland from Barcombe Way to James Street, and from the right of way at the rear of Coulston Way through to Eudoria Street.
- R.29 Upgrade the barbecue area.
- R.29a Reduce grassed area and improve by landscaping. Seek local involvement in the upgrading. (Re-using the water from

the lake may provide the grass with nutrients and filter out nutrients from within the water.)

- R.29b Improve playground facilities to blend in with the wetland environment. Cost out modern equipment and new designs. Display proposed improvements at Gosnells Library or GCC foyer. Advertise in the local community newspapers and ask for public comment.

Cost: \$15,000 including safety fence  
(Parks & Reserves)

- R.29c Incorporate a safety fence or barrier with the information sign and a bird watching facility along the bank. Place a seat there. Seek advice from RAOU, CALM and naturalist groups on design.

Cost: \$8,000 for displays, signs and walk trails (Parks and Reserves)

- R.30 Relocate the car park to a smaller area closer to the playground (either angle parking along Eudoria Street or parallel parking in both Eudoria and Verna Streets). Ensure that adequate lighting is available to discourage antisocial behaviour (See figure 5).

Cost: two 10-bay parallel parking embayments - \$20,000.

#### VESTING AND RESERVE CLASSIFICATION

- R.31 Review the classification of the wetlands
- R.32 Name the smaller wetland as appropriate under Recommendation 205 of the Planning services Committee.
- R.33 Uphold the public purpose of the reserves through public education, support of FMCP, voluntary organisations and the on-going work of the management committee.

## 8.6 Native vegetation replanting programme

The following outline of a replanting programme comes from a letter from Philip Jennings (of the Wetlands Conservation Society) to Greg Miller (Parks and Reserves, GCC), See also EPA Bull. 266 pp. 365-369 for details of existing wetland plant communities.

- Plant jointed twig rush (Baumea articulatum) in the water in May along the northern and eastern shores. This can be directly transplanted from local swamps and will take readily if planted at the water's edge in May.

- Plant swamp paperbark, Melaleuca teretifolia, along the shoreline in July. This shrub is a popular nesting site for birds and likes to be seasonally inundated. Around the edge of the lake, plant the freshwater paperbark, Melaleuca raphiophylla.

These three species will not need attention except when the lake dries out. For most of the year, they will grow happily in waterlogged soil.

- Establish a reasonable buffer of Melaleuca raphiophylla and Eucalyptus rudis around the shore of the lake to provide habitat for fantails and willy wagtails and to remove nutrients from the lake. These trees will also act as a midge and mosquito buffer.

- On the higher land, plant some attractive shade trees. To minimise watering, plant local area species such as the red and white flowering marri (Eucalyptus calophylla) and the swamp banksia (Banksia littoralis) and the paperbark (Melaleuca preissiana). All of these species are hardy, requiring little watering, and they are also attractive shade trees. They also provide good nesting sites for native birds.

## 8.7 Results of laboratory analyses

Several soil, water and sediment samples were obtained for analysis during the preparation of the draft management plan. These samples were:

1. Soil and water samples from Robinson Park and the James Street drain system (to determine nutrient loads). The soil samples were obtained on November 20th, 1990 and water samples from the drains were obtained on November 29th, 1990. (Note that Robinson Park had been fertilised with 311 fertiliser at the rate of 250kg/ha on the 6th of November, pers.comm. - foreman, Parks and Gardens.)

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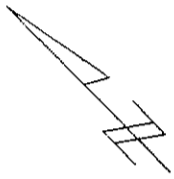
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# Mary Carroll Park

FIG. 5

## Management Proposals

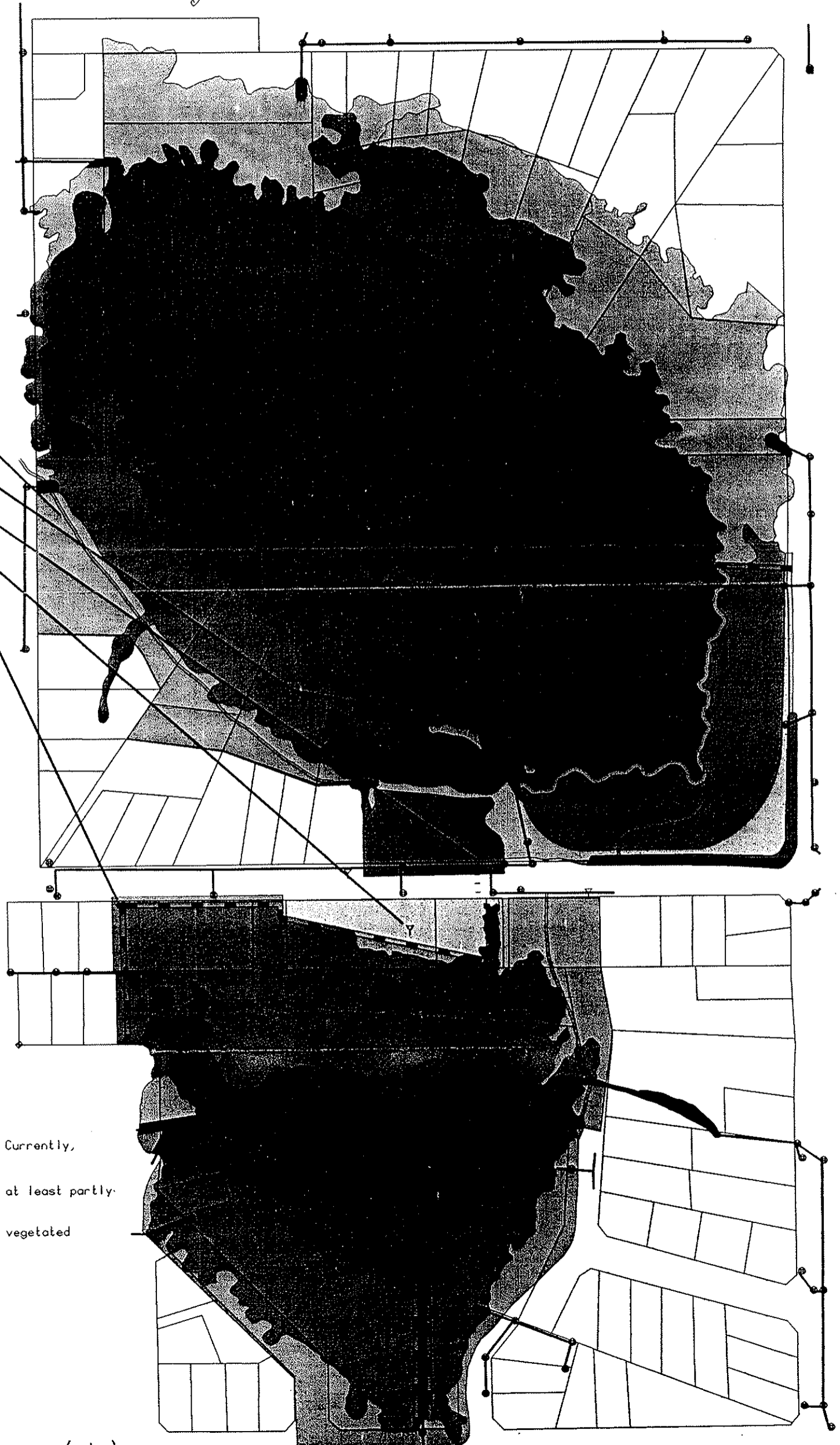
May, 1991



Walkway  
Over Pass  
Tortoise Passage-way  
Warning Sign  
Fence

### Key

- Cadastre
- Incision through the causeway with plank bridge
- Walkway
- Linear carparking
- Lot boundary
- Piped storm-water drain
- Open drain
- Cattle grid for the safe passage of tortoises
- Fence
- Road grid
- Drain outfall
- Nature Reserve information sign
- Keep Out sign (nature reserve), and Tortoise Crossing signs
- Maintenance and preservation of existing flora
- Maintenance of natural vegetation including replanting with native trees and bushes
- Sparse revegetation with large native trees
- Revegetation of the lake-shore and causeway surrounds with sedges and typha
- Open drains planted with typha and revegetation at the drain-outfalls
- Vegetated islands
- New car-park
- Refurbishment of the present car-park
- Path maintenance
- Play facilities and landscaping



Currently,  
at least partly  
vegetated

Scale 1:2500 (meters)

# Mary Carroll Park

FIG. 5

## Management Proposals

May, 1991

Walkway  
 Over Pass  
 Tortoise Passage-way  
 Warning Sign  
 Fence

### Key

- Road grid
- Drain outfall
- Nature reserve information sign
- Nature reserve (nature reserve), and tortoise crossing signs
- Maintenance and preservation of a natural area
- Maintenance of natural vegetation including replanting with native trees and bushes
- Sparse vegetation with large native trees
- Revegetation of the lakeshore and causeway surrounds with sedges and typha
- Open drains planted with typha and revegetation at the drain-outfalls
- Vegetated islands
- New car park
- Reformation of the present car park
- Path maintenance
- Planting of trees and shrubs

Currently,  
 at least partly  
 vegetated

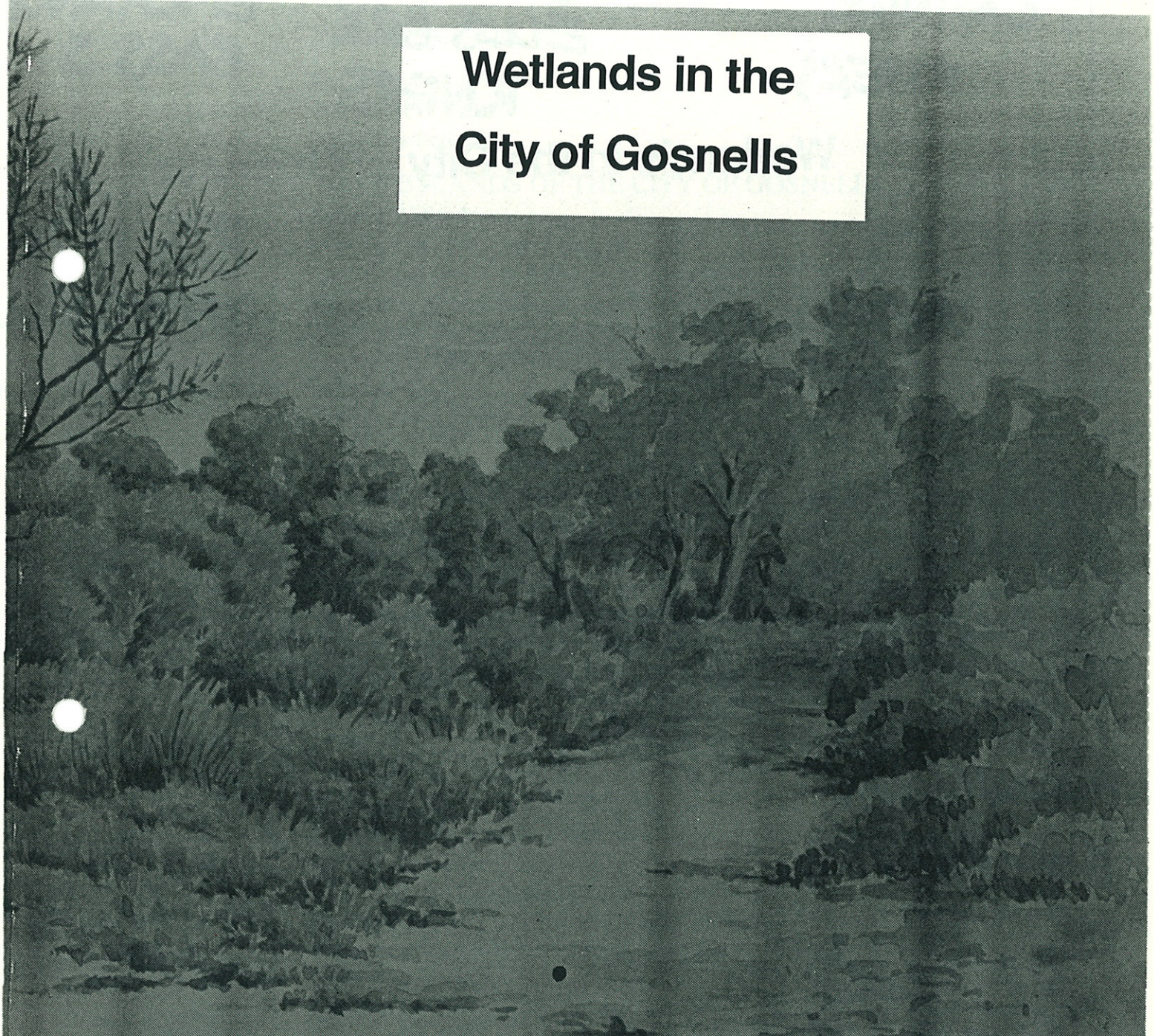


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Water Authority  
of Western Australia

# Wetlands in the City of Gosnells



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MARY CARROLL PARK AND EUDORIA STREET SWAMP

12.4 MARY CARROLL PARK AND EUDORIA STREET SWAMP

BS124

12.4.1 GENERAL INFORMATION

LOCAL AUTHORITY: City of Gosnells  
MRS ZONE: Urban  
LAND STATUS: Reserves and Freehold land  
SYSTEM 6 RECOMMENDATION: M76  
WAC CLASSIFICATION: LE.f.sm.se.o.  
DRAINAGE: Urban runoff

12.4.2 PHYSIOGRAPHY AND GEOLOGICAL SETTING

Eudoria Street Swamp and the swampland that has been modified within Mary Carroll Park are two small oval-shaped deposits of peat-rich sand west of the Canning River in Gosnells. The larger of the two, Mary Carroll Park, has been deepened to provide a drainage feature and lake within the park. Efforts are made to control the water level so that there is open water throughout the year.

12.4.3 AREAS

Areas below are for both swamps:

|                               |        |         |
|-------------------------------|--------|---------|
| Total wetland .....           |        | 19.4 ha |
| Total reserved area .....     | approx | 16.4 ha |
| Total wetland in reserve..... | approx | 15.3 ha |
| Sedgeland .....               |        | 3.5 ha  |
| Paperbark .....               |        | 5.8 ha  |
| Open water zone .....         |        | 5.7 ha  |
| Modified (parkland) .....     |        | 1.4 ha  |

12.4.4 HYDROLOGY

The swamps receive their water as piped runoff from surrounding roads, partially unsewered residential areas and groundwater seepage. Overflow is to the Canning River. The outflow is managed so that the lake in Mary Carroll Park has permanent water to provide landscape amenity and a waterbird refuge.

12.4.5 WATER QUALITY

Two drain inlets, Verna Street and Coulston Way, and four sites in the Mary Carroll Park wetland, were sampled regularly from 7 January 1988. Analysis of the samples indicated several trends including:

- relative stability of total dissolved solids in the drain inputs but increasing concentration through summer in samples from the body of the lake; and

**Full document available on request**